

The effects of taxes and benefits on household income, 2002-03

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The effects of taxes and benefits on household income, 2002–03

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SUMMARY

This analysis examines how taxes and benefits redistribute income between various groups of households in the United Kingdom. It shows where different types of households and individuals are in the income distribution and looks at the changing levels of income inequality over time. The tables and figures were renumbered starting from the 2000–01 publication and new tables and figures were added. Table 1, showing links between the current tables and figures and those for 1999–2000 and previous years, is included at the end of the summary section.

Redistribution through taxes and benefits

Government intervention, by means of taxes and benefits, alters the incomes of households. In general, households in the top half of the distribution pay more in taxes than they receive in benefits while the reverse is true for those in the lower half. Taxes and benefits therefore tend to reduce the differences between households' incomes. As shown in Table 4 for 2002–03, before government intervention, the top fifth of households have an average of around £60,300 per year in original income (that is from sources such as earnings, occupational pensions and investments). This is around 15 times as great as the figure of around £4,000 for the bottom fifth. This compares with ratios of 18 to one in the two previous years. After taking account of taxes and benefits, the ratio for final income is greatly reduced to four to one, the same as in previous years. The effect on the transition between original income and final income for 2002–03, broken down by quintiles, is also shown graphically in Figure 1.

Figure 1

Original income and Final income by quintile groups for ALL households, 2002–03

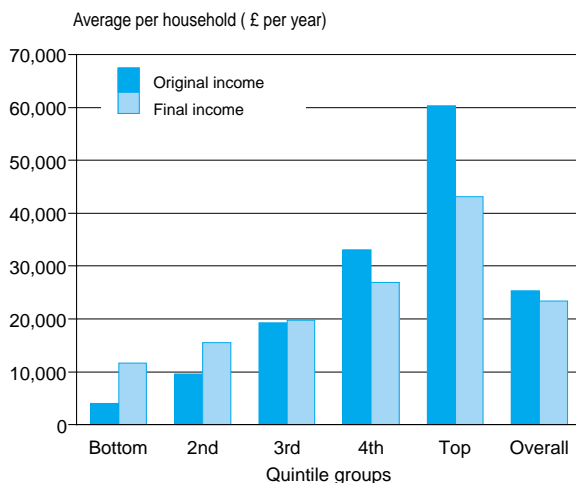
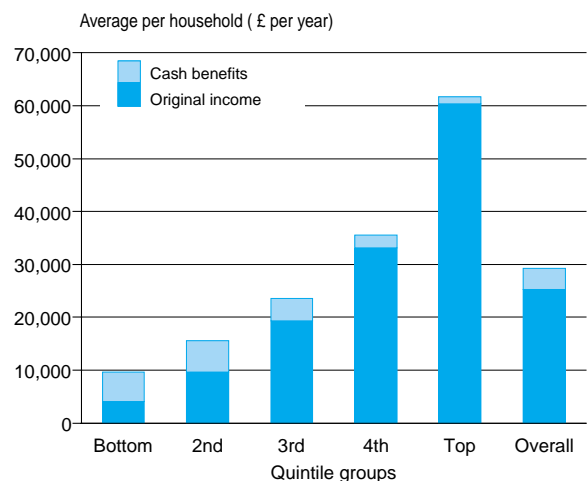


Figure 2

Gross income by quintile groups for ALL households, 2002–03



Cash benefits play the largest part in reducing inequality. The majority of these go to households in the lower part of the distribution, with the poorest two fifths receiving 59 per cent of the total. As shown in Table 4, these households typically receive around £5,600 to £6,000 from cash benefits, representing around three fifths of gross income for the bottom quintile group and two fifths for the next group. These proportions are even higher for retired households in this part of the distribution (see Table 12). The majority of cash benefits for non-retired households come from non-contributory benefits and, for retired households, from contributory benefits, particularly the state pension. Figure 2 shows gross income broken down into original income and cash benefits by the quintile distribution for equivalised disposable income.

Direct taxes, except for Council tax and Northern Ireland rates, are progressive – they take a larger proportion of income from those higher up the income distribution because tax is not paid on the first tranche of income and higher rates of tax are paid on higher incomes. Therefore, they also contribute to a reduction in inequality although not to the same extent as cash benefits. The proportion of gross income paid in direct tax (Table 3) by the top fifth of households is more than double that paid by the bottom fifth: 24 per cent compared with 9 per cent. For Council tax in Great Britain and domestic rates in Northern Ireland, the top quintile group pays the largest absolute amount (Table 14A). On the other hand, when expressed as a proportion of gross income (Table 3), the impact of Council tax in Great Britain and domestic rates in Northern Ireland is higher in the lower half of the distribution. Unlike in previous years, charges made by water authorities for water, environmental and sewerage services have been excluded. They are now regarded as charges for services rather than a tax. Comparable data for 2001–02 are shown in Table 3A.

Indirect taxes have the opposite effect to direct taxes taking a higher proportion of income from those with lower incomes, i.e. they are regressive. On average, higher income households channel a relatively high proportion of their income into savings and mortgage payments. These do not attract indirect taxes. In addition, the recorded expenditure of some lower income households is higher than their recorded current incomes. This results in relatively large payments of indirect tax. Despite this, the top fifth of households still pay more indirect tax in absolute terms than other households, see Table 14A.

Households also receive benefits in kind from services provided free or at subsidised prices by government, such as health and education. The amount received falls gradually as income increases indicating that these benefits also lead to a reduction in inequality.

Characteristics across the income distribution

As described in more detail later, households are ranked by their equivalised disposable income, which the analysis uses as a proxy for their level of welfare. Equivalisation is a standard methodology that takes into account the size and composition of households and adjusts their incomes to recognise differing demands on resources. As a result, larger households will be lower down the income distribution than a smaller household with the same absolute income.

Adults and children are not spread evenly throughout the income distribution (Tables 4, 15 and 15A). For example, there are more children in households in the lower half of the distribution. However, among adults, women appear fairly evenly spread across income groups. There are more men in households in the higher groups than in the lower groups. There are also distinct patterns by household type. For example, households containing one adult and at least one child are concentrated in the bottom fifth. Retired households are over-represented in the bottom two quintile groups.

The higher income groups are characterised by households with more economically active people than those lower down the income distribution. Two adult households with no children are also over-represented towards the top of the distribution.

Trends in income inequality

As shown in Figure 5 and Table 27, inequality of disposable income was fairly stable in the first half of the 1980s then increased during the second half of the 1980s. Inequality has shown no consistent trend since the start of the 1990s.

Changes in the income distribution over time have been the focus of much study. This analysis includes discussion of work which has attempted to identify some of the factors which have influenced these changes.

CONCEPTS AND SOURCES

Redistribution through taxes and benefits

This study examines how taxes and benefits redistribute income. It adds the value of government benefits to the private income of households and subtracts the value of taxes to look at different measures of household income.

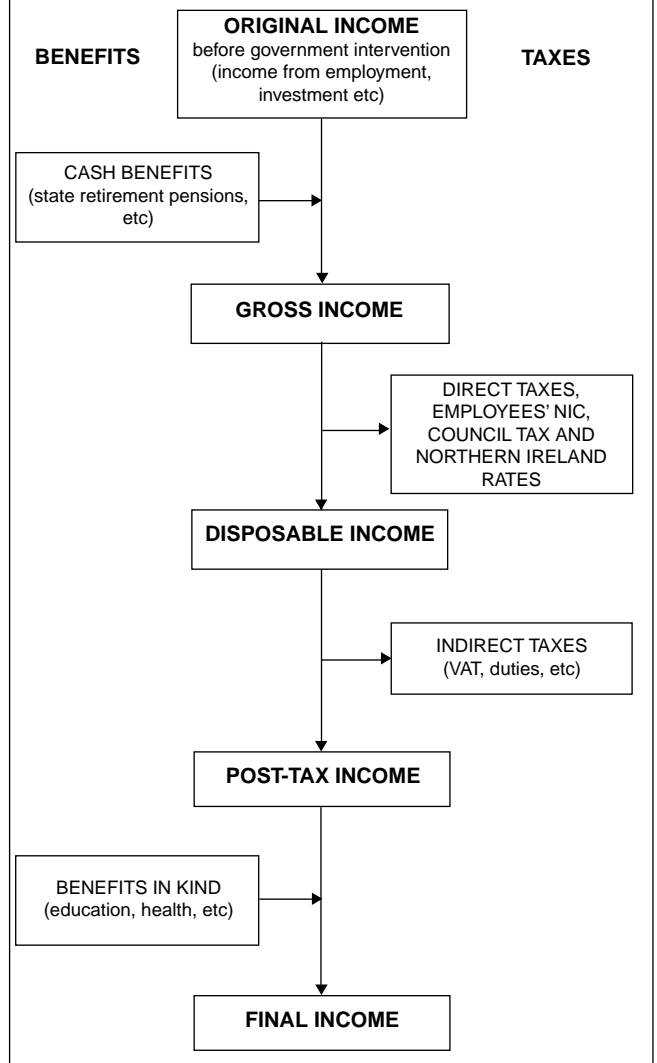
Diagram 1 shows the stages in the redistribution of income used in this analysis. Household members receive income from employment, occupational pensions, investments and other non-government sources. This is referred to as original income. The diagram shows the various ways that government raises revenue from households through taxation and distributes benefits to them in cash and in kind.

The analysis only allocates those taxes and benefits that can reasonably be attributed to households. Therefore, some government revenue and expenditure is not allocated such as revenue from corporation tax and expenditure on defence and public order. There are three main reasons for non-allocation. Some taxes and benefits fall on people who do not live in private households. In other cases, there is no clear conceptual basis for allocation to particular households. Finally, there may be a lack of data to enable allocation. In this study, some £270 billion of taxes and compulsory social contributions have been allocated to households. This is equivalent to 67 per cent of general government expenditure, which totalled around £406 billion in 2002 (Table 13). Similarly, £234 billion of cash benefits and benefits in kind have been allocated to households, making up 58 per cent of general government expenditure (Table 13).

The estimated values of taxes and benefits reflect the methodology used in this study. They are based on assumptions about which taxes and benefits should be covered and to whom they should apply. Where it is practical, the methodology used is similar to that used in previous years. However, there have been some changes in the underlying surveys and improvements in the methodology. For example, changes from 1996–97 onwards include new questions for the self-employed and the use of data which are grossed up to the UK household population. A household is defined in terms of the harmonised definition as used in the Census and nearly all other government household surveys since 1981. This is one person, or a group of persons, who have the accommodation as their only or main residence and (for a group) share the living accommodation, that is a living or sitting room, or share meals together or have common housekeeping. Up until 1999–2000, the definition was based on the pre-1981 Census definition and required members

Diagram 1

Stages of redistribution



A National Statistics review of income statistics and the redistribution of income statistics was published on the ONS web site on March 19th 2004 see http://www.statistics.gov.uk/methods_quality/quality_review/social.asp. For further information please contact the author.

to share eating and budgeting arrangements as well as shared living accommodation. The definition of a household comprised people who lived at the same address and who shared common catering for at least one meal a day. The effect of the change was fairly small, but not negligible. Time series are presented for some measures that are relatively robust to these changes. These include Gini coefficients and other measures of inequality in Tables 26 and 27. 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 the article are based on actual household spending and do not, therefore, apply to such items as notional income. Beyond these measures, one should be cautious about making direct comparisons with earlier studies.

Unit of analysis

The unit of analysis used in this study is the household. The households are ranked by their equivalised disposable income, which the analysis uses as a proxy for their level of welfare. Equivalisation is a standard methodology that takes into account the size and composition of households and adjusts their incomes to recognise differing demands on resources. For example, a couple would need a higher income than a single person to achieve the same standard of living. The equivalence scale used in this analysis is the *McClements scale* (**before** housing costs are deducted). So a single person's income of £6,100 is treated as equivalent to an income of £10,000 for a couple (see Appendix 2, paragraph 46). Households with the same equivalised income do not necessarily have the same standard of living where other characteristics are different. For example, households which own their homes outright would be in a better position than identical households with the same income which had to pay rent or mortgage payments. Also, households which include disabled people may require additional resources to maintain the same standard of living as those without disabled people. Equivalisation does not adjust for these differences.

Equivalised income is used only to rank the households. Most monetary values shown in the analysis are not equivalised. Where equivalised amounts are given, they are shown in *italics*. Once the households have been ranked, the distribution is split into five (or ten) equally sized groups – that is quintile groups (or decile groups). The bottom and second quintile groups are those with the lowest equivalised disposable incomes while the fourth and top groups have the highest.

Data source

The main data source for this analysis is the Expenditure and Food Survey (EFS) which covers about 7,000 households in the United Kingdom each year. It only covers private households – people living in hotels, lodging houses and in institutions, such as old peoples' homes, are excluded. The EFS brought together and replaced the Family Expenditure Survey (FES) and the National Food Survey from 2001–02. However, the income questions were essentially unchanged.

The survey results are re-weighted and grossed so that the totals reflect the whole household population in terms of age, sex and region. Different initial weights are applied to different types of household in order to correct for over or under-representation of these groups in the responding sample of the EFS. Studies have indicated that the EFS suffers from under-representation of individuals at the very top of the income distribution. This under-representation is not directly corrected by the re-weighting and

grossing methodology and may lead to some under-estimation of income. Those who are interested in the level of income for the top decile group of the income distribution should refer to the Department for Work and Pensions publication *Households Below Average Income 2002-03*¹. This analysis uses data from the Family Resources Survey and contains an income adjustment for households at the top of the income distribution, which is made using the Inland Revenue's Survey of Personal Incomes.

Further details of the concepts and methodology used are given in Appendix 2.

The results of the analysis are reported in three sections. The first looks at the effects for all households. Non-retired and retired households have distinct income and expenditure patterns and so the tax and benefit systems affect the two groups in very different ways. Therefore, the second and third sections look separately at results for non-retired and retired households.

TABLE 1: Comparison between old and new table and figure numbers, and additional tables and figures

Old table or chart	New Name	Description
Chart 1	Diagram 1	Stages of redistribution
New Chart	Figure 1	Original income and final income by quintile groups of all households, 2002–03
New Chart	Figure 2	Gross income (original income & cash benefits) by quintile groups of all households, 2002–03
Chart 2	Figure 3	Sources of gross income by quintile groups of equivalised disposable income, 2002–03
Chart 3	Figure 4	Summary of the effects of taxes and benefits on all households, 2002–03
Chart 4	Figure 5	Gini coefficients 1980 to 2002–03
Chart 5	Figure 6	Income stages by non-retired household types, 2002–03
Look up table	Table 1	Comparison between old tables and new table numbers and additional tables
A	Table 2	Percentage shares of household income and Gini coefficients, 2002–03
B	Table 3	Taxes as a percentage of gross income, disposable income and expenditure for all households by quintile groups, 2002–03
	Table 3A	Table 3 for 2001–02 on same basis as for 2002–03 ie excluding water rates
C	Table 4	Summary of the effects of taxes and benefits by quintile groups of all households, 2002–03
D	Table 5	Percentage shares of household income and Gini coefficients for non-retired households, 2002–03
E	Table 6	Summary of the effects of taxes and benefits on non-retired households by quintile groups, 2002–03
F	Table 7	Cash benefits for non-retired households by quintile groups, 2002–03
G	Table 8	Taxes as a percentage of gross income for non-retired households by quintile groups, 2002–03
H	Table 9	Indirect taxes as a percentage of (a) disposable income and (b) household expenditure for non-retired households by quintile groups, 2002–03
I	Table 10	Benefits in kind for non-retired households by quintile groups, 2002–03
J	Table 11	Percentage shares of household income and Gini coefficients for retired households, 2002–03
K	Table 12	Summary of the effects of taxes and benefits on retired households by quintile groups, 2002–03
Appendix 1	Appendix 1	
1	Table 13	Taxes and benefits allocated to households as a percentage of general government expenditure, 2002
2A	Table 14	Average incomes, taxes and benefits by decile groups of all households, 2002–03
New quintiles	Table 14A	Average incomes, taxes and benefits by quintile groups of all households, 2002–03
2B	Table 15	Household characteristics of decile groups of all households, 2002–03
New quintiles	Table 15A	Household characteristics of quintile groups of all households, 2002–03
3A	Table 16	Average incomes, taxes and benefits by decile groups of non-retired households, 2002–03
New quintiles	Table 16A	Average incomes, taxes and benefits by quintile groups of non-retired households, 2002–03
3B	Table 17	Household characteristics of decile groups of non-retired households, 2002–03
New quintiles	Table 17A	Household characteristics of quintile groups of non-retired households, 2002–03
4A	Table 18	Average incomes, taxes and benefits by decile groups of retired households, 2002–03
New quintiles	Table 18A	Average incomes, taxes and benefits by quintile groups of retired households, 2002–03
4B	Table 19	Household characteristics of decile groups of retired households, 2002–03
New quintiles	Table 19A	Household characteristics of quintile groups of retired households, 2002–03
5	Table 20	Average incomes, taxes and benefits by decile groups of non-retired households without children, 2002–03
6	Table 21	Average incomes, taxes and benefits by decile groups of non-retired households with children, 2002–03
7	Table 22	Distribution of households by household type, 2002–03
8	Table 23	Summary of the effects of taxes and benefits, by household type, 2002–03
9	Table 24	Average incomes, taxes and benefits by decile groups of households (ranked by unadjusted disposable income), 2002–03
10	Table 25	Cross-tabulation of households ranked by disposable income, unadjusted and equivalised, 2002–03
Appendix 2	Appendix 1	Long run time series
1	Table 26	Percentage shares of equivalised total original, gross, disposable and post-tax incomes by quintile groups for all households, 1980 to 2002–03
2	Table 27	Gini coefficients for the distribution of income at each stage of the tax-benefit system
3	Table 27	and P90/P10 and P75/P25 ratios for disposable income for all households, 1980 to 2002–03
Appendix 3	Appendix 2	Methodology and definitions
Diagram A	Diagram 3	Complete income inequality
Diagram B	Diagram 2	Lorenz curve for a typical income distribution

*Note:**Symbols**The following symbols have been used throughout the article**O negligible (less than half the final digit shown)**- nil*

RESULTS FOR ALL HOUSEHOLDS

Overall effect

Government intervention affects household income in various ways. Money is taken through taxes, both direct and indirect, and given back in the form of cash benefits and the provision of free or subsidised services. In general, households in the bottom half of the income distribution tend to be net gainers from the tax and benefit systems while those in the top half pay more in tax than they receive in benefits. Therefore, taken as a whole, government intervention leads to income being shared more equally between households. Table 2 summarises the overall effects.

In this analysis, income before taxes and benefits is termed original income and includes income from earnings, occupational pensions and investments. The extent of inequality in this measure of income can be seen by looking at the proportion of total original income received by groups of households in different parts of the income distribution. At this stage, the richest fifth of households (those in the top quintile group) receive 50 per cent of all original income (Table 2). This compares with only 3 per cent for households in the bottom fifth.

Adding cash benefits to original income produces gross income. In contrast to original income, the amount received from cash benefits is higher for households lower down the income distribution than for those at the top. This has an equalising effect on the distribution. It raises the share of income received by the

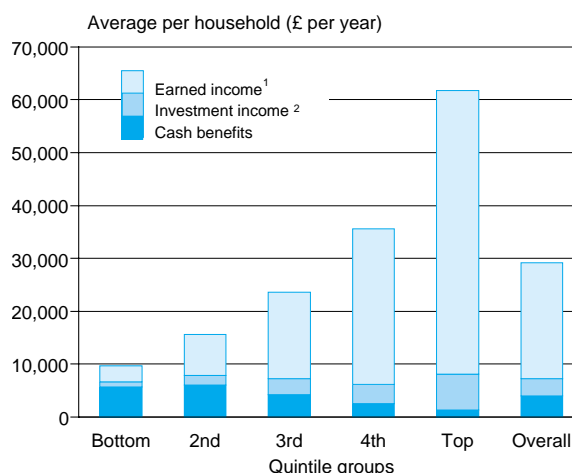
TABLE 2: Percentage shares of household income and Gini coefficients¹, 2002–03

	Percentage shares of equivalised income for ALL households ²			
	Original income	Gross income	Disposable income	Post-tax income
Quintile group ²				
Bottom	3	7	8	6
2nd	7	11	12	12
3rd	15	16	17	16
4th	25	23	23	23
Top	50	43	41	43
All households	100	100	100	100
Decile group ²				
Bottom	1	3	3	2
Top	32	28	26	28
Gini coefficient (per cent)	51	37	33	37

¹ This is a measure of the dispersion of each definition of income (see Appendix 2, paragraph 51).

² Households are ranked by equivalised disposable income.

Figure 3
Sources of gross income by quintile groups of equivalised disposable income, 2002–03



¹ Earned income includes wages and salaries, income from self-employment and income from 'fringe benefits'.

² Investment income includes occupational pensions, annuities and other income.

bottom quintile group to 7 per cent of gross income while the share of the top fifth is reduced to 43 per cent. Figure 3 shows a breakdown of gross income by quintiles.

The tax system has a much smaller effect on income inequality. The shares of income for disposable income (that is after direct taxes) and post-tax income (after indirect taxes) for each quintile group are similar to those for gross income. The direct tax system has a small equalising effect while the indirect system reverses this.

Tables 3, 14 and 14A show the effect of direct and indirect tax on each quintile and decile group in more detail. Households at the lower end of the income distribution pay smaller amounts of direct tax compared with households with higher incomes. Of the total income tax paid by all households, the bottom two quintile groups together pay about 7 per cent. This compares with 81 per cent of the total paid by the top two fifths combined.

In addition, low income households also pay a smaller proportion of their income in income tax. This is due to the progressive nature of the income tax system. As a proportion of their gross incomes, households in the bottom quintile group pay 4 per cent in income tax on average compared with 18 per cent for those in the top quintile group.

For national insurance contributions, the amount paid as a proportion of gross income rises as income rises until the fourth quintile group. The proportion then falls for the top fifth. This is because national insurance contributions are only levied on the first £585 of weekly earnings in 2002-03, so part of the earnings of many of those in the top quintile group will not be subject to this deduction.

TABLE 3: Taxes as a percentage of gross income, disposable income and expenditure for ALL households by quintile groups¹, 2002–03
(a) Direct and indirect taxes as a percentage of gross income
(b) Indirect taxes as a percentage of disposable income
(c) Indirect taxes as a percentage of expenditure²

	Quintile groups of ALL households ¹					All households
	Bottom	2nd	3rd	4th	Top	
(a) Percentages of gross income						
Direct taxes						
Income tax	3.5	6.3	10.3	13.4	18.3	13.5
Employees' NIC	1.3	2.5	3.8	4.7	3.9	3.8
Council tax & Northern Ireland rates ³	4.6	3.4	2.9	2.3	1.6	2.4
<i>All direct taxes</i>	<i>9.5</i>	<i>12.2</i>	<i>17.0</i>	<i>20.4</i>	<i>23.7</i>	<i>19.7</i>
Indirect taxes						
VAT	10.7	7.8	7.2	6.3	5.0	6.4
Duty on alcohol	1.6	1.0	1.1	0.9	0.7	0.9
Duty on tobacco	3.2	2.2	1.4	0.8	0.4	1.0
Duty on hydrocarbon oils & Vehicle excise duty	3.2	2.3	2.3	2.1	1.4	1.9
Other indirect taxes	9.8	6.8	5.8	4.8	3.8	5.1
<i>All indirect taxes</i>	<i>28.5</i>	<i>20.1</i>	<i>17.7</i>	<i>15.0</i>	<i>11.3</i>	<i>15.3</i>
<i>All taxes</i>	<i>37.9</i>	<i>32.2</i>	<i>34.7</i>	<i>35.5</i>	<i>35.1</i>	<i>35.0</i>
(b) Percentages of disposable income						
VAT	11.8	8.8	8.6	7.9	6.6	7.9
Duty on alcohol	1.7	1.2	1.3	1.2	0.9	1.1
Duty on tobacco	3.6	2.5	1.7	1.0	0.5	1.3
Duty on hydrocarbon oils & Vehicle excise duty	3.5	2.7	2.7	2.7	1.9	2.4
Other indirect taxes	10.8	7.7	7.0	6.0	5.0	6.3
<i>All indirect taxes</i>	<i>31.4</i>	<i>22.9</i>	<i>21.4</i>	<i>18.9</i>	<i>14.9</i>	<i>19.1</i>
(c) Percentages of expenditure²						
VAT	8.6	8.4	8.3	8.3	7.5	8.0
Duty on alcohol	1.3	1.1	1.3	1.2	1.0	1.2
Duty on tobacco	2.6	2.3	1.6	1.1	0.6	1.3
Duty on hydrocarbon oils & Vehicle excise duty	2.6	2.5	2.6	2.8	2.1	2.5
Other indirect taxes	7.8	7.3	6.7	6.3	5.7	6.4
<i>All indirect taxes</i>	<i>22.8</i>	<i>21.7</i>	<i>20.5</i>	<i>19.7</i>	<i>17.0</i>	<i>19.4</i>

¹ Households are ranked by equivalised disposable income.

² Calculated to be consistent with disposable income. See paragraph 34 of Appendix 2 for the definition of expenditure.

³ After deducting discounts, council tax benefits and rates rebates.

TABLE 3A: Taxes as a percentage of gross income, disposable income and expenditure for ALL households by quintile groups¹, 2001–02**(a) Direct and indirect taxes as a percentage of gross income****(b) Indirect taxes as a percentage of disposable income****(c) Indirect taxes as a percentage of expenditure²**

	Quintile groups of ALL households ¹					All households
	Bottom	2nd	3rd	4th	Top	
(a) Percentages of gross income						
Direct taxes						
Income tax	3.2	7.0	10.2	13.6	18.4	13.8
Employees' NIC	1.2	2.4	4.0	4.8	3.9	3.8
Council tax & Northern Ireland rates ³	4.7	3.3	2.8	2.3	1.4	2.2
<i>All direct taxes</i>	<i>9.1</i>	<i>12.7</i>	<i>17.1</i>	<i>20.6</i>	<i>23.7</i>	<i>19.9</i>
Indirect taxes						
VAT	11.4	7.5	7.0	6.2	4.7	6.1
Duty on alcohol	1.6	1.0	1.0	0.9	0.6	0.9
Duty on tobacco	3.1	1.8	1.6	0.9	0.3	1.0
Duty on hydrocarbon oils & Vehicle excise duty	3.4	2.4	2.4	2.1	1.3	1.9
Other indirect taxes	10.9	7.0	5.9	5.0	3.6	5.1
<i>All indirect taxes</i>	<i>30.4</i>	<i>19.8</i>	<i>17.8</i>	<i>15.2</i>	<i>10.5</i>	<i>15.0</i>
<i>All taxes</i>	<i>39.5</i>	<i>32.5</i>	<i>34.9</i>	<i>35.8</i>	<i>34.2</i>	<i>34.8</i>
(b) Percentages of disposable income						
VAT	12.6	8.6	8.5	7.9	6.1	7.6
Duty on alcohol	1.7	1.2	1.3	1.1	0.8	1.1
Duty on tobacco	3.5	2.1	1.9	1.1	0.4	1.2
Duty on hydrocarbon oils & Vehicle excise duty	3.7	2.8	2.9	2.7	1.7	2.4
Other indirect taxes	12.0	8.1	7.1	6.3	4.7	6.4
<i>All indirect taxes</i>	<i>33.4</i>	<i>22.6</i>	<i>21.5</i>	<i>19.1</i>	<i>13.8</i>	<i>18.7</i>
(c) Percentages of expenditure²						
VAT	7.9	7.9	7.8	7.6	6.9	7.5
Duty on alcohol	1.1	1.1	1.2	1.1	0.9	1.0
Duty on tobacco	2.2	1.9	1.7	1.1	0.5	1.2
Duty on hydrocarbon oils & Vehicle excise duty	2.3	2.6	2.6	2.6	2.0	2.3
Other indirect taxes	7.5	7.5	6.5	6.1	5.4	6.2
<i>All indirect taxes</i>	<i>21.1</i>	<i>21.0</i>	<i>19.8</i>	<i>18.5</i>	<i>15.7</i>	<i>18.3</i>

¹ Households are ranked by equivalised disposable income.² Calculated to be consistent with disposable income. See paragraph 34 of Appendix 2 for the definition of expenditure.³ After deducting discounts, council tax benefits and rates rebates.

Council tax in Great Britain and domestic rates in Northern Ireland are shown net of council tax benefits and rates rebates in Tables 3, 14 and 14A. Households in the lower part of the income distribution pay smaller absolute amounts. Net payments by the bottom quintile group are typically under half of those in the top fifth. On the other hand, when expressed as a proportion of gross income, the burden decreases as income rises. Council tax in Great Britain and domestic rates in Northern Ireland represent 5 per cent of gross income for those in the bottom fifth but 2 per cent for those in the top quintile group. Unlike in previous years, charges made by water authorities for water, environmental and sewerage services have been excluded. They are now regarded as charges for services rather than a tax. Comparable data for 2001-02 are shown in Table 3A.

Indirect taxes

The amount of indirect tax that each household pays is estimated from its expenditure recorded in the EFS. However, the income and expenditure data recorded in the EFS are not fully compatible because they are recorded in different ways (see Appendix 2, paragraph 6). Indeed, measured expenditure exceeds measured income for households in the lower half of the distribution. There are a number of possible explanations for this. Some households with low incomes may draw on their savings or borrow in order to finance their expenditure. In addition, the lower deciles include some groups who have, or report, very little income (for example, self-employed people starting a business or someone who has just been made redundant). For some people this spell of very low income may only be temporary and during this period, they may continue with previous patterns of spending. In these cases, expenditure taxes are not being met from current income. Some types of receipts are not included as income in the EFS, e.g. inheritance and severance payments. In some cases, the information given on direct tax is not consistent with that on income received, possibly because of timing differences. For a minority of households, the EFS may be measuring incomes inaccurately. Therefore, to give a more complete picture of the impact of indirect taxes, they are shown in Table 3 separately as a proportion of gross income, disposable income and expenditure. In addition, direct taxes are also shown as a proportion of gross income so that the impact of direct and indirect taxes can be compared.

In cash terms, the top fifth of households pay about two and a half times as much indirect tax as the bottom fifth. However, when expressed as a percentage of expenditure, the proportion paid in indirect tax tends to be lower for households at the top of the distribution compared to those lower down.

When expressed as a proportion of gross or disposable income, as shown in Table 3, the impact of indirect taxes declines sharply as income rises. This is because those in higher income groups tend to channel a larger proportion of their income into savings and mortgage payments, which do not attract indirect taxes. Indirect taxes therefore appear more regressive than when expressed as a proportion of expenditure. However, the top fifth still pay a smaller proportion of their expenditure or income in indirect taxation whichever measure is used.

Another way of looking at how taxes and benefits change inequality is to calculate Gini coefficients – a widely used summary measure of inequality (see Appendix 2, paragraph 51). It can take values from 0 to 100 per cent where a value of zero would indicate that each household had an equal share of income, while higher values indicate greater inequality.

The Gini coefficients (as shown in Tables 2 and 27) produce a similar picture to the shares of income discussed earlier. For 2002–03, the figure of 51 per cent for original income is reduced to 37 per cent for gross income by the inclusion of cash benefits – a large reduction in inequality. The coefficient for disposable income shows the equalising effect of direct taxes with the figure falling further to 33 per cent. The picture of indirect taxes reversing this effect is confirmed by the Gini coefficient rising to 37 per cent for post-tax income. The Gini coefficients for original, gross, disposable and post-tax income show slight falls in 2002–03 compared to those in 2001–02. As discussed earlier, all comparisons are subject to the potential effect of the discrepancy between income and expenditure in the lower half of the income distribution.

Characteristics of households

Different types of household are not spread evenly throughout the income distribution. Information about the characteristics of households in the different income groups is shown in Table 4, with more detail in Tables 15 and 15A. Household size does not vary much across the income distribution, with an average of between 2.2 and 2.5 people per household in each decile group in 2002-03. There are differences in the split between adults and children. A child (i.e. a dependent) is defined as either aged under 16, or aged 16, 17 or 18 not married, and receiving full-time non-advanced further education. There are more children in the lower half of the income distribution. The bottom quintile group has nearly twice the number of children as the top group. The pattern for the numbers of men and women also varies across income groups. The number of women is fairly constant while households in the higher income groups tend to have more men than the lower groups. Higher income groups also contain more

TABLE 4: Summary of the effects of taxes and benefits by quintile groups on ALL households¹, 2002-03

	Quintile groups of ALL households ¹						Ratio Top/Bottom quintile
	Bottom	2nd	3rd	4th	Top	All households	
Income, taxes and benefits per household (£ per year)²							
Original income	4 030	9 610	19 320	33 080	60 310	25 270	15
<i>plus</i> cash benefits	5 640	6 010	4 250	2 500	1 390	3 960	0
Gross income	9 670	15 630	23 560	35 580	61 700	29 230	6
<i>less</i> direct taxes ³ and employees' NIC	910	1 900	4 000	7 270	14 650	5 750	16
Disposable income	8 760	13 730	19 570	28 310	47 050	23 480	5
<i>less</i> indirect taxes	2 750	3 140	4 180	5 340	6 990	4 480	3
Post-tax income	6 010	10 590	15 390	22 970	40 060	19 000	7
<i>plus</i> benefits in kind	5 700	4 960	4 370	3 970	3 070	4 410	1
Final income	11 710	15 550	19 750	26 940	43 130	23 410	4
Number of individuals per household							
<i>Children</i> ⁴	0.7	0.6	0.5	0.5	0.4	0.5	
<i>Adults</i>	1.7	1.7	1.9	2.0	1.9	1.8	
<i>Men</i>	0.7	0.8	0.9	1.0	1.0	0.9	
<i>Women</i>	1.0	1.0	1.0	1.0	0.9	1.0	
People	2.4	2.3	2.4	2.5	2.3	2.4	
People in full-time education	0.7	0.5	0.5	0.5	0.3	0.5	
Economically active people	0.6	0.8	1.2	1.7	1.7	1.2	
Retired people	0.6	0.7	0.5	0.3	0.2	0.4	
Household type (percentages)							
Retired	38	43	27	14	8	26	
Non-retired							
1 adult	13	9	14	14	20	14	
2 adults	11	12	19	29	38	22	
1 adult with children ⁵	13	8	5	3	1	6	
2 adults with children	16	19	22	22	20	20	
3 or more adults ⁶	9	9	13	18	13	12	
All household types	100	100	100	100	100	100	

¹ Households are ranked by equivalised disposable income.

² 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).

³ These are income tax (which is after tax relief at source on life assurance premiums), Council tax and Northern Ireland rates but after deducting discounts, council tax benefits and rates rebates.

⁴ Children are defined as people aged under 16 or aged between 16 and 18, unmarried and receiving non-advanced further education.

⁵ This group is smaller than the category of 'one parent families' because some of these families will be contained in the larger household types.

⁶ With or without children.

economically active people. The top fifth of households has about three times as many economically active people as the bottom fifth. Non-retired households with one adult and one or more children are concentrated in the lower groups, as shown in Tables 4, 15A and 22.

Around 70 per cent of these households are in the bottom two quintile groups. This group makes up the majority of lone parent families. However, some lone parents will be part of larger households and will be included in other household types. For two adult households with children, the position in the income distribution tends to vary according to the number of children. Those with three or more children tend to be in lower groups than those with only one or two. Households with three or more children are less likely to have two economically active adults compared to those with fewer children, partly reflecting the fact that the youngest child or children may not yet be of school age. In addition, households with higher numbers of children will tend to have higher needs than smaller households. As the ranking of households is based on income adjusted for the needs of the household (i.e. equivalised income, adjusted for household size and composition), this increases the chance that households with three or more children will be found in the lower part of the income distribution. Where there are no children in the household, non-retired two adult households tend to be found in the higher income groups.

Retired households are over-represented at the lower end of the distribution. Nearly two thirds are in the bottom two fifths (as shown in Table 22). Those consisting of one retired woman are more concentrated towards the bottom compared to those with one retired man.

Stages of redistribution

Details of the amounts which households in each quintile group receive from the various measures of income are shown in Table 4, with more detailed information for decile groups in Table 14 and quintile groups in Table 14A.

On average, households receive about £25,300 a year in original income but this varies widely between households. Those in the top quintile group have around £60,300 compared with about £4,000 for the bottom fifth. This pattern is driven by differences in the numbers of economically active people and the employment status of the chief economic supporter between the groups. For example, as shown in Tables 15 and 15A, nine in ten chief economic supporters of households in the top quintile group are economically active compared with less than one in three of those in the lowest. The chief economic supporters in the top

fifth are predominantly full-time employees or self-employed. Those in the bottom fifth are more likely to work part-time or be unemployed or economically inactive. Those in the higher deciles tend to have better paid jobs as well as being more likely to be economically active.

Wages and salaries and income from self-employment are typically the most important source of income, together making up three quarters of gross income on average (as shown in Table 14A). Cash benefits are also a significant source, particularly for households in the lower half of the distribution. Of the total amount of cash benefits received, the bottom two quintile groups together receive about 60 per cent. These households typically receive around £5,600 to £6,000 from cash benefits, representing around three fifths of gross income for the bottom quintile group and two fifths for the next group (Figure 3).

Higher income groups pay both higher amounts of direct tax and higher proportions of their income in direct tax (Tables 3, 4, 14 and 14A). The top quintile group pays about £14,700 per household in income tax, national insurance contributions and Council tax or Northern Ireland rates – 24 per cent of gross income. In contrast, the direct tax bill for households in the bottom fifth is around £900, representing 9 per cent of their gross income. Looking at income tax on its own, the top two quintile groups pay around 81 per cent of the total.

In contrast to benefits and direct taxes, the indirect tax system has a different effect. Households with higher incomes still pay more in absolute terms but not as a proportion of their incomes. This means that indirect taxes tend to increase income inequality.

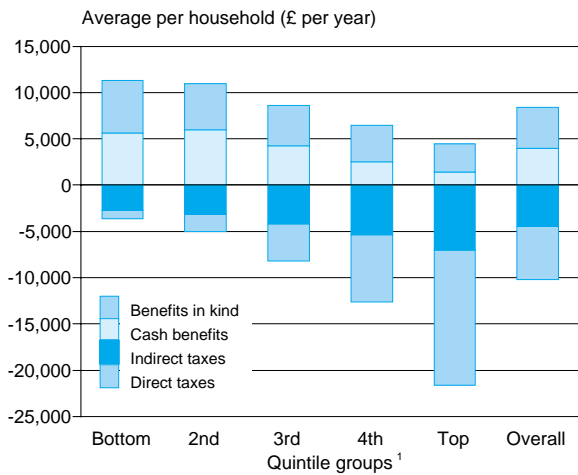
The final stage in the redistribution process is the addition of benefits in kind, such as those from state education and the health service. Households in the bottom quintile group receive the equivalent of around £5,700 from all benefits in kind, which is nearly twice the amount received by the top fifth (see Figure 4). These are described in more detail later in the analysis.

Taken as a whole, the tax and benefit systems redistribute income from high income households to those on low incomes. The average final income for the quintile groups ranges from £11,700 to £43,100, a ratio of one to four compared to a ratio of one to 15 for original income, i.e. before government intervention, as shown in Table 4.

Changes in inequality over time

There are many ways of measuring income inequality. Different measures may show different trends depending on whether

Figure 4
Summary of the effects of taxes and benefits on ALL households, 2002–03



1 Households are ranked throughout by their grossed equivalised disposable incomes.

they are particularly sensitive to changes in one part of the distribution. Calculation of several measures of inequality allows us to see whether a particular trend is peculiar to one particular measure or backed up by others. Tables 26 and 27 (at the end of Appendix 1) show trends for three measures of inequality. Table 26 shows trends for the shares of income figures that have already been seen for 2002–03 earlier in this analysis. Table 27 contains time series for Gini coefficients and another concept: using the ratio of the incomes at two points in the distribution. Two such measures are calculated: the ratio of the disposable

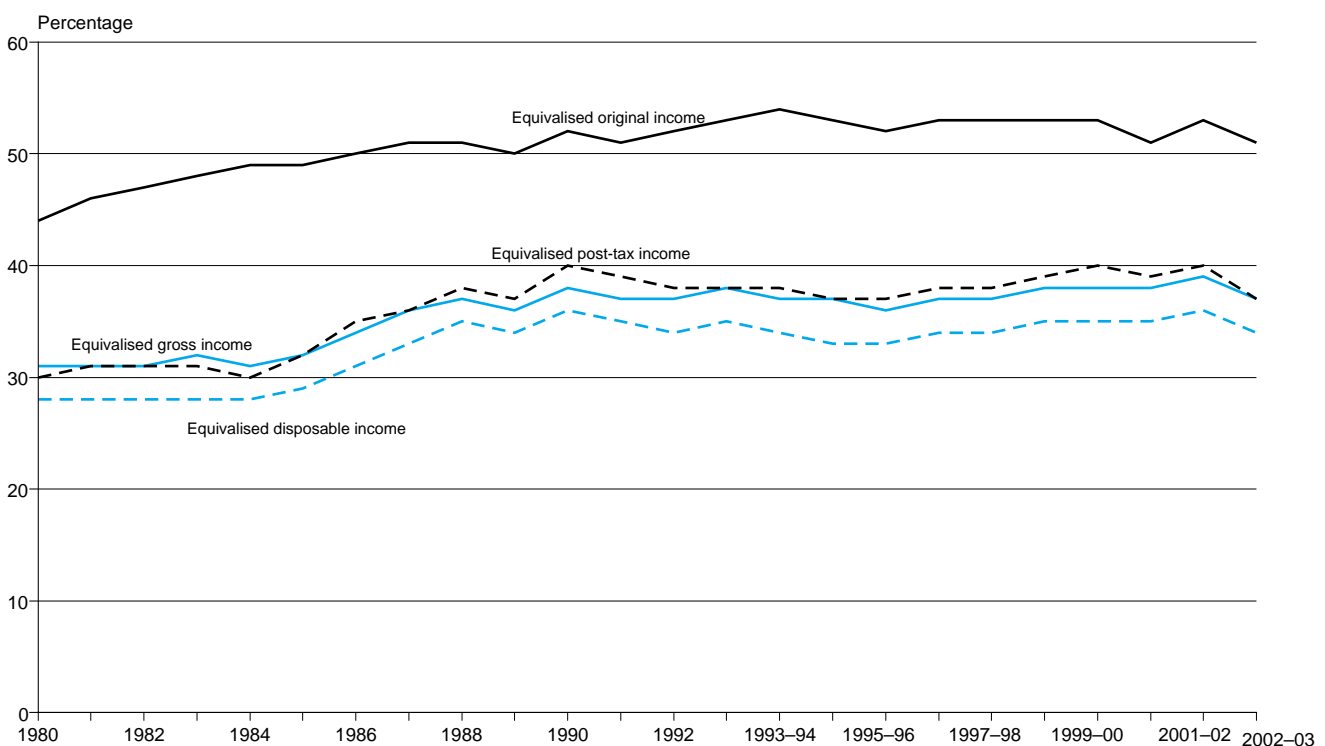
income at the 90th percentile compared to the 10th (P90/P10); and the ratio of the 75th percentile to the 25th (P75/P25). (The 90th percentile is the income below which nine out of ten households lie and the 75th percentile is the income below which three quarters of households lie.) An advantage of the measure of the ratio of the 75th percentile to the 25th is that it is not affected by extreme values at either end of the distribution, which may be inaccurately measured. However, it does not reflect changes within households in the middle of the distribution.

Figure 5 shows how inequality has been changing over time since 1980 for the various measures of income as measured by the Gini coefficient. It indicates several phases over the last two decades and shows that the different measures of income do not always show the same trend in inequality.

The 1980s were characterised by a large increase in inequality. The Gini coefficient for original income rose fairly steadily throughout this period. However, the pattern for the coefficient for disposable income is slightly different: for the first half of the decade inequality of disposable income was stable; this was then followed by a rise in the second half of the 1980s.

The data for the 1990s and since then show a different story. Inequality of original, disposable and post-tax income have shown no consistent trend since the start of the 1990s.

Figure 5
Gini coefficients 1980 to 2002–03



As with all measures derived from sample surveys, the Gini coefficients are subject to sampling errors. To give an indication as to whether the estimated changes in inequality are real changes or simply the result of sampling variation, we have calculated confidence intervals for the coefficients in Figure 5 using software developed at the London School of Economics². These show that, in most cases, the year-on-year changes are within the bounds of sampling variation. However, when we look at changes over periods of more than one year there are changes which cannot be explained by variation introduced by the sampling process.

Figures in Table 26 for trends in the shares of income figures tell the same story as the Gini coefficient: one of increasing inequality of disposable income in the 1980s then a flatter picture in the 1990s.

Changes in income distribution over time have been the focus of much study. The Organisation for Economic Co-operation and Development (OECD)³ has commissioned a number of studies into this, and has identified a number of reasons for possible shifts, in particular the widening of the income distribution during the 1980s. The most prominent reasons given are globalisation of trade pushing down some wages, recent technological changes having a bias against unskilled workers, and other developments concerning the deregulation of labour and product markets. Other explanations for trends in recent years offered by, for example, the Institute for Fiscal Studies (IFS)⁴ include: the effect of wage growth in some areas; the change in the importance of self-employment income; the change in the level of unemployment and the type of people affected; the importance of additional income sources; demographics; and the tax and benefit system.

RESULTS FOR NON-RETIRED HOUSEHOLDS

Overall effect

As for all households, the tax and benefit systems lead to income being shared more equally between non-retired households. Before government intervention, original income is shared more equally between non-retired households, as shown in Table 5, than for all households, as shown in Table 2. However, after the process of redistribution, the shares of income and Gini coefficients for post-tax income are the same as those for all households. The redistribution effect is therefore smaller for non-retired households than for all households. A summary of the effects of taxes and benefits on non-retired households is shown in Table 6, with more detail in Tables 16 and 16A.

TABLE 5: Percentage shares of household income and Gini coefficients¹ for NON-RETIRED households, 2002–03

	Percentage shares of equivalised income for NON-RETIRED households			
	Original income	Gross income	Disposable income	Post-tax income
Quintile group ²				
Bottom	3	6	7	6
2nd	10	12	12	12
3rd	17	17	17	16
4th	24	23	23	23
Top	46	42	41	43
All non-retired households	100	100	100	100
Decile group ²				
Bottom	1	2	3	2
Top	29	27	25	27
Gini coefficient (per cent)	44	36	33	38

¹ This is a measure of the dispersion of each definition of income (see Appendix 2, paragraph 51).

² Households are ranked by equivalised disposable income.

Characteristics of households

Unlike for all households, the average household size tends to decrease as income increases, as shown in Tables 17 and 17A. This fall is more than accounted for by the decrease in the average number of children in each household from 1.1 in the bottom quintile group to 0.4 in the top.

Other patterns are similar to those for all households. One adult household with children are concentrated at the bottom of the distribution with 43 per cent of these households in the bottom fifth and a further 26 per cent in the second quintile group (Table 22). Two adult households with three or more children are also concentrated towards the bottom although not to the same extent. Two adult households without children are over-represented at the top.

For single person households, there are different patterns for men and women. Households containing only one man are over-represented in the top quintile of the distribution. One woman households are more evenly spread throughout the income groups.

Original income

The average original income for non-retired households is £31,500 (Table 6). As mentioned above, inequality of original income is lower for non-retired households than for all households. The ratio of the average for the top quintile group to the bottom is 11 to one

TABLE 6: Summary of the effects of taxes and benefits on NON-RETIRED households by quintile groups¹, 2002–03

	Quintile groups of NON-RETIRED households ¹					All non-retired households	Ratio Top/Bottom quintile
	Bottom	2nd	3rd	4th	Top		
Income, taxes and benefits per household (£ per year)							
Original income	6 220	17 230	27 770	39 740	66 680	31 530	11
<i>plus</i> cash benefits	5 280	4 010	2 400	1 300	890	2 770	0
Gross income	11 500	21 240	30 170	41 030	67 570	34 300	6
<i>less</i> direct taxes ² and employees' NIC	1 170	3 420	5 880	8 950	16 440	7 170	14
Disposable income	10 330	17 820	24 290	32 080	51 130	27 130	5
<i>less</i> indirect taxes	3 330	4 140	5 160	5 870	7 430	5 190	2
Post-tax income	7 010	13 680	19 130	26 220	43 700	21 950	6
<i>plus</i> benefits in kind	6 440	5 160	4 280	3 660	2 930	4 490	0
Final income	13 440	18 840	23 410	29 870	46 630	26 440	3
Number of individuals per household							
<i>Children</i> ³	1.1	0.9	0.6	0.5	0.4	0.7	
<i>Adults</i>	1.8	1.9	2.1	2.1	1.9	2.0	
<i>Men</i>	0.8	0.9	1.1	1.1	1.0	1.0	
<i>Women</i>	1.0	1.0	1.0	1.0	0.9	1.0	
People	2.9	2.8	2.7	2.6	2.3	2.7	
People in full-time education	1.1	0.8	0.6	0.5	0.3	0.7	
Economically active people	1.0	1.5	1.8	2.0	1.8	1.6	
Retired people	0.1	0.1	0.1	0.1	0.1	0.1	

1 Households are ranked by equivalised disposable income.

2 These are income tax (which is after tax relief at source on life assurance premiums), Council tax and Northern Ireland rates but after deducting discounts, council tax benefit and rates rebates.

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

(compared to 15 to one for all households). The ratio in 2001–02 was 13 to one.

The original income of households shows a relatively strong relationship to the number of economically active people it contains. Households in the top three quintile groups typically contain nearly twice as many economically active people as those in the lowest group, as shown in Table 6.

Cash benefits

Table 7 gives a summary of the benefits that each quintile group receives. There are two types of cash benefits: contributory benefits which are paid from the National Insurance Fund (to which individuals and their employers make contributions while working) and non-contributory benefits. For non-retired households, non-contributory benefits (including Working Families Tax Credit (WFTC)) make up nearly three quarters of all cash benefits on average. Children's tax credits could not be separately identified but will have led to a reduction in income tax paid by households with children.

The average non-retired household receives £2,800 in cash benefits. The bottom fifth receive nearly double this amount while those in the top quintile group typically get £900. However, the patterns for contributory and non-contributory benefits are different.

Most non-contributory benefits, particularly income support and housing benefit, are income related and so payments are concentrated in the two lowest quintile groups. The presence of some individuals with low incomes in high income households means that some payments are recorded further up the income distribution. Three fifths of income support and housing benefit paid to non-retired households goes to households in the bottom fifth of the distribution. Child benefit and WFTC are based on the number of children in the household. Levels of child benefit received are therefore higher at the lower end of the distribution, as these households tend to have more children. Receipts of WFTC are high partly for that reason but, to a greater extent, because the amount received is higher the lower the income of the household.

TABLE 7: Cash benefits for NON-RETIRED households by quintile groups¹, 2002–03

	Quintile groups of NON-RETIRED households ¹					All non-retired households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
Contributory						
Retirement pension	160	510	560	420	240	380
Incapacity benefit	530	480	240	100	50	280
Job seeker's allowance ²	70	20	20	10	0	30
Other	50	50	60	70	160	80
Total contributory	810	1 070	880	590	440	760
Non-contributory						
Income support	1 490	680	280	20	0	490
Working Families Tax Credit	440	390	130	40	20	210
Child benefit	780	620	450	370	260	500
Housing benefit	1 030	470	170	20	0	340
Job seeker's allowance ³	220	40	20	0	0	60
Sickness/disablement related	360	580	390	150	90	310
Other	160	150	70	100	60	110
Total non-contributory	4 470	2 930	1 510	710	440	2 010
Total cash benefits	5 280	4 010	2 400	1 300	890	2 770
Cash benefits as a percentage of gross income	46	19	8	3	1	8

¹ Households are ranked by equivalised disposable income.

² Contribution based.

³ Income based.

In contrast, one criterion for receipt of contributory benefits is the amount of national insurance contributions that has been paid by, or on behalf of, the individual. The amounts received from these benefits are higher in the first three quintile groups than in the top two groups.

For all non-retired households, as shown in Table 7, cash benefits provide 8 per cent of gross income on average. For those in the bottom quintile group they form a much larger proportion – 46 per cent. Their payment results in a significant reduction in income inequality.

Direct taxes

Households at the lower end of the income distribution pay smaller amounts of direct tax (including income tax, employees' national insurance contributions, and Council tax and Northern

Ireland rates net of council tax benefits and rates rebates) compared with households with higher incomes (Tables 16 and 16A). Of the total income tax paid by non-retired households, the bottom two quintile groups together pay about 10 per cent. This compares with 75 per cent of the total paid by the top two fifths.

In addition, low income households also pay a smaller proportion of their income in income tax (Table 8). This is due to the progressive nature of the income tax system. As a proportion of their gross incomes, households in the bottom quintile group typically pay 5 per cent in income tax compared with 19 per cent for those in the top quintile group.

For national insurance contributions, the amount paid as a proportion of gross income rises as income rises until the fourth quintile group; the proportion then falls for the top fifth. This is because national insurance contributions are only levied on the first £585 of weekly earnings in 2002-03, so part of the earnings of many of those in the top quintile group will not be subject to this deduction.

Council tax in Great Britain and domestic rates in Northern Ireland are shown net of council tax benefits and rates rebates in Tables 8, 16 and 16A. Households in the lower part of the income distribution pay smaller absolute amounts in local taxes. Net payments by the bottom quintile group are only about two fifths of those in the top fifth (Table 16A). When expressed as a proportion of gross income in Table 8, the impact decreases as income rises. Council tax and Northern Ireland rates represent 3 per cent of

TABLE 8: Taxes as a percentage of gross income for NON-RETIRED households by quintile groups¹, 2002–03

	Quintile groups of NON-RETIRED households ¹					All non-retired households
	Bottom	2nd	3rd	4th	Top	
Percentages						
Direct taxes						
Income tax ²	4.6	9.1	12.1	14.5	18.9	14.5
Employees' NIC	2.1	4.1	4.9	5.2	4.0	4.3
Council tax & NI rates ³	3.5	2.9	2.5	2.1	1.4	2.1
All direct taxes	10.1	16.1	19.5	21.8	24.3	20.9
All indirect taxes	28.9	19.5	17.1	14.3	11.0	15.1
All taxes	39.0	35.6	36.6	36.1	35.3	36.0

¹ Households are ranked by equivalised disposable income.

² After tax relief at source on life assurance premiums.

³ Council tax and Northern Ireland rates after deducting discounts, council tax benefit and rates rebates.

gross income for the bottom fifth but only 1 per cent for those in the top quintile group.

Indirect taxes

The amount of indirect tax that each household pays is estimated from its expenditure recorded in the EFS. However, as described earlier in this analysis, the income and expenditure data recorded in the EFS are not fully compatible because they are recorded in different ways (see Appendix 2, paragraph 6). Therefore, to give a more complete picture of the impact of indirect taxes, they are shown in Table 9 as a proportion of disposable income and, separately, as a proportion of expenditure. In addition, indirect taxes are also shown as a proportion of gross income in Table 8 so that the impact of direct and indirect taxes can be compared.

In cash terms, the top fifth of non-retired households pay over twice as much indirect tax as the bottom fifth (Table 16A). On the other hand, when expressed as a percentage of disposable income or expenditure (Table 9), the proportion paid in indirect tax tends to be lower for households at the top of the distribution compared to those lower down.

When expressed as a proportion of disposable income, the impact of indirect taxes declines sharply as income rises. This is because those in higher income groups tend to channel a larger proportion of their income into savings and mortgage payments.

These do not attract indirect taxes. Indirect taxes appear less regressive when expressed as a proportion of expenditure, with payments rising broadly in line with expenditure. However, the top fifth still pay a smaller proportion of their expenditure in indirect taxation. In particular, the burden of tobacco duty is much heavier on households in the lower half of the distribution.

Benefits in kind

The Government provides certain goods and services to households either free at the time of use or, at subsidised prices. This study allocates these benefits in kind to individual households in order to arrive at final income. The imputed value of these benefits is based on the estimated cost of providing them. The largest two categories for which such imputations are made are health and education services. The 2002 expenditure for both these allocated in this analysis to all households is equivalent to around 28 per cent of total general government expenditure, as shown in Table 13. Other items for which imputations are made are free school meals, welfare milk, housing subsidy and travel subsidies. These items are equivalent to a further 1 per cent of general government expenditure. Table 10 gives a summary of the value of these benefits for each quintile group for non-retired households.

The benefit in kind from education is allocated to a household according to its members' use of state education (Appendix 2,

TABLE 9: Indirect taxes as a percentage of (a) disposable income and (b) household expenditure¹ for NON-RETIRED households by quintile groups², 2002–03

	Quintile groups of NON-RETIRED households ²					All non-retired households
	Bottom	2nd	3rd	4th	Top	
(a) Percentages of disposable income						
VAT	12.1	9.1	8.6	7.6	6.5	7.9
Duty on alcohol	1.8	1.3	1.3	1.2	0.9	1.1
Duty on tobacco	4.1	2.5	1.5	1.0	0.5	1.3
Duty on hydrocarbon oils & Vehicle excise duty	3.6	2.9	3.0	2.6	1.8	2.5
Other indirect taxes	10.7	7.5	6.8	5.9	4.8	6.2
All indirect taxes	32.2	23.2	21.3	18.3	14.5	19.1
(b) Percentages of expenditure¹						
VAT	8.6	8.2	8.2	8.0	7.4	7.9
Duty on alcohol	1.3	1.1	1.3	1.2	1.0	1.1
Duty on tobacco	2.9	2.3	1.4	1.1	0.5	1.3
Duty on hydrocarbon oils & Vehicle excise duty	2.5	2.6	2.9	2.7	2.0	2.5
Other indirect taxes	7.6	6.7	6.5	6.2	5.5	6.2
All indirect taxes	22.9	21.0	20.3	19.2	16.5	19.2

¹ Calculated to be consistent with disposable income. See paragraph 34 of Appendix 2 for the definition of expenditure.

² Households are ranked by equivalised disposable income.

paragraph 36). Households in the lower quintiles receive the highest benefit from education, as shown in Table 10. This is due to the concentration of children in this part of the distribution. In addition, children in households in the higher quintiles are more likely to be attending private schools and an allocation is not made in these cases. The impact of expenditure on free 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.

The benefit from the health service is estimated according to the age and sex of the household members rather than their actual use of the service, as the EFS does not contain this information (Appendix 2, paragraph 38). The imputed benefit is relatively high for young children, low in later childhood and through the adult years until it begins to rise from late middle age onwards. This benefit is virtually the same in the bottom two quintiles then falls gradually as income rises, as shown in Table 10. This pattern is a reflection of the demographic composition of households. Studies by Sefton⁵ have attempted to allow for variations in use of the health service according to socio-economic characteristics.

The housing subsidy, which excludes housing benefit (Appendix 2, paragraph 39), is spread between public sector, housing association and Registered Social Landlord tenants. Since such households tend to be concentrated in the lower half of the income distribution, this is where the imputed benefit is highest, as shown in Table 10.

TABLE 10: Benefits in kind for NON-RETIRED households by quintile groups¹, 2002–03

	Quintile groups of NON-RETIRED households ¹					All non-retired households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
Education	3 910	2 750	1 990	1 530	870	2 210
National health service	2 250	2 270	2 190	2 040	1 950	2 140
Housing subsidy	100	60	30	10	0	40
Travel subsidies	50	50	60	70	100	70
School meals and welfare milk	120	30	10	0	0	30
All benefits in kind	6 440	5 160	4 280	3 660	2 930	4 490
Benefits in kind as a percentage of post-tax income						
	92	38	22	14	7	21

¹ Households are ranked by equivalised disposable income.

Travel subsidies cover the support payments made to bus and train operating companies. The use of public transport by non-retired households is partly related to the need to travel to work and therefore to the number of economically active people in a household. This results in estimates of these subsidies being higher for households in higher income quintiles. This pattern is also due to London and the South East having higher levels of commuting by public transport together with higher than average household incomes.

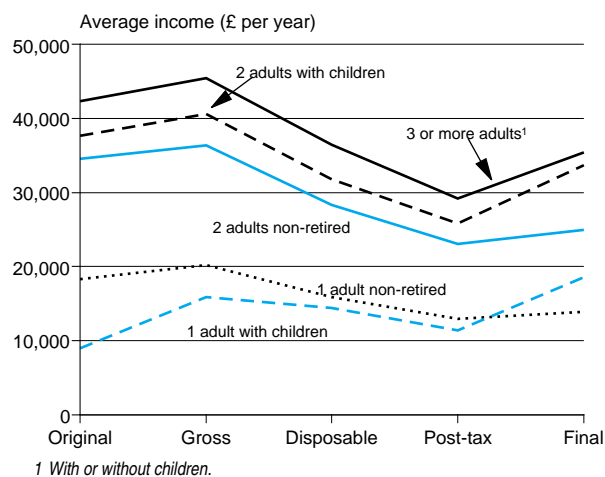
Taken together, the absolute value of these benefits in kind declines as household income increases. The ratio of benefits in kind to post-tax income decreases from 92 per cent for the lowest quintile group to 7 per cent for the highest, as shown in Table 10. This indicates that these benefits contribute to the reduction in inequality.

The effects of taxes and benefits by household type

The tax and benefit systems affect different types of household in different ways reflecting, in part, the number and ages of people within each household type. Of the types of non-retired households shown in Figure 6, only those containing one adult and children are net gainers, with average final incomes of £18,500 compared to original incomes of £8,900 (Table 23). This table also has a more detailed breakdown that shows that households with two adults and three or more children are also net beneficiaries, but to a smaller extent.

Original income is strongly related to the number of adults in the household. For two adult households, those with children have broadly similar levels of original income to those without, but

Figure 6
Income stages by NON-RETIRED household types, 2002–03



receive more cash benefits than those without. This reflects the effect of receiving child benefit and WFTC. The effect of taxes is broadly similar for both groups. Final incomes are higher for those with children due to the imputed benefit in kind from education.

For one adult households, original income is much lower for those with children as the adult is less likely to be economically active. Benefits, both in cash and in kind, are significantly higher for those with children.

RESULTS FOR RETIRED HOUSEHOLDS

In this analysis retired households are those where the income of retired household members accounts for more than half of the household gross income (see Appendix 2, paragraph 9 for the definition of a retired person). These households have quite distinct income and expenditure patterns. The tax and benefit systems affect them in different ways from non-retired households.

There is a high degree of inequality in original income between households. Tables 11, 18 and 18A show that, before government intervention, the richest fifth of retired households receive nearly three fifths of total original income, while the Gini coefficient for this measure of income is 63 per cent. Both these measures are higher (showing more inequality) than equivalent figures for non-retired households. After the impact of taxes and benefits there is a large reduction in inequality. Cash benefits play by far the largest

part in bringing about this reduction. Income tax payments make a further, though much smaller, contribution. Payments of indirect taxes result in an increase in inequality.

Overall, retired households receive an average of £7,500 in original income with most of this coming from occupational pensions and investments (Tables 12, 18 and 18A). Original income ranges from £1,500 for the bottom quintile group to £21,900 for the top. On the other hand, amounts received from cash benefits vary less across the distribution. On average, households in the bottom fifth receive around £5,700 from this source, while those in the second to fifth quintile groups receive between £7,500 and £8,000. These cash benefits make up large proportions of the gross incomes for the bottom four quintiles ranging from 79 per cent for the bottom quintile group to 51 per cent for the fourth quintile group. The top fifth are much less dependent on cash benefits – these account for only 26 per cent of their gross incomes.

Most retired people will have made contributions to the National Insurance Fund throughout their working lives. The bulk of the benefits which retired households receive will be paid out of this fund in the form of contributory benefits. The most significant of these is the state retirement pension, which on average accounts for three quarters of their cash benefits (Tables 12, 18 and 18A).

Non-contributory benefits are lowest in the bottom quintile group, where about three quarters of households own their homes outright (Table 19A) and so receive little in the way of housing benefit. In addition, as shown in Table 18A, disability benefits sometimes make up a significant proportion of the income of a retired household and their receipt may push a household up the income distribution. This does not necessarily mean that households receiving disability benefits have a higher standard of living than those lower down the income distribution. The income from these benefits may be offset by the additional costs that may be incurred by the individual due to the illness or disability in question.

Retired households derive significant benefits from health services and, to a lesser extent, housing and travel subsidies. Health benefit is spread fairly evenly between retired households whereas benefit from the housing subsidy is higher for those in the middle quintiles, since public sector tenants are concentrated in these groups. The benefits received by retired households from travel subsidies are mainly for bus travel, particularly in the form of concessionary fares and passes for senior citizens and, since these are not usually means-tested, there is no particular relationship with income.

Table 23 gives some details of the effect of taxes and benefits on different types of household. On average, both one adult retired households and those with two or more adults are net gainers from

TABLE 11: Percentage shares of household income and Gini coefficients¹ for RETIRED households, 2002–03

	Percentage shares of equivalised income for RETIRED households ²			
	Original income	Gross income	Disposable income	Post-tax income
Quintile group ²				
Bottom	4	10	10	9
2nd	7	14	14	14
3rd	10	16	17	17
4th	20	21	22	22
Top	58	39	37	39
All retired households	100	100	100	100
Decile group ²				
Bottom	1	4	4	4
Top	42	25	23	24
Gini coefficient (per cent)	63	29	26	31

¹ This is a measure of the dispersion of each definition of income (see Appendix 2, paragraph 51).
² Households are ranked by equivalised disposable income.

TABLE 12: Summary of the effects of taxes and benefits on RETIRED households by quintile groups¹, 2002–03

	Quintile groups of RETIRED households ¹					All retired households
	Bottom	2nd	3rd	4th	Top	
Income, taxes and benefits per household (£ per year)						
Original income						
Earnings	90	120	330	540	1 060	430
Occupational pensions	970	1 860	2 980	5 850	15 370	5 400
Investment income	450	450	530	1 220	5 270	1 580
Other income	40	90	40	70	160	80
Total original income	1 550	2 520	3 880	7 680	21 860	7 500
plus Contributory benefits	5 010	5 830	5 680	5 610	6 080	5 640
Non-contributory benefits	730	1 650	2 200	2 350	1 480	1 680
Total cash benefits	5 740	7 490	7 880	7 960	7 560	7 320
Gross income	7 280	10 000	11 760	15 630	29 420	14 820
less Income tax ²	110	190	430	970	3 680	1 080
Employees' NIC	0	20	20	20	70	20
Council tax & Northern Ireland rates ³	550	480	470	610	910	610
Disposable income	6 620	9 320	10 850	14 030	24 770	13 120
less Indirect taxes	1 800	1 940	2 160	2 770	3 740	2 480
Post-tax income	4 820	7 380	8 690	11 260	21 030	10 630
plus National health service	4 240	4 140	3 730	3 980	3 890	4 000
Housing subsidy	30	70	80	60	20	50
Other benefits in kind	140	120	190	140	120	140
Final income	9 220	11 710	12 690	15 440	25 060	14 820
Cash benefits as a percentage of gross income	79	75	67	51	26	49
Retirement pension as a percentage of cash benefits	86	76	71	70	79	76

¹ Households are ranked by equivalised disposable income.

² After tax relief at source on life assurance premiums.

³ Council tax and Northern Ireland rates after deducting discounts, council tax benefit and rates rebates.

the tax and benefit systems. For one adult retired households there are distinct differences in original income by gender. Men received more than one and a half times the level of original income than that of women on average: £5,800 for men compared with £3,700 for women. After the addition of benefits and the deduction of taxes, the differences are greatly reduced, so that final income levels for these men is only marginally higher than for women.

The author gratefully acknowledges the considerable work done for this study by Peter Acol, Daniel Annan, Peter Mayne, Paul Janvier, and Valerie Christian.

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APPENDIX 1

TABLE 13 (Appendix 1): Taxes and benefits allocated to households as a percentage of general government expenditure, 2002

Taxes and compulsory social contributions ¹ allocated to households			Benefits allocated to households		
	£ million	% of GGE ²		£ million	% of GGE ²
Income tax (gross)	109 400	27.0	Cash benefits		
Tax reliefs	- 70	0.0			
Income tax (net)	109 330	27.0	Contributory (National Insurance, etc)		
Employees' & self-employed NI contributions	27 690	6.8	Retirement	43 990	10.8
Council tax	16 340	4.0	Incapacity benefit	6 750	1.7
			Widows' and guardians' allowances	1 100	0.3
			Maternity/Statutory maternity pay	780	0.2
			Job seekers allowance	510	0.1
			Social fund	1 920	0.5
			Other	270	0.1
Taxes on final goods and services			Non-contributory		
VAT	48 000	11.8	Income support	14 440	3.6
Duty on hydrocarbon oils	11 130	2.7	Working Families Tax Credit	6 270	1.5
Duty on tobacco	7 710	1.9	Other family benefits	8 910	2.2
Vehicle excise duty	2 590	0.6	War pensions	1 170	0.3
Duty on wines, cider, perry and spirits	4 040	1.0	Other	16 980	4.2
Duty on beer	2 740	0.7	Student support	530	0.1
Betting duties	1 190	0.3	Rent rebates and allowances	12 080	3.0
Camelot: payments to NLDF	1 330	0.3			
Stamp duty on house purchase	2 020	0.5			
Other	2 910	0.7			
Taxes & NI contributions on intermediate goods & services ³			Benefits in kind		
Employers' NI contributions	12 420	3.1	Health services	64 850	16.0
Commercial & industrial rates	8 400	2.1	Education	49 820	12.3
Duty on hydrocarbon oils	5 590	1.4	Travel subsidies ⁴	1 670	0.4
VAT	3 470	0.9	Housing subsidy	1 120	0.3
Vehicle excise duty	1 060	0.3	School meals and welfare milk	730	0.2
Other	3 350	0.8			
Total	271 310	66.9	Total	233 890	57.8
Total government expenditure	405 600				

¹ Paid to UK central and local government and European Union institutions.

² Expressed as a percentage of general government expenditure.

³ These are taxes paid by industry and commerce assumed to be passed on to households in the prices of goods and services they buy. For instance, duty on derv used in the transportation of goods is an 'intermediate' tax whereas the duty on petrol bought by the private motorist is a tax on final goods and services.

⁴ Including concessionary fares expenditure.

Source: United Kingdom National Accounts, 2003 Edition.

TABLE 14 (Appendix 1): Average incomes, taxes and benefits by decile groups of ALL households, 2002-03

	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 (£ per year)											
<i>Decile points (equivalised £)</i>	<i>8 972</i>	<i>11 196</i>	<i>13 151</i>	<i>15 516</i>	<i>18 048</i>	<i>20 860</i>	<i>24 579</i>	<i>29 575</i>	<i>38 275</i>		
Number of households in the population ('000s)	2 434	2 434	2 434	2 436	2 432	2 437	2 434	2 435	2 433	2 437	24 346
Original income											
Wages and salaries	1 682	3 220	5 246	8 863	12 805	17 026	23 658	29 636	35 716	54 829	19 268
Imputed income from benefits in kind	3	23	21	46	62	148	291	438	659	1 555	325
Self-employment income	377	791	606	712	923	1 730	1 662	3 108	4 572	9 727	2 421
Occupational pensions, annuities	317	851	1 140	1 585	2 245	2 156	2 623	2 438	3 296	4 097	2 075
Investment income	186	285	320	395	540	561	796	1 023	1 582	4 090	978
Other income	170	161	129	163	255	181	273	222	215	285	205
Total	2 735	5 330	7 462	11 763	16 830	21 801	29 303	36 865	46 040	74 585	25 271
Direct benefits in cash											
Contributory											
Retirement pension	1 675	2 506	2 793	2 540	2 008	1 710	1 492	1 050	866	603	1 724
Job seeker's allowance (Contribution based)	98	16	5	24	16	27	9	4	10	2	21
Incapacity benefit	299	370	441	301	289	266	86	89	54	44	224
Widows' benefits	43	23	24	20	36	51	25	33	26	112	39
Statutory Maternity Pay/Allowance	1	3	5	6	7	19	21	34	61	76	23
Non-contributory											
Income support	942	1 129	796	511	437	346	256	32	10	-	446
Child benefit	431	530	406	384	374	372	353	352	259	232	369
Housing benefit	634	855	842	672	371	306	171	27	2	-	388
Job seeker's allowance (Income based)	197	130	34	18	21	24	2	1	5	-	43
Invalid care allowance	28	52	80	64	57	25	8	8	3	3	33
Attendance allowance	8	65	138	134	146	138	39	24	15	-	71
Disability living allowance	112	204	326	406	416	314	216	97	91	15	220
Disabled Persons Tax Credit	-	1	13	4	6	-	-	-	13	2	4
War pensions/War widows' pensions	9	-	21	14	60	31	78	17	15	24	27
Severe disablement allowance	26	16	16	11	55	30	44	33	4	8	24
Industrial injury disablement benefit	11	36	20	27	11	15	35	34	7	21	22
Student support	54	21	91	53	27	39	21	64	87	25	48
Government training schemes	25	7	20	5	7	1	12	0	1	0	8
Working Families Tax Credit	163	349	287	263	194	99	92	37	21	14	152
Other non-contributory benefits	90	122	115	95	83	59	60	37	28	20	71
Total cash benefits	4 845	6 436	6 473	5 553	4 621	3 873	3 021	1 974	1 579	1 201	3 958
Gross income	7 580	11 765	13 935	17 315	21 451	25 674	32 324	38 839	47 619	75 786	29 229
Direct taxes and Employees' NIC											
Income tax	199	487	660	1 300	2 028	2 837	4 066	5 464	7 434	15 139	3 961
<i>less: Tax relief at source¹</i>	3	3	3	3	4	4	2	5	7	8	4
Employers' NI contributions	79	181	271	520	758	1 029	1 484	1 871	2 222	2 595	1 101
Council tax and Northern Ireland rates ²	669	694	681	720	740	764	829	875	921	1 013	791
<i>less: Council tax benefit/Rates rebates</i>	242	234	202	146	90	65	33	8	4	4	103
Total	702	1 126	1 406	2 391	3 432	4 561	6 344	8 197	10 566	18 734	5 746
Disposable income	6 878	10 639	12 529	14 924	18 019	21 113	25 980	30 642	37 053	57 052	23 483
<i>Equivalised disposable income</i>	<i>6 516</i>	<i>10 112</i>	<i>12 166</i>	<i>14 300</i>	<i>16 758</i>	<i>19 464</i>	<i>22 618</i>	<i>27 014</i>	<i>33 413</i>	<i>56 635</i>	<i>21 899</i>
Indirect taxes											
Taxes on final goods and services											
VAT	1 077	987	1 113	1 316	1 591	1 785	2 176	2 314	2 619	3 586	1 856
Duty on tobacco	312	311	310	366	335	314	295	296	281	217	304
Duty on beer and cider	75	60	75	81	111	123	151	160	158	168	116
Duty on wines & spirits	90	82	76	89	141	143	170	192	226	300	151
Duty on hydrocarbon oils	239	243	242	319	364	454	588	595	682	705	443
Vehicle excise duty	69	70	74	96	115	136	157	173	192	186	127
Television licences	83	83	78	85	89	98	97	104	104	105	93
Stamp duty on house purchase	45	39	37	49	62	86	100	143	194	352	111
Customs duties	18	16	18	21	23	26	30	32	36	47	27
Betting taxes	41	41	46	46	47	74	54	56	54	44	50
Insurance premium tax	26	20	24	32	37	46	52	61	74	83	46
Air passenger duty	8	6	15	12	17	25	30	28	36	51	23
Camelot National Lottery Fund	41	46	50	57	61	62	68	68	58	39	55
Other	14	10	9	7	11	23	12	14	55	22	18
Intermediate taxes											
Commercial and industrial rates	169	159	172	200	222	255	291	310	351	453	258
Employers' NI contributions	247	232	251	292	323	371	424	451	511	660	376
Duty on hydrocarbon oils	112	106	114	133	147	169	193	205	233	300	171
Vehicle excise duty	23	21	23	27	30	34	39	41	47	60	34
Other	146	138	149	173	191	220	251	267	303	391	223
Total indirect taxes	2 834	2 670	2 877	3 401	3 916	4 444	5 178	5 511	6 212	7 768	4 481
Post-tax income	4 043	7 969	9 652	11 523	14 103	16 668	20 803	25 131	30 841	49 284	19 002
Benefits in kind											
Education	2 787	2 205	1 858	1 675	1 663	1 584	1 599	1 443	1 128	569	1 651
National health service	2 868	3 089	3 169	2 889	2 703	2 566	2 503	2 224	2 203	2 030	2 625
Housing subsidy	70	90	76	72	45	42	27	14	4	1	44
Rail travel subsidy	15	9	12	11	13	14	29	31	59	66	26
Bus travel subsidy	52	55	53	52	42	42	38	38	36	34	44
School meals and welfare milk	81	77	37	17	10	9	2	2	0	-	23
Total	5 873	5 525	5 206	4 716	4 477	4 257	4 198	3 752	3 431	2 700	4 413
Final income	9 916	13 494	14 857	16 239	18 580	20 925	25 000	28 883	34 271	51 984	23 415

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 14A (Appendix 1): Average incomes, taxes and benefits by quintile groups of ALL households, 2002-03

	Quintile groups of all households ranked by equivalised disposable income					All households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
<i>Quintile points (equivalised £)</i>	<i>11 196</i>	<i>15 516</i>	<i>20 860</i>	<i>29 575</i>		
Number of households in the population ('000s)	4 869	4 870	4 869	4 869	4 870	24 346
Original income						
Wages and salaries	2 451	7 054	14 915	26 647	45 273	19 268
Imputed income from benefits in kind	13	34	105	365	1 107	325
Self-employment income	584	659	1 326	2 385	7 150	2 421
Occupational pensions, annuities	584	1 362	2 200	2 531	3 696	2 075
Investment income	235	357	550	909	2 836	978
Other income	165	146	218	247	250	205
Total	4 032	9 613	19 315	33 084	60 312	25 271
Direct benefits in cash						
Contributory						
Retirement pension	2 090	2 666	1 859	1 271	734	1 724
Job seeker's allowance (Contribution based)	57	14	22	6	6	21
Incapacity benefit	334	371	277	88	49	224
Widows' benefits	33	22	44	29	69	39
Statutory Maternity Pay/Allowance	2	5	13	28	69	23
Non-contributory						
Income support	1 035	653	391	144	5	446
Child benefit	480	395	373	353	245	369
Housing benefit	745	757	338	99	1	388
Job seeker's allowance (Income based)	164	26	23	2	2	43
Invalid care allowance	40	72	41	8	3	33
Attendance allowance	36	136	142	31	7	71
Disability living allowance	158	366	365	157	53	220
Disabled Persons Tax Credit	1	8	3	-	7	4
War pensions/War widows' pensions	5	17	45	48	20	27
Severe disablement allowance	21	14	42	38	6	24
Industrial injury disablement benefit	24	24	13	35	14	22
Student support	38	72	33	43	56	48
Government training schemes	16	12	4	6	1	8
Working Families Tax Credit	256	275	147	64	18	152
Other non-contributory benefits	106	105	71	49	24	71
Total cash benefits	5 640	6 013	4 247	2 498	1 390	3 958
Gross income	9 673	15 625	23 563	35 581	61 702	29 229
Direct taxes and Employees' NIC						
Income tax	343	980	2 432	4 765	11 286	3 961
<i>less: Tax relief at source¹</i>	3	3	4	4	8	4
Employers' NI contributions	130	395	894	1 677	2 408	1 101
Council tax and Northern Ireland rates ²	681	701	752	852	967	791
<i>less: Council tax benefit/Rates rebates</i>	238	174	77	20	4	103
Total	914	1 899	3 997	7 270	14 650	5 746
Disposable income	8 759	13 726	19 566	28 311	47 052	23 483
<i>Equivalised disposable income</i>	<i>8 314</i>	<i>13 233</i>	<i>18 111</i>	<i>24 816</i>	<i>45 024</i>	<i>21 899</i>
Indirect taxes						
Taxes on final goods and services						
VAT	1 032	1 215	1 688	2 245	3 102	1 856
Duty on tobacco	312	338	324	296	249	304
Duty on beer and cider	67	78	117	156	163	116
Duty on wines & spirits	86	83	142	181	263	151
Duty on hydrocarbon oils	241	280	409	591	693	443
Vehicle excise duty	69	85	125	165	189	127
Television licences	83	82	93	101	105	93
Stamp duty on house purchase	42	43	74	121	273	111
Customs duties	17	19	25	31	42	27
Betting taxes	41	46	61	55	49	50
Insurance premium tax	23	28	42	57	79	46
Air passenger duty	7	13	21	29	43	23
Camelot National Lottery Fund	43	54	62	68	48	55
Other	12	8	17	13	39	18
Intermediate taxes						
Commercial and industrial rates	164	186	238	300	402	258
Employers' NI contributions	240	271	347	437	585	376
Duty on hydrocarbon oils	109	124	158	199	266	171
Vehicle excise duty	22	25	32	40	54	34
Other	142	161	206	259	347	223
Total indirect taxes	2 752	3 139	4 180	5 345	6 990	4 481
Post-tax income	6 006	10 587	15 386	22 967	40 063	19 002
Benefits in kind						
Education	2 496	1 766	1 623	1 521	848	1 651
National health service	2 978	3 029	2 635	2 363	2 117	2 625
Housing subsidy	80	74	43	20	2	44
Rail travel subsidy	12	12	14	30	63	26
Bus travel subsidy	54	53	42	38	35	44
School meals and welfare milk	79	27	9	2	0	23
Total	5 699	4 961	4 367	3 975	3 065	4 413
Final income	11 705	15 548	19 752	26 941	43 128	23 415

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 15 (Appendix 1): Household characteristics of decile groups of ALL households, 2002-03

	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	2.4	2.4	2.3	2.3	2.4	2.4	2.5	2.5	2.4	2.2	2.4
<i>Adults</i>	1.7	1.7	1.7	1.8	1.8	1.9	2.0	2.0	2.0	1.8	1.8
<i>Men</i>	0.7	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.9
<i>Women</i>	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0
<i>Children</i>	0.7	0.8	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.5
Economically active people	0.6	0.6	0.7	0.9	1.1	1.3	1.6	1.7	1.7	1.6	1.2
Retired people	0.5	0.7	0.7	0.6	0.5	0.4	0.3	0.2	0.2	0.1	0.4
People in full-time education	0.76	0.67	0.52	0.50	0.49	0.48	0.47	0.45	0.33	0.25	0.49
<i>In state primary schools</i>	0.29	0.32	0.26	0.26	0.21	0.23	0.19	0.18	0.14	0.09	0.22
<i>In state secondary schools</i>	0.21	0.25	0.16	0.16	0.19	0.14	0.17	0.16	0.10	0.06	0.16
<i>In further and higher education</i>	0.24	0.09	0.07	0.06	0.07	0.10	0.08	0.08	0.06	0.02	0.09
<i>In other educational establishments</i>	0.02	0.02	0.03	0.01	0.02	0.01	0.03	0.03	0.04	0.08	0.03
Composition (percentages)											
Household type											
Retired											
1 adult	20	17	26	21	16	12	8	5	3	3	13
1 adult men	3	4	6	5	5	2	2	2	2	1	3
1 adult women	17	13	20	16	11	10	7	3	1	3	10
2 or more adults	15	25	20	18	15	10	9	6	6	4	13
Non-retired											
1 adult	15	11	8	10	13	15	12	15	17	22	14
1 adult men	8	6	5	5	7	8	7	10	12	15	8
1 adult women	6	5	3	5	6	7	5	5	6	7	6
2 adults	12	9	9	15	16	22	26	31	36	40	22
3 or more adults	6	2	5	6	9	10	13	12	16	8	9
1 adult with children	12	15	9	7	6	5	2	3	1	1	6
2 adults with 1 child	5	4	7	6	6	9	8	9	6	13	7
2 adults with 2 children	4	8	6	9	12	12	12	10	10	7	9
2 adults with 3 or more children	6	6	5	4	3	3	2	3	2	2	3
3 or more adults with children	5	3	4	4	3	3	5	5	2	0	4
Household tenure											
Rented											
Local authority rented	22	28	28	21	14	13	8	4	1	0	14
Housing association or RSL	6	11	11	12	6	5	3	1	1	0	6
Other rented unfurnished	5	5	6	5	5	3	4	5	4	3	4
Rented furnished	8	3	3	4	5	4	4	3	5	4	4
Rent free	2	3	2	1	2	1	1	1	0	0	1
Owner occupied											
With mortgage	18	18	20	29	35	47	51	62	61	69	41
Rental purchase	1	-	0	0	0	1	1	0	0	0	0
Owned outright	39	31	32	28	32	26	28	25	27	23	29
Age of chief economic supporter											
Under 25	8	5	4	3	4	3	3	3	2	2	4
Over 24 and under 35	12	15	11	12	14	16	17	22	23	25	17
Over 34 and under 45	19	18	16	17	16	21	23	23	20	25	20
Over 44 and under 55	15	12	10	13	18	19	20	23	27	24	18
Over 54 and under 65	14	11	14	18	18	17	16	17	17	17	16
Over 64 and under 75	13	20	23	20	16	12	12	8	7	5	14
Over 74	19	20	22	17	15	11	8	4	3	3	12
Employment status of chief economic supporter											
Self-employed	5	7	5	5	5	8	6	9	11	14	7
Full-time employee	8	14	20	34	43	52	64	72	71	72	45
Part-time employee	11	10	10	8	10	9	5	4	6	6	8
Unemployed	9	3	2	1	2	1	1	1	1	0	2
Unoccupied and under minimum NI age	33	26	18	13	9	7	4	3	3	2	12
Retired/unoccupied over minimum NI age	33	40	45	39	31	23	19	11	9	7	26
Other	1	0	-	-	0	0	-	-	-	-	0

TABLE 15A (Appendix 1): Household characteristics of quintile groups of ALL households, 2002-03

	Quintile groups of all households ranked by equivalised disposable income					All households
	Bottom	2nd	3rd	4th	Top	
Average per household (number)						
People	2.4	2.3	2.4	2.5	2.3	2.4
<i>Adults</i>	1.7	1.7	1.9	2.0	1.9	1.8
<i>Men</i>	0.7	0.8	0.9	1.0	1.0	0.9
<i>Women</i>	1.0	1.0	1.0	1.0	0.9	1.0
<i>Children</i>	0.7	0.6	0.5	0.5	0.4	0.5
Economically active people	0.6	0.8	1.2	1.7	1.7	1.2
Retired people	0.6	0.7	0.5	0.3	0.2	0.4
People in full-time education	0.72	0.51	0.48	0.46	0.29	0.49
<i>In state primary schools</i>	0.30	0.26	0.22	0.19	0.11	0.22
<i>In state secondary schools</i>	0.23	0.16	0.17	0.16	0.08	0.16
<i>In further and higher education</i>	0.16	0.07	0.08	0.08	0.04	0.09
<i>In other educational establishments</i>	0.02	0.02	0.01	0.03	0.06	0.03
Composition (percentages)						
Household type						
Retired						
1 adult	19	24	14	7	3	13
<i>1 adult men</i>	4	6	4	2	1	3
<i>1 adult women</i>	15	18	10	5	2	10
2 or more adults	20	19	12	8	5	13
Non-retired						
1 adult	13	9	14	14	20	14
<i>1 adult men</i>	7	5	7	9	13	8
<i>1 adult women</i>	6	4	7	5	6	6
2 adults	11	12	19	29	38	22
3 or more adults	4	5	10	13	12	9
1 adult with children	13	8	5	3	1	6
2 adults with 1 child	5	7	7	9	9	7
2 adults with 2 children	6	8	12	11	9	9
2 adults with 3 or more children	6	4	3	3	2	3
3 or more adults with children	4	4	3	5	1	4
Household tenure						
Rented						
Local authority rented	25	25	14	6	0	14
Housing association or RSL	9	11	5	2	0	6
Other rented unfurnished	5	5	4	4	4	4
Rented furnished	6	3	4	4	5	4
Rent free	2	1	2	1	0	1
Owner occupied						
With mortgage	18	24	41	56	65	41
Rental purchase	0	0	0	0	0	0
Owned outright	35	30	29	26	25	29
Age of chief economic supporter						
Under 25	6	3	4	3	2	4
Over 24 and under 35	13	12	15	20	24	17
Over 34 and under 45	18	16	18	23	23	20
Over 44 and under 55	14	11	18	22	26	18
Over 54 and under 65	12	16	17	16	17	16
Over 64 and under 75	16	22	14	10	6	14
Over 74	19	19	13	6	3	12
Employment status of chief economic supporter						
Self-employed	6	5	6	8	12	7
Full-time employee	11	27	48	68	72	45
Part-time employee	10	9	9	5	6	8
Unemployed	6	2	1	1	1	2
Unoccupied and under minimum NI age	29	15	8	4	2	12
Retired/unoccupied over minimum NI age	36	42	27	15	8	26
Other	1	-	0	-	-	0

TABLE 16 (Appendix 1): Average incomes, taxes and benefits by decile groups of NON-RETIRED households, 2002-03

	Decile groups of non-retired households ranked by equivalised disposable income										All such households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	<i>9 310</i>	<i>12 045</i>	<i>14 852</i>	<i>17 674</i>	<i>20 324</i>	<i>23 413</i>	<i>27 293</i>	<i>32 618</i>	<i>41 123</i>		
Number of households in the population ('000s)	1 797	1 802	1 802	1 798	1 802	1 801	1 800	1 800	1 802	1 802	18 007
Original income											
Wages and salaries	2 826	6 458	12 494	17 465	21 662	26 320	32 317	35 123	42 431	62 062	25 916
Imputed income from benefits in kind	20	26	57	100	169	289	441	546	899	1 839	439
Self-employment income	644	1 399	1 015	1 354	1 921	2 193	2 295	4 607	5 349	11 806	3 258
Occupational pensions, annuities	152	196	460	558	780	870	1 112	1 079	1 635	2 184	902
Investment income	86	207	157	272	368	417	539	895	1 202	3 501	764
Other income	212	220	237	296	276	280	184	333	198	258	249
Total	3 939	8 506	14 420	20 045	25 175	30 369	36 888	42 583	51 714	81 649	31 529
Direct benefits in cash											
Contributory											
Retirement pension	121	207	519	502	447	680	342	492	269	203	378
Job seeker's allowance (Contribution based)	131	14	23	25	37	11	5	10	7	2	26
Incapacity benefit	433	624	612	356	359	114	118	74	52	39	278
Widows' benefits	42	41	43	49	34	39	26	29	8	152	46
Statutory Maternity Pay/Allowance	2	7	9	9	17	30	39	45	64	94	32
Non-contributory											
Income support	1 357	1 614	827	525	298	264	42	5	9	-	494
Child benefit	702	853	640	602	490	419	389	348	283	247	497
Housing benefit	962	1 100	662	286	218	123	25	10	3	-	339
Job seeker's allowance (Income based)	344	86	49	28	16	22	3	6	1	-	56
Invalid care allowance	33	86	100	69	38	7	8	-	5	4	35
Attendance allowance	2	8	7	9	15	10	-	17	6	-	7
Disability living allowance	155	303	426	426	316	230	109	55	77	13	211
Disabled Persons Tax Credit	-	19	5	8	-	-	-	-	17	3	5
War pensions/War widows' pensions	12	-	14	3	8	-	9	14	8	12	8
Severe disablement allowance	35	5	22	58	40	57	21	20	-	6	26
Industrial injury disablement benefit	15	40	11	7	15	38	24	24	5	24	20
Student support	76	48	139	37	50	21	80	92	57	34	63
Government training schemes	34	29	12	6	2	16	1	-	2	-	10
Working Families Tax Credit	274	613	419	370	155	101	51	24	28	19	206
Other non-contributory benefits	52	72	62	35	28	33	14	22	10	12	34
Total cash benefits	4 784	5 769	4 600	3 410	2 581	2 217	1 304	1 287	908	864	2 772
Gross income	8 724	14 275	19 019	23 456	27 756	32 586	38 193	43 869	52 623	82 513	34 301
Direct taxes and Employees' NIC											
Income tax	312	745	1 501	2 361	3 220	4 105	5 322	6 592	8 642	16 954	4 975
<i>less: Tax relief at source¹</i>	<i>3</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>5</i>	<i>2</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>9</i>	<i>4</i>
Employers' NI contributions	140	341	704	1 041	1 313	1 627	2 051	2 209	2 597	2 783	1 480
Council tax and Northern Ireland rates ²	637	672	723	714	768	792	853	889	914	1 004	797
<i>less: Council tax benefit/Rates rebates</i>	<i>266</i>	<i>242</i>	<i>137</i>	<i>70</i>	<i>40</i>	<i>26</i>	<i>7</i>	<i>3</i>	<i>5</i>	<i>3</i>	<i>80</i>
Total	819	1 514	2 789	4 044	5 256	6 496	8 214	9 682	12 142	20 729	7 169
Disposable income	7 904	12 761	16 230	19 412	22 500	26 090	29 979	34 187	40 480	61 785	27 133
<i>Equivalised disposable income</i>	<i>6 448</i>	<i>10 741</i>	<i>13 471</i>	<i>16 265</i>	<i>19 016</i>	<i>21 809</i>	<i>25 334</i>	<i>29 697</i>	<i>36 249</i>	<i>61 227</i>	<i>24 026</i>
Indirect taxes											
Taxes on final goods and services											
VAT	1 283	1 210	1 493	1 742	1 949	2 253	2 356	2 551	2 955	3 709	2 150
Duty on tobacco	416	436	485	413	373	347	326	335	286	208	362
Duty on beer and cider	91	87	106	113	155	163	169	181	161	179	141
Duty on wines & spirits	110	79	92	135	156	166	192	209	256	302	170
Duty on hydrocarbon oils	290	295	394	419	546	607	650	643	766	702	531
Vehicle excise duty	75	76	109	121	155	156	174	183	191	185	143
Television licences	104	102	103	104	111	104	109	108	108	108	106
Stamp duty on house purchase	47	45	58	64	97	96	130	178	200	403	132
Customs duties	21	20	23	25	29	31	33	35	40	49	30
Betting taxes	45	41	45	47	63	64	59	66	50	46	53
Insurance premium tax	28	22	36	38	50	51	58	65	76	82	51
Air passenger duty	7	6	16	16	26	35	24	33	40	52	25
Camelot National Lottery Fund	42	46	56	63	72	76	70	68	59	37	59
Other	15	9	12	14	31	9	16	24	60	27	22
Intermediate taxes											
Commercial and industrial rates	202	189	226	244	276	296	315	339	382	473	294
Employers' NI contributions	294	275	329	356	402	431	459	494	557	689	429
Duty on hydrocarbon oils	134	125	150	162	183	196	209	225	254	314	195
Vehicle excise duty	27	25	30	33	37	40	42	45	51	63	39
Other	174	163	195	211	238	256	272	292	330	408	254
Total indirect taxes	3 405	3 250	3 960	4 322	4 948	5 378	5 663	6 073	6 822	8 036	5 186
Post-tax income	4 500	9 511	12 271	15 090	17 551	20 712	24 316	28 114	33 658	53 749	21 947
Benefits in kind											
Education	4 268	3 559	2 855	2 643	2 001	1 978	1 612	1 454	1 204	544	2 212
National health service	2 210	2 286	2 436	2 111	2 166	2 219	1 994	2 095	1 942	1 963	2 142
Housing subsidy	101	103	72	48	34	35	16	4	4	0	42
Rail travel subsidy	17	15	14	20	17	29	31	42	62	75	32
Bus travel subsidy	44	33	34	28	31	35	31	31	35	33	34
School meals and welfare milk	124	116	39	18	12	3	1	2	0	-	32
Total	6 764	6 112	5 448	4 868	4 261	4 299	3 686	3 628	3 247	2 615	4 493
Final income	11 264	15 623	17 719	19 958	21 812	25 012	28 002	31 742	36 905	56 364	26 440

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 16A (Appendix 1): Average incomes, taxes and benefits by quintile groups of NON-RETIRED households, 2002-03

	Quintile groups of non-retired households ranked by equivalised disposable income					All such households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
<i>Quintile points (equivalised £)</i>	<i>12 045</i>	<i>17 674</i>	<i>23 413</i>	<i>32 618</i>		
Number of households in the population ('000s)	3 600	3 600	3 603	3 600	3 604	18 007
Original income						
Wages and salaries	4 642	14 979	23 991	33 720	52 246	25 916
Imputed income from benefits in kind	23	78	229	493	1 369	439
Self-employment income	1 021	1 184	2 057	3 451	8 578	3 258
Occupational pensions, annuities	174	509	825	1 095	1 909	902
Investment income	146	214	393	717	2 351	764
Other income	216	267	278	259	228	249
Total	6 223	17 232	27 772	39 736	66 682	31 529
Direct benefits in cash						
Contributory						
Retirement pension	164	511	564	417	236	378
Job seeker's allowance (Contribution based)	73	24	24	7	4	26
Incapacity benefit	529	484	236	96	46	278
Widows' benefits	42	46	37	27	80	46
Statutory Maternity Pay/Allowance	5	9	23	42	79	32
Non-contributory						
Income support	1 485	676	281	24	4	494
Child benefit	777	621	455	369	265	497
Housing benefit	1 031	474	170	18	1	339
Job seeker's allowance (Income based)	215	39	19	4	0	56
Invalid care allowance	60	84	23	4	5	35
Attendance allowance	5	8	13	8	3	7
Disability living allowance	229	426	273	82	45	211
Disabled Persons Tax Credit	10	7	-	-	10	5
War pensions/War widows' pensions	6	8	4	11	10	8
Severe disablement allowance	20	40	48	20	3	26
Industrial injury disablement benefit	28	9	26	24	14	20
Student support	62	88	36	86	45	63
Government training schemes	31	9	9	0	1	10
Working Families Tax Credit	444	395	128	38	24	206
Other non-contributory benefits	62	48	30	18	11	34
Total cash benefits	5 277	4 005	2 399	1 295	886	2 772
Gross income	11 499	21 238	30 171	41 031	67 568	34 301
Direct taxes and Employees' NIC						
Income tax	529	1 931	3 662	5 957	12 798	4 975
less: Tax relief at source ¹	2	3	3	5	8	4
Employers' NI contributions	240	873	1 470	2 130	2 690	1 480
Council tax and Northern Ireland rates ²	654	719	780	871	959	797
less: Council tax benefit/Rates rebates	254	103	33	5	4	80
Total	1 167	3 417	5 876	8 948	16 435	7 169
Disposable income	10 333	17 821	24 295	32 083	51 133	27 133
<i>Equivalised disposable income</i>	<i>8 594</i>	<i>14 868</i>	<i>20 413</i>	<i>27 516</i>	<i>48 738</i>	<i>24 026</i>
Indirect taxes						
Taxes on final goods and services						
VAT	1 246	1 618	2 101	2 454	3 332	2 150
Duty on tobacco	426	449	360	331	247	362
Duty on beer and cider	89	110	159	175	170	141
Duty on wines & spirits	95	114	161	200	279	170
Duty on hydrocarbon oils	292	407	576	646	734	531
Vehicle excise duty	75	115	155	179	188	143
Television licences	103	104	108	109	108	106
Stamp duty on house purchase	46	61	96	154	302	132
Customs duties	20	24	30	34	44	30
Betting taxes	43	46	63	63	48	53
Insurance premium tax	25	37	51	61	79	51
Air passenger duty	6	16	31	28	46	25
Camelot National Lottery Fund	44	60	74	69	48	59
Other	12	13	20	20	43	22
Intermediate taxes						
Commercial and industrial rates	195	235	286	327	428	294
Employers' NI contributions	285	342	417	476	623	429
Duty on hydrocarbon oils	130	156	190	217	284	195
Vehicle excise duty	26	31	38	44	57	39
Other	169	203	247	282	369	254
Total indirect taxes	3 327	4 141	5 163	5 868	7 429	5 186
Post-tax income	7 005	13 680	19 132	26 215	43 704	21 947
Benefits in kind						
Education	3 913	2 749	1 990	1 533	874	2 212
National health service	2 248	2 273	2 192	2 045	1 952	2 142
Housing subsidy	102	60	34	10	2	42
Rail travel subsidy	16	17	23	37	68	32
Bus travel subsidy	39	31	33	31	34	34
School meals and welfare milk	120	28	8	2	0	32
Total	6 438	5 158	4 280	3 657	2 931	4 493
Final income	13 443	18 838	23 412	29 872	46 635	26 440

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 17 (Appendix 1): Household characteristics of decile groups of NON-RETIRED households, 2002-03

	Decile groups of non-retired households ranked by equivalised disposable income										All such households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (number)											
People	2.9	2.9	2.9	2.8	2.7	2.7	2.6	2.6	2.4	2.2	2.7
<i>Adults</i>	1.8	1.7	2.0	1.9	2.0	2.1	2.1	2.0	2.0	1.8	2.0
<i>Men</i>	0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.0	1.0	1.0
<i>Women</i>	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0
<i>Children</i>	1.1	1.2	0.9	0.9	0.7	0.6	0.5	0.5	0.4	0.4	0.7
Economically active people	0.9	1.1	1.4	1.6	1.7	1.9	2.0	1.9	1.9	1.7	1.6
Retired people	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1
People in full-time education	1.18	1.08	0.81	0.78	0.61	0.58	0.49	0.45	0.37	0.26	0.66
<i>In state primary schools</i>	0.47	0.53	0.42	0.36	0.29	0.22	0.21	0.20	0.15	0.09	0.29
<i>In state secondary schools</i>	0.35	0.36	0.25	0.30	0.20	0.20	0.16	0.15	0.11	0.05	0.21
<i>In further and higher education</i>	0.33	0.14	0.11	0.09	0.11	0.11	0.09	0.08	0.06	0.02	0.11
<i>In other educational establishments</i>	0.03	0.04	0.04	0.02	0.01	0.04	0.02	0.03	0.05	0.10	0.04
Composition (percentages)											
Household type											
Non-retired											
1 adult	22	18	17	18	17	17	16	17	19	26	19
1 adult men	12	9	10	9	9	9	11	12	13	17	11
1 adult women	10	8	7	9	8	7	6	6	6	8	8
2 adults	18	18	22	22	28	32	34	37	41	42	29
3 or more adults	9	4	11	12	14	15	16	15	15	8	12
1 adult with children	19	24	12	11	6	3	3	3	1	1	8
2 adults with 1 child	8	9	12	9	11	11	10	9	8	14	10
2 adults with 2 children	7	12	13	18	15	13	13	12	11	7	12
2 adults with 3 or more children	10	9	8	5	4	3	3	2	2	2	5
3 or more adults with children	8	6	7	6	4	6	6	4	2	0	5
Household tenure											
Rented	59	61	42	36	23	22	17	12	13	7	29
Local authority rented	31	32	19	16	9	9	5	2	1	0	12
Housing association or RSL	9	13	11	7	4	3	1	0	1	-	5
Other rented unfurnished	6	7	6	5	5	3	5	5	5	3	5
Rented furnished	11	6	5	6	4	5	5	4	6	4	6
Rent free	2	3	1	2	2	1	1	1	1	0	1
Owner occupied	41	39	58	64	77	78	83	88	87	93	71
With mortgage	25	29	40	48	60	58	66	68	66	75	53
Rental purchase	1	-	1	0	1	1	1	0	0	0	0
Owned outright	16	11	17	16	16	19	17	20	20	17	17
Age of chief economic supporter											
Under 25	11	8	6	6	4	4	2	4	3	1	5
Over 24 and under 35	19	25	19	20	21	20	26	22	27	27	23
Over 34 and under 45	30	31	27	26	26	26	28	24	23	27	27
Over 44 and under 55	21	21	18	24	26	23	25	29	28	27	24
Over 54 and under 65	16	13	23	20	18	19	17	17	17	16	18
Over 64 and under 75	2	2	5	3	3	6	2	3	2	1	3
Over 74	0	1	2	1	2	2	0	1	0	0	1
Employment status of chief economic supporter											
Self-employed	9	11	8	8	8	9	7	12	13	15	10
Full-time employee	13	28	49	60	69	72	84	78	78	77	61
Part-time employee	17	18	14	16	9	8	6	6	6	6	11
Unemployed	13	4	2	3	1	2	0	1	1	0	3
Unoccupied and under minimum NI age	46	37	24	10	9	4	2	1	1	1	13
Retired/unoccupied over minimum NI age	1	2	3	4	3	5	1	2	1	0	2
Other	1	0	-	0	0	-	-	-	-	-	0

TABLE 17A (Appendix 1): Household characteristics of quintile groups of NON-RETIRED households, 2002-03

	Quintile groups of non-retired households ranked by equivalised disposable income					All such households
	Bottom	2nd	3rd	4th	Top	
Average per household (number)						
People	2.9	2.8	2.7	2.6	2.3	2.7
<i>Adults</i>	1.8	1.9	2.1	2.1	1.9	2.0
<i>Men</i>	0.8	0.9	1.1	1.1	1.0	1.0
<i>Women</i>	1.0	1.0	1.0	1.0	0.9	1.0
<i>Children</i>	1.1	0.9	0.6	0.5	0.4	0.7
Economically active people	1.0	1.5	1.8	2.0	1.8	1.6
Retired people	0.1	0.1	0.1	0.1	0.1	0.1
People in full-time education	1.13	0.80	0.60	0.47	0.31	0.66
<i>In state primary schools</i>	0.50	0.39	0.26	0.20	0.12	0.29
<i>In state secondary schools</i>	0.36	0.28	0.20	0.16	0.08	0.21
<i>In further and higher education</i>	0.24	0.10	0.11	0.08	0.04	0.11
<i>In other educational establishments</i>	0.04	0.03	0.03	0.03	0.07	0.04
Composition (percentages)						
Household type						
Non-retired						
1 adult	20	17	17	17	22	19
<i>1 adult men</i>	11	9	9	11	15	11
<i>1 adult women</i>	9	8	8	6	7	8
2 adults	18	22	30	36	41	29
3 or more adults	7	11	15	16	12	12
1 adult with children	21	11	5	3	1	8
2 adults with 1 child	8	10	11	9	11	10
2 adults with 2 children	10	15	14	12	9	12
2 adults with 3 or more children	9	6	4	2	2	5
3 or more adults with children	7	6	5	5	1	5
Household tenure						
Rented	60	39	22	14	10	29
<i>Local authority rented</i>	31	17	9	4	0	12
<i>Housing association or RSL</i>	11	9	4	1	0	5
<i>Other rented unfurnished</i>	6	6	4	5	4	5
<i>Rented furnished</i>	8	6	4	5	5	6
<i>Rent free</i>	2	1	1	1	0	1
Owner occupied	40	61	78	86	90	71
<i>With mortgage</i>	27	44	59	67	71	53
<i>Rental purchase</i>	0	0	1	0	0	0
<i>Owned outright</i>	13	17	18	18	19	17
Age of chief economic supporter						
Under 25	10	6	4	3	2	5
Over 24 and under 35	22	20	21	24	27	23
Over 34 and under 45	30	26	26	26	25	27
Over 44 and under 55	21	21	25	27	27	24
Over 54 and under 65	14	22	18	17	17	18
Over 64 and under 75	2	4	4	2	2	3
Over 74	0	1	2	1	0	1
Employment status of chief economic supporter						
Self-employed	10	8	9	10	14	10
Full-time employee	21	55	71	81	78	61
Part-time employee	17	15	9	6	6	11
Unemployed	8	2	2	1	1	3
Unoccupied and under minimum NI age	41	17	6	1	1	13
Retired/unoccupied over minimum NI age	1	3	4	1	1	2
Other	1	0	0	-	-	0

TABLE 18 (Appendix 1): Average incomes, taxes and benefits by decile groups of RETIRED households, 2002-03

	Decile groups of retired households ranked by equivalised disposable income										All such households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	<i>8 397</i>	<i>9 914</i>	<i>11 300</i>	<i>12 311</i>	<i>13 527</i>	<i>15 139</i>	<i>17 108</i>	<i>19 853</i>	<i>24 967</i>		
Number of households in the population ('000s)	631	636	633	632	635	635	633	635	633	636	6 339
Original income											
Wages and salaries	18	124	4	182	273	356	371	616	634	1 269	385
Imputed income from benefits in kind	-	-	-	8	-	-	-	0	-	5	1
Self-employment income	10	29	16	31	25	-	15	70	-	222	42
Occupational pensions, annuities	542	1 396	1 997	1 723	2 550	3 408	4 673	7 017	9 780	20 959	5 405
Investment income	282	612	439	457	461	602	1 134	1 315	2 052	8 485	1 584
Other income	41	40	78	97	34	50	59	80	83	235	80
Total	894	2 200	2 535	2 497	3 344	4 417	6 253	9 098	12 549	31 174	7 496
Direct benefits in cash											
Contributory											
Retirement pension	4 572	5 302	5 764	5 687	5 281	5 837	5 543	5 537	6 020	5 929	5 547
Job seeker's allowance (Contribution based)	19	-	7	-	8	-	17	2	-	-	5
Incapacity benefit	15	49	72	127	160	79	49	74	63	19	71
Widows' benefits	35	21	-	11	-	-	-	-	79	53	20
Statutory Maternity Pay/Allowance	-	-	-	-	-	-	-	-	-	-	-
Non-contributory											
Income support	189	331	260	329	343	309	400	400	484	41	309
Child benefit	-	-	17	6	5	10	5	2	7	10	6
Housing benefit	54	143	530	763	931	982	728	561	548	35	527
Job seeker's allowance (Income based)	-	81	-	-	-	-	-	4	-	-	8
Invalid care allowance	28	19	27	40	27	24	51	5	30	18	27
Attendance allowance	4	121	189	272	268	332	411	514	309	81	250
Disability living allowance	39	39	148	243	240	423	445	366	351	154	245
Disabled Persons Tax Credit	-	-	-	-	-	-	-	-	-	-	-
War pensions/War widows' pensions	-	-	-	32	27	14	215	123	281	112	80
Severe disablement allowance	-	10	48	20	-	-	46	-	21	39	18
Industrial injury disablement benefit	-	17	25	15	17	90	28	12	57	8	27
Student support	0	3	-	-	-	43	6	1	-	-	5
Government training schemes	0	-	-	-	0	-	13	-	-	-	1
Working Families Tax Credit	-	-	-	-	-	-	-	-	-	-	-
Other non-contributory benefits	182	199	154	188	160	155	184	176	199	168	176
Total cash benefits	5 138	6 334	7 241	7 733	7 466	8 299	8 139	7 776	8 449	6 666	7 324
Gross income	6 032	8 534	9 775	10 230	10 810	12 716	14 392	16 875	20 997	37 840	14 820
Direct taxes and Employees' NIC											
Income tax	61	175	218	172	352	508	776	1 178	1 883	5 484	1 081
<i>less: Tax relief at source¹</i>	<i>2</i>	<i>4</i>	<i>4</i>	<i>6</i>	<i>5</i>	<i>3</i>	<i>6</i>	<i>3</i>	<i>2</i>	<i>10</i>	<i>5</i>
Employers' NI contributions	-	1	27	6	12	20	9	24	39	92	23
Council tax and Northern Ireland rates ²	737	741	718	676	674	705	747	786	840	1 111	774
<i>less: Council tax benefit/Rates rebates</i>	<i>163</i>	<i>212</i>	<i>204</i>	<i>232</i>	<i>224</i>	<i>209</i>	<i>169</i>	<i>136</i>	<i>109</i>	<i>22</i>	<i>168</i>
Total	632	701	754	617	810	1 021	1 358	1 848	2 650	6 655	1 705
Disposable income	5 399	7 833	9 021	9 613	10 000	11 695	13 034	15 027	18 347	31 185	13 115
<i>Equivalised disposable income</i>	<i>6 777</i>	<i>9 231</i>	<i>10 603</i>	<i>11 798</i>	<i>12 896</i>	<i>14 284</i>	<i>16 036</i>	<i>18 349</i>	<i>21 992</i>	<i>36 630</i>	<i>15 860</i>
Indirect taxes											
Taxes on final goods and services											
VAT	694	730	733	722	891	864	1 061	1 275	1 352	1 904	1 023
Duty on tobacco	149	106	148	122	161	132	187	155	114	100	137
Duty on beer and cider	34	30	51	41	40	42	53	57	59	57	46
Duty on wines & spirits	35	64	99	55	79	62	114	114	142	212	98
Duty on hydrocarbon oils	144	158	174	120	156	155	184	230	244	368	193
Vehicle excise duty	63	67	61	51	51	66	69	108	108	174	82
Television licences	43	49	58	50	52	55	53	59	56	66	54
Stamp duty on house purchase	36	36	31	24	27	25	40	53	70	161	50
Customs duties	11	12	13	13	15	15	16	19	20	28	16
Betting taxes	28	31	53	60	37	45	43	80	36	25	44
Insurance premium tax	24	20	17	16	24	20	29	35	40	89	32
Air passenger duty	8	7	7	14	20	9	11	18	18	33	14
Camelot National Lottery Fund	34	45	54	50	45	52	50	35	45	26	44
Other	11	2	15	13	4	2	2	5	4	9	7
Intermediate taxes											
Commercial and industrial rates	108	115	123	123	143	142	157	179	197	269	156
Employers' NI contributions	158	168	179	179	208	207	228	261	287	392	227
Duty on hydrocarbon oils	72	77	82	82	95	94	104	119	131	178	103
Vehicle excise duty	14	15	16	16	19	19	21	24	26	36	21
Other	94	100	106	106	123	123	135	155	170	232	134
Total indirect taxes	1 761	1 832	2 021	1 856	2 190	2 129	2 557	2 981	3 119	4 360	2 481
Post-tax income	3 638	6 001	7 000	7 756	7 811	9 566	10 477	12 045	15 228	26 825	10 635
Benefits in kind											
Education	31	94	48	22	70	133	114	9	60	-	58
National health service	4 277	4 201	4 069	4 206	3 690	3 773	4 010	3 945	4 032	3 750	3 995
Housing subsidy	14	37	58	73	71	91	57	53	39	9	50
Rail travel subsidy	10	5	7	5	8	1	7	5	15	24	9
Bus travel subsidy	65	77	84	79	69	90	81	72	73	60	75
School meals and welfare milk	-	-	3	2	1	-	-	-	-	-	1
Total	4 397	4 413	4 269	4 388	3 908	4 088	4 269	4 084	4 218	3 844	4 188
Final income	8 035	10 414	11 269	12 144	11 719	13 653	14 746	16 129	19 445	30 668	14 822

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 18A (Appendix 1): Average incomes, taxes and benefits by quintile groups of RETIRED households, 2002-03

	Quintile groups of retired households ranked by equivalised disposable income					All such households
	Bottom	2nd	3rd	4th	Top	
Average per household (£ per year)						
<i>Quintile points (equivalised £)</i>		9 914	12 311	15 139	19 853	
Number of households in the population ('000s)	1 267	1 266	1 269	1 268	1 269	6 339
Original income						
Wages and salaries	71	93	315	493	951	385
Imputed income from benefits in kind	-	4	-	0	3	1
Self-employment income	20	24	13	42	111	42
Occupational pensions, annuities	969	1 860	2 979	5 845	15 369	5 405
Investment income	447	448	532	1 225	5 268	1 584
Other income	40	88	42	70	159	80
Total	1 547	2 516	3 880	7 676	21 861	7 496
Direct benefits in cash						
Contributory						
Retirement pension	4 937	5 725	5 559	5 540	5 974	5 547
Job seeker's allowance (Contribution based)	10	4	4	10	-	5
Incapacity benefit	32	100	120	62	41	71
Widows' benefits	28	5	-	-	66	20
Statutory Maternity Pay/Allowance	-	-	-	-	-	-
Non-contributory						
Income support	260	295	326	400	262	309
Child benefit	-	11	7	3	8	6
Housing benefit	98	647	957	644	291	527
Job seeker's allowance (Income based)	41	-	-	2	-	8
Invalid care allowance	24	34	26	28	24	27
Attendance allowance	62	230	300	463	195	250
Disability living allowance	39	196	331	406	252	245
Disabled Persons Tax Credit	-	-	-	-	-	-
War pensions/War widows' pensions	-	16	20	169	197	80
Severe disablement allowance	5	34	-	23	30	18
Industrial injury disablement benefit	8	20	54	20	32	27
Student support	2	-	22	3	-	5
Government training schemes	0	-	0	6	-	1
Working Families Tax Credit	-	-	-	-	-	-
Other non-contributory benefits	191	171	157	180	183	176
Total cash benefits	5 736	7 487	7 883	7 958	7 557	7 324
Gross income	7 283	10 003	11 763	15 633	29 418	14 820
Direct taxes and Employees' NIC						
Income tax	118	195	430	977	3 683	1 081
less: Tax relief at source ¹	3	5	4	5	6	5
Employers' NI contributions	1	16	16	17	66	23
Council tax and Northern Ireland rates ²	739	697	690	767	976	774
less: Council tax benefit/Rates rebates	187	218	217	152	66	168
Total	667	686	915	1 603	4 653	1 705
Disposable income	6 616	9 317	10 847	14 030	24 766	13 115
<i>Equivalised disposable income</i>	8 004	11 201	13 590	17 193	29 311	15 860
Indirect taxes						
Taxes on final goods and services						
VAT	712	728	877	1 168	1 628	1 023
Duty on tobacco	127	135	146	171	107	137
Duty on beer and cider	32	46	41	55	58	46
Duty on wines & spirits	50	77	70	114	177	98
Duty on hydrocarbon oils	151	147	156	207	306	193
Vehicle excise duty	65	56	59	89	141	82
Television licences	46	54	54	56	61	54
Stamp duty on house purchase	36	28	26	46	116	50
Customs duties	12	13	15	17	24	16
Betting taxes	29	56	41	61	31	44
Insurance premium tax	22	16	22	32	65	32
Air passenger duty	8	10	15	14	25	14
Camelot National Lottery Fund	40	52	48	43	35	44
Other	6	14	3	4	7	7
Intermediate taxes						
Commercial and industrial rates	112	123	142	168	233	156
Employers' NI contributions	163	179	208	245	339	227
Duty on hydrocarbon oils	74	82	95	111	155	103
Vehicle excise duty	15	16	19	22	31	21
Other	97	106	123	145	201	134
Total indirect taxes	1 796	1 939	2 159	2 769	3 739	2 481
Post-tax income	4 820	7 378	8 688	11 261	21 026	10 635
Benefits in kind						
Education	62	35	102	61	30	58
National health service	4 239	4 138	3 731	3 978	3 891	3 995
Housing subsidy	25	66	81	55	24	50
Rail travel subsidy	7	6	4	6	19	9
Bus travel subsidy	71	81	79	77	67	75
School meals and welfare milk	-	2	1	-	-	1
Total	4 405	4 328	3 998	4 177	4 031	4 188
Final income	9 225	11 707	12 686	15 438	25 057	14 822

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 19 (Appendix 1): Household characteristics of decile groups of RETIRED households, 2002-03

	Decile groups of retired households ranked by equivalised disposable income										All such households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (number)											
People	1.5	1.6	1.6	1.5	1.4	1.5	1.5	1.5	1.6	1.6	1.5
<i>Adults</i>	1.5	1.6	1.6	1.5	1.4	1.5	1.5	1.5	1.5	1.6	1.5
<i>Men</i>	0.5	0.6	0.7	0.6	0.5	0.6	0.6	0.6	0.6	0.8	0.6
<i>Women</i>	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
<i>Children</i>	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Economically active people	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Retired people	1.4	1.4	1.5	1.4	1.3	1.4	1.4	1.4	1.5	1.5	1.4
People in full-time education	0.01	0.02	0.02	0.01	0.02	0.03	0.02	0.00	0.02	0.01	0.01
Composition (percentages)											
Household type											
Retired											
1 adult	57	48	41	54	64	52	53	50	50	41	51
1 adult men	10	7	11	17	12	11	18	11	10	17	12
1 adult women	47	41	30	36	52	41	35	39	40	24	38
2 or more adults	43	52	59	46	36	48	47	50	50	59	49
Household tenure											
Rented											
Local authority rented	6	12	23	34	29	27	19	18	15	-	18
Housing association or RSL	1	5	10	4	12	17	11	6	5	2	8
Other rented unfurnished	1	4	1	6	2	2	3	3	1	-	3
Rented furnished	0	1	0	-	1	3	2	1	1	1	1
Rent free	2	1	4	3	1	1	2	2	2	-	2
Owner occupied											
With mortgage	6	8	4	4	4	2	3	5	5	10	5
Rental purchase	-	-	-	-	-	-	-	-	-	-	-
Owned outright	83	69	57	48	51	48	60	65	71	87	64
Age of chief economic supporter											
Under 25	-	-	-	-	-	-	-	-	-	-	-
Over 24 and under 35	-	-	-	-	-	-	-	-	-	-	-
Over 34 and under 45	1	-	-	1	-	-	-	-	-	1	0
Over 44 and under 55	1	1	-	1	-	0	0	-	2	-	1
Over 54 and under 65	10	8	9	8	13	12	8	15	9	15	11
Over 64 and under 75	31	40	49	45	42	47	45	43	46	51	44
Over 74	57	50	42	45	45	40	46	43	43	33	44
Employment status of chief economic supporter											
Self-employed	-	-	-	1	-	-	-	-	-	-	0
Full-time employee	-	-	-	-	-	-	-	-	-	1	0
Part-time employee	-	-	-	2	-	-	-	-	-	-	0
Unemployed	1	0	-	-	-	-	-	-	-	-	0
Unoccupied and under minimum NI age	9	6	5	5	6	4	5	10	6	13	7
Retired/unoccupied over minimum NI age	91	94	95	92	94	96	95	90	94	87	93

TABLE 19A (Appendix 1): Household characteristics of quintile groups of RETIRED households, 2002-03

	Quintile groups of retired households ranked by equivalised disposable income					All such households
	Bottom	2nd	3rd	4th	Top	
Average per household (number)						
People	1.5	1.6	1.5	1.5	1.6	1.5
<i>Adults</i>	1.5	1.6	1.5	1.5	1.6	1.5
<i>Men</i>	0.6	0.7	0.5	0.6	0.7	0.6
<i>Women</i>	0.9	0.9	0.9	0.9	0.9	0.9
<i>Children</i>	0.0	0.0	0.0	0.0	0.0	0.0
Economically active people	0.0	0.0	0.0	0.1	0.1	0.1
Retired people	1.4	1.5	1.4	1.4	1.5	1.4
People in full-time education	0.01	0.01	0.02	0.01	0.01	0.01
Composition (percentages)						
Household type						
Retired						
1 adult	52	47	58	52	46	51
1 adult men	9	14	12	14	13	12
1 adult women	44	33	46	37	32	38
2 or more adults	48	53	42	48	54	49
Household tenure						
Rented						
Local authority rented	9	29	28	18	7	18
Housing association or RSL	3	7	15	9	4	8
Other rented unfurnished	3	4	2	3	1	3
Rented furnished	1	0	2	2	1	1
Rent free	2	4	1	2	1	2
Owner occupied						
With mortgage	7	4	3	4	7	5
Rental purchase	-	-	-	-	-	-
Owned outright	76	52	49	62	79	64
Age of chief economic supporter						
Under 25	-	-	-	-	-	-
Over 24 and under 35	-	-	-	-	-	-
Over 34 and under 45	0	0	-	-	0	0
Over 44 and under 55	1	1	0	0	1	1
Over 54 and under 65	9	9	12	11	12	11
Over 64 and under 75	36	47	45	44	49	44
Over 74	54	43	43	44	38	44
Employment status of chief economic supporter						
Self-employed	-	1	-	-	-	0
Full-time employee	-	-	-	-	0	0
Part-time employee	-	1	-	-	-	0
Unemployed	0	-	-	-	-	0
Unoccupied and under minimum NI age	7	5	5	8	9	7
Retired/unoccupied over minimum NI age	92	94	95	92	90	93

TABLE 20 (Appendix 1): Average incomes, taxes and benefits by decile groups of NON-RETIRED households WITHOUT CHILDREN, 2002-03

	Decile groups of non-retired households without children ranked by equivalised disposable income										All such households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	<i>10 103</i>	<i>13 925</i>	<i>17 196</i>	<i>19 901</i>	<i>22 796</i>	<i>26 267</i>	<i>30 167</i>	<i>35 328</i>	<i>44 290</i>		
Number of households in the population ('000s)	1 080	1 079	1 083	1 080	1 082	1 076	1 085	1 080	1 079	1 085	10 808
Original income											
Wages and salaries	2 077	7 177	12 808	18 809	20 474	28 053	30 405	36 004	40 328	61 386	25 752
Imputed income from benefits in kind	-	38	64	67	43	305	362	575	776	2 093	432
Self-employment income	498	907	1 198	1 083	2 236	1 538	2 899	3 334	5 315	9 722	2 873
Occupational pensions, annuities	252	481	933	896	1 440	1 199	1 391	1 576	2 515	2 804	1 349
Investment income	126	372	305	286	589	398	445	1 316	1 599	3 072	851
Other income	162	183	53	40	327	48	99	132	106	200	135
Total	3 116	9 158	15 360	21 181	25 109	31 540	35 601	42 937	50 641	79 277	31 392
Direct benefits in cash											
Contributory											
Retirement pension	227	741	853	699	1 085	551	585	507	366	264	588
Job seeker's allowance (Contribution based)	119	19	50	43	18	3	5	12	11	-	28
Incapacity benefit	811	1 000	643	426	219	150	93	95	51	55	354
Widows' benefits	64	13	57	56	45	27	30	12	23	244	57
Statutory Maternity Pay/Allowance	-	-	-	-	-	-	-	-	-	-	-
Non-contributory											
Income support	579	766	591	324	347	90	10	7	15	-	273
Child benefit	6	2	8	8	3	7	7	6	7	8	6
Housing benefit	658	812	343	172	124	79	13	-	-	-	220
Job seeker's allowance (Income based)	218	58	27	49	25	4	1	-	-	-	38
Invalid care allowance	53	80	92	18	9	-	-	-	-	7	26
Attendance allowance	-	5	6	25	17	-	22	-	10	-	9
Disability living allowance	190	428	539	416	244	201	48	83	17	22	219
Disabled Persons Tax Credit	-	3	8	13	-	-	-	-	-	5	3
War pensions/War widows' pensions	20	18	-	10	4	11	10	26	2	7	11
Severe disablement allowance	46	25	90	57	79	35	17	10	-	10	37
Industrial injury disablement benefit	51	31	7	21	67	24	28	13	8	40	29
Student support	38	160	13	25	41	59	62	73	93	-	57
Government training schemes	24	22	4	2	21	3	-	3	0	-	8
Working Families Tax Credit	8	12	14	4	-	17	2	-	-	-	6
Other non-contributory benefits	37	56	42	40	51	20	25	19	17	13	32
Total cash benefits	3 150	4 248	3 387	2 409	2 400	1 281	958	865	619	675	1 999
Gross income	6 266	13 406	18 748	23 590	27 509	32 822	36 559	43 802	51 260	79 952	33 391
Direct taxes and Employees' NIC											
Income tax	205	863	1 863	2 679	3 333	4 415	5 213	6 622	8 286	16 154	4 963
<i>less: Tax relief at source¹</i>	5	3	3	6	4	3	5	7	8	10	5
Employees' NI contributions	90	369	767	1 111	1 273	1 788	1 954	2 388	2 576	2 771	1 509
Council tax and Northern Ireland rates ²	606	670	676	711	756	792	841	840	884	969	775
<i>less: Council tax benefit/Rates rebates</i>	237	201	99	42	32	17	2	2	6	4	64
Total	660	1 698	3 204	4 453	5 326	6 976	7 999	9 842	11 732	19 880	7 177
Disposable income	5 606	11 709	15 544	19 137	22 182	25 846	28 560	33 961	39 528	60 072	26 214
<i>Equivalised disposable income</i>	<i>6 308</i>	<i>12 089</i>	<i>15 626</i>	<i>18 567</i>	<i>21 257</i>	<i>24 324</i>	<i>28 229</i>	<i>32 618</i>	<i>38 987</i>	<i>66 020</i>	<i>26 402</i>
Indirect taxes											
Taxes on final goods and services											
VAT	1 123	1 117	1 409	1 658	1 859	2 128	2 200	2 396	3 034	3 379	2 030
Duty on tobacco	268	354	526	413	363	353	333	314	253	245	342
Duty on beer and cider	115	109	121	161	154	191	190	196	165	194	160
Duty on wines & spirits	148	89	118	160	162	181	189	268	251	318	188
Duty on hydrocarbon oils	259	294	342	492	503	610	540	642	731	662	507
Vehicle excise duty	66	81	103	140	148	157	176	184	197	173	143
Television licences	97	94	100	110	101	106	108	106	106	109	104
Stamp duty on house purchase	50	46	47	75	96	92	140	155	200	379	128
Customs duties	18	18	21	24	27	29	30	33	39	43	28
Betting taxes	47	45	56	65	74	65	62	64	41	55	58
Insurance premium tax	28	28	30	43	50	52	61	61	82	75	51
Air passenger duty	8	11	11	19	32	27	28	34	47	55	27
Camelot National Lottery Fund	45	51	77	67	74	72	76	65	53	38	62
Other	21	10	6	18	9	10	15	35	76	23	22
Intermediate taxes											
Commercial and industrial rates	174	176	202	234	263	283	294	322	380	419	275
Employers' NI contributions	254	256	294	341	383	412	428	469	554	610	400
Duty on hydrocarbon oils	115	117	134	155	174	188	195	214	252	278	182
Vehicle excise duty	23	23	27	31	35	38	39	43	51	56	37
Other	150	152	174	202	227	244	254	278	328	361	237
Total indirect taxes	3 010	3 069	3 796	4 411	4 734	5 240	5 358	5 879	6 841	7 472	4 981
Post-tax income	2 597	8 640	11 747	14 726	17 448	20 606	23 202	28 081	32 687	52 601	21 233
Benefits in kind											
Education	1 864	662	263	227	574	233	168	361	182	92	463
National health service	1 356	1 653	1 734	1 780	1 855	1 619	1 550	1 579	1 566	1 336	1 603
Housing subsidy	69	86	44	45	33	23	4	4	1	1	31
Rail travel subsidy	24	13	12	27	26	25	34	72	63	61	36
Bus travel subsidy	33	37	29	24	43	29	35	38	23	38	33
School meals and welfare milk	-	-	-	-	-	-	-	-	-	-	-
Total	3 346	2 451	2 082	2 103	2 531	1 928	1 791	2 054	1 836	1 528	2 165
Final income	5 942	11 090	13 829	16 829	19 979	22 535	24 993	30 135	34 522	54 128	23 398

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 21 (Appendix 1): Average incomes, taxes and benefits by decile groups of NON-RETIRED households WITH CHILDREN, 2002-03

	Decile groups of non-retired households with children ranked by equivalised disposable income										All such households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
<i>Decile points (equivalised £)</i>	<i>8 828</i>	<i>10 760</i>	<i>12 466</i>	<i>14 684</i>	<i>17 061</i>	<i>19 593</i>	<i>22 837</i>	<i>27 167</i>	<i>35 017</i>		
Number of households in the population ('000s)	719	718	722	720	717	720	721	721	719	721	7 199
Original income											
Wages and salaries	3 121	6 026	9 580	15 721	20 568	24 922	31 295	38 932	43 232	68 216	26 161
Imputed income from benefits in kind	11	40	41	97	146	242	521	632	1 194	1 554	448
Self-employment income	685	1 236	1 676	1 372	1 664	1 978	2 833	2 965	7 477	16 481	3 837
Occupational pensions, annuities	71	58	142	203	232	157	237	272	468	484	232
Investment income	22	57	67	62	164	352	270	725	705	3 924	635
Other income	284	263	161	409	588	559	308	422	651	569	421
Total	4 194	7 680	11 667	17 864	23 362	28 210	35 465	43 947	53 727	91 228	31 734
Direct benefits in cash											
Contributory											
Retirement pension	41	57	148	82	103	49	50	34	73	-	64
Job seeker's allowance (Contribution based)	149	20	5	6	11	20	21	2	10	-	24
Incapacity benefit	269	250	314	224	196	186	90	57	32	16	163
Widows' benefits	32	45	50	34	75	-	32	21	14	-	30
Statutory Maternity Pay/Allowance	5	2	16	18	15	51	77	91	208	307	79
Non-contributory											
Income support	2 236	2 405	1 606	969	399	451	150	49	-	-	826
Child benefit	1 357	1 497	1 314	1 254	1 243	1 206	1 151	1 131	1 147	1 046	1 235
Housing benefit	1 315	1 416	1 052	610	254	348	133	36	12	-	518
Job seeker's allowance (Income based)	386	295	9	80	-	0	24	4	16	-	82
Invalid care allowance	27	54	139	72	47	88	28	19	12	-	49
Attendance allowance	4	-	20	-	21	-	-	-	9	-	6
Disability living allowance	207	191	357	331	213	276	202	89	115	11	199
Disabled Persons Tax Credit	-	-	43	-	-	-	-	-	42	-	9
War pensions/War widows' pensions	-	-	-	8	8	-	-	6	-	17	4
Severe disablement allowance	19	-	-	27	-	26	-	13	20	-	10
Industrial injury disablement benefit	-	12	18	12	-	7	-	6	16	-	7
Student support	134	48	83	91	55	73	28	57	85	84	74
Government training schemes	50	0	47	13	15	2	5	-	-	-	13
Working Families Tax Credit	490	1 045	942	723	783	418	313	163	64	116	506
Other non-contributory benefits	74	89	84	54	27	20	8	2	9	0	37
Total cash benefits	6 794	7 426	6 248	4 607	3 465	3 221	2 310	1 779	1 884	1 597	3 933
Gross income	10 989	15 106	17 915	22 471	26 826	31 431	37 776	45 726	55 611	92 825	35 668
Direct taxes and Employees' NIC											
Income tax	347	697	1 002	1 858	2 658	3 566	4 823	6 381	8 915	19 692	4 994
<i>less: Tax relief at source¹</i>	1	1	1	2	2	2	3	4	1	8	2
Employers' NI contributions	154	332	509	895	1 248	1 533	1 931	2 417	2 544	2 817	1 438
Council tax and Northern Ireland rates ²	655	681	722	744	770	801	848	944	1 002	1 131	830
<i>less: Council tax benefit/Rates rebates</i>	329	283	194	98	45	58	11	9	4	-	103
Total	826	1 426	2 038	3 398	4 629	5 840	7 588	9 728	12 456	23 632	7 156
Disposable income	10 163	13 680	15 877	19 073	22 197	25 591	30 188	35 998	43 155	69 193	28 511
<i>Equivalised disposable income</i>	<i>6 848</i>	<i>9 760</i>	<i>11 604</i>	<i>13 552</i>	<i>15 790</i>	<i>18 331</i>	<i>21 156</i>	<i>24 886</i>	<i>30 270</i>	<i>52 378</i>	<i>20 458</i>
Indirect taxes											
Taxes on final goods and services											
VAT	1 335	1 365	1 449	1 779	2 091	2 075	2 649	2 910	3 170	4 478	2 330
Duty on tobacco	553	579	476	510	323	312	400	264	303	211	393
Duty on beer and cider	58	62	96	93	103	124	159	151	129	144	112
Duty on wines & spirits	59	73	86	70	161	119	175	205	201	270	142
Duty on hydrocarbon oils	305	311	363	433	498	594	660	811	819	870	566
Vehicle excise duty	70	82	97	117	146	156	163	200	191	203	143
Television licences	112	107	109	107	108	112	110	111	111	110	110
Stamp duty on house purchase	37	42	54	72	80	104	116	155	260	456	137
Customs duties	22	22	23	27	30	31	36	39	43	61	33
Betting taxes	43	34	41	45	43	50	54	43	54	43	45
Insurance premium tax	21	25	26	40	46	51	57	65	78	91	50
Air passenger duty	4	5	14	12	20	37	24	34	24	54	23
Camelot National Lottery Fund	38	46	45	50	56	65	89	61	58	42	55
Other	12	11	7	7	20	60	5	20	41	24	21
Intermediate taxes											
Commercial and industrial rates	218	212	224	264	287	296	344	382	418	591	324
Employers' NI contributions	317	309	326	385	419	431	501	556	610	862	472
Duty on hydrocarbon oils	144	141	149	175	191	196	228	253	278	392	215
Vehicle excise duty	29	28	30	35	38	39	46	51	56	79	43
Other	188	183	193	228	248	255	297	330	361	511	279
Total indirect taxes	3 565	3 638	3 808	4 449	4 906	5 107	6 114	6 643	7 205	9 492	5 493
Post-tax income	6 598	10 041	12 070	14 623	17 291	20 484	24 074	29 355	35 950	59 701	23 019
Benefits in kind											
Education	6 437	5 803	5 361	5 036	5 209	4 606	4 558	4 256	4 438	2 676	4 838
National health service	3 051	2 924	2 814	3 042	2 569	2 699	2 841	2 808	3 243	3 526	2 952
Housing subsidy	149	121	88	79	44	36	27	26	4	5	58
Rail travel subsidy	6	13	21	13	25	11	26	32	39	84	27
Bus travel subsidy	64	34	30	35	27	29	29	32	29	35	34
School meals and welfare milk	262	230	129	76	34	37	12	5	5	-	79
Total	9 969	9 125	8 443	8 280	7 908	7 418	7 492	7 158	7 758	6 327	7 988
Final income	16 567	19 166	20 512	22 903	25 199	27 902	31 567	36 513	43 709	66 027	31 007

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 22 (Appendix 1): Distribution of households¹ by household type, 2002-03

	Retired households				Non-Retired households		
	1 adult Men	1 adult Women	All 1 adult	2 or more adults	1 adult Men	1 adult Women	All 1 adult
Decile groups of households ranked by equivalised disposable income							
Number of households ('000s)							
Bottom	80	412	492	356	206	156	362
2nd	99	316	415	604	139	130	269
3rd	158	487	645	498	121	77	198
4th	115	389	504	428	123	130	253
5th	126	274	400	369	166	143	308
6th	59	235	294	239	184	181	365
7th	39	167	205	230	176	119	295
8th	47	66	112	155	243	122	365
9th	45	30	75	143	288	137	425
Top	22	61	83	91	368	167	535
All households in population ('000s)	789	2 437	3 226	3 113	2 015	1 361	3 375

	Non-Retired households							All house- holds
	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 ('000s)								
Bottom	301	154	282	121	95	143	128	2 434
2nd	217	61	353	108	188	141	78	2 434
3rd	223	112	225	161	150	119	103	2 434
4th	370	146	166	156	224	98	91	2 436
5th	386	226	153	149	284	72	84	2 432
6th	542	236	112	209	287	70	83	2 437
7th	643	326	54	194	297	60	129	2 434
8th	762	296	83	230	248	64	118	2 435
9th	867	390	29	156	244	46	57	2 433
Top	973	202	29	305	174	38	7	2 437
All households in population ('000s)	5 284	2 149	1 487	1 790	2 191	852	880	24 346

¹ See Appendix 2 for definitions of retired households, adults and children.

TABLE 23 (Appendix 1): Summary of the effects of taxes and benefits, by household type¹, 2002-03

	Retired households				Non-Retired households			
	1 adult Men	1 adult Women	All 1 adult	2 or more adults	1 adult Men	1 adult Women	All 1 adult	
Average per household (£ per year)								
Original income	5 811	3 693	4 211	10 900	19 411	16 552	18 259	
<i>plus</i> Cash benefits	5 797	6 403	6 255	8 432	1 729	2 259	1 942	
Gross income	11 609	10 096	10 466	19 332	21 140	18 811	20 201	
<i>less</i> Direct taxes and employees' NIC	1 329	939	1 034	2 400	4 599	3 961	4 342	
Disposable income	10 280	9 157	9 432	16 932	16 541	14 849	15 859	
<i>Equivalentised disposable income</i>	<i>16 811</i>	<i>15 005</i>	<i>15 447</i>	<i>16 287</i>	<i>27 117</i>	<i>24 343</i>	<i>25 998</i>	
<i>less</i> Indirect taxes	1 792	1 457	1 539	3 457	3 085	2 725	2 940	
Post-tax income	8 488	7 701	7 893	13 476	13 457	12 124	12 919	
<i>plus</i> Benefits in kind	3 092	3 526	3 420	4 983	897	1 062	963	
Final income	11 580	11 227	11 313	18 458	14 353	13 186	13 883	
Non-Retired households								
	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	All house- holds
Average per household (£ per year)								
Original income	34 549	44 258	8 924	38 090	38 868	33 769	37 618	25 271
<i>plus</i> Cash benefits	1 814	2 545	6 930	2 222	2 448	5 677	4 362	3 958
Gross income	36 363	46 803	15 853	40 312	41 316	39 446	41 980	29 229
<i>less</i> Direct taxes and employees' NIC	8 053	9 475	1 418	9 139	8 959	7 967	7 542	5 746
Disposable income	28 310	37 327	14 435	31 172	32 356	31 478	34 438	23 483
<i>Equivalentised disposable income</i>	<i>27 613</i>	<i>24 060</i>	<i>14 478</i>	<i>25 589</i>	<i>22 344</i>	<i>18 025</i>	<i>17 782</i>	<i>21 899</i>
<i>less</i> Indirect taxes	5 303	7 397	3 034	5 911	5 983	6 128	6 961	4 481
Post-tax income	23 007	29 931	11 402	25 261	26 374	25 350	27 477	19 002
<i>plus</i> Benefits in kind	1 948	4 587	7 114	5 099	8 087	13 261	9 987	4 413
Final income	24 955	34 517	18 516	30 360	34 461	38 612	37 464	23 415

¹ See Appendix 2 for definitions of retired households, adults and children.

TABLE 24 (Appendix 1): Average incomes, taxes and benefits by decile groups of households ranked by UNADJUSTED disposable income), 2002-03

	Decile groups of all 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>	7 313	9 834	12 268	15 230	18 837	22 711	27 785	33 928	44 715		
Number of households in the population ('000s)	2 434	2 434	2 432	2 437	2 434	2 435	2 432	2 434	2 436	2 437	24 346
Original income											
Wages and salaries	696	1 265	3 622	6 319	10 317	16 677	23 253	29 565	37 334	63 633	19 268
Imputed income from benefits in kind	2	8	39	25	34	69	238	554	675	1 605	325
Self-employment income	180	329	354	650	1 147	1 428	1 984	2 368	5 329	10 436	2 421
Occupational pensions, annuities	492	1 085	1 531	2 106	2 801	2 179	2 285	2 417	2 592	3 258	2 075
Investment income	201	384	368	439	779	682	811	1 007	1 582	3 524	978
Other income	115	88	134	171	230	176	164	392	299	284	205
Total	1 687	3 159	6 048	9 710	15 307	21 212	28 735	36 302	47 812	82 739	25 271
Direct benefits in cash											
Contributory											
Retirement pension	2 132	3 192	2 859	2 420	2 095	1 444	1 035	919	666	479	1 724
Job seeker's allowance (Contribution based)	50	23	33	21	9	30	14	19	6	5	21
Incapacity benefit	288	260	284	381	318	225	196	142	69	78	224
Widows' benefits	31	29	36	61	44	38	26	31	13	86	39
Statutory Maternity Pay/Allowance	1	0	4	6	2	16	26	34	67	77	23
Non-contributory											
Income support	442	801	913	842	540	438	208	149	62	64	446
Child benefit	80	150	265	338	425	488	506	479	450	513	369
Housing benefit	540	1 135	859	603	365	222	77	44	37	-	388
Job seeker's allowance (Income based)	92	37	86	74	49	57	10	15	7	5	43
Invalid care allowance	23	4	33	83	63	71	16	22	4	10	33
Attendance allowance	40	112	200	146	82	62	22	24	10	7	71
Disability living allowance	71	169	307	508	281	305	193	182	102	79	220
Disabled Persons Tax Credit	-	-	1	-	13	4	6	-	-	15	4
War pensions/War widows' pensions	6	9	44	48	67	7	54	8	12	14	27
Severe disablement allowance	14	18	26	33	20	30	42	6	25	30	24
Industrial injury disablement benefit	24	10	28	28	19	6	28	40	20	18	22
Student support	14	31	10	60	45	70	54	68	73	57	48
Government training schemes	13	4	7	9	8	7	6	21	1	3	8
Working Families Tax Credit	25	34	176	316	341	334	91	133	44	27	152
Other non-contributory benefits	93	130	113	89	91	70	56	32	20	15	71
Total cash benefits	3 979	6 147	6 283	6 064	4 875	3 922	2 668	2 368	1 688	1 581	3 958
Gross income	5 667	9 306	12 331	15 775	20 182	25 134	31 403	38 670	49 500	84 320	29 229
Direct taxes and Employees' NIC											
Income tax	126	318	631	1 136	1 851	2 675	3 933	5 234	7 371	16 339	3 961
<i>less: Tax relief at source¹</i>	3	3	3	2	3	3	5	5	6	9	4
Employees' NI contributions	29	74	201	376	594	1 006	1 484	1 899	2 325	3 021	1 101
Council tax and Northern Ireland rates ²	616	629	672	705	765	772	824	883	950	1 088	791
<i>less: Council tax benefit/Rates rebates</i>	228	255	212	146	81	61	21	13	8	2	103
Total	539	764	1 289	2 068	3 126	4 389	6 216	7 998	10 633	20 437	5 746
Disposable income	5 127	8 542	11 042	13 707	17 056	20 745	25 187	30 672	38 867	63 883	23 483
Indirect taxes											
Taxes on final goods and services											
VAT	728	712	977	1 235	1 482	1 818	2 110	2 481	2 985	4 038	1 856
Duty on tobacco	174	214	280	327	341	371	403	292	346	290	304
Duty on beer and cider	49	47	71	78	83	126	149	157	192	208	116
Duty on wines & spirits	62	59	96	85	118	140	180	191	239	340	151
Duty on hydrocarbon oils	143	129	218	307	373	452	555	633	770	851	443
Vehicle excise duty	47	46	71	87	124	135	164	170	205	219	127
Television licences	69	69	80	90	99	99	103	104	108	106	93
Stamp duty on house purchase	37	27	44	53	72	88	103	138	207	337	111
Customs duties	13	13	16	19	22	26	30	33	40	55	27
Betting taxes	31	31	41	50	49	51	70	54	67	58	50
Insurance premium tax	17	18	24	30	37	44	55	62	79	90	46
Air passenger duty	4	9	8	13	12	19	32	34	42	53	23
Camelot National Lottery Fund	31	37	45	50	59	59	74	66	70	62	55
Other	9	9	8	10	5	43	10	18	33	32	18
Intermediate taxes											
Commercial and industrial rates	122	129	157	183	216	255	286	324	382	528	258
Employers' NI contributions	177	188	229	267	315	371	416	472	557	769	376
Duty on hydrocarbon oils	81	85	104	122	144	169	190	215	254	350	171
Vehicle excise duty	16	17	21	24	29	34	38	43	51	70	34
Other	105	111	136	158	187	220	247	279	330	456	223
Total indirect taxes	1 915	1 952	2 626	3 188	3 766	4 520	5 213	5 765	6 956	8 912	4 481
Post-tax income	3 212	6 591	8 415	10 519	13 290	16 225	19 974	24 907	31 911	54 972	19 002
Benefits in kind											
Education	771	683	1 186	1 478	1 762	2 269	2 204	1 982	1 964	2 210	1 651
National health service	2 447	2 828	2 879	2 744	2 743	2 474	2 529	2 437	2 417	2 747	2 625
Housing subsidy	61	85	89	72	47	33	15	24	5	9	44
Rail travel subsidy	13	6	10	8	12	30	20	33	48	80	26
Bus travel subsidy	42	55	51	49	46	41	32	37	35	56	44
School meals and welfare milk	11	30	52	45	35	34	15	10	4	1	23
Total	3 345	3 687	4 267	4 397	4 645	4 880	4 815	4 521	4 473	5 103	4 413
Final income	6 557	10 278	12 683	14 916	17 936	21 105	24 789	29 428	36 384	60 074	23 415

¹ On life assurance premiums.

² Council tax and Northern Ireland rates after deducting discounts.

TABLE 25 (Appendix 1): Cross-tabulation of households ranked by disposable income, unadjusted and equivalised, 2002-03

(i) Quintile groups	Quintile groups of equivalised disposable income					All households					
	Bottom	2nd	3rd	4th	Top						
Number of households in the population ('000s)											
Quintile groups of unadjusted disposable income											
Bottom	3 036	1 634	199	-	-	4 868					
2nd	1 396	1 669	1 257	547	-	4 869					
3rd	412	1 220	1 907	850	480	4 869					
4th	25	330	1 335	2 219	957	4 867					
Top	-	16	172	1 253	3 432	4 873					
All households	4 869	4 870	4 869	4 869	4 870	24 346					
(ii) Decile groups	Decile groups of equivalised disposable income										All households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Number of households in the population ('000s)											
Decile groups of unadjusted disposable income											
Bottom	1 443	694	297	-	-	-	-	-	-	-	2 434
2nd	529	370	580	757	199	-	-	-	-	-	2 434
3rd	227	740	418	61	511	475	-	-	-	-	2 432
4th	138	291	520	670	66	205	500	47	-	-	2 437
5th	64	190	329	357	762	181	25	435	91	-	2 434
6th	28	129	185	349	246	718	373	16	390	-	2 435
7th	4	20	76	176	448	359	600	500	24	225	2 432
8th	-	-	29	49	141	388	493	626	521	187	2 434
9th	-	-	-	16	60	100	362	551	783	564	2 436
Top	-	-	-	-	-	13	80	259	624	1 461	2 437
All households	2 434	2 434	2 434	2 436	2 432	2 437	2 434	2 435	2 433	2 437	24 345

TABLE 26 (Appendix 1): Percentage shares of equivalised total original, gross, disposable and post-tax incomes by quintile groups for ALL households¹, 1980 to 2002-03²

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Original income												
Bottom	2	3	3	3	3	2	3	2	2	2	2	2
2nd	9	9	8	8	7	7	7	7	7	7	7	7
3rd	18	17	17	17	17	17	16	16	16	16	15	16
4th	26	26	26	26	26	27	26	25	26	26	25	26
Top	44	46	46	47	47	47	49	50	50	49	51	50
All households	100	100	100	100	100	100	100	100	100	100	100	100
Gross income												
Bottom	8	8	9	9	9	8	8	7	7	7	7	7
2nd	12	12	12	12	12	12	11	11	11	11	10	10
3rd	18	17	17	17	17	17	16	16	16	16	16	16
4th	23	23	23	23	23	24	23	23	23	23	23	23
Top	38	39	39	39	39	40	41	43	43	42	44	44
All households	100	100	100	100	100	100	100	100	100	100	100	100
Disposable income												
Bottom	9	9	9	9	10	9	9	8	8	8	7	7
2nd	13	13	13	13	13	13	12	12	11	12	11	11
3rd	18	17	17	17	17	17	17	16	16	17	16	16
4th	23	23	23	23	23	23	23	23	23	23	23	23
Top	37	38	37	38	37	38	40	41	42	41	43	42
All households	100	100	100	100	100	100	100	100	100	100	100	100
Post-tax income												
Bottom	9	9	9	9	9	9	8	8	7	7	6	7
2nd	13	13	13	13	13	13	12	12	11	11	10	11
3rd	17	17	17	17	17	17	16	16	16	16	15	16
4th	23	22	22	22	22	23	22	22	22	23	23	23
Top	38	39	39	39	38	39	41	43	44	43	45	44
All households	100	100	100	100	100	100	100	100	100	100	100	100
	1992	1993	1993-4	1994-5	1995-6	1996-7	1997-8	1998-9	1999-00	2000-01	2001-02	2002-03
Original income												
Bottom	2	2	2	2	3	2	2	3	2	2	3	3
2nd	6	6	6	6	7	7	7	7	7	7	7	7
3rd	15	15	14	15	15	15	15	15	15	15	14	15
4th	26	25	25	25	25	25	25	25	25	25	24	25
Top	50	52	52	51	50	51	51	52	52	50	52	50
All households	100	100	100	100	100	100	100	100	100	100	100	100
Gross income												
Bottom	7	7	7	7	7	7	7	7	7	6	6	7
2nd	11	11	11	11	11	11	11	11	11	11	11	11
3rd	16	16	16	16	16	16	16	16	16	16	15	16
4th	23	23	23	23	23	23	23	23	23	23	22	23
Top	43	44	44	43	43	44	44	44	44	44	45	43
All households	100	100	100	100	100	100	100	100	100	100	100	100
Disposable income												
Bottom	7	8	8	8	8	8	8	7	7	7	7	8
2nd	11	12	12	12	12	12	12	12	12	12	12	12
3rd	16	16	16	16	17	16	16	16	16	16	16	17
4th	23	23	23	23	23	23	23	23	23	23	22	23
Top	42	42	42	41	40	42	42	42	42	42	43	41
All households	100	100	100	100	100	100	100	100	100	100	100	100
Post-tax income												
Bottom	7	7	7	7	7	7	7	6	6	6	6	6
2nd	11	11	11	11	12	11	11	11	11	11	11	12
3rd	16	16	16	16	16	16	16	16	16	16	15	16
4th	23	22	22	22	23	22	22	22	22	22	22	23
Top	44	44	44	43	43	44	44	45	45	44	46	43
All households	100	100	100	100	100	100	100	100	100	100	100	100

1 Ranked by equivalised disposable income.

2 From 1990 this includes company car benefit and beneficial house purchase loans from employers. From 1996-97 values are based on estimates for the sample grossed up to population totals.

TABLE 27 (Appendix 1): Gini coefficients for the distribution of income at each stage of the tax-benefit system and P90/P10 and P75/P25¹ ratios for disposable income for ALL households, 1980 to 2002-03²

	Gini coefficients (per cent)				Ratios for disposable income	
	Equivalised income				P90/P10	P75/P25
	Original	Gross	Disposable	Post-tax		
1980	44	31	28	30	3.5	2.0
1981	46	31	28	31	3.4	2.0
1982	47	31	28	31	3.3	2.0
1983	48	32	28	31	3.3	1.9
1984	49	31	28	30	3.3	2.0
1985	49	32	29	32	3.5	2.1
1986	50	34	31	35	3.7	2.1
1987	51	36	33	36	4.1	2.2
1988	51	37	35	38	4.4	2.4
1989	50	36	34	37	4.5	2.4
1990	52	38	36	40	4.9	2.5
1991	51	37	35	39	4.8	2.5
1992	52	37	34	38	4.6	2.4
1993	53	38	35	38	4.5	2.3
1993/94	54	37	34	38	4.5	2.3
1994/95	53	37	33	37	4.5	2.3
1995/96	52	36	33	37	4.2	2.2
1996/97	53	37	34	38	4.4	2.3
1997/98	53	37	34	38	4.5	2.3
1998/99	53	38	35	39	4.5	2.3
1999/00	53	38	35	40	4.6	2.4
2000/01	51	38	35	39	4.5	2.3
2001/02	53	39	36	40	4.5	2.3
2002/03	51	37	33	37	4.3	2.2

¹ P90/P10 is the ratio of the income at the 90th percentile to the 10th; P75/P25 is the ratio of the income at the 75th percentile to the 25th.

² From 1990 this includes company car benefit and beneficial house purchase loans from employers. From 1996-97 values are based on estimates for the sample grossed to population totals.

APPENDIX 2

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 Expenditure and Food Survey (EFS). 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 have sufficient information to make an allocation.

Expenditure and Food Survey (EFS)

2. The estimates in this analysis are based mainly on data derived from the EFS, which replaced the Family Expenditure Survey (FES) from 2001–02. The EFS 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; children aged 7 to 15 keep a simplified diary. 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 EFS is to produce information on household expenditure patterns which is used to derive the weights for the retail prices index. The fieldwork is

undertaken by ONS and by the Northern Ireland Statistics and Research Agency. *Family Spending 2002–2003*, published on the ONS web site in February 2004, shows detailed results on expenditure and income from the 2002–03 survey, and how they vary with household characteristics. The report also includes an outline of the survey design.

4. The number of households in the United Kingdom responding to the EFS in 2002–03 was 7,000 (about 1 in every 3,500 households). The response rate was 57 per cent. 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.

5. The results in the analysis are based on the survey grossed up so that totals reflect the total population in private households in the United Kingdom (that is excluding those in institutions such as residential homes for the elderly). Households were assigned different initial weights based on the non-response in the 1991 FES. These weights were derived from Census-linked data (see "*Weighting the FES in Great Britain to compensate for non-response: an investigation using Census-linked data*" by Kate Foster). The final household weights were produced using specialised software developed by INSEE, the French national statistics institute. The control variables used in the grossing system were the number of individuals by age (in five-year bands) and sex; and the number of individuals by region. The weights have not yet been revised to take account of results from the 2001 Census.

6. The EFS 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). EFS 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 half of the income distribution. Moreover, the difference between income and expenditure is not necessarily a measure of savings or dis-savings.

Unit of analysis

7. The basic unit of analysis used is the household, and not the family, individual or benefit unit. A household is defined in terms of the harmonised definition as used in the Census and nearly all other government household surveys since 1981. This is one person, or a group of persons, who have the accommodation as their only or main residence and (for a group) share the living accommodation, that is a living or sitting room, or share meals together or have common housekeeping. Up until 1999-2000, the definition was based on the pre-1981 Census definition and required members to share eating and budgeting arrangements as well as shared living accommodation. The definition of a household comprised people who lived at the same address and who shared common catering for at least one meal a day. The effect of the change was fairly small, but not negligible. 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.

8. In classifying the households into various types, a **child** (i.e. a dependent) is defined as:

either aged under 16;

or aged 16, 17 or 18 not married, and receiving full-time non-advanced further education.

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.

9. 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'.

10. By no means all retired people are in retired households: about one in five households comprising three or more adults contains retired people, for example, and households comprising one retired and one non-retired adult are often classified as non-retired.

11. 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 (none in 2002-03) 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.

12. Economically active people comprise persons aged 16 or over who, at the time of interview, were:

- employees at work,
- employees temporarily away from work through illness, temporary lay-off, industrial action, etc,
- on government training schemes,
- self-employed,
- 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

13. Stage one:

Original income *plus* cash benefits = Gross income.

Stage two:

Gross income *minus* income tax, employees' National Insurance contributions and Council tax and Northern Ireland rates (see paragraph 24 below) = Disposable income.

Stage three:

Disposable income *minus* indirect taxes = Post-tax income.

Stage four:

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

14. 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.

15. Furthermore, to avoid double counting and to make it consistent with the estimate of income from cash benefits (see paragraph 20), 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 12 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.

16. 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.

17. 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.

18. In addition to salary, many employees receive as part of their income fringe benefits such as company cars, private medical insurance and beneficial loans. 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 charges. The Inland Revenue website 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 EFS. 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 EFS.

19. 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 EFS and the interest payments that would have been payable at the ruling market rate of interest.

20. The next stage of the analysis is to add cash benefits and tax credits to original income to obtain **gross income**. This is slightly different from the 'gross normal weekly income' used in the EFS report. Cash benefits and tax credits include:

Contributory:

Retirement pension, part of job seeker's allowance, incapacity benefit, widows' benefits, and statutory maternity pay.

Non-contributory:

Income support, part of job seeker's allowance, child benefit, housing benefit (council tax benefit and rates rebates are treated as deductions from Council tax and Northern Ireland rates), invalid care allowance, attendance allowance, disability living allowance, disabled persons tax credit, war pensions, severe disablement allowance, industrial injury disablement benefits, working families tax credit, old persons pension, Christmas bonus for pensioners, government training scheme allowances, educational support (largely student maintenance awards) and winter fuel payments.

21. Statutory maternity pay is classified as a cash benefit even though it is paid through the employer.

22. 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.

23. Income tax, Council tax and Northern Ireland rates, 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 are not available from the EFS.

24. The figures for Council tax and Northern Ireland rates include Council tax (for households in Great Britain), and domestic rates (for households in Northern Ireland). Council tax is shown after discounts to reduce or remove the personal element of the tax (e.g. the discount of 25 per cent for single person households). All Council tax and Northern Ireland rates are shown after the deduction of council tax benefit and rate rebates. This brings the treatment in line with that of National Accounts which treats such rebates as revenue foregone. Up to, and including, 1995–96 these rebates were included as part of housing benefits.

25. Unlike in earlier years, there is no figure shown for local taxes which included charges made by water authorities for water, environmental and sewerage services. It has been decided that these are charges for services rather than a tax. Comparable data for 2001–02 for Table 3 are shown in the analysis and a full set of tables can be obtained from the ONS by emailing iew@ons.gov.uk or ringing 020 7533 5772.

26. 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 'at source'. In 2002–03, there was only one type of tax relief obtained in this way: life assurance premium relief. Where households are eligible for these reliefs, imputations are made and deducted from recorded income tax payments.

27. 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;
- Driving licenses;
- Television licenses;
- Stamp duties;
- Fossil fuel levy;
- Camelot: payments to National Lottery Distribution Fund.

28. Taxes levied on final goods and services are assumed to be fully incident on the consumer, and can be imputed from a household's EFS expenditure record. For example, the amount of VAT that is paid by the household is calculated from the household's total expenditure on goods and services subject to VAT.

29. 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 EFS 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 under-represented in the EFS.

30. 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 EFS) and the probability of a household of that type moving in a given year (estimated from the General Household Survey).

31. 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;
- Independent Commission franchise payments;
- Landfill tax;
- Consumer Credit Act fees.

32. 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 analysis, 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.

33. For Tables 3 and 9 of the main analysis, we have constructed a measure of expenditure on goods and services from data from the EFS. Indirect taxes are shown as a proportion both of disposable income and of expenditure. One drawback of comparing the incidence of indirect taxes on households at different levels of income is that, by whatever measure used, on average, recorded expenditure exceeds income apparently available for it by significant amounts at the bottom of the distribution. Thus, it has been argued that for many households, where, for instance, income fluctuates widely or where it is difficult to measure accurately, a measure based on regular household outgoings would be a far better indicator of resources available to the household and therefore give a better picture of the incidence of indirect taxes.

34. This measure of expenditure has been customised to be analogous to the definition of disposable income used in the analysis in order to facilitate these comparisons. For instance, because the imputed benefit of company cars and beneficial loans will have boosted the figure for disposable income these items have had to be added to this expenditure measure. Expenditure on alcohol, tobacco and confectionery have been grossed up for under-recording in line with the treatment of the indirect taxes on these items. Payments deemed to be made out of income such as superannuation, regular savings, mortgage repayments, etc. have been included and adjusted where necessary but not items such as lump sum capital payments in line with the exclusion of capital gains and windfalls from income.

35. 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).

36. Education benefit is estimated from information provided by the Department for Education and Skills of 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 EFS as receiving each kind of state education (students away from the household are excluded). No benefit is allocated for pupils attending private schools.

37. The value of school meals and other welfare foods is based on their costs to the public authorities.

38. 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 EFS 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.

39. In this analysis, public sector tenants are defined to include the tenants of local authorities, Scottish Homes, Northern Ireland Housing Executive (NIHE), housing associations and Registered Social Landlords. The total housing subsidy includes the contribution from central government to the housing revenue accounts of local authorities, and grants paid to Scottish Homes, the NIHE, housing associations and Registered Social Landlords. 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 Council Tax band of the dwelling. Housing subsidy does not include, rent rebates and allowances or local tax rebates.

40. The rail travel subsidies allocated are the support payments made to the train operating companies. The subsidy to London and South East services is allocated to households living in the area and subsidies to other services to households living outside the South East, in proportion to households' expenditure on rail fares as recorded in the EFS. 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.

41. In this analysis, 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.

42. We must emphasise that the analysis provides only a 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.

43. 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 a life assurance premium, for example, accrues directly to the taxpayer rather than to some other party, for instance, the seller of the policy. 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.

44. 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.

45. 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

46. 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 were based on the assumption that it is possible to estimate equivalence scales from people's spending behaviour as recorded in the EFS 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 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.

47. The equivalence values are given below:

Type of household member	Equivalence value
married head of household (i.e. a married or cohabiting couple)	1.00
1st additional adult	0.42
2nd (or more) additional adult	0.36 (per adult)
single head of household (adult)	0.61
1st additional adult	0.46
2nd additional adult	0.42
3rd (or more) additional adult	0.36 (per adult)
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

48. 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 two children (aged six and nine) 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 ($=£20,000/1.86$).

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

50. It is important to note that most monetary values shown in the analysis are ordinary (i.e. un-equivalised) £ per year, not

Diagram 2
Lorenz curve for a typical income distribution

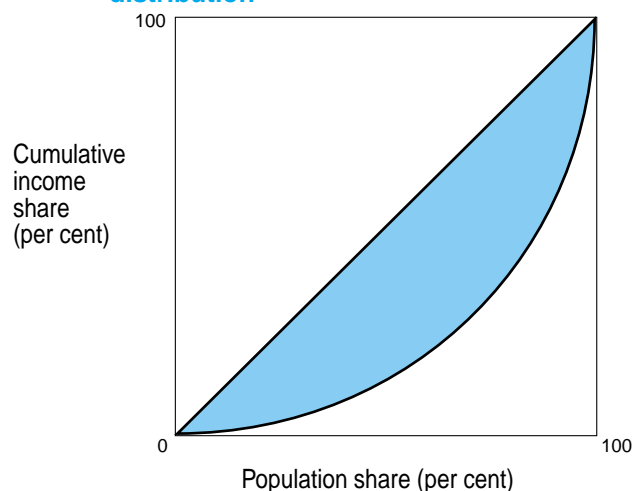
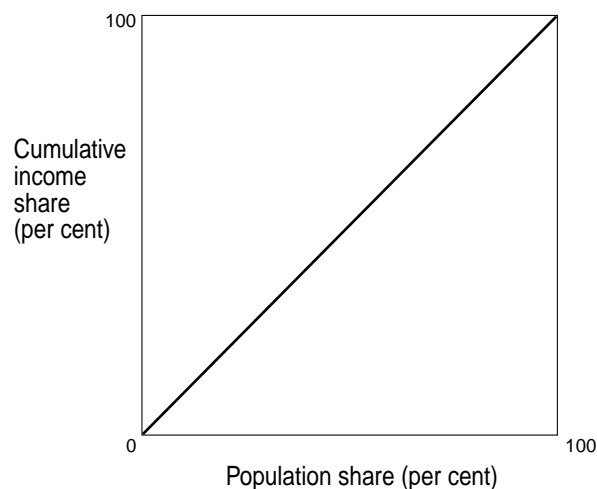


Diagram 3
Complete income equality



equivalised £ per year. Where equivalised values do appear (e.g. the quintile points in Table 16A of Appendix 1), they are shown in *italics*.

Gini coefficient

51. 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 2) 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 3). 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).

52. 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 analysis 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.

53. 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 analysis are based on actual household spending and do not, therefore, apply to such items as notional income.

Impact of population weighting

54. The survey results have been re-weighted and grossed so that the population totals reflect the whole household population, a process described as population weighting. Different weights are applied to different types of households in order to correct for over and under-representation of these groups in the responding sample of the EFS. Population weighting raises the quality of the estimates by making the population more representative and by improving the allocation of national accounts aggregates to individual households. Estimates based on the population-weighted data set are different from estimates based on the sample. Indeed, if they were not, there would be little point in the weighting. The effect of weighting on some of the major variables used in the analysis was given in the 1997-98 analysis. More detail about the effect of weighting can be obtained from the ONS on request.

Sampling errors and reliability

55. As the EFS 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 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.

56. It is difficult to calculate these standard errors exactly because of the multi-stage design of the EFS sample and the population weighting, but we have made a good approximation by combining the simple random formula with the appropriate design factor from the EFS 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 and the population weighting to the standard error using the simple random sample formula.] The most appropriate design factor from the EFS 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 1.1 for 2002–03, and S^2 is the estimate of the population variance.

57. The standard error for normal weekly disposable income of all households is slightly more than one 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 likely to be higher.

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

$$\text{estimate of mean} + \text{or} - (1.96 * \text{standard error})$$

where the factor 1.96 corresponds to the 95 per cent confidence interval.

59. The standard errors for the household types are larger than for the whole sample, mainly because the sample sizes concerned are smaller. For quintile 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.

60. The 'complex' standard errors for quintile and decile groups are quite a bit larger than the simple random sample estimates.

Previous analyses

61. This analysis is the latest in an annual series covering the years from 1957 onwards. From 1987 onwards, the analyses 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. Last year the analysis was published on the Internet in April, and in the May 2002 edition of Economic Trends. A revised version, reflecting revisions to the Expenditure and Food Survey was published on the Internet in October. A list of the previous articles was included in the article published in March 1997.

62. The results in all analyses are intended to be free standing: they were not designed for direct comparison with other years except where some limited comparisons were made in them. Such comparisons are difficult because of changes in definitions, however, some broader measures like the Gini coefficients are relatively robust and will stand comparison with other years: this year's analysis gives such a comparison for the years 1980 to 2002–03.