

The effects of taxes and benefits upon household income, 1995-96

This article examines how the distribution of income amongst households in the UK is modified by government expenditure and taxation. The main findings are:

- The income share of the bottom fifth of households is increased from 2.6% of original income to 6.9% of post-tax income by taxes and benefits.
- The average original income of the top fifth of households is 17 times the average of the bottom fifth, the average final income of the top fifth of households is 3.5 times the average of the bottom fifth.
- Cash benefits make up two thirds of the gross income of the bottom fifth of households.
- The top fifth of non-retired households pay 18.8% of their gross income in income tax compared with 11.9% for the rest of non-retired households.
- The state retirement pension accounts for 72% of the cash benefits received by retired households.
- The distribution of original income is more equal among non-retired households than retired. But the distribution of post-tax income is more equal among the retired than the non-retired.

Part 1

Introduction

During 1995-96, the government raised and spent £303 billion. Directly or indirectly most of this revenue was raised from households and the expenditure benefited households. This article examines the impact of government taxation and expenditure on the distribution of income by allocating the revenue to those households which paid the taxes and the expenditure to those households which benefited from it, wherever this is possible. Some outlays and revenue of government cannot readily be allocated to households, for example there is no clear conceptual basis for determining the benefit to each household of expenditure on defence. However, about 59 per cent of government revenue and 55 per cent of government spending can be allocated to households (see Table 1, Appendix 1). One of the consequences of this redistribution is to reduce the differences in income amongst households.

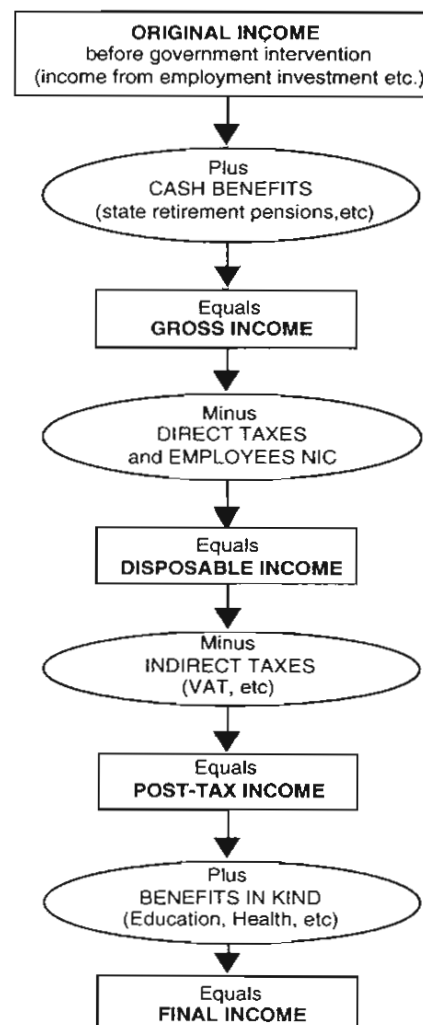
The stages of redistribution of income used in this analysis are shown in Chart 1. Household members receive income from their employment; from occupational pensions; from their investments and from other non-government sources. Total income from these sources constitutes original income. The flow chart shows the various ways in which government then raises revenue through taxation on households and distributes benefits to them both in cash and in kind.

The main data source for this analysis is the Family Expenditure Survey (FES) which covers about 7,000 households each year. People living in hotels, lodging houses and in institutions such as old peoples' homes are excluded. The unit of analysis is the household rather than the individual. Being a sample survey its results are subject to the usual sampling errors - these errors are larger for the household groups with smaller sample numbers (see Appendix 3).

The article aims to present the most meaningful figures for 1995-96. The figures cannot be easily compared with earlier articles in this series because the tax-benefit system and the FES change over time.

CHART 1

Stages of redistribution



Summary of the effects of taxes and benefits by quintile groups of unadjusted disposable income, 1995-96

TABLE A

	Quintile groups of households ranked by UNADJUSTED disposable income					All households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)¹						
Original income	1 590	4 870	12 780	22 310	44 470	17 200
plus cash benefits	4 200	5 020	3 410	2 090	1 530	3 250
Gross income	5 790	9 890	16 190	24 400	45 990	20 450
less direct taxes ² and employees' NIC	980	1 310	2 930	5 120	11 100	4 290
Disposable income	4 810	8 580	13 260	19 280	34 890	16 170
less indirect taxes	1 380	2 150	3 180	4 170	5 850	3 350
Post-tax income	3 430	6 430	10 080	15 110	29 040	12 820
plus benefits in kind	2 220	3 070	3 200	3 370	3 630	3 100
Final income	5 650	9 510	13 280	18 490	32 670	15 920
Average per household (number)						
Children ³	0.2	0.6	0.7	0.8	0.8	0.6
Adults	1.2	1.6	1.9	2.1	2.3	1.8
Persons	1.4	2.2	2.6	2.9	3.2	2.4
People in full-time education	0.2	0.5	0.6	0.7	0.8	0.5
Economically active people	0.3	0.6	1.1	1.6	2.1	1.1
Retired people	0.7	0.7	0.4	0.2	0.1	0.4
Composition (Percentages)						
Household type						
Retired	58	41	19	8	5	26
Non-retired						
1 adult	21	16	16	8	3	13
2 adults	5	13	25	29	29	20
1 adult with children ⁴	11	13	5	2	0	6
2 adults with children	4	14	27	37	37	24
3 or more adults ⁵	1	2	7	16	27	10
Total	100	100	100	100	100	100

1 The monetary values in the tables in the main body of the article are rounded to the nearest £10.

2 These are income tax (which is after tax relief at source on mortgage interest and life assurance premiums) and gross Council tax/Domestic rates and Water charges but after deducting discounts and Council tax transitional relief.

3 Children are defined as persons aged under 16 or aged between 16 and 18, unmarried and receiving non-advanced further education.

4 This group is smaller than the category of "one parent families" because some of these families will be contained in the larger household types.

5 With or without children.

RESULTS FOR ALL HOUSEHOLDS

Results for households ranked by unadjusted disposable income

When households are ranked by disposable income as in Table A, there is a strong relationship between a household's position in the income distribution and its size: the average number of persons per household is 3.2 for the highest quintile group and 1.4 for the lowest quintile group (the lowest quintile group contains the 20 per cent of households with the lowest disposable income). The bottom quintile group has a high proportion of retired households - defined as households where at least half the total gross income comes from retired people. In contrast, households with 3 or more adults are over-represented in the top quintile group. Further details of the distribution ranked by unadjusted disposable income are shown in Table 8, Appendix 1.

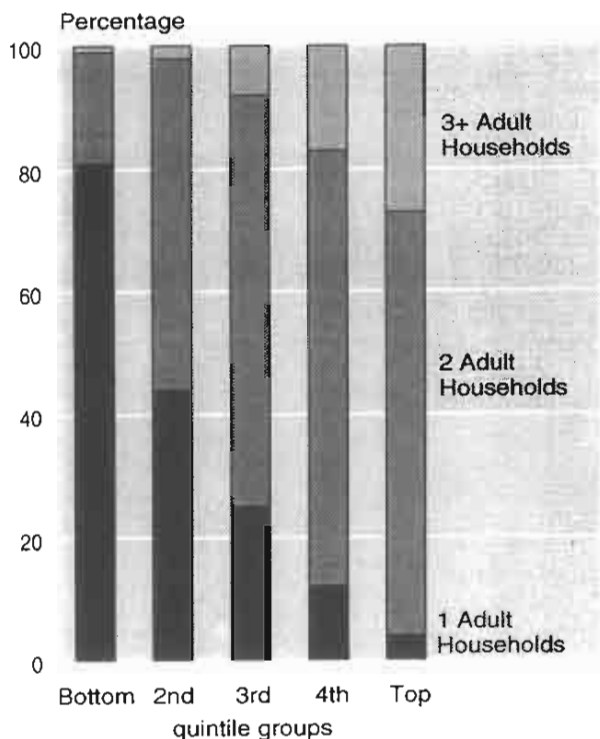
Adjustment for household composition

Using income per household to compare the welfare among households does not allow for differences in their composition and thus the differing demands on resources. One way to take such differences into account is to use income per capita but such a measure does not allow for the differing needs of children relative to adults or for economies of scale within households. This analysis therefore uses equivalence scales designed to take into account household size, family composition and age of children. The remainder of this article refers to households ranked by equivalised disposable income (disposable income divided by the equivalence value of the household). Chart 2 shows how the use of the equivalence scale results in larger households moving down the income distribution and smaller ones moving up. Fuller details of the derivation of the equivalence scale are given in Appendix 3.

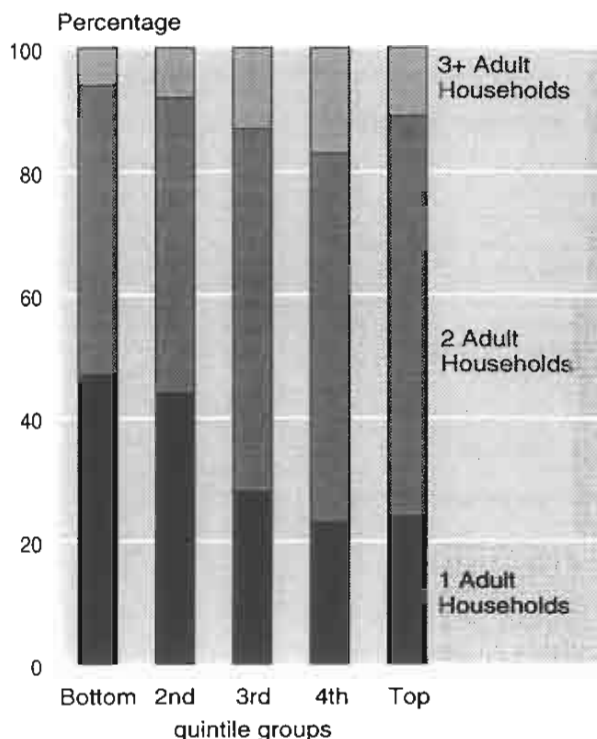
CHART 2

The effect of EQUIVALISATION

Composition of households by quintile groups of UNADJUSTED disposable income.



Composition of households by quintile groups of EQUIVALISED disposable income.



Equivalised income is used only to rank the households. Most monetary values shown in the article are unequivalised. Where equivalised amounts are given, they are shown in *italics*.

Results for households ranked by equivalised disposable income

The level of original income varies widely between households. Table B shows this and other income measures for quintile groups ranked by equivalised disposable income. In the lowest quintile group the average number of economically active people is 0.5 and the chief economic supporter is a full-time employee or self-employed in 13 per cent of the households (Appendix 1, Table 2b). Hence the average original income is low (£2,430 per annum). In the highest quintile group, there are an average of 1.6 economically active people and the chief economic supporter is in full-time employment or self employed in 82 per cent of the households. The average original income is £41,260 for this group.

Chart 3 illustrates the declining importance of cash benefits in gross income as income rises.

Chart 4 shows the average taxes paid and the average benefits received by household in each quintile group. This redistribution of income through the tax-benefit system reduces the dispersion of incomes, so that the average final income for each quintile group ranges from £8,230 to £29,200, a ratio of about 1:3.5 compared with the ratio for original incomes of about 1:17.

An alternative way to illustrate the extent of income redistribution is to examine how income shares are modified by the tax-benefit system (Table C). For example, households in the highest quintile group (when ranked by equivalised disposable income) receive 50 per cent of all original income. After taking into account cash benefits, this same group's share falls to 43 per cent. At the other end of the scale, the share of the lowest quintile group rises from 2.6 per cent to 7.4 per cent. A further, but comparatively smaller, compression of the income distribution occurs at the stage of disposable income, but this is reversed after indirect taxes are taken into account.

The Gini coefficient is the most widely used summary measure of the inequality of the distribution of income (see Appendix 3, paragraph 41). It takes values between 0 and 100 per cent - the higher values indicating greater inequality. The fall in the Gini coefficient from 52 per cent for original income to 36 per cent for gross income (see Table C) shows that cash benefits contribute the most to the reduction in income inequality.

The majority of retired households are in the lower ranges of the distribution of original income: about 42 per cent of the households in the bottom two quintile groups are retired (Table B). The income pattern of the retired is very different from that of households whose head is of working age; for example they receive a higher proportion of their income from contributory benefits, particularly the retirement pension. Their expenditure pattern (which is reflected in their indirect tax payments) is also different. For these reasons, in the detailed examination of each stage of the tax-benefit system which follows, retired and non-retired households are analysed separately.

Summary of the effects of taxes and benefits by quintile groups of equivalised disposable income, 1995-96

TABLE B

	Quintile groups of households ranked by EQUIVALISED disposable income					All households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)¹						
Original income	2 430	6 090	13 790	22 450	41 260	17 200
plus cash benefits	4 910	4 660	3 360	2 130	1 190	3 250
Gross income	7 340	10 750	17 150	24 580	42 450	20 450
less direct taxes ² and employees' NIC	1 130	1 520	3 130	5 180	10 470	4 290
Disposable income	6 210	9 230	14 020	19 400	31 980	16 170
less indirect taxes	1 930	2 340	3 290	4 090	5 090	3 350
Post-tax income	4 280	6 890	10 730	15 310	26 890	12 820
plus benefits in kind	3 950	3 310	3 260	2 670	2 310	3 100
Final income	8 230	10 200	13 990	17 980	29 200	15 920
<i>Equivalised disposable income</i>	<i>5 945</i>	<i>9 130</i>	<i>12 473</i>	<i>17 234</i>	<i>30 385</i>	<i>15 030</i>
Average per household (number)						
Children ³	0.9	0.6	0.7	0.6	0.4	0.6
Adults	1.6	1.7	1.9	2.0	1.9	1.8
Persons	2.5	2.2	2.6	2.5	2.3	2.4
People in full-time education	0.8	0.5	0.6	0.5	0.4	0.5
Economically active people	0.5	0.7	1.2	1.6	1.6	1.1
Retired people	0.6	0.7	0.4	0.3	0.2	0.4
Composition (Percentages)						
Household type						
Retired	38	45	24	14	9	26
Non-retired						
1 adult	11	9	11	14	20	13
2 adults	9	11	18	26	37	20
1 adult with children ⁴	16	8	4	2	1	6
2 adults with children	21 ¹	19	29	27	23	24
3 or more adults ⁵	5	7	13	16	11	10
Total	100	100	100	100	100	100

1 All the tables in Part 1 of this article show unequivalised income:equivalised income has only been used in the ranking process to produce the quintile groups (and to produce the percentage shares and Gini coefficients).

2 These are income tax (which is after tax relief at source on mortgage interest and life assurance premiums) and Gross Council tax / domestic rates and Water charges but after deducting discounts and Council tax transitional relief.

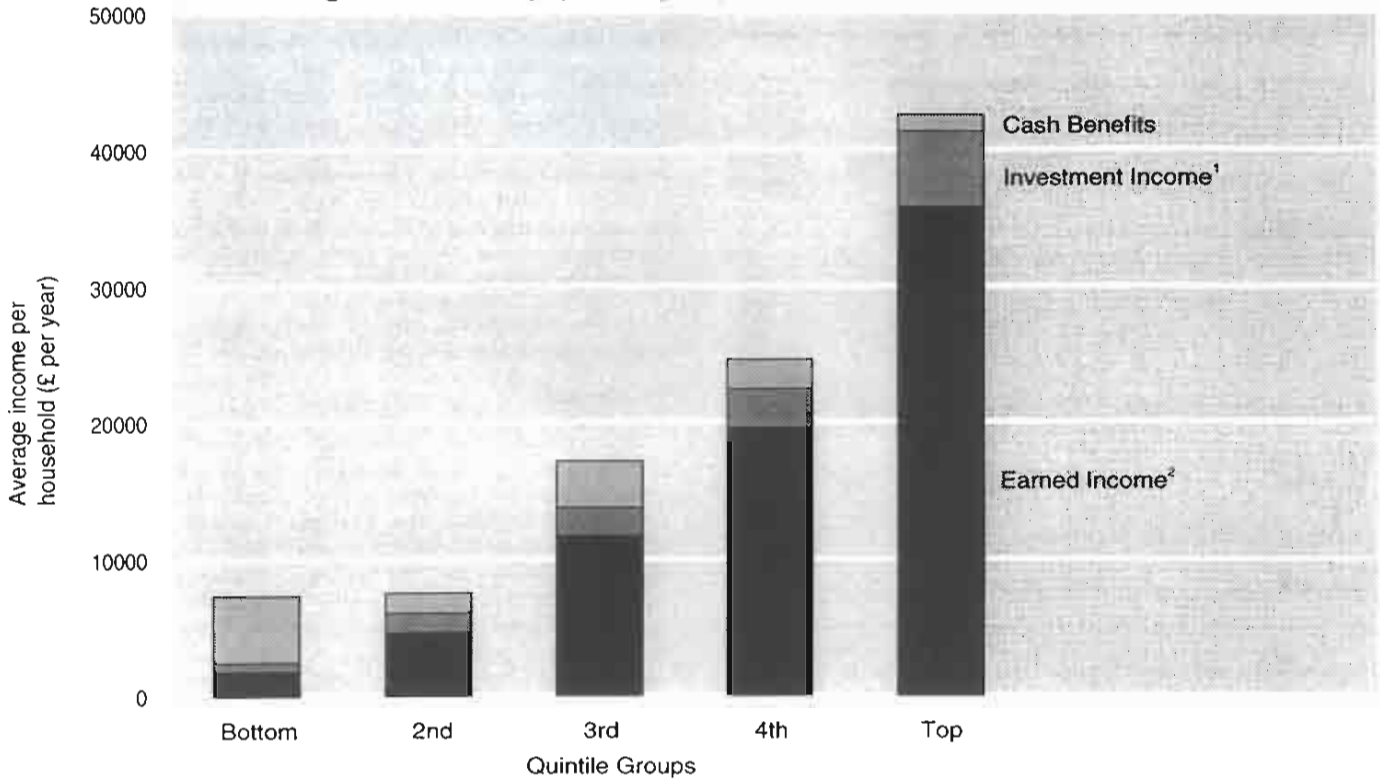
3 Children are defined as persons aged under 16 or aged between 16 and 18, unmarried and receiving non-advanced further education.

4 This group is smaller than the category of "one parent families" because some of these families will be contained in the larger household types.

5 With or without children.

CHART 3

Sources of gross income by quintile groups of equivalised disposable income, 1995-96

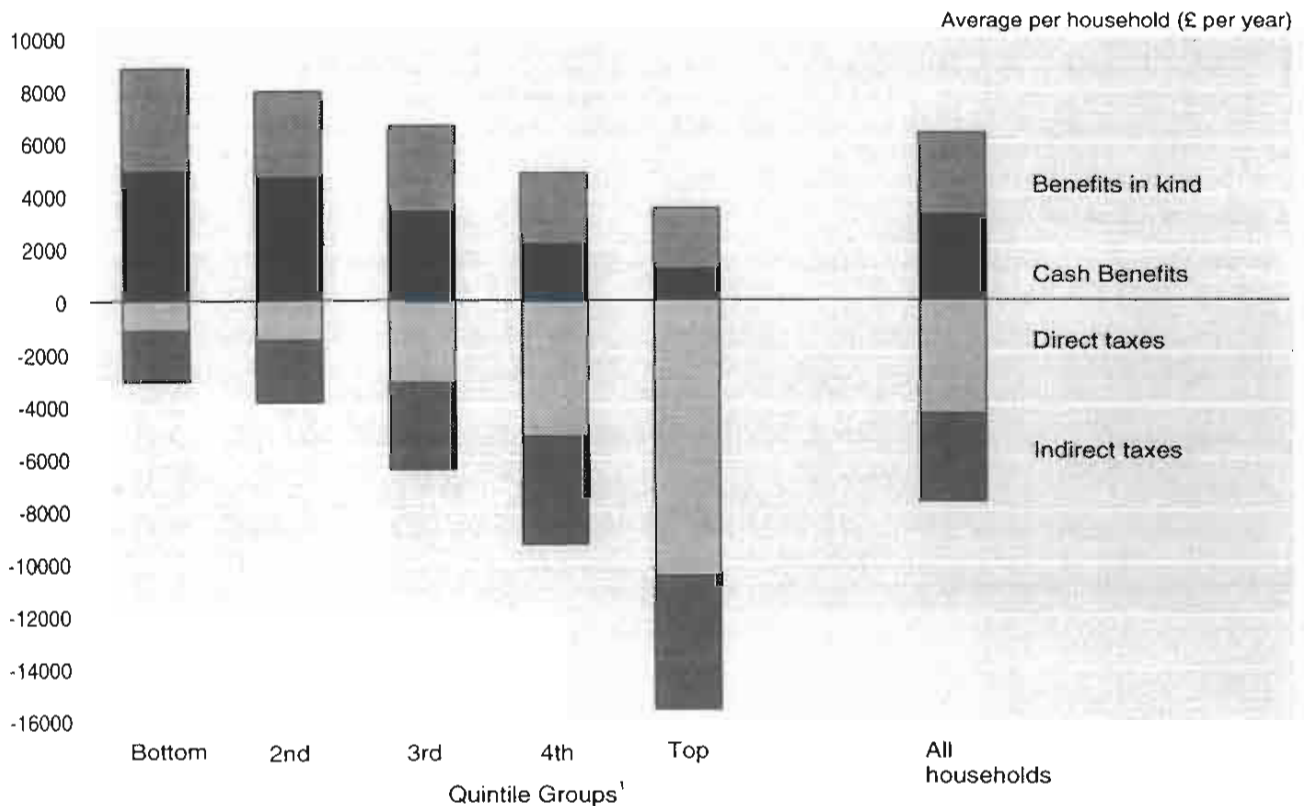


1. Investment income includes occupational pensions and annuities.

2. Earned income includes wages and salaries, income from self-employment and income from "fringe benefits".

CHART 4

Summary of the effects of taxes and benefits on ALL households, 1995-96



1. Households are ranked by their equivalised disposable income.

Percentage shares of total household income and Gini coefficients¹, 1995-96

TABLE C

	Percentage shares of total equivalised income for households ranked by equivalised disposable income			
	Original income	Gross income	Disposable income	Post-tax income
Quintile group				
Bottom	2.6	7.4	7.9	6.9
2nd	7	11	12	12
3rd	15	16	17	16
4th	25	23	23	23
Top	50	43	40	43
All households	100	100	100	100
Decile group				
Bottom	1.1	3.2	3.2	2.5
Top	32	27	25	27
Gini coefficient (percent)	52	36	33	37

1 This is a measure of the dispersion of each definition of income. Unlike the percentage share analysis where household incomes are ranked only once, the Gini coefficient calculation needs a separate ranking for each definition. For example, the coefficient for original income is produced by first equivalising the original income of all the households, then this distribution is ranked and this ranked distribution is used to calculate the coefficient.

RESULTS FOR NON-RETIRED HOUSEHOLDS

Original income

The distribution of original income among non-retired households is more equal than among all households, ranging from an average of £3,780 per annum in the lowest quintile group to £45,460 in the highest (Table D), a ratio of 1:12 compared to the ratio of 1:17 for the distribution over all households. There is a relatively strong relationship between the original income of a household and the number of economically active people it contains. On average, 76 per cent of the members of households in the top quintile group are economically active, compared with 28 per cent of the members of households in the bottom quintile group.

Chart 5 summarises the effects of the tax-benefit system on non-retired households in different quintile groups.

Cash benefits

Cash benefits are of two types: contributory (paid from the National Insurance Fund to which individuals and their employers make contributions while working), and non-contributory (Table E). For non-retired households, non-contributory benefits form the most important source of cash benefit income. Child benefit payments are higher at the lower end of the income distribution, in proportion to the number of children per household (Table D). The other non-contributory benefits, in particular Income Support and housing benefits, are mainly income related, and so payments are concentrated in the lowest quintile group, although the presence of some individuals with low incomes in high income households means that some payments are recorded further up the income distribution. Contributory benefits, for which the individual's contribution record rather than income is the criterion for payment, are highest for the second quintile group. Cash benefits formed 57 per cent of the gross income of households in the bottom quintile group on average and 11 per cent of the gross income for all non-retired households: their payment resulted in a significant reduction in income inequality.

Summary of the effects of taxes and benefits on NON-RETIRED households, 1995-96

TABLE D

	Quintile groups of NON-RETIRED households ranked by equivalised disposable income					All non-retired households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
Original income	3 780	11 680	19 630	26 710	45 460	21 450
plus cash benefits	4 960	3 500	1 940	1 400	800	2 520
Gross income	8 740	15 180	21 570	28 110	46 260	23 970
less direct taxes ¹ & employees' NIC	1 450	2 630	4 450	6 330	11 560	5 280
Disposable income	7 290	12 550	17 120	21 780	34 710	18 690
less indirect taxes	2 290	3 270	4 010	4 370	5 380	3 860
Post-tax income	5 000	9 280	13 110	17 410	29 330	14 820
plus benefits in kind	4 710	3 820	3 200	2 690	2 170	3 320
Final income	9 710	13 090	16 310	20 090	31 500	18 140
<i>Equivalised disposable income</i>	<i>6 106</i>	<i>10 344</i>	<i>14 134</i>	<i>18 995</i>	<i>32 590</i>	<i>16 434</i>
Average per household (number)						
Children ²	1.4	1.0	0.8	0.6	0.4	0.9
Adults	1.7	1.9	2.0	2.0	1.9	1.9
Persons	3.1	2.9	2.9	2.6	2.3	2.8
People in full-time education	1.2	0.9	0.7	0.5	0.4	0.7
Economically active people	0.9	1.4	1.7	1.8	1.8	1.5
Retired people	0.1	0.1	0.1	0.1	0.0	0.1

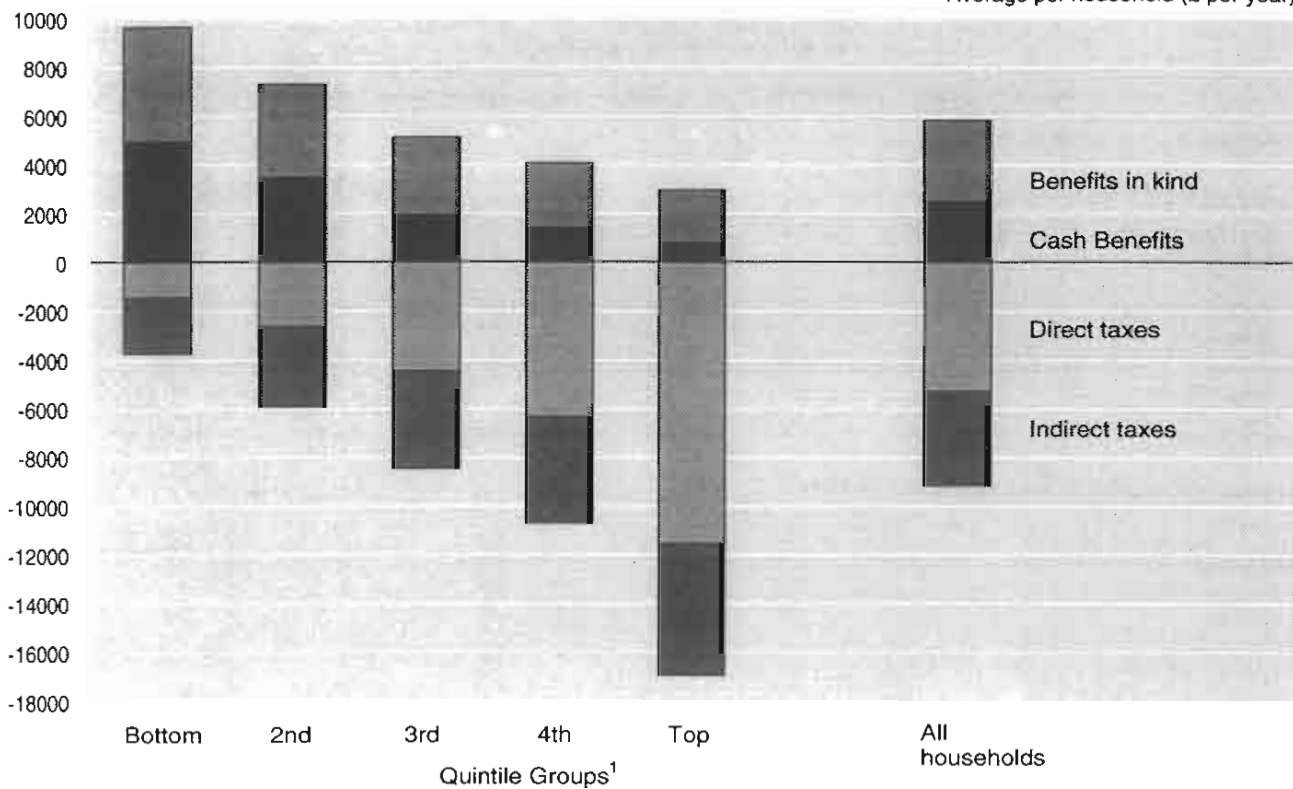
1 These are income tax (which is after tax relief at source on mortgage interest and life assurance premiums) and Gross Council tax/domestic rates and Water charges but after deducting discounts and Council tax transitional relief.

2 Children are defined as persons aged under 16 or aged between 16 and 18, unmarried and receiving non-advanced further education.

CHART 5

Summary of the effects of taxes and benefits on NON-RETIRED households, 1995-96

Average per household (£ per year)



1. Households are ranked throughout by their equivalised disposable income.

Average value of cash benefits for each quintile group of NON-RETIRED households, 1995-96

TABLE E

	Quintile groups of NON-RETIRED households ranked by equivalised disposable income					All non-retired households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
Contributory						
Retirement pension	100	400	340	310	220	270
Incapacity benefit	390	430	280	270	90	290
Unemployment benefit	70	50	40	20	20	40
Other	60	80	60	100	90	80
Total contributory	620	960	730	710	420	690
Non-contributory						
Income support	1850	690	220	80	40	570
Child benefit	710	510	420	310	220	430
Housing benefits	1290	620	170	40	10	430
Sickness/disablement related	140	420	280	160	70	210
Other	360	310	130	100	40	190
Total non-contributory	4 340	2 540	1 220	680	390	1 830
Total cash benefits	4 960	3 500	1 940	1 400	800	2 520
Cash benefits as a percentage of gross income	57	23	9	5	2	11

Income tax, employees' NIC and Local taxes² as percentages of gross income for each quintile group of NON-RETIRED households, 1995-96

TABLE F

	Quintile groups of NON-RETIRED households ranked by equivalised disposable income					All non-retired households
	Bottom	2nd	3rd	4th	Top	
Percentages						
Income tax ¹	7.8	9.0	12.2	14.6	18.8	14.6
Employees' NIC	2.0	4.3	5.3	5.4	4.4	4.6
Local taxes ²	6.7	4.1	3.2	2.5	1.8	2.9
Total	16.5	17.4	20.6	22.5	25.0	22.0

1 After tax relief at source on mortgage interest and life assurance premiums.
 2 Gross Council tax, Domestic rates and Water charges but after deducting discounts and Council tax transitional relief.

Income tax, NI contributions and local taxes

Both income tax payments and employees' National Insurance contributions are closely related to the size of original income. The payments by households of employees' National Insurance contributions in particular vary with the number of persons in employment and with their earnings. However, since National Insurance contributions are only levied on the first £440 of weekly earnings during 1995-96, households in the top quintile group pay rather less in contributions as a percentage of gross income than the 3rd and 4th quintile groups of households (Table F).

Indirect taxes as a percentage of (a) disposable income and (b) expenditure on goods and services for each quintile group of NON-RETIRED households, 1995-96

TABLE G

	Quintile groups of NON-RETIRED households ranked by equivalised disposable income					All non-retired households
	Bottom	2nd	3rd	4th	Top	
(a) Percentages of disposable income						
VAT	11.1	9.8	9.3	8.1	6.8	8.3
Duty on beer and cider	0.8	1.0	0.8	0.8	0.5	0.7
Duty on wines and spirits	0.6	0.6	0.7	0.7	0.5	0.6
Duty on tobacco	5.2	3.5	2.2	1.5	0.6	1.9
Duty on hydrocarbon oils	2.7	2.4	2.4	2.0	1.4	1.9
Vehicle excise duty	0.8	0.8	0.8	0.7	0.4	0.6
Other taxes on final goods and services	3.3	2.5	2.2	1.8	1.2	1.8
Intermediate taxes	6.9	5.5	5.1	4.6	4.0	4.8
Total indirect taxes	31.4	26.1	23.4	20.1	15.5	20.7
(b) Percentages of expenditure on goods and services¹						
VAT	8.2	8.8	8.8	8.6	8.6	8.6
Duty on beer and cider	0.6	0.9	0.8	0.8	0.6	0.7
Duty on wines and spirits	0.5	0.6	0.7	0.7	0.7	0.6
Duty on tobacco	3.9	3.1	2.0	1.6	0.8	1.9
Duty on hydrocarbon oils	2.0	2.2	2.3	2.1	1.7	2.0
Vehicle excise duty	0.6	0.7	0.8	0.7	0.6	0.7
Other taxes on final goods and services	2.4	2.2	2.1	1.9	1.5	1.9
Intermediate taxes	5.1	5.0	4.9	4.9	5.0	5.0
Total indirect taxes	23.3	23.4	22.3	21.3	19.5	21.5

¹ See paragraph 29 of Appendix 3 for the definition of expenditure.

Average value of benefits in kind for each quintile group of NON-RETIRED households, 1995-96

TABLE H

	Quintile groups of NON-RETIRED households ranked by equivalised disposable income					All non-retired households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
Education	2 830	2 160	1 650	1 240	770	1 730
National health service	1 570	1 520	1 470	1 360	1 240	1 430
Housing subsidy ¹	110	60	30	20	0	40
Travel subsidies	50	60	50	70	150	80
School meals and welfare milk	150	30	10	0	0	40
Total	4 710	3 820	3 200	2 690	2 170	3 320
Benefits in kind as a percentage of post-tax income						
	94	41	24	15	7	22

¹ Does not include tax relief at source on mortgage payments. These are taken into account in the income tax payments shown in Table F.

Income tax was, on average, 7.8 per cent of gross income in the lowest quintile, rising steadily to 18.8 per cent in the top quintile. As the quintile groups are based on equivalised disposable income, i.e. after direct tax, even the lowest quintile contains individuals who are liable for income tax.

Council tax in Great Britain and domestic rates in Northern Ireland are included here with income tax and NICs in line with the treatment of council tax in the National Accounts. Rebates on these local taxes are included as part of housing benefits in Table E. Table F overstates the regressive impact of local taxation at the lower end of the income distribution, since low income households are likely to be receiving these rebates.

Indirect taxes

Households' payments of indirect taxes are estimated from their expenditure recorded in the FES. Because the data on expenditure and incomes in the FES are compiled in different ways, they are not fully compatible (see Appendix 3, paragraph 5). Indeed, measured expenditure substantially exceeds measured income in the bottom decile group of households.

In total, indirect taxes expressed as a proportion of disposable income fall as disposable income rises (upper part of Table G), though the highest quintile pay most in indirect taxes in cash terms. The impact of indirect taxes declines for the top quintile groups partly because higher income households channel an increased proportion of their disposable income into savings, investments and mortgage payments.

Percentage shares of total household income and Gini coefficients¹ for NON-RETIRED households, 1995-96

TABLE J

	Percentage shares of total equivalised income for NON-RETIRED households ranked by equivalised disposable income			
	Original income	Gross income	Disposable income	Post-tax income
Quintile group				
Bottom	3.0	6.9	7.4	6.4
2nd	10	12	13	12
3rd	17	17	17	17
4th	25	23	23	23
Top	45	41	40	42
All non-retired households	100	100	100	100
Decile group				
Bottom	1.1	2.9	2.9	2.2
Top	28	25	24	26
Gini coefficient (percent)	44	35	32	37

1 This is a measure of the dispersion of each definition of income. Unlike the percentage shares analysis where the household incomes are ranked only once, the Gini coefficient calculation needs a separate ranking for each income definition. For example, the coefficient for original income is produced by first equivalising the original income of all the households, then this distribution is ranked and this ranked distribution is used to calculate the coefficient.

Because of the imbalance between measured income and expenditure already mentioned, Table G also shows estimates of indirect tax payments expressed as a percentage of *expenditure* on goods and services (in the lower part of the table). When assessed in this way, indirect taxes, with the exception of tobacco duty, rise broadly in line with expenditure.

Benefits in kind

The Government provides certain goods and services to households either free at the time of use or at subsidised prices. These benefits in kind are allocated to individual households in order to arrive at final income. The imputed value of these benefits is based on estimated costs of providing them. The largest two items for which such imputations are made are health and education services, the allocated part of which together accounted for 24.1 per cent of total general government expenditure in 1995. Other items for which imputations are made are school meals and welfare milk, the housing subsidy and travel subsidies, together accounting for a further 1.2 per cent of general government expenditure.

Education benefit is attributed to households according to the members' usage of state education (see Appendix 3, paragraph 31). The bottom quintile group contains the highest number of children in full time education: it contains nearly five times as many children in state schools as the highest quintile group (see Table 3b, Appendix 1). This is the main reason for this quintile group being allocated the highest average imputed benefit (Table H). In addition, the majority of student-only households, for whom the costs of education are greatest, are in this quintile group. Similarly the impact of expenditure on school meals and welfare milk is greatest in the lower income groups where children are more likely to have school meals provided free of charge.

Summary of the effects of taxes and benefits on RETIRED households, 1995-96

TABLE K

	Quintile groups of RETIRED households ranked by equivalised disposable income					All retired households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
Original income						
Earnings	50	140	130	320	630	250
Occupational pensions	540	1 010	1 820	3 620	9 620	3 320
Investment income	310	370	550	1 140	5 790	1 630
Other income	30	50	60	30	20	40
Total original income	920	1 560	2 560	5 110	16 070	5 240
plus Contributory benefits	3 820	4 180	3 920	4 070	4 090	4 020
Non-contributory benefits	640	1 270	1 560	1 700	1 300	1 290
Gross income	5 380	7 000	8 040	10 880	21 460	10 550
less Income tax ¹	70	100	250	650	3 100	830
Employees' NIC	10	0	10	10	30	10
Local taxes ²	610	570	590	630	810	640
Disposable income	4 690	6 330	7 200	9 590	17 530	9 070
less Indirect taxes	1 410	1 420	1 570	1 950	3 110	1 890
Post-tax income	3 280	4 910	5 630	7 640	14 420	7 180
plus National health service	2 400	2 360	2 280	2 330	2 200	2 320
Housing subsidy ³	40	80	90	60	40	60
Other benefits in kind	130	120	100	120	110	110
Final income	5 860	7 460	8 090	10 160	16 770	9 670
<i>Equivalised disposable income</i>	<i>5 786</i>	<i>7 828</i>	<i>9 240</i>	<i>11 720</i>	<i>20 883</i>	<i>11 090</i>

1 After tax relief at source on mortgage interest and life assurance premiums.

2 Gross Council tax. Local rates and Water charges but after deducting discounts and Council tax transitional relief.

3 Does not include tax relief at source on mortgage payments, which is included in the income tax payments shown above.

The benefit from the health service is estimated according to the age and sex of the household members (see Appendix 3, paragraph 33). Table H shows that this benefit falls gradually as income increases.

The housing subsidy (see Appendix 3, paragraph 34) has been spread between public sector tenants, and since such households tend to be concentrated in the lower half of the income distribution this is where the imputed benefit is highest.

Travel subsidies cover the passenger element of the grants made to various public operations covering both buses and railways. The use of public transport by non-retired households is partly related to the need to travel to work and thus to the number of economically active people in a household and so the combined effect of these travel subsidies increases over the income distribution.

Table H shows that taken together the absolute values of these benefits in kind clearly decline as household income increases. The ratio of benefits in kind to post-tax income decreases from 94 per cent in the lowest quintile group to 7 per cent in the highest quintile group, indicating that this expenditure contributes to the reduction in income inequality.

Summary

The overall effect of the various stages of the tax-benefits system on non-retired households is summarised in Table J. Households in the highest quintile group receive 45 per cent of all (equivalised) original income, compared with 3.0 per cent received by the lowest quintile group. However, after direct taxes and cash benefits are taken into account, the share of the lowest quintile group rises to 7.4 per cent and that of the highest falls to 40 per cent. Cash benefits are the major factor underlying these changes, causing the Gini coefficient to fall from 44 per cent based on original income to 35 per cent based on gross income. Income tax, employees' National Insurance contributions and local taxes produced a further reduction in inequality, but payment of indirect taxes increases inequality.

RESULTS FOR RETIRED HOUSEHOLDS

Retired households (see Appendix 3, paragraph 8 for definition) have quite distinct income and expenditure patterns and so the tax-benefit system affects them in a different way from non-retired households (Table K).

While a minority of retired households have substantial original income, mainly through occupational pensions and investment income, most retired households are dependent on cash benefits, mainly in the form of state retirement pensions. Therefore cash benefits form a very high proportion of gross income for all but the better-off retired households. However, unlike non-retired households, the bulk of these cash benefits (76 per cent) are paid from the National Insurance Fund into which the recipients will have made contributions throughout their working lives. Non-contributory benefits are lowest for the bottom quintile group where 69 per cent of the households own their house outright (Table 4b, Appendix 1) and consequently receive much less in housing benefits.

All households except those in the highest quintile group of retired households pay very little income tax, because their income is unlikely to exceed their tax allowances by much unless they have significant income from investments or occupational pensions in addition to their state retirement pension. The top quintile group also pays nearly one of third the indirect taxes paid by retired households.

Retired households derive significant benefits from health services and, to a lesser extent, the housing subsidy and travel subsidies, though of course virtually none from the education service. Health

benefit is spread fairly evenly within the group of retired households, but housing subsidy is substantially higher for the middle three quintile groups since they have the highest concentration of public sector tenants. The benefits received by retired households from travel subsidies are mainly for bus travel, particularly in the form of concessionary fares, passes, etc., for senior citizens, and since these are not usually means-tested but depend instead on what sort of scheme is being operated by their local authority, there is no particular relationship with income.

Table L shows the extent to which income inequality amongst retired households is reduced by the tax-benefit system. Cash benefits play by far the largest part in bringing about this reduction and income tax payments make a further, though much smaller, contribution. Payments of indirect taxes result in an increase in inequality.

A comparison of Table L with Table J shows that although the distribution of original income amongst retired households is much more unequal than that within the non-retired household group, the distribution of post-tax income is more equal amongst the retired than amongst the non-retired.

Chart 6 illustrates the different impact which the tax-benefit system has on retired households in different quintile groups.

Percentage shares of total household income and Gini coefficients¹ for RETIRED households, 1995-96

TABLE L

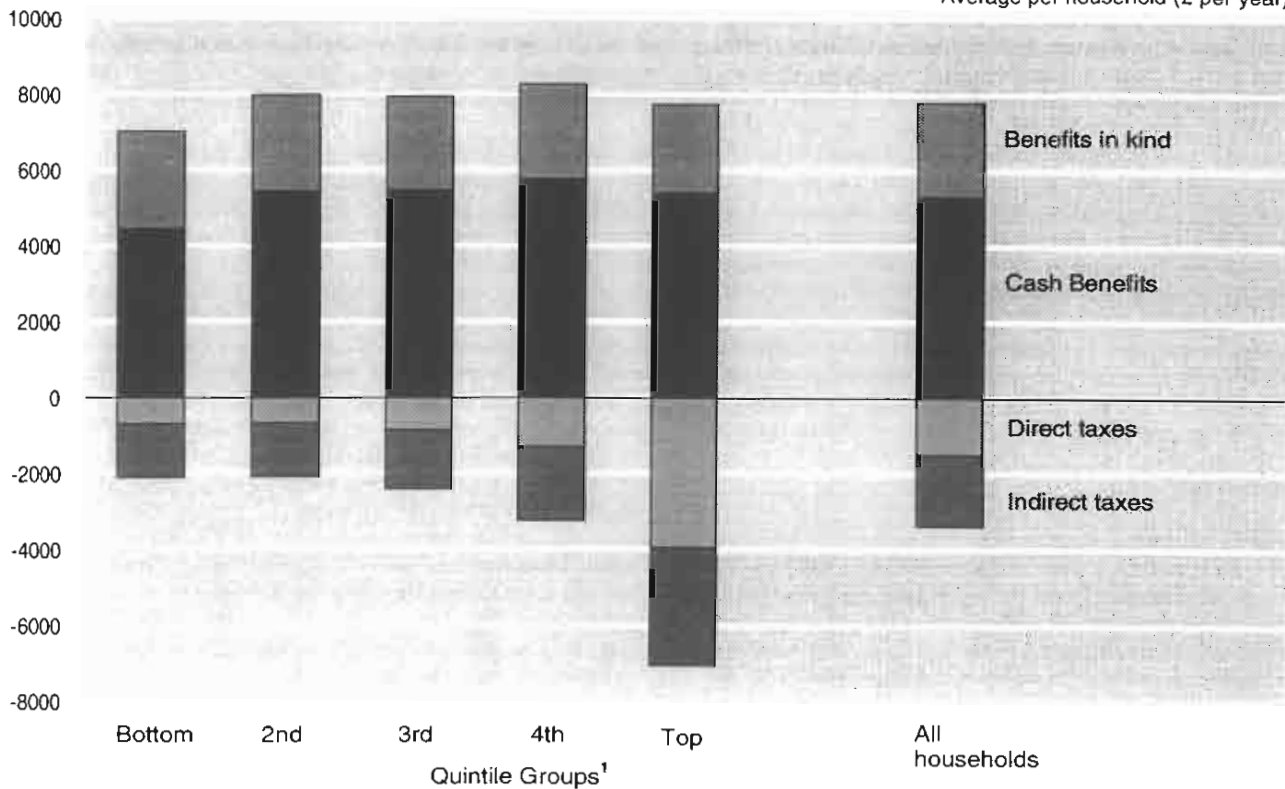
	Percentage shares of total equivalised income for RETIRED households ranked by equivalised disposable income			
	Original income	Gross income	Disposable income	Post-tax income
Quintile group				
Bottom	3.6	10.3	10.4	9.2
2nd	6	13	14	14
3rd	10	16	17	17
4th	19	21	21	21
Top	61	40	38	39
All retired households	100	100	100	100
Decile group				
Bottom	1.4	4.6	4.5	3.7
Top	44	26	24	25
Gini coefficient (percent)	66	29	27	31

¹ This is a measure of the dispersion of each definition of income. Unlike the percentage shares analysis where the household incomes are ranked only once, the Gini coefficient calculation needs a separate ranking for each income definition. For example, the coefficient for original income is produced by first equivalising the original income of all the households, then this distribution is ranked and this ranked distribution is used to calculate the coefficient.

CHART 6

Summary of the effects of taxes and benefits on RETIRED households, 1995-96

Average per household (£ per year)



1. Households are ranked throughout by their equivalised disposable income.

**PART 2
COMPARISON WITH NATIONAL ACCOUNTS**

This special section compares the estimates in this redistribution of income (ROI) analysis with national accounts (NA) estimates. The comparison is based on data for 1994-95, NA data for 1995-96 are not yet available, and covers original, gross and disposable income. This report presents a summary of the results with a brief explanation of some of the major areas of disparity. A fuller report will be published by the ONS later in the year.

The differing purposes of the ROI and the NA lead to differences in scope, definitions, sources and methods. For example, the scope of NA includes all resident persons whereas the ROI covers only those in households; the NA defines lump sum pension and redundancy payments as income, ROI does not; and income in FES is for the latest period the respondent is able to give, that for NA relates to the particular year. Where possible adjustments have been made for these differences but it is not surprising that disparities still remain.

The ratio of ROI to NA remains fairly stable from year to year for most components. However, the ratio for self-employment income and for investment income shows considerable volatility between years. The full explanation for this volatility is not known, but it is likely to be a result of timing problems for the FES data and perhaps with the sampling of outliers at the very top of the income distribution.

In order to compare the estimates, it is necessary to gross up the sample to the total population in private households and to adjust the national aggregates to allow for those not in private households, for example people living in old peoples' homes. The sample is inflated

Adjustment factor for National Accounts control totals, 1994-95

TABLE M

	Adjustment factor	
	percent ¹	name
Economically active		
Employed	1.14	EMP
Unemployed	1.75	UMP
Economically inactive		
Retired	5.21	RET
Permanently sick	11.12	PSK
Total aged 16 or over	2.81	TOT
Aged under 16	0.31	CHD
Income Support ²	15.90	IS

¹ Non-household population as a percentage of total population.
² Income Support paid to non-household population as percentage of total Income Support paid out.

to population level by using a uniform grossing factor (23.7 million households in UK / 6,853 households in sample = 3,460). More sophisticated re-weighting systems which take account of the differential response rate of household types do not have much impact on the estimates at the level of aggregation shown here.

zx The adjustment factors used for the income of the non-household population are based on the percentage of non-household population out of the total population in various categories. There are no estimates of the income of the non-household population that would allow the control totals to be adjusted directly. The adjustment factors used here were derived by Redmond and Wilson (1995), *Validating Polimod Output* (Microsimulation Unit Research Notes, No MU/RN/14, University of Cambridge) based on 1991 Census results. Table M shows the main factors used. The use of these factors assumes that the incidence of different elements of income are the same across the household and non-household population; that the average income among those in the FES population is the same as that among those outside it; and that the non-household population remained the same as a proportion of the total population for each of the categories between the Census in 1991 and 1994-95.

Each of these assumptions is a potential source of error and there is some evidence that the average disposable income of the non-household population is below that of the household population. However, better estimates for non-household income are not available.

Original income

Original income from ROI is 84 per cent of the adjusted NA estimate (Table N). For the largest component, **wages and salaries**, the proportion is 94 per cent. When allowance is made for the difference in coverage of the armed forces, and for the difference in treatment of the earnings of juveniles, undeclared income and balancing adjustments, the proportion for wages and salaries rises to 96 per cent.

A possible explanation for the shortfall in wages and salaries is that income in the ROI is based on normal gross earnings rather than current earnings. Normal earnings should provide a better estimate for annual income. However, average normal earnings are lower than average current earnings, by 2.7 per cent in 1994-95, possibly because unusual additional earnings are greater than unusual deficits.

Income in kind from employment makes up less than 2 per cent of total original income. Coverage in ROI is limited by the information collected in the FES. ROI covers company cars and fuel, which account for two thirds of the Inland Revenue estimate of taxable benefits, and the benefit of subsidised loans from employers for

Comparison of values for Original income between National Accounts and reweighted Re-distribution of Income, 1994-95

TABLE N

	Adjustment Factor	NA	ROI	ROI as % of NA
<i>£billion</i>				
Wages and salaries	EMP	310.4	290.7	94
Income in kind	EMP	7.8	6.6	84
Self employment	EMP	57.4	45.2	79
Occupational pensions	RET	60.0	28.9	48
Investment income	TOT	37.2	19.7	53
Other income			5.4	
Original income		473.0	396.4	84

house purchase. NA covers a wider range of taxable benefits and non-taxable benefits such as subsidised catering.

The match for **self-employment income** is better for 1994-95 than for most recent years, even so the ROI aggregate is only 79 per cent of the NA figure. The NA estimate includes an adjustment for evasion or under-recording of 13 per cent for 1994-95. Before this adjustment, ROI accounted for 91 per cent of NA.

Measuring self employment income from survey data is difficult for three, not necessarily independent, reasons: that self employment respondents find it difficult to assess their income; that self employment income is under reported and that the response rate is lower for the self employed.

The major cause of the difference between the ROI and the NA for **occupational pensions** is in the treatment of lump sum payments. Lump sum payments arising from retirement, redundancy or life assurance policies reaching maturity are included as income in NA but not in the FES as they are not regular payments. Only half of the NA aggregate for pensions and other benefits paid by life assurance and pension schemes is comparable with the ROI measure of occupational pensions and annuities.

Income from investments in ROI is only 53 per cent of the NA total. There are some differences in coverage, for example the NA figures include income from private trusts which is not likely to be in the FES, but the main problem is likely to be under-reporting of investment income in the survey.

There are two ways in which the FES is known to under-report investment income. Information from the banks and building societies show that there are a large number of "middle income" people with small amounts of investment income. Far fewer report investment income in the FES. Secondly, and more seriously, people at the top end of the income distribution with investment income are under-represented in the FES.

Another problem with comparing investment income between FES and NA is that they do not relate to the same time period. FES data generally do not relate to the survey year. Respondents refer to accounts or statements which are several months old and themselves refer to interest earned in the preceding twelve months. Even those respondents interviewed at the end of the survey year may be reporting income accrued before the start of the survey year.

Other income in ROI includes trade union benefits, children's income, private scholarships, income from baby-sitting, maintenance, regular allowances (from relatives for example) and income from odd jobs. Most of these are not included in NA as they are transfers within the household sector.

Cash benefits

Contributory cash benefits in the ROI amounted to 94 per cent of the NA total in 1994-95 (Table P). For the most important benefit, **retirement pension**, the proportion was even higher at 98 per cent. The results for **unemployment benefit** are not as good. This may be associated with the under-representation of the unemployed in the FES and fraud, which was estimated at 7.2 per cent of expenditure in 1994.

The match for non-contributory benefits is not as good mainly because of **income support**. The NA figures for income support (IS) have been adjusted to allow for payments to the non-household population. This is important for this benefit as the average payment to those living in institutional care is much higher than the average

Comparison of values for cash benefits between National Accounts and reweighted Re-distribution of income, 1994-95

TABLE P

	Adjustment Factor	NA	ROI	ROI as % of NA
<i>£ billion</i>				
Contributory benefits		37.9	35.8	94
Retirement pension	RET	27.6	27.1	98
Unemployment benefit	UMP	1.3	0.9	69
Invalidity pension and allowance	PSK	7.0	6.1	87
Other contributory benefits	EMP/TOT	2.0	1.7	86
Non-contributory benefits		31.4	25.4	81
Income support	IS	13.9	10.9	79
Family benefits	CHD	8.0	8.2	102
War pensions	TOT	1.0	0.5	50
Other cash benefits	TOT/RET	8.4	5.7	67
Other current transfers		18.0	10.2	57
Housing benefits ¹		10.2	7.8	76
Other		7.8	2.4	31
Current grants to household sector		87.2	71.3	82

¹ For the purpose of this table Council tax benefit has been excluded from the ROI figure to bring it into line with national accounts which treat the benefit as revenue foregone.

for all recipients. Even with this adjustment the ROI figure is only 80 per cent of the NA. One difficulty with the comparison of IS is fraud. In an exercise in 1994 it was estimated that 8.2 per cent of IS expenditure was lost in this way. Also the FES tends to under-record the number of pensioners on IS, particularly those receiving small amounts. Because pensioners receive their benefit in conjunction with their retirement pension, some of this apparent under-reportage may be mis-classification as pension income and, therefore, not lead to under-reporting of total income.

In national accounts, **housing benefit** is treated as part of other current transfers to the household sector. The Department of Social Security does not estimate the amount of housing benefit paid to the non-household population, so no adjustment is made here, even though benefit is paid to some of those in bed-and-breakfast and hostel accommodation. Total fraud for housing benefit is estimated at over £900 million in 1995, about 10 per cent of total expenditure.

For the remainder of other current transfers to the household sector, the coverage of FES, and hence ROI, is restricted to student maintenance awards and government training schemes. The NA coverage is much wider and includes non-government transfers.

Comparison of values for direct taxes between National Accounts and grossed up Re-distribution of income, 1994-95

TABLE Q

	Adjustment Factor	NA	ROI	ROI as % of NA
<i>£ billion</i>				
Income tax	TOT	69.9	66.2	95
Life assurance payments	TOT	0.1	0.1	105
MIRAS		3.1	3.7	121
Net income tax		66.7	62.3	93
Employees NICs	TOT	18.4	18.4	100
Local taxes ¹		12.8	13.2	103
Total direct taxes		97.9	93.9	96

¹ For the purposes of this table Council tax benefit has been excluded from the ROI figure to bring it into line with national accounts which treats the benefit as revenue foregone.

Direct taxes

The overall match for direct tax is quite good with ROI accounting for around 96 per cent of NA estimates (Table Q). Many of the problems with income data feed through into problems with tax. For example: if income estimates are based on an earlier period then it is likely that the tax estimates will be similarly out of date; if investment income is under reported, then the tax paid will also be missed.

The over-reporting of tax relief at source arises from a difference in the treatment of tax relief on mortgage interest payments between ROI and NA. Under the mortgage interest relief at source scheme, a borrower pays the lender the interest less the tax relief and the lender is reimbursed by the Inland Revenue for the amount deducted. Borrowers are able to deduct income tax at the available rate from their interest payments irrespective of their taxable income. Any payment to lenders for interest paid by non-taxpayers are treated as public expenditure rather than tax relief. In ROI this distinction between taxpayers and non-taxpayers is not drawn.

Conclusion

In general, the match between ROI and NA is reasonably good. After making allowances for differences in coverage and definitions, ROI captures more than 90 per cent of the national aggregates for most components of income and direct taxation. The two components which fall below that level, self-employment income and investment income, suffer from a combination of under-reporting, non-response and timing problems which are difficult to resolve satisfactorily.

This comparison exercise is seen as a step towards producing the analysis for the total household population by re-weighting the sample.

APPENDIX 1

Detailed tables for 1995-96

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Average incomes, taxes and benefits, 1995-96	
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A table showing the average incomes, taxes and benefits for 1995-96 by quintile groups within household type is available from the ONS on request.

Guide to the allocation of general government expenditure and financing to households in 1995

TABLE 1 (Appendix 1)

Expenditure			Financing		
	£ million	% of total		£ million	% of total
Allocated expenditure¹			Allocated financing¹		
Allocated cash benefits			Income tax ⁴	67 450	22.1
Contributory (National Insurance, etc)			Employees' & self-employed NI contributions	20 180	6.6
Retirement	29 930	9.8	Council tax	8 990	3.0
Widows and guardians	1 020	0.3	Taxes on final goods and services		
Unemployment	1 120	0.4	VAT	32 400	10.6
Sickness/Statutory sick pay	340	0.1	Duty on beer	2 480	0.8
Invalidity	7 960	2.6	Duty on wines, cider, perry	890	0.3
Maternity/Statutory maternity pay	460	0.2	Duty on spirits	1 860	0.6
Other	410	0.1	Customs duties	1 290	0.4
Non-contributory			Betting duties	1 550	0.5
Family benefits	8 300	2.7	Duty on tobacco	7 170	2.4
Income support	16 620	5.5	Duty on hydrocarbon oils	7 110	2.3
War pensions	1 200	0.4	Vehicle excise duty	2 700	0.9
Other	9 820	3.2	Camelot: payments to NLDF	1 260	0.4
Student maintenance grants ²	1 800	0.6	Other	2 520	0.8
Rent rebates and allowances	10 670	3.5	Taxes & NI contributions on intermediate goods & services		
Allocated benefits in kind			Employers' NI contributions	7 900	2.6
Health services	40 250	13.2	Commercial & industrial rates	5 910	1.9
Education	33 320	10.9	Duty on hydrocarbon oils	4 090	1.3
School meals and welfare milk	720	0.2	VAT	2 640	0.9
Housing subsidy	1 190	0.4	Vehicle excise duty	700	0.2
Travel subsidies ³	1 820	0.6	Other	1 170	0.4
	166 960	54.8		180 260	59.2
Unallocated expenditure			Unallocated financing		
Other current expenditure	89 020	29.2	Employers' NI contributions not allocated	16 170	5.3
Capital expenditure	18 800	6.2	Taxes on expenditure not allocated	27 860	9.1
Debt interest	25 800	8.5	Other taxes		
Non-trading capital consumption	4 130	1.4	Corporation tax	22 400	7.4
			Petroleum revenue tax	820	0.3
			Taxes on capital	2 690	0.9
			Other receipts ⁵	13 060	4.3
			Non-trading capital consumption	4 130	1.4
			General government borrowing requirement	37 320	12.2
Total expenditure	304 710	100.0	Total financing	304 710	100.0

1 Including benefits to and taxes paid by, people not living in private households. It is not possible (for the reasons given in Appendix 3, paragraph 1) to allocate all Government expenditure and revenue to households.

2 Estimated.

3 Including concessionary fares expenditure.

4 Net of tax relief at source on mortgage interest and life assurance premiums.

5 Receipts of rent, royalties and licence fees on oil and gas production, interest, dividends, trading income and miscellaneous transactions (net).

Source: United Kingdom National Accounts, 1996 Edition, Tables 9.4 & 9.1.

Average incomes, taxes and benefits by decile groups of ALL households, 1995-96

TABLE 2A (Appendix 1)

	Decile groups of households ranked by equivalised disposable income										All households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	6 299	7 786	9 073	10 635	12 451	14 504	17 094	20 394	26 662		
Number of households in the sample	680	679	680	680	680	679	680	680	679	680	6 797
Original income											
Wages and salaries	1 013	1 761	2 729	5 362	8 791	11 983	15 913	19 316	25 279	34 328	12 647
Imputed income from benefits in kind	45	10	19	34	83	108	166	417	640	1 137	266
Self-employment income	415	318	510	636	1 128	1 375	1 424	1 910	2 194	7 902	1 781
Occupational pensions, annuities	177	409	787	1 107	1 255	1 359	1 652	1 925	1 879	2 941	1 349
Investment income	236	171	242	437	475	689	733	936	1 399	3 881	920
Other income	134	162	128	196	134	204	213	294	385	537	239
Total	2 020	2 830	4 415	7 771	11 866	15 718	20 102	24 798	31 776	50 727	17 203
Direct benefits in cash											
Contributory											
Retirement pension	1 214	1 783	2 013	1 736	1 384	1 135	875	740	550	554	1 198
Unemployment benefit	47	44	38	33	40	34	23	28	17	15	32
Incapacity benefit	199	342	345	302	389	319	245	278	148	69	264
Widows' benefits	49	40	39	32	61	24	40	53	43	11	39
Statutory Maternity Pay/ Allowance	1	4	8	14	15	16	37	34	47	82	26
Non-contributory											
Income support	1 355	1 189	708	506	469	279	209	91	46	26	488
Child benefit	507	392	305	298	362	335	296	276	250	185	321
Housing benefits	819	1 131	984	731	455	248	187	40	27	9	463
Invalid care allowance	27	19	56	39	43	32	41	8	8	3	28
Attendance allowance	5	40	58	118	113	127	73	40	14	18	61
Disability living allowance	41	55	141	199	249	128	150	90	47	25	113
War pensions	-	9	11	22	20	44	40	25	8	21	20
Severe disablement allowance	-	25	21	53	45	15	38	13	22	3	23
Industrial injury disablement benefit	11	23	30	12	19	9	30	46	18	22	22
Student maintenance awards	66	54	80	80	42	80	25	44	49	23	54
Government training schemes	29	23	22	9	17	18	23	15	9	7	17
Family credit	107	113	120	81	54	20	19	13	1	-	53
Other non-contributory benefits	46	18	52	19	49	32	32	42	7	5	30
Total cash benefits	4 523	5 305	5 032	4 284	3 826	2 894	2 382	1 875	1 310	1 079	3 251
Gross income	6 544	8 136	9 447	12 055	15 692	18 613	22 484	26 673	33 086	51 805	20 454
Direct taxes and Employees' NIC											
Income tax	680	280	493	920	1 568	2 213	2 962	3 934	5 799	10 373	2 922
less: Tax relief at source ¹	44	31	37	65	102	141	163	182	236	242	124
Employees' NI contributions	77	114	182	365	599	824	1 086	1 307	1 655	1 961	817
Local taxes ²	613	574	572	609	639	668	690	726	766	869	673
Total	1 327	937	1 210	1 830	2 703	3 564	4 575	5 785	7 984	12 961	4 288
Disposable income	5 217	7 198	8 237	10 225	12 989	15 049	17 909	20 888	25 102	38 844	16 166
<i>Equivalised disposable income</i>	4 795	7 097	8 431	9 829	11 535	13 413	15 763	18 705	23 106	37 654	15 033
Indirect taxes											
Taxes on final goods and services											
VAT	721	644	725	1 009	1 185	1 366	1 580	1 729	1 917	2 507	1 338
Duty on tobacco	302	289	288	342	343	312	322	326	258	176	296
Duty on beer and cider	46	52	56	84	109	112	131	145	170	154	106
Duty on wines	10	8	11	18	19	26	35	37	63	92	32
Duty on spirits	35	35	50	61	61	86	96	101	110	110	74
Duty on hydrocarbon oils	163	135	146	224	293	336	385	417	452	467	302
Vehicle excise duty	58	48	59	83	99	120	137	149	148	154	106
Television licences	72	72	76	75	81	79	82	84	83	84	79
Stamp duty on house purchase	8	3	4	7	9	13	17	25	34	65	19
Customs duties	28	26	28	36	43	51	56	59	66	85	48
Betting taxes	44	45	53	64	74	74	77	78	70	69	65
Fossil fuel levy	20	18	18	19	21	21	21	21	23	25	21
Camelot National Lottery Fund	42	38	44	51	65	71	76	74	70	51	58
Other	13	20	10	18	16	38	25	38	37	46	26
Intermediate taxes											
Commercial and industrial rates	120	109	118	154	184	208	240	263	301	402	210
Employers' NI contributions	156	141	154	201	237	269	310	342	392	523	272
Duty on hydrocarbon oils	85	78	84	106	125	137	156	171	200	259	140
Vehicle excise duty	13	12	13	17	20	22	25	28	33	43	23
Other	77	70	76	100	118	133	153	167	190	247	133
Total indirect taxes	2 012	1 844	2 013	2 669	3 102	3 476	3 924	4 255	4 617	5 560	3 347
Post-tax income	3 205	5 355	6 224	7 556	9 887	11 573	13 985	16 633	20 485	33 284	12 819
Benefits in kind											
Education	2 127	1 498	1 366	1 234	1 441	1 408	1 104	1 036	1 066	592	1 287
National health service	1 875	1 911	1 889	1 777	1 801	1 660	1 579	1 459	1 332	1 337	1 662
Housing subsidy	76	104	99	70	50	30	28	17	11	2	49
Rail travel subsidy	27	14	25	37	30	26	39	44	97	155	49
Bus travel subsidy	27	36	37	34	31	27	20	17	16	12	26
School meals and welfare milk	125	73	35	16	10	6	3	0	1	0	27
Total	4 257	3 636	3 452	3 166	3 362	3 158	2 773	2 574	2 523	2 098	3 100
Final income	7 463	8 990	9 676	10 723	13 249	14 730	16 758	19 206	23 008	35 382	15 919

1 On mortgage interest and life assurance premiums.

2 Gross Council tax, Rates and Water charges but after deducting discounts and transitional relief.

Household characteristics of decile groups of ALL households, 1995-96

TABLE 2B (Appendix 1)

	Decile groups of ALL households ranked by equivalised disposable income										All households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (number)											
People	2.7	2.4	2.2	2.3	2.6	2.6	2.6	2.5	2.4	2.2	2.4
<i>Adults</i>	1.6	1.6	1.6	1.7	1.9	1.9	2.0	2.0	1.9	1.9	1.8
<i>Children</i>	1.0	0.7	0.6	0.6	0.7	0.7	0.6	0.5	0.5	0.4	0.6
Economically active people	0.5	0.5	0.6	0.8	1.1	1.3	1.5	1.6	1.6	1.6	1.1
Retired people	0.5	0.6	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.4
People in full-time education	0.93	0.61	0.52	0.52	0.60	0.57	0.48	0.46	0.43	0.29	0.54
<i>In state primary schools</i>	0.55	0.34	0.27	0.28	0.30	0.28	0.23	0.22	0.16	0.11	0.27
<i>In state secondary schools</i>	0.26	0.20	0.16	0.17	0.21	0.20	0.16	0.14	0.13	0.07	0.17
<i>In further and higher education</i>	0.10	0.07	0.08	0.06	0.08	0.08	0.06	0.06	0.09	0.04	0.07
<i>In other educational establishments</i>	0.02	0.01	0.02	0.02	0.01	0.01	0.04	0.04	0.06	0.07	0.03
Composition (percentages)											
Household type											
Retired											
1 adult	20	21	32	23	13	12	8	5	4	3	14
2 or more adults	14	22	19	17	15	9	9	7	6	5	12
Non-retired											
1 adult	11	11	8	9	11	12	12	16	18	21	13
2 adults	10	8	9	14	16	21	25	28	33	41	20
3 or more adults	2	3	2	6	7	9	13	12	9	7	7
1 adult with children	15	17	10	6	5	4	3	2	1	1	6
2 adults with 1 child	7	5	4	5	9	11	10	11	12	11	8
2 adults with 2 children	9	5	8	12	15	14	14	12	11	7	11
2 adults with 3 or more children	10	6	5	5	5	5	4	4	3	2	5
3 or more adults with children	3	3	3	4	5	5	4	4	3	2	3
Household tenure											
Rented											
Local authority rented	32	45	44	28	21	13	10	4	3	1	20
Housing association	5	10	7	6	5	3	3	2	1	0	4
Other rented unfurnished	4	6	6	8	6	4	4	3	4	3	5
Rented furnished	3	3	4	5	4	4	3	3	5	5	4
Rent free	2	1	1	1	1	2	2	2	1	1	1
Owner occupied											
With mortgage	19	14	15	27	38	49	54	62	71	70	42
Rental purchase	0	0	-	0	0	1	1	-	0	0	0
Owned outright	35	20	24	26	25	24	23	25	16	20	24
Age of chief economic supporter											
Under 25	7	6	5	3	4	4	3	4	3	2	4
Over 24 and under 35	17	18	14	14	17	21	19	22	28	26	20
Over 34 and under 45	21	14	14	17	20	18	22	23	24	24	20
Over 44 and under 55	12	11	9	11	15	20	22	24	24	27	18
Over 54 and under 65	12	12	13	16	16	14	17	16	11	13	14
Over 64 and under 75	13	22	24	21	16	13	11	8	7	6	14
Over 74	18	18	22	17	12	10	5	4	3	4	11
Employment status of chief economic supporter											
Self-employed	7	4	5	6	8	9	7	9	8	15	8
Full-time employee at work	5	11	15	27	41	52	60	67	73	69	42
Part-time employee at work	7	7	8	8	7	7	6	4	5	4	6
Unemployed	16	11	5	6	5	3	4	4	3	3	6
Unoccupied and under minimum NI age	32	25	17	14	11	7	7	6	3	2	12
Retired/unoccupied over minimum NI age	32	41	49	39	29	22	16	11	9	8	26
Other	2	1	1	0	0	-	-	0	-	-	0

Average incomes, taxes and benefits by decile groups of NON-RETIRED households, 1995-96

TABLE 3A (Appendix 1)

	Decile groups of NON-RETIRED households ranked by equivalised disposable income										All non-retired households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	6 515	8 366	10 384	12 205	14 017	16 259	18 897	22 299	28 167		
Number of households in the sample	502	501	502	501	502	501	502	501	502	501	5 015
Original income											
Wages and salaries	1 518	3 740	7 614	11 551	14 657	18 372	21 194	23 602	29 241	39 132	17 060
Imputed income from benefits in kind	69	15	38	103	102	221	389	516	776	1 361	359
Self-employment income	684	615	1 069	1 379	1 896	1 532	2 077	2 080	2 822	9 921	2 407
Occupational pensions, annuities	67	169	291	395	524	601	784	925	999	1 738	649
Investment income	186	67	193	280	409	472	512	612	1 123	2 824	668
Other income	183	249	251	210	244	224	243	495	384	620	310
Total	2 706	4 855	9 457	13 917	17 832	21 422	25 199	28 230	35 346	55 596	21 453
Direct benefits in cash											
Contributory											
Retirement pension	43	149	320	475	380	303	359	260	221	213	272
Unemployment benefit	66	72	46	49	58	26	35	14	24	12	40
Incapacity benefit	274	510	482	384	358	198	310	238	152	35	294
Widows' benefits	69	37	42	72	32	36	33	90	10	15	44
Statutory maternity pay / Allowance	4	10	16	26	20	40	35	52	51	99	35
Non-contributory											
Income support	1 973	1 730	848	529	282	155	88	64	52	25	575
Child benefit	755	658	520	493	448	394	317	295	246	194	432
Housing benefits	1 164	1 406	796	445	222	118	41	37	18	6	425
Invalid care allowance	32	29	86	44	46	40	15	7	7	4	31
Attendance allowance	3	8	0	27	21	26	15	13	3	5	12
Disability living allowance	50	97	318	219	126	149	82	60	45	20	117
War pensions	-	-	7	-	29	16	7	4	-	17	8
Severe disablement allowance	-	23	60	49	20	51	16	17	20	-	26
Industrial injury disablement benefit	15	16	18	11	8	21	48	42	9	14	20
Student maintenance awards	97	106	145	75	82	38	39	72	39	30	72
Government training schemes	41	37	35	20	23	24	19	18	7	9	23
Family credit	156	218	178	82	30	30	14	6	1	-	71
Other non-contributory benefits	39	25	29	46	18	17	3	29	1	1	21
Total cash benefits	4 782	5 130	3 946	3 047	2 203	1 683	1 477	1 316	906	700	2 519
Gross income	7 488	9 985	13 403	16 964	20 035	23 104	26 676	29 547	36 252	56 296	23 972
Direct taxes and Employees' NIC											
Income tax	936	530	1 118	1 831	2 454	3 173	3 885	4 757	6 541	11 380	3 660
less: Tax relief at source ¹	62	48	85	132	166	195	198	229	259	264	164
Employees' NI contributions	111	246	518	781	1 021	1 251	1 445	1 585	1 899	2 173	1 103
Local taxes ²	611	565	606	634	677	684	705	710	776	875	684
Total	1 596	1 293	2 157	3 113	3 987	4 913	5 836	6 823	8 957	14 164	5 283
Disposable income	5 891	8 692	11 246	13 851	16 048	18 191	20 839	22 724	27 295	42 133	18 689
Equivalised disposable income	4 737	7 478	9 389	11 302	13 089	15 181	17 601	20 392	25 041	40 155	16 434
Indirect taxes											
Taxes on final goods and services											
VAT	807	815	1 163	1 298	1 461	1 712	1 737	1 779	2 071	2 684	1 553
Duty on tobacco	399	360	457	422	381	356	390	271	255	189	348
Duty on beer and cider	52	68	115	125	128	144	166	166	173	168	130
Duty on wines	11	10	18	20	26	31	39	44	69	98	36
Duty on spirits	31	38	67	52	84	93	113	94	95	105	77
Duty on hydrocarbon oils	198	196	255	348	385	435	430	440	462	493	364
Vehicle excise duty	60	59	85	110	130	143	147	146	150	154	118
Television licences	69	71	75	81	81	82	84	83	83	84	79
Stamp duty on house purchase	8	4	7	9	15	17	20	28	40	73	22
Customs duties	32	32	43	46	55	61	58	62	71	91	55
Betting taxes	46	46	74	71	82	84	83	78	69	78	71
Fossil fuel levy	20	20	20	22	22	22	22	22	23	25	22
Camelot National lottery fund	49	47	60	72	76	88	78	74	67	52	66
Other	13	17	21	16	46	24	35	36	36	47	29
Intermediate taxes											
Commercial and industrial rates	131	133	172	199	221	255	268	277	325	422	240
Employers' NI contributions	171	172	222	257	285	329	347	360	423	550	312
Duty on hydrocarbon oils	95	96	119	135	148	164	178	183	211	276	160
Vehicle excise duty	15	15	19	22	24	26	29	30	35	46	26
Other	85	85	112	128	143	163	170	176	205	262	153
Total indirect taxes	2 294	2 286	3 106	3 435	3 791	4 231	4 393	4 350	4 860	5 898	3 864
Post-tax income	3 598	6 406	8 140	10 415	12 257	13 961	16 447	18 374	22 435	36 235	14 824
Benefits in kind											
Education	3 107	2 550	2 348	1 964	1 840	1 465	1 201	1 276	893	647	1 729
National health service	1 600	1 541	1 408	1 624	1 441	1 490	1 436	1 277	1 256	1 224	1 430
Housing subsidy	101	129	73	46	26	25	18	14	4	2	44
Rail travel subsidy	36	36	36	43	33	34	59	58	108	180	62
Bus travel subsidy	11	15	15	18	17	13	16	12	12	9	14
School meals and welfare milk	187	107	41	16	10	2	1	2	1	0	37
Total	5 042	4 379	3 921	3 711	3 366	3 030	2 731	2 640	2 274	2 062	3 316
Final income	8 640	10 785	12 061	14 126	15 623	16 990	19 178	21 014	24 709	38 297	18 140

¹ On mortgage interest and life assurance premiums.

² Gross Council tax, Rates and Water charges but after deducting discounts and transitional relief.

Household characteristics of decile groups of NON-RETIRED households, 1995-96

TABLE 3B (Appendix 1)

	Decile groups of NON-RETIRED households ranked by equivalised disposable income										All non-retired households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (number)											
People	3.3	3.0	2.9	3.0	2.9	2.8	2.7	2.5	2.4	2.3	2.8
Adults	1.7	1.7	1.9	2.0	2.0	2.0	2.1	1.9	1.9	1.9	1.9
Children	1.5	1.3	1.0	1.0	0.9	0.8	0.6	0.6	0.5	0.4	0.9
Economically active people	0.8	0.9	1.3	1.5	1.7	1.8	1.8	1.7	1.8	1.8	1.5
Retired people	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
People in full-time education	1.36	1.03	0.92	0.83	0.76	0.64	0.52	0.51	0.40	0.31	0.73
<i>In state primary schools</i>	0.81	0.56	0.46	0.43	0.38	0.31	0.24	0.22	0.16	0.12	0.37
<i>In state secondary schools</i>	0.38	0.33	0.30	0.27	0.27	0.23	0.15	0.16	0.10	0.07	0.23
<i>In further and higher education</i>	0.14	0.13	0.12	0.11	0.10	0.06	0.08	0.08	0.07	0.05	0.09
<i>In other educational establishments</i>	0.03	0.02	0.04	0.02	0.01	0.04	0.05	0.05	0.07	0.07	0.04
Composition (percentages)											
Household type											
Non-retired											
1 adult	16	18	17	14	15	13	17	21	20	23	17
2 adults	14	14	22	23	25	30	30	34	39	44	28
3 or more adults	3	5	9	10	11	11	17	11	9	9	9
1 adult with children	24	27	13	8	4	4	2	3	1	1	9
2 adults with 1 child	10	9	8	11	13	13	12	12	14	11	11
2 adults with 2 children	14	11	18	20	19	18	14	13	10	8	15
2 adults with 3 or more children	15	11	8	8	7	6	4	4	3	2	7
3 or more adults with children	4	5	6	6	7	5	5	3	3	2	5
Household tenure											
Rented	62	72	53	36	26	20	16	14	11	10	32
<i>Local authority rented</i>	44	49	29	21	12	8	5	4	1	1	18
<i>Housing association</i>	8	10	7	2	3	2	2	1	1	-	4
<i>Other rented unfurnished</i>	4	6	8	7	6	4	4	3	3	4	5
<i>Rented furnished</i>	5	6	8	5	5	4	3	4	6	5	5
<i>Rent free</i>	1	1	1	1	1	2	2	1	1	0	1
Owner occupied	38	28	47	64	74	81	84	86	89	90	68
<i>With mortgage</i>	27	22	33	49	57	65	67	72	78	76	54
<i>Rental purchase</i>	0	0	0	0	1	1	1	0	0	0	0
<i>Owned outright</i>	11	6	14	15	16	15	16	14	10	14	13
Age of chief economic supporter											
Under 25	10	11	6	6	5	5	3	5	3	2	5
Over 24 and under 35	27	30	23	24	26	24	24	27	32	27	26
Over 34 and under 45	31	25	28	27	25	28	25	24	25	27	27
Over 44 and under 55	18	17	21	20	26	25	27	28	25	30	24
Over 54 and under 65	13	14	18	17	15	15	16	12	12	11	15
Over 64 and under 75	1	1	4	5	3	3	2	3	2	2	3
Over 74	0	1	1	2	1	1	1	1	1	0	1
Employment status of chief economic supporter											
Self-employed	11	7	10	10	12	8	9	9	10	17	10
Full-time employee at work	8	23	40	54	66	72	76	78	79	75	57
Part-time employee at work	10	13	14	11	8	8	4	6	6	4	8
Unemployed	23	16	10	8	3	5	5	3	3	3	8
Unoccupied and under minimum NI age	46	38	21	13	8	5	5	4	2	1	14
Retired/unoccupied over minimum NI age	0	2	4	5	3	1	1	1	0	0	2
Other	2	1	1	0	-	-	-	0	-	-	1

Average incomes, taxes and benefits by decile groups of RETIRED households, 1995-96

TABLE 4A (Appendix 1)

	Decile groups of RETIRED households ranked by equivalised disposable income										All retired households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	5 969	7 007	7 851	8 548	9 176	10 095	11 554	13 817	17 625		
Number of households in the sample	178	178	179	178	178	178	178	179	178	178	1 782
Original income											
Wages and salaries	45	29	74	162	88	131	225	354	410	772	229
Imputed income from benefits in kind	-	-	6	-	3	-	29	-	0	3	4
Self-employment income	6	21	-	29	29	11	39	-	57	25	22
Occupational pensions, annuities	335	742	779	1 245	1 456	2 177	3 122	4 111	6 360	12 880	3 320
Investment income	281	330	350	383	373	733	850	1 422	2 034	9 548	1 629
Other income	19	37	48	43	62	64	8	49	30	18	38
Total	685	1 158	1 256	1 862	2 012	3 117	4 272	5 936	8 891	23 245	5 242
Direct benefits in cash											
Contributory											
Retirement pension	3 315	4 019	4 060	3 834	3 637	3 923	3 696	3 780	3 704	4 074	3 804
Unemployment benefit	10	19	10	22	8	0	9	-	-	7	9
Incapacity benefit	93	153	86	219	138	113	200	416	235	121	178
Widows' benefits	39	-	90	36	17	-	39	-	24	22	27
Statutory maternity pay/ Allowance	-	-	-	-	-	-	-	-	-	-	-
Non-contributory											
Income support	220	141	142	153	237	305	339	365	499	32	243
Child benefit	14	14	3	11	11	-	3	3	6	8	7
Housing benefits	233	435	708	934	945	740	663	474	526	38	570
Invalid care allowance	14	10	10	25	31	21	10	13	31	10	17
Attendance allowance	10	18	112	109	145	309	309	407	363	192	198
Disability living allowance	13	20	36	24	59	70	243	231	254	65	102
War pensions	-	6	28	15	33	47	71	45	182	108	53
Severe disablement allowance	-	11	30	12	23	25	43	-	14	14	17
Industrial injury disablement benefit	-	23	38	36	29	25	17	35	19	45	27
Student maintenance awards	-	-	-	12	-	-	7	-	15	-	3
Government training schemes	-	-	-	-	1	1	-	-	-	-	0
Family credit	-	-	-	-	-	-	-	-	-	-	-
Other non-contributory benefits	54	34	34	61	22	43	33	93	118	69	56
Total cash benefits	4 015	4 904	5 390	5 502	5 336	5 622	5 683	5 862	5 988	4 805	5 311
Gross income	4 700	6 062	6 646	7 363	7 348	8 740	9 956	11 799	14 879	28 049	10 553
Direct taxes and Employees' NIC											
Income tax	69	93	68	145	193	346	516	809	1 350	4 882	847
Less: Tax relief at source ¹	8	6	14	6	15	14	14	18	11	29	13
Employees' NI contributions	12	2	1	7	9	6	10	14	19	45	12
Local taxes ²	624	590	564	579	560	610	621	636	703	913	640
Total	697	678	619	725	747	948	1 134	1 441	2 062	5 811	1 486
Disposable income	4 004	5 384	6 027	6 638	6 601	7 792	8 822	10 357	12 817	22 238	9 067
<i>Equivalised disposable income</i>	<i>5 045</i>	<i>6 527</i>	<i>7 461</i>	<i>8 197</i>	<i>8 869</i>	<i>9 610</i>	<i>10 813</i>	<i>12 622</i>	<i>15 496</i>	<i>26 270</i>	<i>11 090</i>
Indirect taxes											
Taxes on final goods and services											
VAT	523	495	467	561	471	681	700	807	1 107	1 541	735
Duty on tobacco	121	156	165	153	187	183	137	147	134	96	148
Duty on beer and cider	25	43	29	26	36	31	41	44	38	53	37
Duty on wines	8	7	6	9	11	15	16	18	31	74	19
Duty on spirits	41	34	41	51	39	41	72	82	92	173	67
Duty on hydrocarbon oils	89	88	73	95	69	113	127	135	178	306	127
Vehicle excise duty	50	46	43	53	38	66	66	75	101	153	69
Television licences	76	76	76	77	74	75	74	77	76	84	77
Stamp duty on house purchase	5	3	2	4	3	5	6	8	14	30	8
Customs duties	21	19	18	23	18	24	27	31	43	56	28
Betting taxes	37	53	40	46	52	49	61	45	45	41	47
Fossil fuel levy	18	17	15	15	16	16	17	18	18	22	17
Camelot National lottery fund	25	28	30	35	34	37	45	39	43	40	36
Other	9	31	10	8	8	12	13	14	25	50	18
Intermediate taxes											
Commercial and industrial rates	92	89	85	94	85	112	122	134	162	266	124
Employers' NI contributions	119	114	110	124	111	147	160	174	212	346	162
Duty on hydrocarbon oils	63	61	61	67	60	75	86	90	106	161	83
Vehicle excise duty	10	9	9	11	9	12	14	14	17	26	13
Other	59	56	54	60	55	71	77	83	105	157	78
Total indirect taxes	1 391	1 427	1 334	1 509	1 377	1 765	1 861	2 033	2 547	3 676	1 892
Post-tax income	2 612	3 956	4 692	5 129	5 224	6 027	6 961	8 324	10 270	18 562	7 175
Benefits in kind											
Education	53	68	22	83	50	-	65	17	73	-	43
National health service	2 387	2 422	2 384	2 331	2 271	2 284	2 318	2 351	2 120	2 284	2 315
Housing subsidy	33	51	65	90	103	77	75	51	61	11	62
Rail travel subsidy	11	2	3	7	15	11	8	11	5	55	13
Bus travel subsidy	56	62	63	57	64	59	65	62	50	46	58
School meals and welfare milk	1	0	-	0	-	-	3	-	-	-	0
Total	2 541	2 605	2 538	2 568	2 503	2 431	2 534	2 492	2 308	2 396	2 492
Final income	5 153	6 561	7 230	7 697	7 727	8 458	9 495	10 816	12 579	20 959	9 667

1 On mortgage interest and life assurance premiums.

2 Gross Council tax. Rates and Water charges but after deducting discounts and transitional relief.

Household characteristics of decile groups of RETIRED households, 1995-96

TABLE 4B (Appendix 1)

	Decile groups of RETIRED households ranked by equivalised disposable income										All retired households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (number)											
People	1.5	1.6	1.5	1.5	1.3	1.5	1.5	1.5	1.5	1.6	1.5
<i>Adults</i>	1.43	1.52	1.49	1.48	1.33	1.50	1.51	1.53	1.53	1.61	1.49
<i>Children</i>	0.02	0.03	0.01	0.02	0.01	0.00	0.01	0.01	0.01	0.02	0.01
Economically active people	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Retired people	1.3	1.4	1.4	1.4	1.2	1.4	1.4	1.4	1.4	1.5	1.4
People in full-time education	0.02	0.03	0.01	0.02	0.02	0.00	0.02	0.01	0.02	0.02	0.02
Composition (percentages)											
Household type											
Retired											
1 adult	58	50	53	55	71	52	55	50	49	43	54
2 or more adults	42	50	48	46	29	48	46	50	51	57	46
Household tenure											
Rented	17	38	58	57	62	45	43	32	32	7	39
<i>Local authority rented</i>	12	28	35	44	49	29	28	22	21	2	27
<i>Housing association</i>	2	5	10	5	5	7	10	5	6	1	6
<i>Other rented unfurnished</i>	2	3	10	8	5	6	5	2	3	3	5
<i>Rented furnished</i>	0	0	0	0	1	1	1	0	1	0	0
<i>Rent free</i>	1	1	3	1	3	1	1	3	1	1	1
Owner occupied	83	62	42	43	38	55	57	68	69	93	61
<i>With mortgage</i>	5	3	6	3	5	10	7	11	6	11	7
<i>Owned outright</i>	78	59	36	39	33	46	49	58	62	83	54
Age of chief economic supporter											
Under 25	1	-	-	-	-	-	-	-	-	-	0
Over 24 and under 35	-	-	-	-	-	-	-	-	-	-	-
Over 34 and under 45	-	-	-	1	1	-	-	-	-	-	0
Over 44 and under 55	2	-	1	1	3	-	-	1	1	2	1
Over 54 and under 65	10	9	7	15	9	11	17	12	18	16	12
Over 64 and under 75	37	47	49	43	43	53	38	49	52	52	46
Over 74	51	44	44	40	45	36	45	38	29	31	40
Employment status of chief economic supporter											
Self-employed	1	1	-	1	-	1	-	-	-	-	0
Full-time employee at work	-	-	-	-	-	-	-	-	-	-	-
Part-time employee at work	-	1	1	-	1	-	-	-	-	-	0
Unemployed	1	-	-	-	-	-	-	-	-	-	0
Unoccupied and under minimum NI age	5	6	2	6	6	7	10	8	11	13	7
Retired/unoccupied over minimum NI age	93	93	97	94	94	93	90	92	89	87	92

Average incomes, taxes and benefits by decile groups of NON-RETIRED households without CHILDREN, 1995-96

TABLE 5 (Appendix 1)

	Decile groups of households ranked by equivalised disposable income										All households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	7 600	9 985	12 148	14 112	16 329	18 642	21 046	25 058	31 386		
Number of households in the sample	272	273	272	273	272	272	273	272	273	272	2724
Original income											
Wages and salaries	1 505	4 182	8 342	11 019	15 432	18 403	19 620	24 060	27 643	38 008	16 820
Imputed income from benefits in kind	47	22	39	42	124	207	269	480	494	1 402	313
Self-employment income	527	526	733	1 310	1 097	1 384	1 355	1 960	2 951	10 687	2 252
Occupational pensions, annuities	190	503	605	997	880	1 129	1 222	1 071	1 662	2 341	1 060
Investment income	263	191	379	580	518	577	679	599	1 353	3 753	889
Other income	342	178	99	125	70	245	127	562	260	562	257
Total	2 875	5 601	10 197	14 072	18 120	21 945	23 272	28 733	34 364	56 754	21 590
Direct benefits in cash											
Contributory											
Retirement pension	136	534	884	731	485	566	387	284	291	281	458
Unemployment benefit	95	97	50	79	29	19	24	9	6	16	42
Incapacity benefit	594	892	613	610	301	417	392	198	159	28	420
Widows' benefits	59	70	98	70	66	39	55	32	-	28	52
Statutory Maternity Pay/ Allowance	-	-	-	-	-	-	-	-	-	-	-
Non-contributory											
Income support	1 222	824	586	250	166	85	99	93	37	25	339
Child benefit	-	-	6	7	6	8	4	5	6	8	5
Housing benefits	922	894	495	226	112	44	39	50	13	9	280
Invalid care allowance	13	68	61	34	20	7	7	-	-	7	22
Attendance allowance	-	9	44	47	27	12	18	6	15	-	18
Disability living allowance	44	341	354	164	147	86	100	49	33	22	134
War pensions	-	6	6	34	24	14	8	-	20	6	12
Severe disablement allowance	-	71	107	37	66	22	23	21	15	-	36
Industrial injury disablement benefit	24	35	16	15	25	63	93	-	17	26	31
Student maintenance awards	169	180	108	58	56	46	69	32	52	37	81
Government training schemes	51	10	32	16	21	26	18	22	16	0	21
Family credit	6	14	-	-	9	5	4	-	-	-	4
Other non-contributory benefits	14	36	48	4	19	3	53	1	1	1	18
Total cash benefits	3 349	4 080	3 507	2 380	1 577	1 463	1 394	802	681	493	1 973
Gross income	6 224	9 682	13 704	16 453	19 698	23 407	24 666	29 535	35 044	57 247	23 563
Direct taxes and Employees' NIC											
Income tax	969	593	1 297	1 908	2 493	3 248	3 607	4 705	6 065	11 805	3 668
less: Tax relief at source ¹	47	48	69	104	130	145	180	218	250	241	143
Employees' NI contributions	94	259	570	745	1 046	1 279	1 357	1 662	1 892	2 151	1 106
Local taxes ²	546	563	610	640	639	655	663	683	744	850	659
Total	1 562	1 367	2 409	3 190	4 048	5 037	5 448	6 833	8 451	14 566	5 290
Disposable income	4 662	8 315	11 295	13 263	15 649	18 370	19 218	22 702	26 594	42 681	18 273
Equivalised disposable income	5 262	8 817	11 094	13 171	15 270	17 462	19 754	22 971	27 806	44 880	18 647
Indirect taxes											
Taxes on final goods and services											
VAT	686	882	1 141	1 261	1 496	1 653	1 628	1 743	2 123	2 679	1 529
Duty on tobacco	265	352	458	378	352	451	307	280	212	198	325
Duty on beer and cider	83	102	128	143	150	188	162	198	188	175	152
Duty on wines	15	18	18	27	27	38	38	51	71	105	41
Duty on spirits	37	63	66	110	97	128	91	129	88	119	93
Duty on hydrocarbon oils	148	193	275	307	382	421	400	445	473	474	352
Vehicle excise duty	61	68	93	109	133	142	139	144	159	147	119
Television licences	67	69	78	80	81	83	82	82	82	83	79
Stamp duty on house purchase	7	4	5	10	9	12	17	24	31	79	20
Customs duties	24	31	39	44	53	51	58	54	67	89	51
Betting taxes	41	68	89	84	81	93	75	76	80	76	76
Fossil fuel levy	18	17	21	20	20	19	20	22	21	23	20
Camelot National lottery fund	38	59	65	77	86	88	76	74	59	52	67
Other	15	10	13	21	22	35	37	38	33	48	27
Intermediate taxes											
Commercial and industrial rates	114	132	169	185	214	238	238	266	311	403	227
Employers' NI contributions	148	170	219	238	277	308	309	348	402	526	294
Duty on hydrocarbon oils	82	90	117	122	140	157	158	190	198	267	152
Vehicle excise duty	13	15	19	20	23	26	26	33	32	45	25
Other	73	85	108	119	136	150	151	166	194	250	143
Total indirect taxes	1 935	2 427	3 122	3 355	3 778	4 280	4 012	4 363	4 825	5 839	3 793
Post-tax income	2 727	5 888	8 173	9 908	11 871	14 090	15 206	18 339	21 769	36 843	14 479
Benefits in kind											
Education	1 146	722	337	285	196	243	199	344	159	181	381
National health service	872	1 033	1 236	1 115	1 090	1 125	951	930	919	864	1 013
Housing subsidy	82	79	61	37	35	19	11	17	1	0	34
Rail travel subsidy	37	52	58	35	26	54	48	94	96	180	68
Bus travel subsidy	13	18	23	20	17	18	14	14	10	8	16
School meals and welfare milk	1	0	-	-	-	-	-	-	-	-	0
Total	2 151	1 905	1 715	1 493	1 364	1 459	1 223	1 400	1 185	1 234	1 513
Final income	4 878	7 793	9 888	11 401	13 235	15 549	16 429	19 739	22 954	38 076	15 992

1 On mortgage interest and life assurance premiums.

2 Gross Council tax. Rates and Water charges but after deducting discounts and transitional relief.

Average incomes, taxes and benefits by decile groups of NON-RETIRED households with CHILDREN, 1995-96

TABLE 6 (Appendix 1)

	Decile groups of households ranked by equivalised disposable income										All households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	5 844	7 330	8 680	10 416	11 961	13 467	15 833	18 866	23 786		
Number of households in the sample	229	229	229	229	230	229	229	229	229	229	2 291
Original income											
Wages and salaries	1 658	2 618	5 903	9 950	14 107	17 196	21 443	25 513	30 528	44 553	17 345
Imputed income from benefits in kind	64	37	32	42	153	157	286	603	1 036	1 730	414
Self-employment income	748	535	1 113	1 389	1 880	2 656	2 150	2 934	3 285	9 221	2 591
Occupational pensions, annuities	48	64	59	91	123	120	117	196	461	325	160
Investment income	122	43	33	164	215	180	389	416	671	1 815	405
Other income	164	146	204	337	275	429	369	330	683	805	374
Total	2 804	3 443	7 344	11 974	16 752	20 738	24 753	29 992	36 663	58 450	21 289
Direct benefits in cash											
Contributory											
Retirement pension	28	38	40	31	110	44	63	51	70	43	52
Unemployment benefit	39	44	57	26	56	17	40	42	24	30	37
Incapacity benefit	225	225	196	229	152	189	46	42	100	35	144
Widows' benefits	21	61	21	57	26	15	-	26	115	-	34
Statutory Maternity Pay/ Allowance	0	12	21	39	40	44	66	106	130	312	77
Non-contributory											
Income support	2 264	2 487	1 727	965	449	351	182	72	40	18	855
Child benefit	1 140	1 098	1 020	987	921	910	872	843	826	779	940
Housing benefits	1 161	1 751	1 325	855	460	181	167	50	28	0	598
Invalid care allowance	55	16	45	94	41	43	65	33	16	16	42
Attendance allowance	7	-	7	-	7	-	25	7	-	-	5
Disability living allowance	67	44	129	213	134	110	108	77	53	24	96
War pensions	-	-	-	-	-	18	12	-	-	-	4
Severe disablement allowance	-	10	24	45	-	25	-	8	11	8	13
Industrial injury disablement benefit	17	6	4	9	4	-	4	17	6	-	7
Student maintenance awards	81	40	76	126	52	120	17	29	52	32	62
Government training schemes	61	20	42	31	27	40	18	13	6	1	26
Family credit	220	316	373	277	157	75	42	49	8	2	152
Other non-contributory benefits	28	46	45	23	46	36	2	17	1	0	24
Total cash benefits	5 413	6 214	5 152	4 004	2 682	2 218	1 729	1 482	1 487	1 307	3 169
Gross income	8 217	9 657	12 496	15 978	19 435	22 956	26 482	31 473	38 150	59 757	24 458
Direct taxes and Employees' NIC											
Income tax	902	334	942	1 432	2 236	2 773	3 859	4 850	6 840	12 339	3 650
less: Tax relief at source ¹	83	36	72	115	187	225	262	285	296	321	188
Employees' NI contributions	131	176	407	684	957	1 227	1 479	1 707	1 909	2 319	1 100
Local taxes ²	648	591	594	633	658	698	739	769	827	979	714
Total	1 599	1 066	1 870	2 634	3 664	4 473	5 816	7 040	9 280	15 316	5 275
Disposable income	6 619	8 591	10 626	13 343	15 770	18 483	20 666	24 433	28 870	44 441	19 183
<i>Equivalised disposable income</i>	4 513	6 594	7 966	9 540	11 178	12 705	14 637	17 227	20 909	32 773	13 803
Indirect taxes											
Taxes on final goods and services											
VAT	950	773	984	1 324	1 371	1 680	1 870	1 950	2 163	2 739	1 580
Duty on tobacco	430	486	398	531	376	396	351	331	228	225	375
Duty on beer and cider	55	35	71	113	121	113	121	142	147	133	105
Duty on wines	10	5	11	18	21	22	32	45	60	90	32
Duty on spirits	38	21	44	58	47	54	65	106	82	75	59
Duty on hydrocarbon oils	249	185	235	299	389	471	496	477	500	488	379
Vehicle excise duty	58	55	74	93	119	143	158	162	158	152	117
Television licences	70	71	75	78	83	82	83	85	85	85	80
Stamp duty on house purchase	11	2	5	10	12	21	23	34	48	84	25
Customs duties	39	34	41	51	50	65	69	70	78	103	60
Betting taxes	43	54	52	62	61	85	82	67	80	65	65
Fossil fuel levy	22	23	23	23	24	25	25	25	25	28	24
Camelot National lottery fund	58	44	57	56	70	83	84	69	69	60	65
Other	14	23	11	32	18	72	29	32	35	46	31
Intermediate taxes											
Commercial and industrial rates	154	123	157	197	220	258	294	316	355	488	256
Employers' NI contributions	200	161	203	255	283	334	380	408	460	637	332
Duty on hydrocarbon oils	111	92	111	137	149	173	190	206	226	311	170
Vehicle excise duty	17	15	18	22	24	28	31	34	37	52	28
Other	100	80	102	129	143	168	189	203	226	304	164
Total indirect taxes	2 630	2 280	2 671	3 490	3 579	4 273	4 571	4 762	5 063	6 166	3 948
Post-tax income	3 989	6 312	7 955	9 854	12 191	14 210	16 095	19 671	23 807	38 275	15 235
Benefits in kind											
Education	4 262	3 653	3 609	3 763	3 399	3 457	3 121	2 899	3 028	2 132	3 332
National health service	1 998	1 901	1 890	1 709	1 984	1 769	1 894	2 034	1 860	2 207	1 925
Housing subsidy	106	157	124	69	27	25	16	13	9	6	55
Rail travel subsidy	34	22	22	22	49	26	50	58	105	165	55
Bus travel subsidy	11	13	12	14	15	11	12	12	9	11	12
School meals and welfare milk	287	241	128	76	32	19	9	4	5	0	80
Total	6 698	5 986	5 784	5 653	5 507	5 307	5 102	5 021	5 017	4 521	5 460
Final income	10 687	12 298	13 739	15 507	17 698	19 517	21 198	24 692	28 824	42 797	20 694

1 On mortgage interest and life assurance premiums.

2 Gross Council tax. Rates and Water charges but after deducting discounts and transitional relief.

Distribution of households¹ co-operating in the Family Expenditure Survey and Summary of the effects of taxes and benefits, by household type, 1995-96

TABLE 7 (Appendix 1)

	Retired households		Non-Retired households									All households
	1 adult	2 or more adults	1 adult	2 adults	3 or more adults	1 adult with children	2 adults with 1 child	2 adults with 2 children	2 adults with 3 or more children	3 or more adults with children		
Decile groups of households ranked by equivalised disposable income												
Number of households												
Bottom	134	98	72	65	16	100	45	63	70	17	680	
2nd	141	146	73	51	20	116	36	37	39	20	679	
3rd	215	130	56	62	14	67	28	56	35	17	680	
4th	157	116	63	94	39	43	32	78	33	25	680	
5th	87	100	72	109	49	37	58	100	37	31	680	
6th	81	63	79	140	58	24	76	95	31	32	679	
7th	56	61	78	168	86	20	65	95	24	27	680	
8th	34	44	110	192	79	14	75	78	28	26	680	
9th	28	38	125	226	60	7	78	75	22	20	679	
Top	22	31	142	276	50	6	75	50	15	13	680	
All households	955	827	870	1 383	471	434	568	727	334	228	6 797	
Summary of the effects of taxes and benefits, by household type												
Average per household (£ per year)												
Original income	3 103	7 711	11 969	24 500	30 818	4 786	24 154	25 463	22 443	30 574	17 203	
plus Cash benefits	4 572	6 164	1 772	1 856	2 687	5 652	1 977	2 073	4 050	3 614	3 251	
Gross income	7 676	13 875	13 740	26 356	33 505	10 438	26 130	27 535	26 493	34 188	20 454	
less Direct taxes&employees'NIC	1 121	1 906	3 126	6 078	6 975	1 225	5 924	6 327	5 705	7 386	4 288	
Disposable income	6 554	11 969	10 615	20 278	26 531	9 212	20 206	21 209	20 788	26 802	16 166	
<i>Equivalised disposable income</i>	<i>10 731</i>	<i>11 505</i>	<i>17 401</i>	<i>19 900</i>	<i>17 268</i>	<i>9 278</i>	<i>16 893</i>	<i>14 792</i>	<i>11 969</i>	<i>14 252</i>	<i>15 033</i>	
less Indirect taxes	1 163	2 733	2 211	4 097	5 826	2 011	4 128	4 223	4 252	5 866	3 347	
Post-tax income	5 391	9 236	8 404	16 181	20 705	7 202	16 078	16 985	16 536	20 936	12 819	
plus Benefits in kind	2 051	3 001	660	1 366	3 517	5 002	3 337	5 275	8 892	7 178	3 100	
Final income	7 442	12 236	9 064	17 548	24 221	12 204	19 415	22 261	25 428	28 114	15 919	

¹ See Appendix 3 for definitions of retired households, adults and children.

Average incomes, taxes and benefits by decile groups of households (ranked by UNADJUSTED disposable income), 1995-96

TABLE 8 (Appendix 1)

	Decile groups of households ranked by UNADJUSTED disposable income										All households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (£)</i>	5 170	6 757	8 515	10 662	13 164	15 888	19 022	23 628	30 229		
Number of households in the sample	680	679	680	680	680	679	680	680	679	680	6 797
Original income											
Wages and salaries	444	814	1 683	3 656	7 158	11 334	14 771	20 370	26 438	39 807	12 647
Imputed income from benefits in kind	19	9	21	27	46	84	164	392	537	1 359	266
Self-employment income	141	143	271	486	820	1 241	1 601	1 804	2 618	8 688	1 781
Occupational pensions, annuities	291	652	981	1 417	1 550	1 586	1 781	1 389	1 541	2 303	1 349
Investment income	237	276	430	511	592	700	766	977	1 374	3 336	920
Other income	62	103	102	153	231	212	333	273	282	639	239
Total	1 193	1 995	3 488	6 251	10 397	15 157	19 416	25 206	32 789	56 132	17 203
Direct benefits in cash											
Contributory											
Retirement pension	1 854	2 056	1 986	1 677	1 313	911	719	549	512	407	1 198
Unemployment benefit	34	22	41	35	36	33	42	32	20	23	32
Incapacity benefit	183	219	302	368	427	314	361	228	161	73	264
Widows' benefits	67	68	51	44	33	45	29	13	41	-	39
Statutory maternity pay/ Allowance	3	3	0	7	12	15	40	45	46	89	26
Non-contributory											
Income support	544	832	1 043	908	601	391	214	143	140	63	488
Child benefit	86	176	269	315	341	371	399	411	416	422	321
Housing benefits	739	1 148	1 023	780	507	220	79	61	68	6	463
Invalid care allowance	8	3	22	39	57	40	34	30	35	8	28
Attendance allowance	13	66	113	153	109	38	40	26	41	8	61
Disability living allowance	34	62	105	213	190	140	130	107	114	32	113
War pensions	-	8	13	29	29	48	27	16	9	21	20
Severe disablement allowance	3	14	20	28	59	20	25	29	23	15	23
Industrial injury disablement benefit	9	8	37	21	38	16	27	22	29	10	22
Student maintenance awards	23	10	37	72	55	81	86	49	72	57	54
Government training schemes	11	10	9	7	15	16	13	39	27	26	17
Family credit	12	18	56	128	139	78	63	20	4	10	53
Other non-contributory benefits	31	23	51	47	62	23	11	28	23	3	30
Total cash benefits	3 654	4 744	5 177	4 872	4 025	2 800	2 338	1 847	1 780	1 272	3 251
Gross income	4 847	6 739	8 665	11 122	14 422	17 957	21 754	27 053	34 569	57 404	20 454
Direct taxes and Employees' NIC											
Income tax	576	247	395	781	1 451	2 073	2 834	3 931	5 635	11 300	2 922
less: Tax relief at source ¹	25	24	36	57	89	130	175	214	231	262	124
Employees' NI contributions	33	47	109	246	495	778	1 035	1 421	1 759	2 247	817
Local taxes ²	546	558	583	598	614	671	682	725	808	941	673
Total	1 130	828	1 051	1 569	2 470	3 391	4 375	5 863	7 971	14 227	4 288
Disposable income	3 717	5 911	7 614	9 554	11 952	14 565	17 379	21 190	26 598	43 177	16 166
Indirect taxes											
Taxes on final goods and services											
VAT	434	552	680	904	1 072	1 335	1 595	1 780	2 167	2 865	1 338
Duty on tobacco	164	228	265	296	374	346	351	327	336	270	296
Duty on beer and cider	26	34	49	66	100	119	133	148	173	210	106
Duty on wines	7	10	11	18	20	30	30	38	58	98	32
Duty on spirits	29	38	47	57	66	71	87	91	124	133	74
Duty on hydrocarbon oils	80	91	136	212	252	327	396	439	516	571	302
Vehicle excise duty	33	41	57	80	92	115	143	144	162	187	106
Television licences	70	69	73	76	80	81	82	84	84	85	79
Stamp duty on house purchase	5	3	4	6	7	13	17	24	35	70	19
Customs duties	16	21	27	33	39	48	58	63	75	100	48
Betting taxes	25	37	40	60	73	83	70	83	90	87	65
Fossil fuel levy	15	16	17	19	20	22	22	24	25	27	21
Camelot National lottery fund	23	33	39	51	59	69	76	79	82	71	58
Other	14	8	12	15	21	40	30	34	36	52	26
Intermediate taxes											
Commercial and industrial rates	79	92	112	142	166	204	239	273	337	455	210
Employers' NI contributions	103	119	146	185	215	264	309	353	437	593	272
Duty on hydrocarbon oils	55	64	79	99	114	137	158	181	217	297	140
Vehicle excise duty	9	10	12	16	18	22	25	30	36	50	23
Other	51	58	72	91	107	131	155	173	212	281	133
Total indirect taxes	1 239	1 523	1 877	2 426	2 898	3 459	3 976	4 369	5 201	6 503	3 347
Post-tax income	2 479	4 388	5 736	7 128	9 054	11 107	13 403	16 821	21 397	36 674	12 819
Benefits in kind											
Education	319	574	868	1 251	1 383	1 504	1 725	1 633	1 759	1 855	1 287
National health service	1 512	1 708	1 844	1 764	1 650	1 590	1 609	1 595	1 660	1 686	1 662
Housing subsidy	70	99	86	85	61	33	19	16	12	6	49
Rail travel subsidy	15	14	19	27	37	36	41	56	85	164	49
Bus travel subsidy	32	37	38	32	29	21	19	18	15	16	26
School meals and welfare milk	13	40	74	60	39	21	6	11	7	-1	27
Total	1 962	2 473	2 928	3 219	3 199	3 205	3 419	3 330	3 539	3 725	3 100
Final income	4 440	6 861	8 664	10 347	12 253	14 311	16 822	20 151	24 936	40 399	15 919

1 On mortgage interest and life assurance premiums.

2 Gross Council tax (net of transitional relief), Rates and net Water charges.

Cross-tabulation of households ranked by disposable income, unadjusted and equivalised, 1995-96

TABLE 9 (Appendix 1)

(i) Quintile groups

	Quintile groups of equivalised disposable income					All households
	Bottom	2nd	3rd	4th	Top	
Number of households						
Quintile groups of unadjusted disposable income						
Bottom	804	509	46	-	-	1 359
2nd	445	466	296	153	-	1 360
3rd	102	297	567	251	142	1 359
4th	8	86	386	606	274	1 360
Top	-	2	64	350	943	1 359
All households	1 359	1 360	1 359	1 360	1 359	6 797

(ii) Decile groups

	Decile groups of equivalised disposable income										All households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Number of households											
Decile groups of unadjusted disposable income											
Bottom	336	217	127	-	-	-	-	-	-	-	680
2nd	164	87	158	224	46	-	-	-	-	-	679
3rd	94	213	120	13	117	123	-	-	-	-	680
4th	58	80	130	203	14	42	134	19	-	-	680
5th	18	53	87	68	224	55	5	125	45	-	680
6th	8	23	35	107	91	197	119	2	97	-	679
7th	1	4	20	50	122	112	163	131	14	63	680
8th	1	2	2	14	47	105	137	175	142	55	680
9th	-	-	1	1	18	40	106	164	213	136	679
Top	-	-	-	-	1	5	16	64	168	426	680
All households	680	679	680	680	680	679	680	680	679	680	6 797

APPENDIX 2

Trends in income distribution, 1977-1995-96

CONTENTS

	Table
Percentage shares of original, gross, disposable and post-tax income by quintile group of households, 1977-1995-96	1
Gini coefficients for the distribution of income at each stage of the tax-benefit system, 1977-1995-96	2

This section gives Gini coefficients and shares of income for 1977 to 1995-96. As was noted in the Introduction, it is not possible to produce a fully consistent time series because of changes in methodology and definition. Many of these changes, like the inclusion of the income from company cars since 1990, improve the quality of the results but previous data cannot be reproduced on the same consistent basis. However, Gini coefficients and shares of income are relatively robust and can be used to shed light on broad trends in income distribution. The Department of Social Security publication, *Households Below Average Income 1979 - 1993/94* (HMSO), contains more detailed data for comparison of incomes over time.

Percentage shares of total original, gross, disposable and post-tax incomes by quintile groups of households¹, 1977 to 1991, 1993-94, 1994-95 and 1995-96

TABLE 1 (Appendix 2)

	1977	1979	1981	1983	1985	1987	1989	1991 ²	1993-94 ³	1994-95 ³	1995-1996 ³
Equivalised original income											
Quintile group											
Bottom	3.6	2.4	2.9	3.0	2.5	2.1	2.0	2.0	2.3	2.4	2.6
2nd	10	10	9	8	7	7	7	7	6	6	7
3rd	18	18	17	17	17	16	16	16	14	15	15
4th	26	27	26	26	27	25	26	26	25	25	25
Top	43	43	46	47	47	50	49	50	52	51	50
All households	100	100	100	100	100	100	100	100	100	100	100
Equivalised gross income											
Quintile group											
Bottom	8.9	8.5	8.4	8.5	8.3	7.5	7.1	6.7	7.1	7.2	7.4
2nd	13	13	12	12	12	11	11	10	11	11	11
3rd	18	18	17	17	17	16	16	16	16	16	16
4th	24	24	23	23	24	23	23	23	23	23	23
Top	37	37	39	39	40	43	42	44	44	43	43
All households	100	100	100	100	100	100	100	100	100	100	100
Equivalised disposable income											
Quintile group											
Bottom	9.7	9.4	9.3	9.5	9.2	8.2	7.6	7.2	7.7	7.9	7.9
2nd	14	13	13	13	13	12	12	11	12	12	12
3rd	18	18	17	17	17	16	17	16	16	16	17
4th	23	23	23	23	23	23	23	23	23	23	23
Top	36	36	38	38	38	41	41	42	42	41	40
All households	100	100	100	100	100	100	100	100	100	100	100
Equivalised post-tax income											
Quintile group											
Bottom	9.4	9.5	9.0	8.9	8.6	7.6	6.9	6.5	6.8	7.0	6.9
2nd	14	13	13	13	13	12	11	11	11	11	12
3rd	17	18	17	17	17	16	16	16	16	16	16
4th	23	23	22	22	23	22	23	23	22	22	23
Top	37	37	39	39	39	43	43	44	44	43	43
All households	100	100	100	100	100	100	100	100	100	100	100

1 Ranked by equivalised disposable income.

2 Includes Company car benefit.

3 Includes Company car benefit and beneficial house purchase loans from employers.

Gini coefficients for the distribution of income at each stage of the tax-benefit system, 1977 to 1991, 1993-94, 1994-95 and 1995-96

TABLE 2 (Appendix 2)

	1977	1979	1981	1983	1985	1987	1989	1991 ¹	1993-94 ²	1994-95 ²	1995-1996 ²
Gini coefficients (per cent)											
Equivalised original income	43	44	46	48	49	51	50	51	54	53	52
Equivalised gross income	29	30	31	32	32	36	36	37	37	37	36
Equivalised disposable income	27	27	28	28	29	33	34	35	34	33	33
Equivalised post-tax income	29	29	31	31	32	36	37	39	38	37	37

1 Includes Company car benefit.

2 Includes Company car benefit and beneficial house purchase loans from employers.

APPENDIX 3

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 United Kingdom National Accounts - the ONS 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 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: no attempt is made in this analysis to apportion them to households because it would be too difficult. 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. In all, 59 per cent of government financing (including the Borrowing Requirement) and 55 per cent of expenditure are allocated to households in this analysis.

Family Expenditure Survey (FES)

2. The estimates in this article are based mainly on data derived from the FES. The FES is an annual survey of the expenditure and income of private households. People living in hotels, lodging houses, and in institutions such as old peoples' homes are excluded. Each person aged 16 and over keeps a full record of payments made during 14 consecutive days and answers questions about hire purchase and other payments. The respondents also give detailed information, where appropriate, about income (including cash benefits received from the state) and payments of income tax. Information on age, occupation, education received, family composition and housing tenure is also obtained. The survey covers the whole 12 month period.
3. One of the main purposes of the FES is to produce information on household expenditure patterns which is used to derive the weights for the index of retail prices. The fieldwork is undertaken by the Social Survey Division of ONS and by the Northern Ireland Statistics and Research Agency. The Family Expenditure Survey Report for 1995-96, containing detailed data on household characteristics, income, and expenditure, was published in October 1996. Details of the survey method are set out in 'The 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 in the United Kingdom responding to the FES in 1995-96 was 6,797 (about 1 in every 3,000 households). The response rate in Great Britain was 66 per cent: the FES in Northern Ireland is done as a separate exercise to the rest of UK, with a larger sampling fraction, and only a proportion of these cases go into the UK analysis. To count as a co-operating household, all members aged 16 and over must fill in the diaries for both weeks and give full details of income etc. The available evidence suggests that households containing a couple with

non-dependent children, those where the head is self-employed, and those where the head was born outside the United Kingdom, are less likely to co-operate than others (see 'A comparison of the Census characteristics of respondents and non-respondents to the 1991 Family Expenditure Survey by Kate Foster, *Survey Methodology Bulletin*, ONS, No 38, Jan 1996) In addition response in Greater London is noticeably lower than in other areas. However, at present, the results in this article are based on the responses of those households which actually co-operated in the survey and they are not reweighted. This means that some of the figures differ from those produced by other surveys such as the Survey of Personal Incomes from the Inland Revenue.

5. The FES is designed primarily as a survey of expenditure on goods and services by households. It has been developed to gather information about the income of household members, and is an important and detailed source of income data. However, no information is collected that would enable a balance sheet of income and expenditure to be drawn up for a household over any particular period. Much expenditure relates to the two-week period after the interview, whereas many income components refer to a much longer period (e.g. investment income over the previous 12 months). FES income does not include proceeds from the sale of assets (e.g. a car) or windfalls such as legacies. But recorded expenditure might reflect these items, as well as the effects of living off savings, using capital or borrowing money. Hence, there is no reason why income and expenditure should balance either for an individual household or even averaged over a group of households. Indeed, measured expenditure substantially exceeds measured income for the bottom decile groups of households. Moreover, the difference between income and expenditure is not necessarily a measure of savings or dis-savings.

Unit of analysis

6. The basic unit of analysis in the article is the household, and not the family, individual or benefit unit. A household is defined in the FES as comprising people who live at the same address and who share common catering for at least one meal a day. Spending on many items, particularly on food, housing, fuel and light, is largely joint spending by the members of the household. Without further information or assumptions it is difficult to apportion indirect taxes between individuals or other sub-divisions of households.
7. In classifying the households into various types, a **child** (i.e. a dependant) is defined as:
 - either aged under 16
 - or aged 16, 17 or 18 not married, and receiving full-time non-advanced further education.

[The definition used in the pre-1987 articles was a person aged under 16].

Most of the 'extra' adults in households with at least three adults are sons or daughters of the head of household rather than retired people.

8. A **retired household** is defined as one where the combined income of retired members amounts to at least half the total gross income of the household, where a retired person is defined as anyone who describes themselves as 'retired' or anyone over minimum NI pension age describing themselves as 'unoccupied' or 'sick or injured but not intending to seek work'.
9. By no means all retired people are in retired households: about one in five households comprising three or more adults contain retired people, for example, and households comprising one retired and one non-retired adult are often classified as non-retired.
10. The sample households have been classified according to their compositions at the time of the interview. This classification is sensible for the vast majority of households, but it can be misleading for the very small number of cases (41 in 1995-96) where a spouse is absent from the household at the time of interview. The absent spouse may well be working away from home (e.g. on an oil rig), or living separately - but contributing financially to the household's upkeep. These contributions would be picked up as part of the household's original income. Also, it is likely that some households will have changed their composition during the year.
11. Economically active people comprise persons aged 16 or over who, at the time of interview, were:
 - (a) employees at work,
 - (b) employees temporarily away from work through illness, temporary lay-off, industrial action etc.
 - (c) on government training schemes,
 - (d) self-employed,
 - (e) not in employment but who had sought work within the last four weeks, or were waiting to start a job already obtained.

Income: redistributive stages

12. Stage one:

Original income plus cash benefits = Gross income.

Stage two:

Gross income minus income tax, employees' National Insurance contributions and local taxes (see paragraph 21 below) = Disposable income.

Stage three:

Disposable income minus indirect taxes = Post-tax income.

Stage four:

Post-tax income plus 'benefits in kind' = Final income.

13. The starting point of the analysis is **original income**. This is the annualised income in cash of all members of the household before the deduction of taxes or the addition of any state benefits. It includes income from employment, self-employment, investment income, occupational pensions and annuities. The term "annualised" rather than "annual" is used advisedly. For instance, annualised income from a respondent's "main job" is not current wage or salary multiplied up to an annual value; nor is it the sum of income from this source in the twelve month period prior to interview. Rather it is an estimate of such income expressed at an annual rate based on the respondent's assessment of his "normal" wage or salary subject to his current employment

status. Furthermore, to avoid double counting and to make it consistent with the estimate of income from cash benefits (see paragraph 19), this annualised estimate has to be "abated" for the number of weeks likely to be lost due to unemployment, sickness, etc. This figure is taken as the number of weeks so lost in the twelve months prior to interview. It should be noted that regardless of whether the respondent is currently working or unemployed the treatment is essentially the same, i.e. normal gross wage or salary expressed at an annual rate abated as required. In all of this the crucial determining role of current employment status should also be noted. Thus no employment income would be assigned to a respondent whose employment status had recently become retired or unoccupied even though he or she may have worked for most of the twelve months prior to interview.

14. About 98 per cent of original income comes from earnings, occupational pensions (including annuities) and investment income. The tiny bit remaining comes from a variety of sources: trade union benefits, income of children under 16, private scholarships, earnings as a mail order agent or baby-sitter, regular allowance from a non-spouse, allowance from an absent spouse and the imputed value of rent-free accommodation. Households living in rent-free dwellings are each assigned an imputed income. This is counted as employment income if the tenancy depends on the job.
15. In addition to salary, many employees receive as part of their income fringe benefits such as company cars, private medical insurance and beneficial loans. Until recently, these benefits were not allocated to individual households as the information was not available in the FES. However, the company car benefit, together with the benefit from fuel for personal use, has been included in the analysis since 1990. This is by far the most important fringe benefit accounting for over two thirds of all taxable fringe benefits according to Inland Revenue statistics. The benefit is taken to be the taxable income in accordance with Inland Revenue scale charges. Inland Revenue Statistics 1996 (HMSO) contains more detailed information on taxable fringe benefits and their impact on individuals. Although for those earning below £8,500 per year the benefit is not taxable, benefit has been allocated to all those with a company car regardless of the level of earnings. The calculation of this benefit is based primarily on the car price as reported in the FES. In any given year the total amount of benefit will depend on the level of scale charges for tax purposes as well as the numbers and prices of vehicles in the FES.
16. The benefit of subsidised loans from employers for house purchase has been allocated, since the 1992 analysis. The benefit is taken to be the difference between the interest payments on such loans as reported in the FES and the interest payments that would have been payable at the ruling market rate of interest.
17. The next stage of the analysis is to add cash benefits to original income to obtain **gross income**.

This is slightly different from the 'gross normal weekly income' used in the FES Report. Cash benefits include:

Contributory:

Retirement pension, unemployment benefits, incapacity benefit, widows' benefits, and statutory maternity pay.

Non-contributory:

Income support, child benefit, housing benefits, invalid care allowance, attendance allowance, disability living allowance,

disability working allowance, war pensions, severe disablement allowance, industrial injury disablement benefits, family credit, old persons pension, Christmas bonus for pensioners, government training scheme allowances (YTS etc.), student maintenance awards.

Driving licenses
Television licenses
Stamp duties
Gas levy
Fossil fuel levy
Camelot : payments to National Lottery Distribution Fund

18. Statutory Maternity Pay is classified as a cash benefit even though it is paid through the employer.

19. Income from short-term benefits is taken as the product of the last weekly payment and the number of weeks the benefit was received in the 12 months prior to interview. Income from long-term benefits, and from housing benefits, is based on current rates.

20. Income tax, local taxes and employees' and self-employed contributions to National Insurance and National Health services are then deducted to give **disposable income**. Taxes on capital, such as capital gains tax and inheritance tax, are not included in these deductions because there is no clear conceptual basis for doing so, and the relevant data is not available from the FES.

21. The figures for local taxes include:

council tax (for households in Great Britain),
domestic rates (for households in Northern Ireland),
and charges made by water authorities for water, environmental and sewerage services.

Council tax is shown after deduction of transitional relief and discounts to reduce or remove the personal element of the tax (e.g. the discount of 25% for single person households). All local taxes are shown gross of rebates. These rebates are included as part of housing benefits.

[In pre-1987 articles, domestic rates were included in the 'indirect' tax category. Since then, they have been deducted in the derivation of disposable income in anticipation of their replacement by the community charge. The National Accounts system, which strongly influences this article, shows the community charge/council tax as a deduction before disposable income is produced.]

22. The tax estimates are based on the amount deducted from the last payments of employment income and pensions, and on the amount paid in the last 12 months in respect of income from self-employment, interest, dividends and rent. The income tax payments recorded will therefore take account of a household's tax allowances, with the exception of tax relief obtained in this way 'at source'. In 1995-96 there were two types of tax relief obtained in this way: mortgage interest relief and life assurance premium relief. Where households are eligible for these reliefs imputations are made and deducted from recorded income tax payments. In the case of mortgage interest relief obtained through the MIRAS scheme, which was introduced in April 1983, these imputations are based on the interest component of the latest mortgage repayment.

23. The next step is to deduct indirect taxes to give **post-tax income**. Indirect tax on final consumer goods and services include:

Duties on alcoholic drinks, tobacco, petrol, oil, betting, etc.
Value Added Tax (VAT)
Customs (import) duties
Motor vehicle duties
Air passenger duty
Insurance premium tax

24. Taxes levied on final goods and services are assumed to be fully incident on the consumer, and can be imputed from a household's FES expenditure record. 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 affects the prices of second-hand cars and is therefore assumed to be incident on the purchasers of such cars as well as on the purchasers of new cars. In allocating taxes, expenditures recorded in the FES on alcoholic drink, tobacco, ice cream, soft drinks and confectionery are grossed up 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. This approach has its drawbacks because there is some evidence to suggest that heavy drinkers, for example, are not picked up by the FES.

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

27. Indirect taxes on intermediate goods and services include:

Rates on commercial and industrial property
Motor vehicle duties
Duties on hydrocarbon oils
Employers' contributions to National Insurance, the National Health Service, the industrial injuries fund and the redundancy payments scheme
Customs (import) duties
Stamp duties
VAT

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 estimated input-output techniques. This process is not an exact science, and many assumptions have to be made. Some analyses, e.g. that by Dilnot, Kay and Keen 'Allocating Taxes to Households: A Methodology', suggest that the taxes could be progressive rather than regressive if one were to use different incidence assumptions.

29. For Table G of the main article, we have constructed a measure of expenditure on goods and services which is similar to that used in the Consumers' Expenditure part of the National Accounts except that mortgage interest payments are included as a proxy for imputed rent "payments" for owner-occupiers. Savings, investments, superannuation contributions and capital repayments on mortgages are excluded as well as payments of local taxes. The expenditures on alcohol, tobacco and confectionery have been grossed up to correspond to the grossed-up indirect tax amounts described in paragraph 25 above.

30. Finally, we add those notional benefits in kind provided to households by government for which there is a reasonable basis for allocation to households, to obtain **final income**. The benefits in kind allocated are:

- State education
- School meals and welfare milk
- National Health service
- Housing subsidy
- Railway travel subsidy
- Bus travel subsidy (including concessionary fares schemes)

31. Education benefit is estimated by the Department of Education and Employment as the cost per pupil or student in special schools, primary and secondary schools, universities, and other further education establishments. The value of the benefits attributed to a household depends on the number of people in the household recorded in the FES as receiving each kind of state education (students away from the household are excluded). No benefit is allocated for pupils attending private schools.

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

33. Data are available on the average cost to the Exchequer of providing the various types of health care - hospital inpatient/outpatient care, GP consultations, dental services, etc. Each individual in the FES is allocated a benefit from the National Health Service according to the estimated average use made of these various types of health service by people of the same age and sex, and according to the total cost of providing those services. The benefit from maternity services is assigned separately to those households containing children under the age of 12 months. No allowance is made for the use of private health care services.

34. In this article public sector tenants are defined to include the tenants of local authorities, New Town Corporations, the Scottish Special Housing Association (SSHA), Northern Ireland Housing Executive (NIHE) and housing associations. The total housing subsidy includes the contribution from central government to the housing revenue accounts of local authorities; and grants paid to the New Town Corporations, the SSHA, the NIHE and housing associations. Within Greater London, the rest of England, Wales, Scotland and Northern Ireland each public sector tenant has been allocated a share of the region's total relevant subsidy based on the size of the dwelling. Housing subsidy does not include mortgage interest tax relief, rent rebates and allowances or local tax rebates included in housing benefits.

35. The rail travel subsidies allocated are those to British Rail passenger operations and the London Underground. Figures for rail travel subsidy for 1994-95 onwards may not be strictly comparable with those for previous years as the arrangements for the payment of government grants to British Rail were changed fundamentally as from April 1994. The subsidy allocated in this analysis is based on the payment of the Office of Passenger Rail Franchising support grant. The subsidy to London and South East services is allocated to households living in the area and subsidies to provincial services to households living outside the South East, in proportion to households' expenditure on rail fares as recorded in the FES. In making these allocations allowances are made for the use of rail travel by the business sector, tourists and the institutional part of the personal sector.

36. In this article, bus travel subsidy covers both the cost of concessionary travel schemes for senior citizens and others, and subsidies to operators. Separate allocations are made for Greater London, the other metropolitan areas and the rest of the United Kingdom. The subsidy is divided between households according to recorded expenditure on bus travel and the types of concessionary passes held.

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

Equivalence scale

38. The equivalence scale used in this analysis is the *McClements scale* (before housing costs are deducted). The scales (separate ones for before and after housing costs) were developed by Dr L D McClements at the Department of Health and Social Security (DHSS) in the mid-seventies, based on expenditure data from the 1971 and 1972 FES. They are based on the assumption that it is possible to estimate equivalence scales from people's spending behaviour as recorded in the FES without making any specific assumption about the criteria for equivalence. These scales are in regular use and an analysis by Banks and Johnson ('Children and Household Living Standards', IFS, 1993) suggests that the scales are as valid now as when they were developed. The scales are regarded as plausible and they are well within the range of equivalence scales developed at different times in a number of countries. Hence their use is fully justified for broad statistical standardisation.

39. The equivalence values are given below:

Type of household member	Equivalence value
a. <u>married head of household</u> (i.e. a married couple of 2 adults)	1.00
1st additional adult	0.42
2nd (or more) additional adult	0.36 (per adult)

b. single head of household (i.e. 1 adult)	0.61
1st additional adult	0.46
2nd additional adult	0.42
3rd (or more) additional adult	0.36 (per adult)

c. Child aged:

16-18	0.36
13-15	0.27
11-12	0.25
8-10	0.23
5-7	0.21
2-4	0.18
Under 2	0.09

The values for each household member are added together to give the total equivalence number for that household. This number is then divided into the disposable income for that household to give **equivalised disposable income**. For example, a household has a married couple with 2 children (aged 6 and 9) plus one adult lodger. The household's equivalence number is $1.0 + 0.21 + 0.23 + 0.42 = 1.86$. The household's disposable income is £20,000, and so its equivalised disposable income is £10,753 (=£20,000/1.86).

40. This quantity is used to produce the single ranking used in all the tables in this article (apart from the Gini coefficients which have to be ranked afresh for each different definition of income).

[In pre-1987 articles, three types of ranking were used; the main one was using original income but gross income and disposable income were also used. In addition, the tables showing income shares were re-ranked for each separate income measure].

It is important to note that most monetary values shown in the article are ordinary (i.e. un-equivalised) £ a year, not equivalised £ a year. Where equivalised £ a year do appear (e.g. the quintile points in Table 3 of Appendix 1), they are shown in *italics*.

Gini coefficient

41. The Gini coefficient is the most widely used summary measure of the degree of inequality in an income distribution. It can more

easily be understood by considering a Lorenz curve of the income distribution, (see Diagram B) i.e. a graph of the cumulative income share against the cumulative share of households. The curve representing complete equality of income is thus a diagonal line while complete inequality (with only one recipient of income) is represented by a curve comprising the horizontal axis and the right-hand vertical axis (see Diagram A). 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. 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).

42. To calculate the Gini coefficient for an income distribution, the first step is to rank that distribution in ascending order. All the Gini coefficients shown in this article are based on distributions of equivalised income e.g. the coefficient for original income is calculated after dividing the original income for all the households by their appropriate equivalence values.

[In pre-1987 articles, no such equivalisation was used.]

43. Strictly speaking, one could argue that the equivalence scales used here are only applicable to disposable income because this is the only income measure relating directly to spending power. Since the scales are often applied, in practice, to other income measures, we are content to use them to equalise original, gross and post-tax income for the purpose of producing Gini coefficients (and in the tables giving percentage shares of total income). However, we do not think it is appropriate to equalise the final income measure because this contains notional income from benefits in kind (e.g. state education): the equivalence scales used in this article are based on actual household spending and do not, therefore, apply to such items as notional income.

Sampling errors and reliability

44. As the FES is a sample survey, data from it will differ in varying degrees from those of all households in the UK. The degree of difference will depend on how widely particular categories of income and expenditure vary between households. This 'sampling error' is smallest in relation to large groups of households and measures that do not vary greatly between

Diagram A

Complete income equality

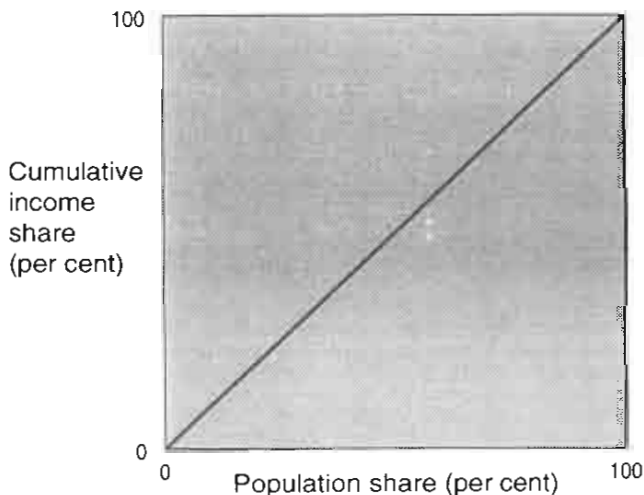
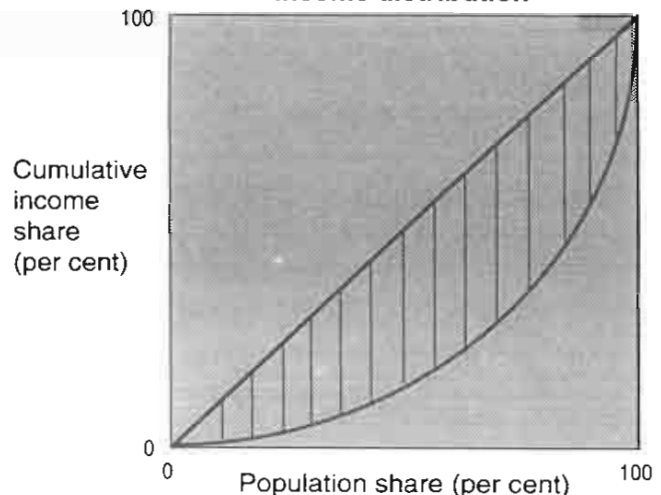


Diagram B

Lorenz curve for a typical income distribution



households. Conversely, it is largest for small groups of households, and for measures that vary considerably between households. A broad numerical measure of the amount of variability is provided by the quantity known as the standard error.

45. It is difficult to calculate these standard errors exactly because of the multi-stage design of the FES, but we have made a good approximation by combining the simple random formula with the appropriate design factor from the FES analysis. [The design factor is the ratio of the standard error using the detailed formula that takes account of the full complexity of the sample design to the standard error using the simple random sample formula.] The most appropriate design factor from the FES work is for 'gross normal weekly household income'. The standard error of the mean for N households is given by:

$$(\text{design factor}) * S/\sqrt{N}$$

where the design factor is 1.31 for 1995-96, and S² is the estimate of the population variance.

46. The standard error for disposable income of all households is less than 2 per cent of the mean but, for the less frequent household types, e.g. 1 adult with children and 3 or more adults with children, it is about 5 per cent of the mean.

The standard errors can be used to give an idea of the reliability of a mean by quoting a confidence interval of the form:

$$\text{estimate of mean} \pm (1.96 * \text{standard error})$$

where the factor 1.96 corresponds to the 95% confidence interval.

47. The standard errors for the household types are larger than for the whole sample, mainly because the sample sizes concerned are smaller. For quantile groups of given household types, the sample sizes are of course smaller still, which would tend to increase sampling variability. On the other hand, the income values are by definition in a narrower range which would tend to reduce the sampling error. Precise estimates of standard errors for averages for quantile groups are complicated to produce. As well as the variability of the observations between the quantile points, we should also take account of the randomness which exists because the sample quantile points are themselves subject to random variation. We have used a formula for the asymptotic variance of a 'randomly trimmed' mean. This formula gives a good approximation where the total sample size is around 1,000 (when the variance is under-estimated by about 2 per cent on average), and a reasonable approximation for samples of 100-500 (when the variance is under-estimated by about 5 per cent on average). The formula for the variance of a mean (x) calculated between two sample percentiles, Q₁ and Q₂, corresponding to proportions p₁ and p₂ is:

$$\frac{S^2 + p_1(x - Q_1)^2 + (1 - p_1)(Q_2 - x)^2 + \frac{p_1(1 - p_2)}{(p_2 - p_1)}(Q_2 - Q_1)^2}{n(p_2 - p_1)}$$

where S² = variance calculated from observations between Q₁ and Q₂, and n = total sample size.

The square root of this quantity is then multiplied by the design factor (as described in paragraph 46) to give the standard errors.

48. The 'complex' standard errors for quintile and decile groups are quite a bit larger than the simple random sample estimates. For the 'all households' group, the standard errors for disposable income for the middle decile groups are about 10 per cent of the mean for the group.

49. Detailed tables containing the standard errors for all of the income measures for the different household types and quantile groups are available on request.

Previous articles

50. This article is the latest in an annual series. Earlier articles covering the years 1957 to 1986 (using the old methodology) 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, 1980, 1981 and 1982, December 1982, November 1983, December 1984, December 1985, July 1986, November 1986, July 1987 and December 1988.

51. From 1987 onwards, the articles have used a very different methodology, in particular households are ranked by their equivalised disposable income. Hence the results are completely incompatible with earlier years. These articles were published in the following issues of *Economic Trends*:

Reference year	Issue
1987	May 1990
1988	March 1991
1989	January 1992
1990	January 1993
1991	May 1993
1992	January 1994
1993	December 1994
1994/5	December 1995

52. The results in all articles are intended to be freestanding: they were not designed for direct comparison with other years except where some limited comparisons were made in the articles. Such comparisons are fraught with difficulty because of changes in definitions e.g. housing benefit in 1983. However, some broader measures like the Gini coefficients are relatively robust and will stand comparison with other years: this year's article gives such a comparison for the years 1977-1995-96. Enquiries should be addressed to Dave Westcott, Social and Regional Division, Office for National Statistics, Zone B2/08, 1 Drummond Gate, London SW1V 2QQ.