Office for National Statistics

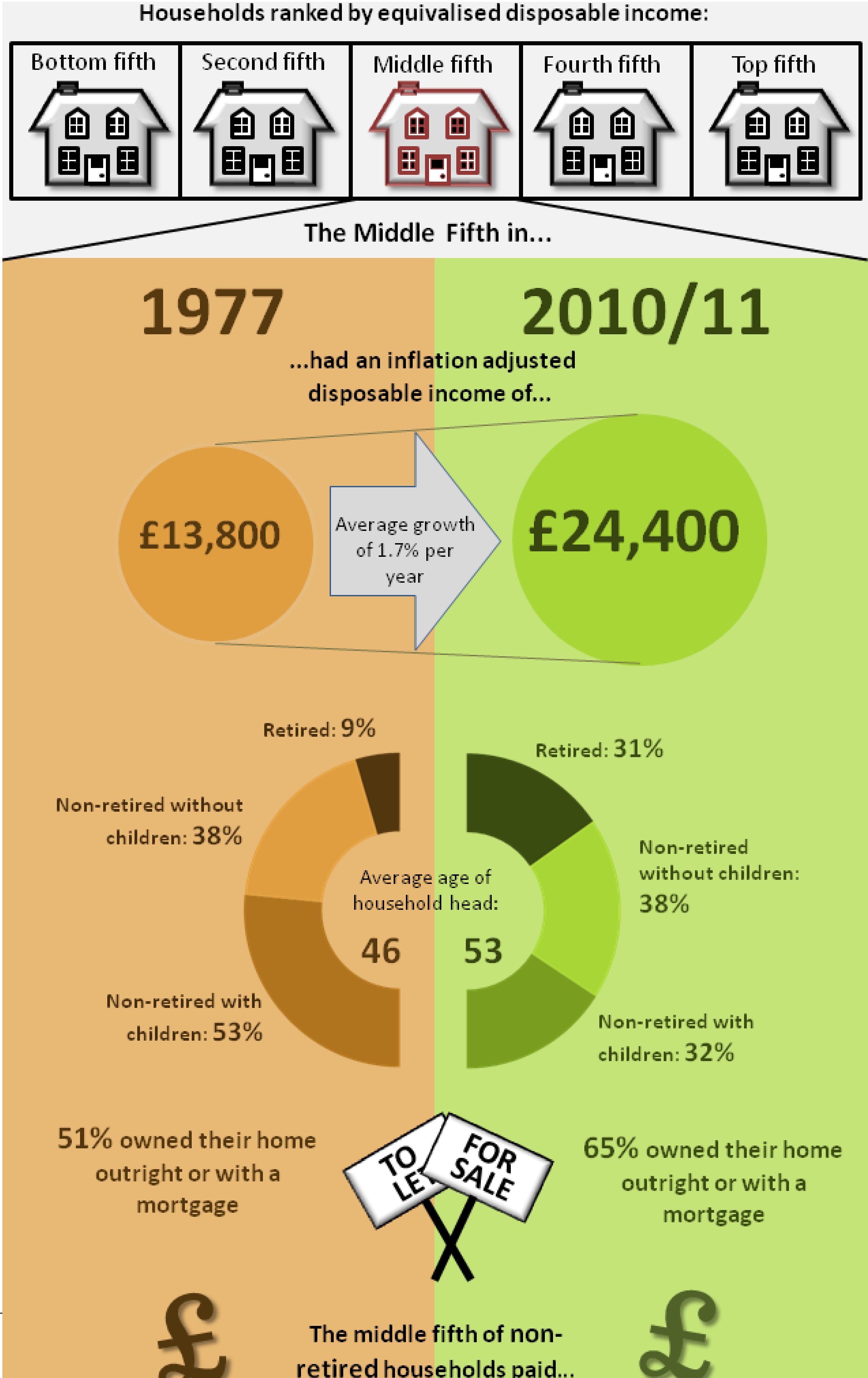
Middle Income Households, 1977-2010/11

Coverage: **UK**
Date: **18 March 2013**
Geographical Area: **UK**
Theme: **Economy**
Theme: **People and Places**

Key points

This short article analyses some of the key trends affecting the incomes of households in the middle of the income distribution. It studies the change in median household income between 1977 and 2010/11 and compares this with changes in GDP per person for both the UK and USA. The article then looks at how the characteristics of the middle fifth of households have changed over time and how the composition of their income has changed during the recent economic downturn and over the longer term.

Some of the key findings are shown in the infographic below:


Households ranked by equivalised disposable income:
Bottom fifth
Second fifth
Middle fifth
Fourth fifth
Top fifth
The Middle Fifth in...
1977
2010/11
...had an inflation adjusted disposable income of...
£13,800
Average growth of 1.7% per year
£24,400
Retired: 9%
Non-retired without children: 38%
Non-retired with children: 53%
Average age of household head:
46
53
Retired: 31%
Non-retired without children: 38%
Non-retired with children: 32%
51% owned their home outright or with a mortgage
TO LET
FOR SALE
65% owned their home outright or with a mortgage
The middle fifth of non-retired households paid...

Other key findings show:

- Growth in UK median household income since 1977 has trended closely to that of GDP per person, rising during periods of economic growth and falling after the recessions of the early 1980s, early 1990s and late 2000s.
- There has been a strong contrast between the UK experience and that of the US, where median household income has grown at a much slower rate than US GDP per person.
- Between the mid 1990s and mid 2000s, growth in UK median household income exceeded that of GDP per person, but in the years immediately before the economic downturn growth in household incomes slowed considerably.
- Since the start of the economic downturn, original income for this middle fifth has fallen by 8.8%, once inflation is taken into account, driven largely by a reduction in income from earnings. However, an increase in the amount of income received through cash benefits and a fall in the proportion of income paid in taxes has meant that disposable income for this group has fallen by only 3.8% in real terms.

Background: Why look at median household incomes?

Gross Domestic Product (GDP) per person is often used as a measure of a country’s standard of living, with higher GDP per person indicating higher living standards. GDP per person, however, was not designed as a measure of individual or national well-being. GDP per person measures total production, income or expenditure in an economy divided between the population.

An alternative to GDP per person is to look at the economic position of households. This article compares the two main measures of average household income, the mean and the median.

The mean simply divides the total income of households by the number of households. A limitation of using the mean for this purpose is that it can be influenced by just a few households with very high incomes and is therefore does not necessarily reflect the standard of living of the “typical” household.

Many researchers argue that growth in median household incomes provides a better measure of how people’s well-being has changed over time. The median household income is the income of what would be the middle household, if all households in the UK were sorted in a list from poorest to richest. As it represents the middle of the income distribution, the median household income provides a good indication of the standard of living of the “typical” household in terms of income.

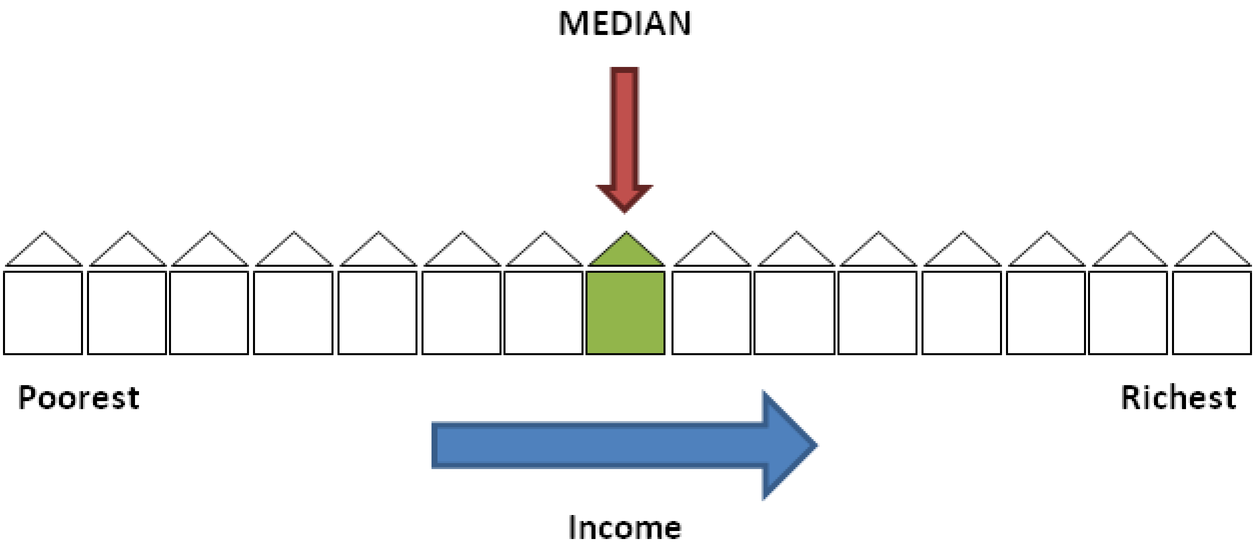
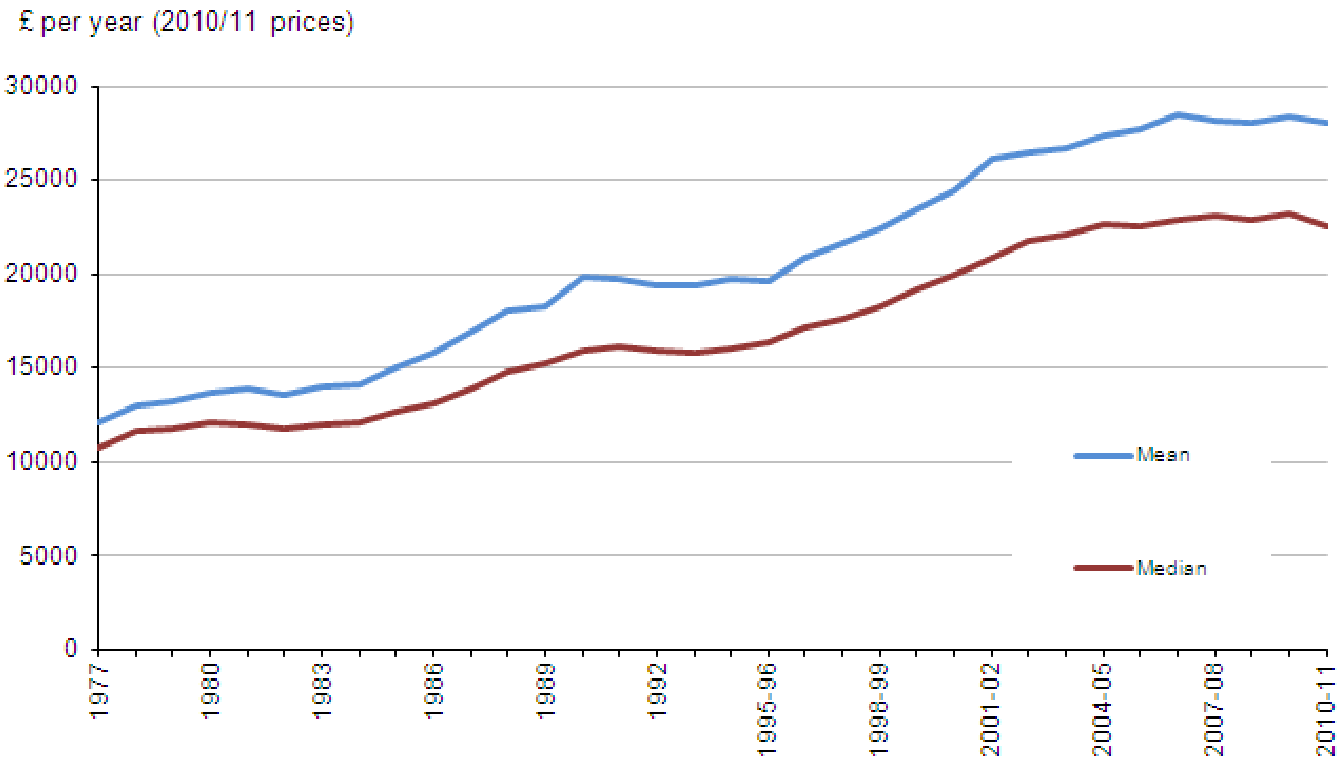


Figure 1: Mean and median equivalised household disposable income, UK, 1977-2010/11



Source: Office for National Statistics

Download chart

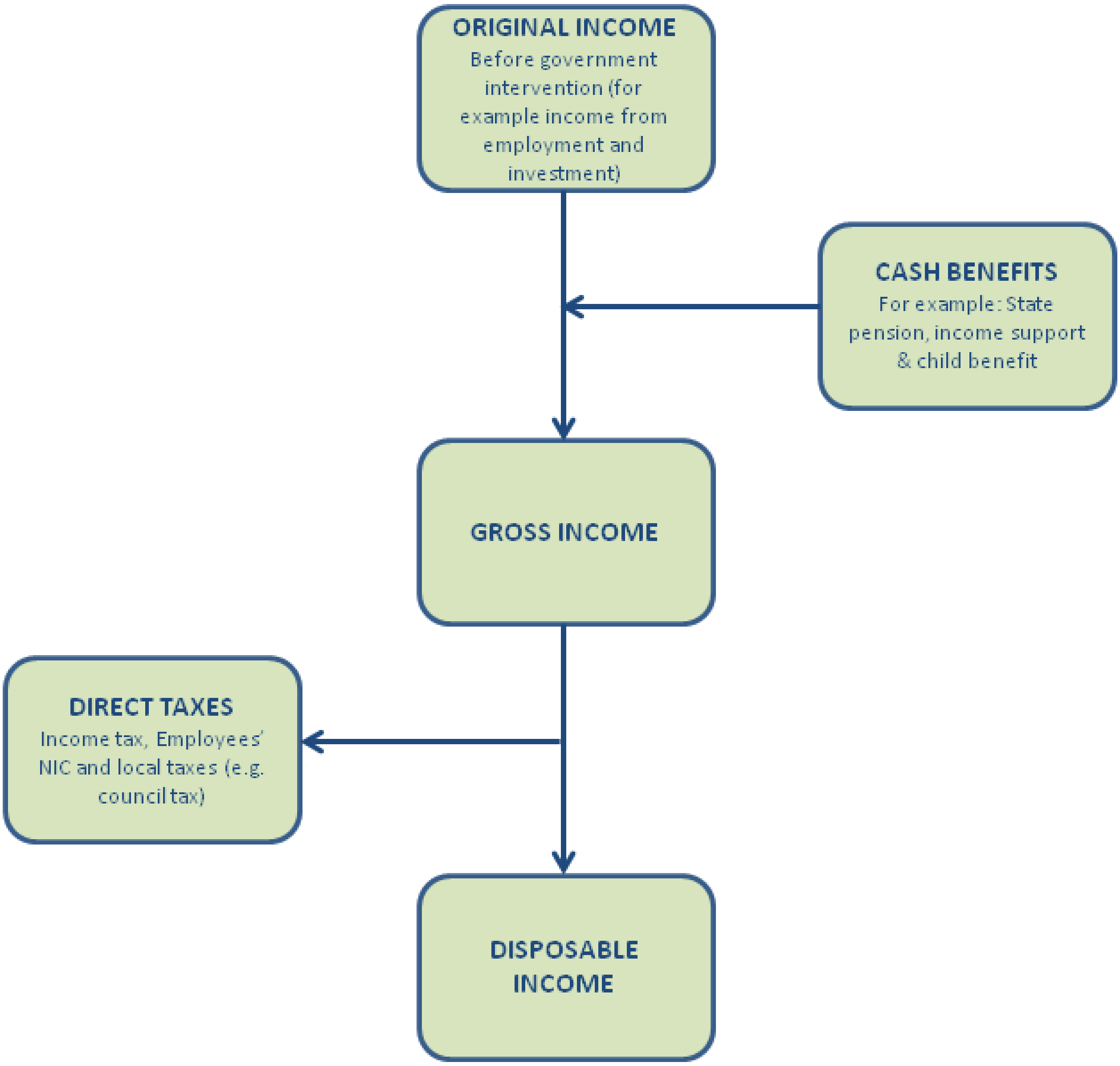
XLS [XLS format](#)
(31 Kb)

Figure 1 looks at how mean and median household incomes have grown over time. It shows that, adjusting for inflation by using constant 2010/11 prices, median household income increased by 2.1 times from £10,700 in 1977 to £22,600 in 2010/11. In the same period, mean household income increased by 2.3 times from £12,100 in 1977 to £28,100 in 2010/11. The relative difference between mean and median income roughly doubled between 1977 and 1990 as the income of households at the top of the income distribution grew at a faster rate (an average of 5.3% per year) than income in the middle of the distribution (which grew at an average rate of 3.1%). Since then, the percentage difference between mean and median has remained relatively constant.

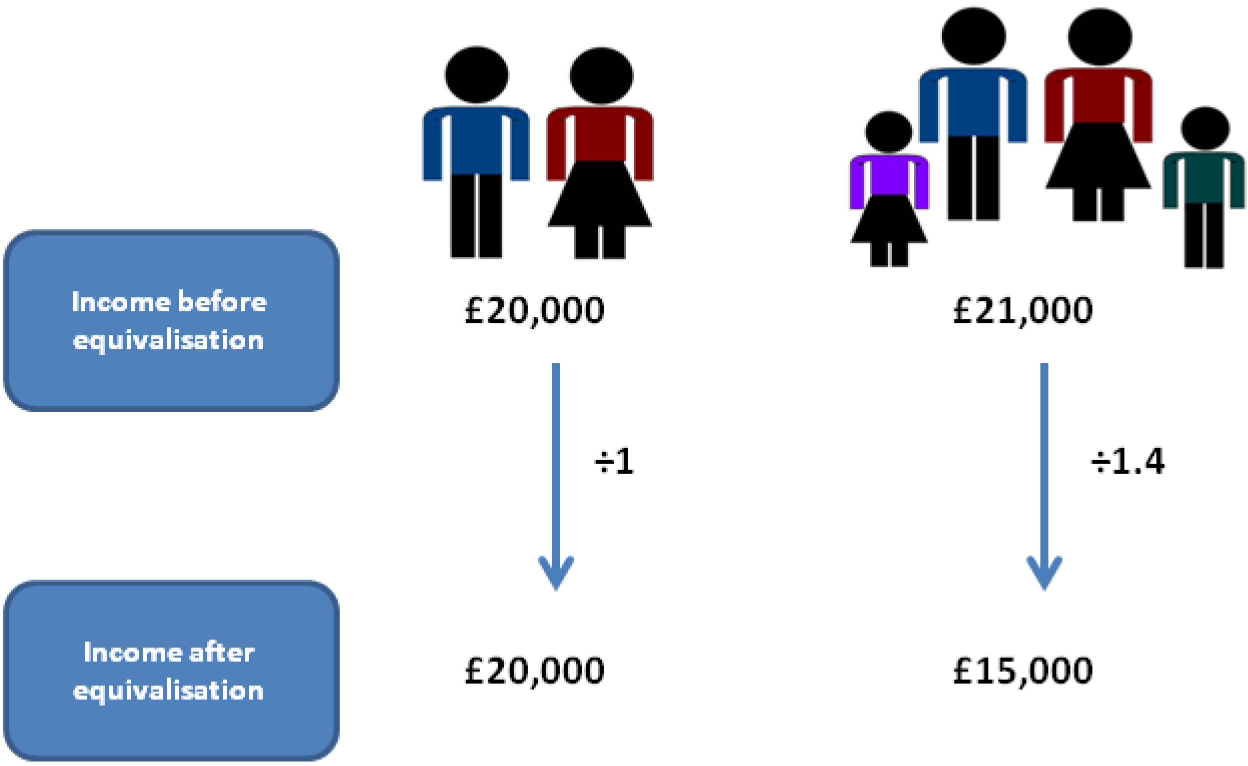
Disposable income and equivalisation

The income measure used in Figure 1 is referred to as equivalised disposable income.

Disposable income is the amount of money that households have available for spending and saving after direct taxes (such as income tax and council tax) have been accounted for. It includes earnings from employment, private pensions and investments as well as cash benefits provided by the state.



Equivalisation is the process of accounting for the fact that households with many members are likely to need a higher income to achieve the same standard of living as households with fewer members. Equivalisation takes into account the number of people living in the household and their ages, acknowledging that whilst a household with two people in it will need more money to sustain the same living standards as one with a single person, the two person household is unlikely to need double the income.



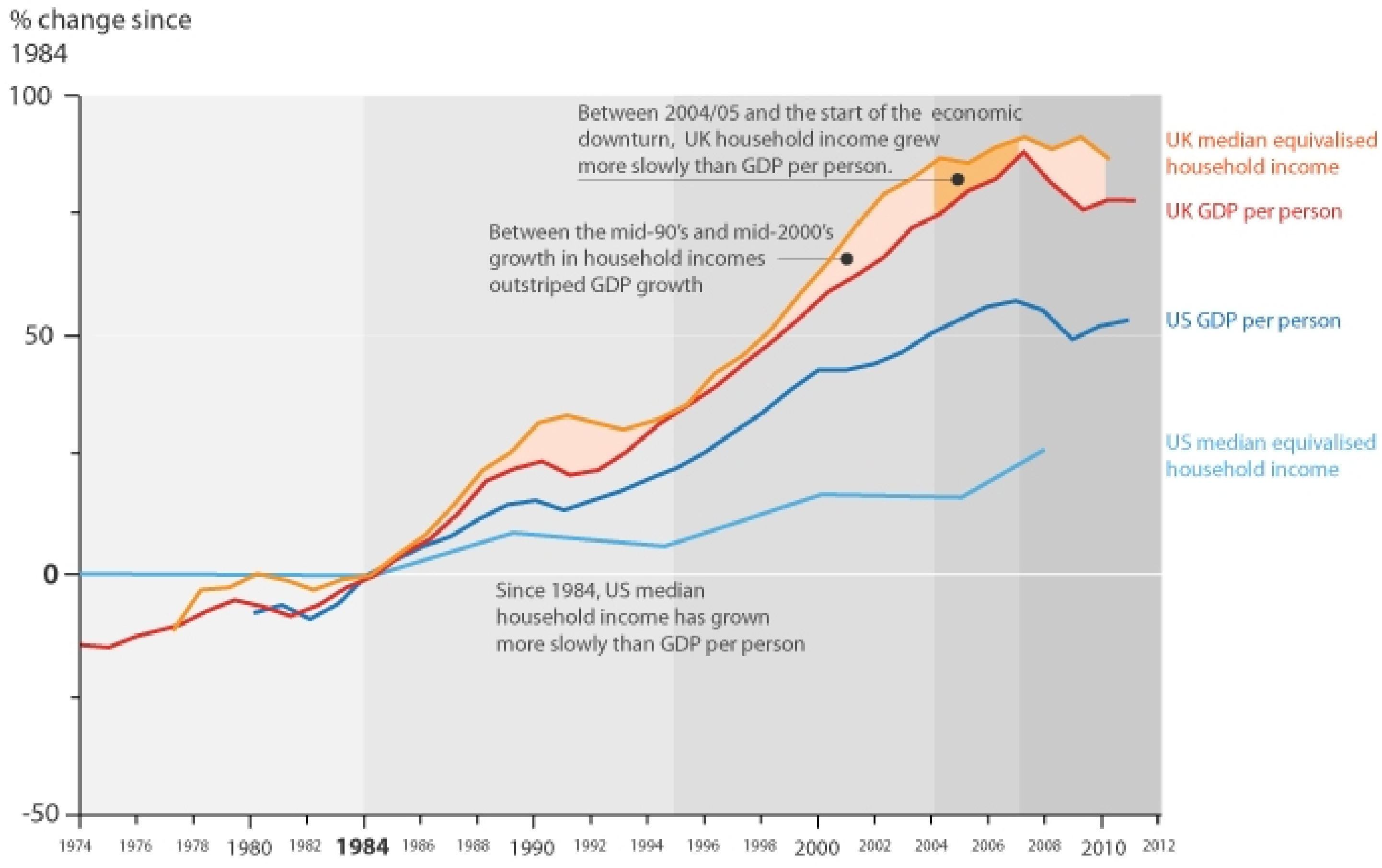
By reporting equivalised disposable income when looking at growth, any changes in average household incomes which might be due solely to the structure of households changing over time are taken into account.

Growth in median household income compared with GDP per person

Figure 2 shows how UK and US GDP per person and median equivalised disposable incomes have grown since 1984. Previous research using US data has shown that growth in median household income has failed to keep pace with growth in GDP over the past 30 years. Using inflation-adjusted data from the US Census Bureau and IMF, Figure 2 shows that between 1984 and 2008 (the latest year for which median equivalised disposable income is available for the US), US median income grew at less than half the rate of GDP per person over the same period.

In contrast, comparable data from the UK for the same period tells a very different story. Growth in the median equivalised disposable income of UK households trended closely to that of UK GDP per person for most of the period covered, rising during periods of economic growth and falling for a short time after the recessions of the early 1980s and early 1990s.

Figure 2: Growth in equivalised household disposable income & GDP per person, UK & USA, constant prices, 1974-2010/11



Source: Office for National Statistics

Download chart

XLS XLS format
(24.5 Kb)

There has been a slight divergence between these two measures since the mid 1990s. Between 1995/96 and 2004/05, UK median household income grew at an average rate of 3.7% per year, faster than GDP per person which grew at 2.9% per year. However, while GDP per person continued to grow at similar rates between 2004/05 and 2007/08, growth of median household income slowed to a fifth of its previous rate in the years immediately before the start of the economic downturn.

As well as experiencing lower growth than GDP per person between 2004/05 and 2007/08, UK median household income also experienced a smaller fall than GDP per person between 2007/08 and 2010/11. This was primarily due to a falling proportion of income paid in taxes and rise in benefits received by middle income households since the start of the economic downturn. These effects are studied in more depth later on in this article.

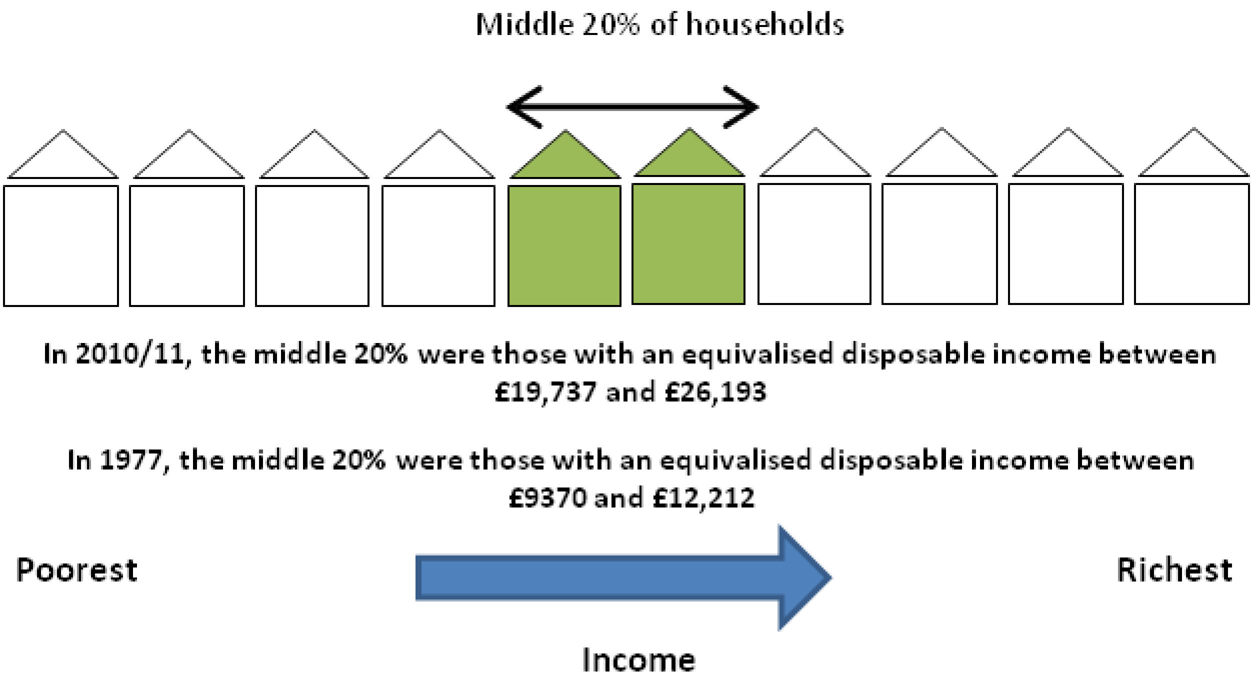
Over the period studied, UK median household income grew at roughly three times the rate of US median income. However, despite the substantial growth in UK income, when converted into pounds sterling and differences in the cost of living controlled for, US equivalised median income in 2008 remained higher than that for the UK.

The slower growth in US median household income than in US GDP per person may be partly attributed to the US experiencing much faster income growth at the top of the income distribution than at the middle. The UK has not seen such a substantial difference between the growth rates of the top and the middle of the income distribution and this may account for UK median income growth trending more closely to that of GDP per person.

Characteristics of middle income households

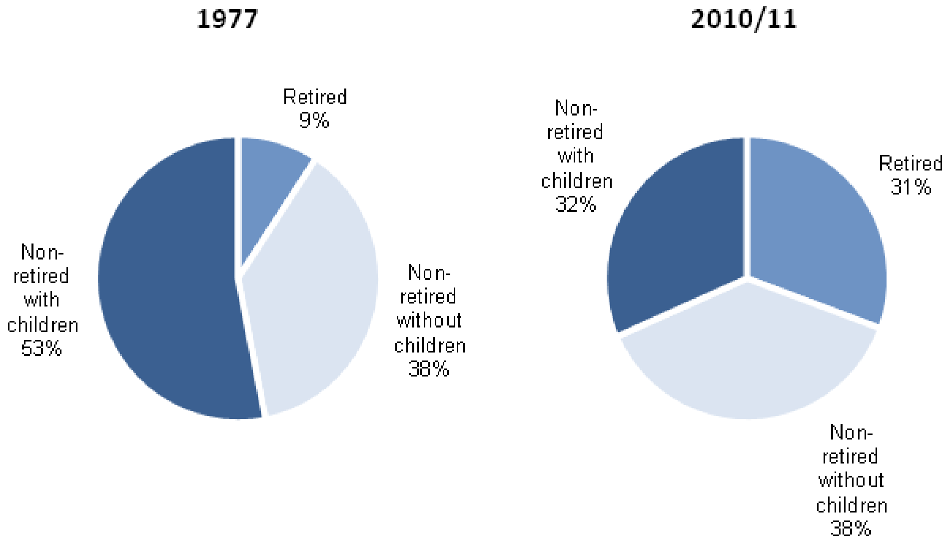
Having examined how median incomes have grown since 1977, the following section of this article goes on to look at the characteristics of “middle income” households and how these have changed over the same time period.

Because the median represents just a single household at the centre of the income distribution, it cannot be used directly to examine the characteristics of the middle. To carry out such an analysis, one approach is to study “middle income” households – defined as the middle 20% of households in terms of their equivalised disposable income.



The characteristics of the households that find themselves in the middle of the income distribution have changed in a number of ways over time. For example, Figure 3 shows that retired households (those with more than half of their income coming from retired members) made up only 9% of the middle fifth in 1977 but 31% in 2010/11. This is partly due to an increase in the number of retired households in the population, but also because of a steady increase over time in the income of retired households relative to non-retired households, resulting in retired households moving up from nearer the bottom into the middle of the distribution. This increase was mirrored by a decline in the proportion the middle fifth that were non-retired households with children, from 53% in 1977 to 32% in 2010/11. The proportion that are non-retired but without children has remained relatively unchanged over this period.

Figure 3: Household type of middle income quintile, 1977 & 2010/11



Source: Office for National Statistics

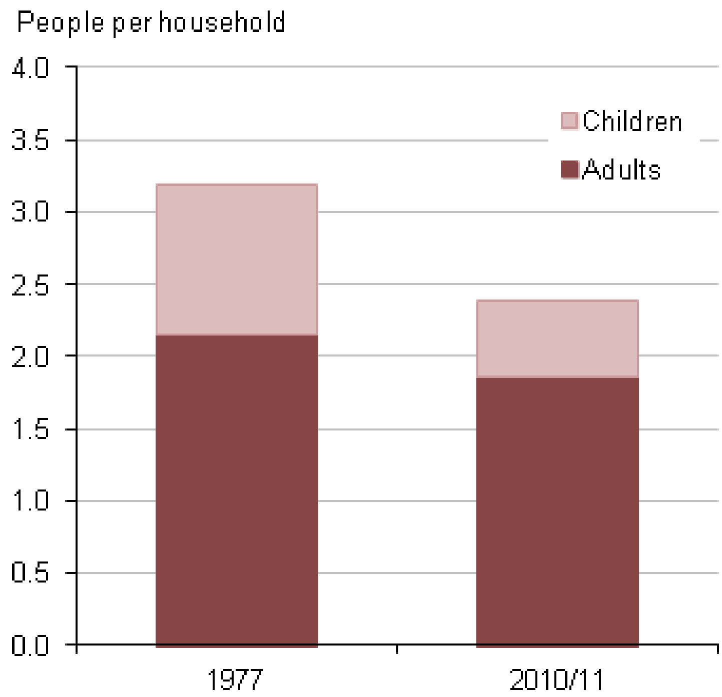
Download chart

XLS [XLS format](#)
(19 Kb)

This increase in the proportion of retired households in the middle of the income distribution has corresponded with an increase in the average age of the heads of the households. In 1977, the median age of the heads of households in the middle fifth was 46. By 2010/11, this had increased to 53 years old.

The fall in the number of households with children and increase in the number of retired households in the middle fifth has resulted in a fall in average household size for this group between 1977 and 2010/11. In 1977, the number of people per household in the middle fifth was considerably higher than the average for the population, with 2.2 adults and 1 child per household. While the overall average household size was smaller in 2010/11 than in 1977, the middle fifth experienced a larger decrease than other income groups and, in 2010/11, it more closely resembled the population average with 1.9 adults and 0.5 children per household.

Figure 4: Average number of people per household in middle income quintile, 1977 & 2010/11



Source: Office for National Statistics

Download chart

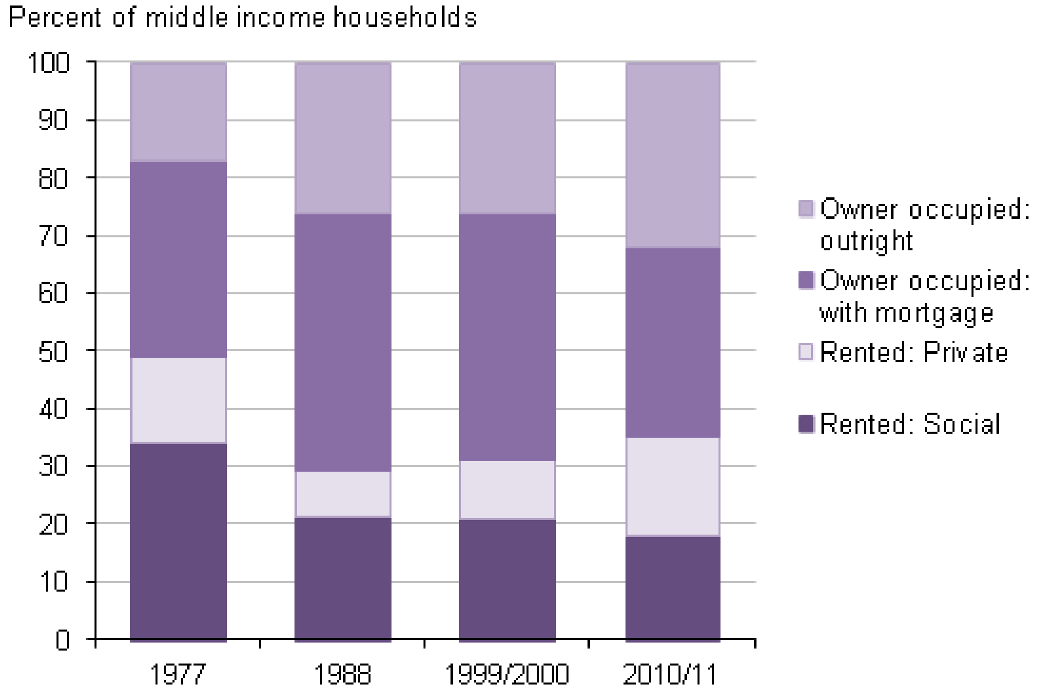
XLS [XLS format](#)
(19 Kb)

Another shift in the composition of middle income households has been the increase in the percentage who are owner occupiers, which rose from 51% in 1977 to 65% in 2010/11. In this period the percentage of households in the middle fifth who owned their accommodation outright increased from 17% to 32%, while there was a corresponding decrease in the percentage living in social rented housing from 34% to 18%.

This change was not evenly spread throughout the period: By 1988, the proportion of households in the middle fifth owning their own home, either with a mortgage or outright had risen to 70%, before subsequently experiencing a gradual fall. In contrast, the proportion of middle income households renting their accommodation privately dropped from 15% to 9% between 1977 and 1988, before rising back to 17% in 2010/11.

These patterns of increasing home ownership during the 1980s and the more recent shift towards renting privately amongst middle income households are not unique to the middle fifth but are consistent with the broader changes observed in the population as a whole.

Figure 5: Household tenure of middle income quintile, 1977, 1988, 1999/2000 & 2010/11



Source: Office for National Statistics

Download chart

XLS [XLS format](#)
(20 Kb)

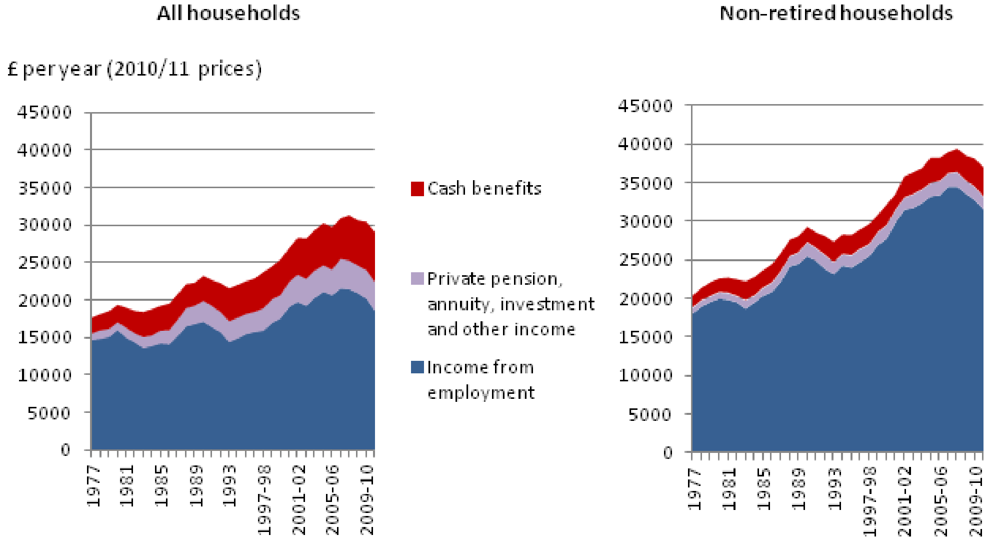
Sources of income for middle income households

In addition to the changing characteristics of middle income households described in the previous section, there have also been changes over time to the composition of income for this group. These variations can be examined by looking at the gross income of this middle 20% of households.

Gross income is the total income households receive from all earnings, pensions, investments and cash benefits, before taxes are taken off. After taking inflation into account, the unequivalised average gross income of the middle fifth of households increased from £17,800 in 1977 to £29,100 in 2010/11.

Looking at the first chart in Figure 6, the proportion of the gross income of the middle fifth made up of cash benefits appears to have increased considerably since 1977, rising from 11.9% to 22.8% in 2010/11. However, most of this change is due to the increase in the proportion of retired households in this group. This has understandably resulted in a large increase in the proportion of income of this group that is made up by age-related benefits, such as the state pension.

Figure 6: Gross income of middle income quintile, all households & non-retired households, 1977-2010/11



Source: Office for National Statistics

Download chart

XLS [XLS format](#)
(33.5 Kb)

In order to make a more consistent comparison over time, it is possible to look at the middle fifth of non-retired households only. The gross income of the middle fifth of non-retired households was higher than that for all households, growing from £20,300 in 1977 to £37,000 in 2010/11.

Between 1977 and 2007/08, the value of cash benefits received by the middle fifth of non-retired households approximately doubled, growing at a faster rate for these middle income households than for households in higher income groups, but more slowly than for households on lower incomes. However, despite some fluctuations in the intervening time, cash benefits made up approximately 7.5% of gross income for the middle fifth of non-retired households in both 1977 and 2007/08.

Since the beginning of the recent economic downturn, cash benefits for the middle fifth of non-retired households have increased by 26%, a larger increase than that experienced by any other income band over this period (between 2007/08 and 2010/11). This has been driven by relative increases in the average amount these households have received in a number of benefits, including tax credits and housing benefit, likely to be partly due to the fall in earnings experienced by this group.

As a result of this change, in 2010/11, cash benefits as a proportion of gross income for the middle fifth of non-retired households had increased to 10.3%. This increase meant that while original income for the middle fifth of non-retired households fell by 8.8% between 2007/08 and 2010/11, primarily due to a fall in income from earnings, their gross income, including cash benefits, fell by less (6.2%) over the same period.

Effects of taxes on middle income households

Disposable income and direct taxes

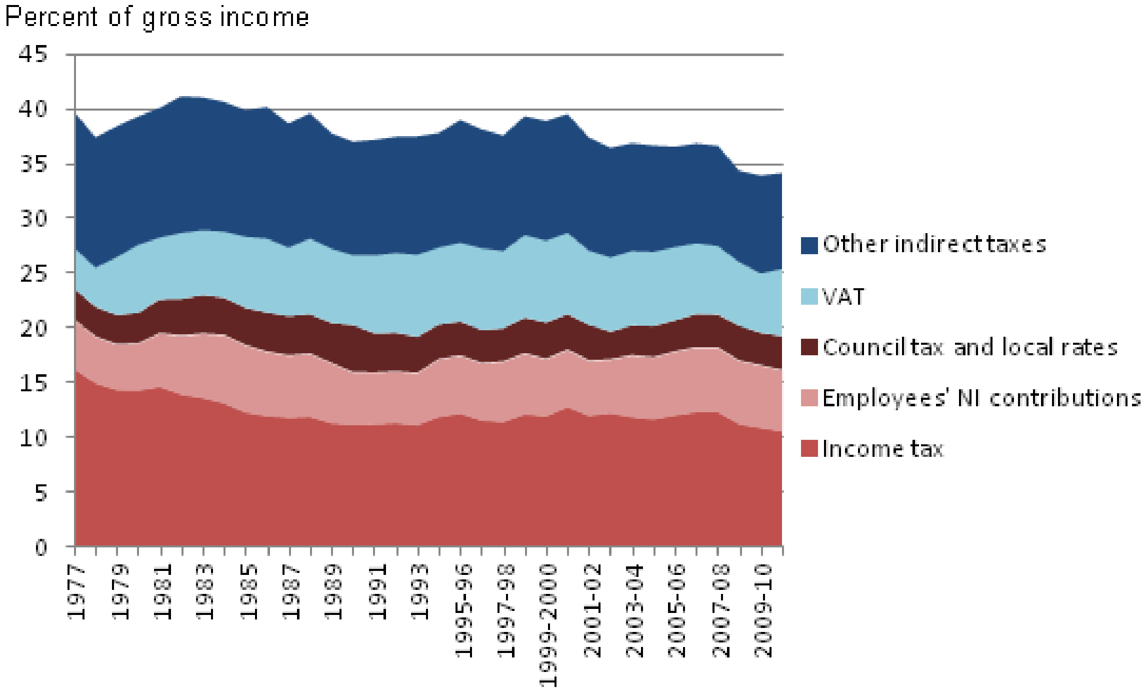
The average disposable income for the middle fifth of households was £24,400 in 2010/11. After accounting for the effects of inflation, this is 1.77 times higher than the average income received by middle income households in 1977 of £13,800.

Looking just at the middle fifth of non-retired households, to control for the demographic change, average disposable incomes were slightly higher. In 2010/11, the middle fifth of non-retired households paid £7,100 in direct taxes, such as income tax, resulting in an average disposable income of £29,900. In 1977, after adjusting for inflation, this group paid £4,800, leading to a disposable income of £15,500.

Throughout this period, the proportion of gross income paid by the middle fifth in direct taxes has experienced some small fluctuations, falling slightly from 23.5% in 1977 to 21.1% in 2007/08. Since the start of the recent economic downturn, direct taxes paid by the middle fifth have fallen further to 19.2% of gross income, with the majority of that fall being attributable to a relative decrease in the amount paid in income tax. This recent drop is likely to be partly due to the progressive nature of the UK income tax system, with falling average earnings from employment since the start of the economic downturn being associated with lower effective tax rates as a percentage of those earnings.

As a result of this, the average disposable income of the middle fifth of non-retired households fell by only 3.8% during the period 2007/08 to 2010/11 (compared with a fall in gross income of 6.2%).

Figure 7: Direct and Indirect taxes as a percentage of gross income for middle income quintile of non-retired households, 1977-2010/11



Source: Office for National Statistics

Download chart

XLS XLS format
(32.5 Kb)

Impact of Indirect taxes

The amount of indirect tax (such as VAT, and duties on alcohol and fuel) each household pays is determined by their expenditure rather than their income. When indirect taxes are accounted for, the effective fall in the income of the middle fifth of non-retired households since the start of the economic downturn is further reduced, with a real terms fall of 2.4% between 2007/08 and 2010/11. This is due to the percentage fall in indirect taxes exceeding that for disposable income. VAT, which is the largest single indirect tax paid by households, was also the largest contributor to the fall in indirect taxes as a proportion of the middle fifth's income. The average amount of VAT paid by the middle fifth fell to a trough in the 2009/10 financial year before rises in the standard rate from 15% to 17.5% in January 2010 and to 20% in January 2011 resulted in an increase in 2010/11.

Over the longer term, the proportion of gross income that is paid in indirect taxes by middle income households has fallen. In 1977, the middle fifth of non-retired households paid 16.3% of their gross income in indirect taxes. By 2010/11, this had fallen to 15.0%.

Overall, taxes as a proportion of the middle fifth of non-retired household's gross income experienced only relatively small changes over the period studied, falling from 39.8% in 1977 to

36.7% in 2007/08. However, since then, the effective overall tax burden of this middle income group has fallen further to 34.2% in 2010/11.

Background notes

1. The figures in this article are based on the Effects of Taxes and Benefits on Household Income series produced by the Office for National Statistics, which itself is derived from the Living Costs and Food Survey (LCF). This series has been chosen for this article due to its long time series and the availability of expenditure data which allows for the calculation of indirect taxes. The period covered is 1977 to 2010/11 because this is the period over which data from the Effects of Taxes on Benefits on Household Income series is available.

2. The data used in this analysis is based on that previously been published in tables accompanying in the Effects of Taxes and Benefits on Household Income annual article. A historical series of tables covering the period 1977-2010/11 is available on the ONS website.

3. All income, tax and benefit measures given in this article for the UK have been deflated to 2010/11 prices using an implied deflator for the household sector in order to give a better comparison of households' standards of living. The figures are all given before housing costs.

4. All income, tax and benefit measures given in this article for the UK have been deflated to 2010/11 prices using an implied deflator for the household sector in order to give a better comparison of households' standards of living. The figures are all given before housing costs.

5. From 1996/97 onwards, the LCF data are weighted to correct for different levels of non-response between different compositions of household. The data for the years before 1996/97 are unweighted.

6. US income data used in the release were provided by the US Census Bureau. US GDP per person figures were sourced from the International Monetary Fund (IMF) website. US data were used as a point of comparison due to the availability of previous research showing that US median household income growth has not kept pace with GDP per person. Similar data on median household incomes for other EU countries are also available from Eurostat, the statistical office of the EU. These were not used in this analysis as, in the majority of cases, the time series available are considerably shorter.

7. Follow ONS on Twitter and receive up to date information about our statistical releases.

8. Like ONS on facebook to receive our updates in your newsfeed and to post comments on our page.

9. Watch our videos on YouTube.

10. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

Copyright

Appendices

Supporting information

Glossary

Children

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.

Retired and non-retired persons and households

A retired person is defined as anyone who describes themselves (in the Living Costs & Food survey) as ‘retired’ or anyone over minimum National Insurance pension age describing themselves as ‘unoccupied’ or ‘sick or injured but not intending to seek work’. 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. Non-retired individuals are simply those who do not meet the criteria of retired individuals. A non-retired household is one where combined income of non-retired members amounts to more than half the total gross income of the household. By no means are all retired people in retired households and all non-retired people in non-retired households. For example, households comprising one retired and one non-retired adult are often classified as non-retired. Around one in five households comprising three or more adults contains retired people.

Original Income

Original income is all income that households receive from non-government sources, including earnings from employment and income from private pensions, annuities and other investments.

Gross Income

Gross income is the total income households receive from original income plus cash benefits provided by the state, including the State Pension.

Disposable Income

Disposable income is the amount of money that households have available for spending and saving. It is equal to gross income minus direct taxes (such as income tax and council tax).

Post-tax Income

Post-tax income is the income households are left with after indirect taxes (such as VAT) have been deducted from disposable income.

Equivalisation

Equivalisation is a process that makes adjustments to disposable incomes, so that the standard of living of households with different compositions can be compared. When applying an equivalence scale, the values for each household member are added together to give the total equivalence number for that household. This number is then used to divide disposable income for that household to give equivalised disposable income. The equivalence scale which has been applied to the LCF income data in order to divide the sample into the fifths (also known as income quintiles) used in this article is the modified-OECD scale where a two-adult household has an equivalence value of one:

Modified-OECD Equivalence Scale:

Type of household member	Modified-OECD Equivalence value
First adult	0.67
Second and subsequent adults	0.33 (each)
Child aged 14 and over	0.33 (each)
Child aged 13 and under	0.2 (each)

Download table

XLS XLS format
(26 Kb)

While UK household income has been equivalised using the modified-OECD scale, US household income is equivalised using a square-root scale. However application of the square-root scale as opposed to the modified-OECD scale to UK income has a negligible effect on the growth rate of UK median income.

Unit of analysis

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 people, 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 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.

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 where a spouse is absent from the household at the time of interview. The absent spouse may well be working away from home, 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.

Related statistics and analysis

This article was published alongside a separate release looking at the Wealth of the Average Household, 2008/10.

Other related publications produced by ONS include:

The Effects of Taxes and Benefits on Household Income (2010/11)

The Effects of Taxes and Benefits on Household Income, Historical Data

Income of Retired Households, 1977-2010/11

An alternative source of income data in this area is the Households Below Average Income (HBAI) series, produced by the Department of Work and Pensions and based on the Family Resources survey. Due to HBAI being based on a different survey, along with some methodological differences (for example HBAI measures inequality on an individual basis whereas ETB measures inequality on a household basis), HBAI and ETB estimates can differ slightly from each other. However, historical trends are broadly similar.

Measuring National Well-being

This release adds to the evidence base amassed as part of the ONS Measuring National Well-being Programme. The programme aims to produce accepted and trusted measures of the well-being of the nation - how the UK as a whole is doing. It is about looking at 'GDP and beyond' and includes:

- greater analysis of the national economic accounts, especially to understand household income, expenditure and wealth,
- further accounts linked to the national accounts, including the UK Environmental Accounts and valuing household production and 'human capital',
- quality of life measures, looking at different areas of national well-being such as health, relationships, job satisfaction, economic security, education environmental conditions,

- working with others to include the measurement of the well-being of children and young people as part of national well-being,
- measures of 'subjective well-being' - individuals' assessment of their own well-being,
- headline indicators to summarise national well-being and the progress we are making as a society.

The programme is underpinned by a communication and engagement workstream, providing links with Cabinet Office and policy departments, international developments, the public and other stakeholders. The programme is working closely with Defra on the measurement of 'sustainable development' to provide a complete picture of national well-being, progress and sustainable development.

Find out more on the Measuring National Well-being website pages.