



Poverty & Income Inequality in Scotland: 2015-18



Scottish Government
Riaghaltas na h-Alba
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Annual

Update for financial years 2015/16 - 2017/18

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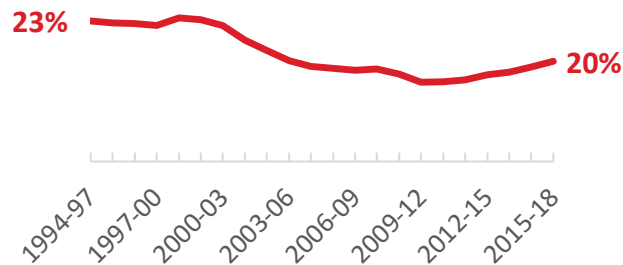
This publication presents three-year averaged estimates of the percentage of people, children, working-age adults and pensioners in Scotland living in poverty, and other statistics on household income and income inequality. These estimates are used to monitor progress in reducing poverty and income inequality.

Key trends

- Poverty rates continue to rise.
- Income inequality continues to rise.
- Median household income is rising slowly.

Relative poverty

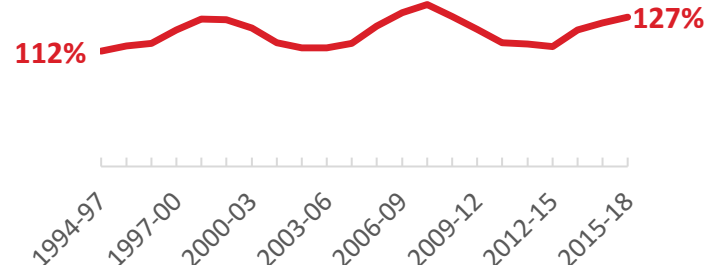
Poverty rate continues to rise



20% of people in Scotland were living in relative poverty after housing costs in 2015-18. Overall, the poverty rate continues to rise.

Income inequality

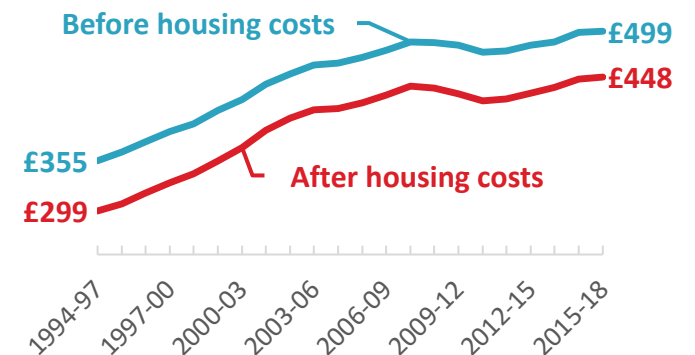
Palma inequality measure continues to rise



The Palma coefficient measures income inequality. The top 10% of the population in Scotland had 27% more income in 2015-18 than the bottom 40% combined.

Household income

Overall household income rising slowly



Median income before housing costs in Scotland in 2015-18 was £499 a week – an increase of only £1 per week compared to 2014-17.

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Lead Statistician: Maike Waldmann
[@social-justice-analysis@gov.scot](mailto:social-justice-analysis@gov.scot)
[@EqualityPoverty](https://twitter.com/EqualityPoverty)

Comments? Feedback is welcome

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What you need to know about this publication

Statistics in this report are based on data from the Family Resources Survey. This survey is the main source of information on household income and poverty in Scotland.

Income and poverty measures

The Scottish Government uses a range of indicators to measure different aspects of poverty. The most commonly used poverty indicator in Scotland is relative poverty after housing costs. It is complemented in this publication by measures of absolute poverty and material deprivation.

In this publication, unless otherwise stated, statistics are based on net income. That is, income after taxes and including social security payments. All incomes are in 2017/18 prices (real prices). Figures in this publication are rounded to the nearest pound (weekly incomes), a hundred pound (annual incomes), percentage point or 10,000 people. Poverty is measured at the household level. If the household income is below the poverty threshold, all people within the household are considered to be in poverty.

Survey data

The estimates presented in this publication are based on a sample survey and are therefore subject to sampling error. Any year-on-year changes in the numbers and percentages of people in poverty presented in the body of this report are not statistically significant. In time series, looking at longer term trends offers a better indication of significant change.

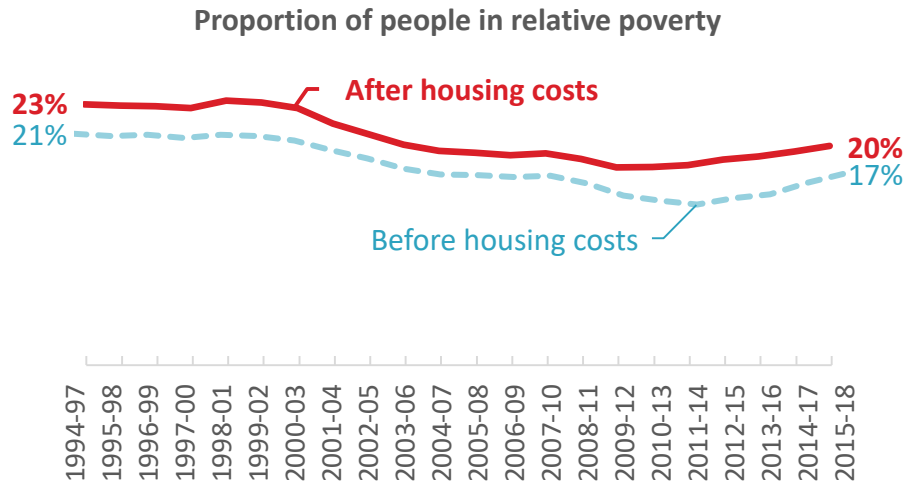
Three-year averages

Data is presented as three-year rolling (overlapping) averages of each estimate. For example, the latest estimates (2015-18) are an average of the single-year estimates in the financial years 2015/16, 2016/17 and 2017/18, and the previous estimates are an average of the single-year estimates in the financial years 2014/15, 2015/16 and 2016/17.

Using three-year averages ensures the statistics are usable and understandable, and that they are comparable with poverty and income statistics reported by the Department for Work and Pensions. Three-year averages are best used when focusing on trends over time, as in this publication. When focusing on a particular year, the single-year estimate is best used. Single-year estimates are available in the associated tables.

Poverty: All individuals

Chart 1. Relative poverty rate for all individuals continues to rise

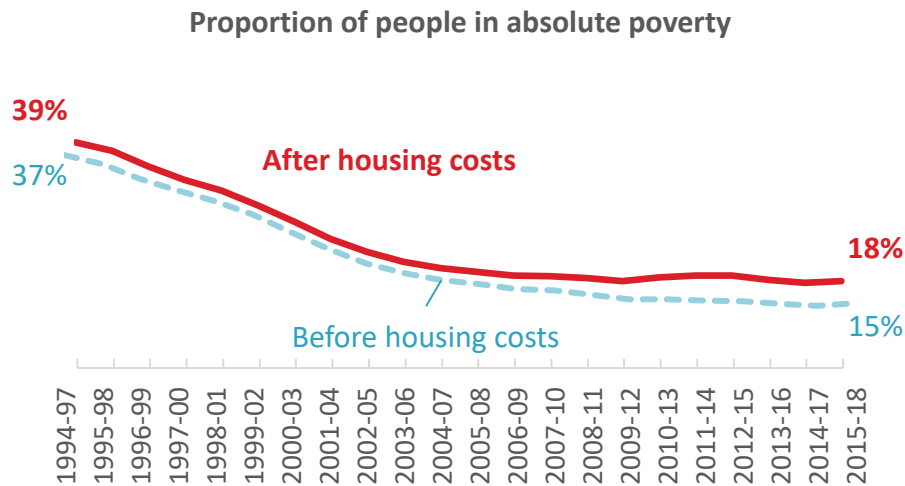


It is estimated that 20% of Scotland’s population (1.03 million people each year) were living in relative poverty after housing costs in 2015-18. This compares to 19% (1.00 million people) in the previous period. Before housing costs, 17% of Scotland’s population (900,000 people) were living in poverty in 2015-18, compared to 16% in the previous period.

Relative poverty is a measure of whether the income of the poorest households are keeping pace with middle income households across the UK.

The number of people in relative poverty after housing costs in Scotland had been falling since the late nineties, but data of recent years shows a continuous increase since 2009-12. Before housing costs, relative poverty numbers have been rising since the all-time low in 2011-14.

Chart 2. Absolute poverty rate for all individuals stable



It is estimated that 18% of Scotland’s population (930,000 people each year) were living in absolute poverty after housing costs in 2015-18. This compares to 17% (910,000 people) in the previous period. After a long decline since the beginning of this time series in the mid-nineties, absolute poverty rates have stagnated since 2006-09.

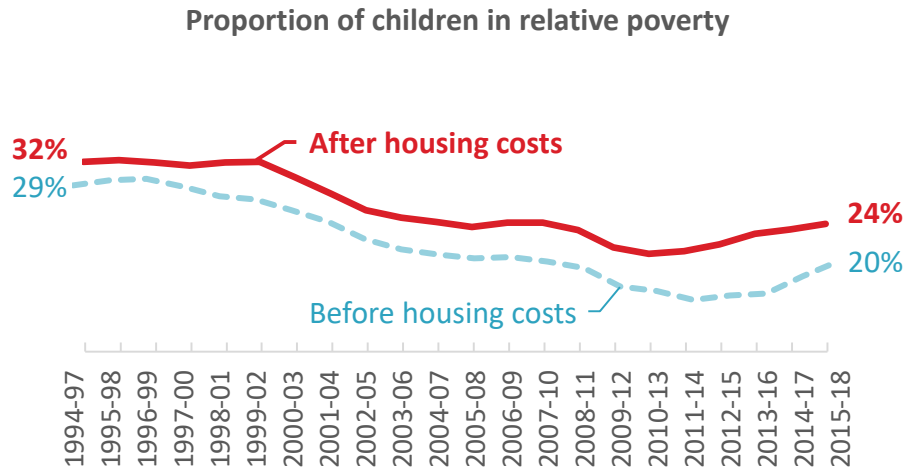
Before housing costs, 15% of Scotland’s population (780,000 people each year) were in absolute poverty. The trend is similar to the after housing costs measure, although the downward trend started to stagnate a few years later.

The gap between the before and after housing costs measure had widened in recent years, but remained steady in 2015-18.

Absolute poverty is a measure of whether the incomes of the poorest households are keeping pace with inflation, and is based on the poverty threshold in 2010/11.

Children in poverty

Chart 3. Relative poverty rate for children slowly rising



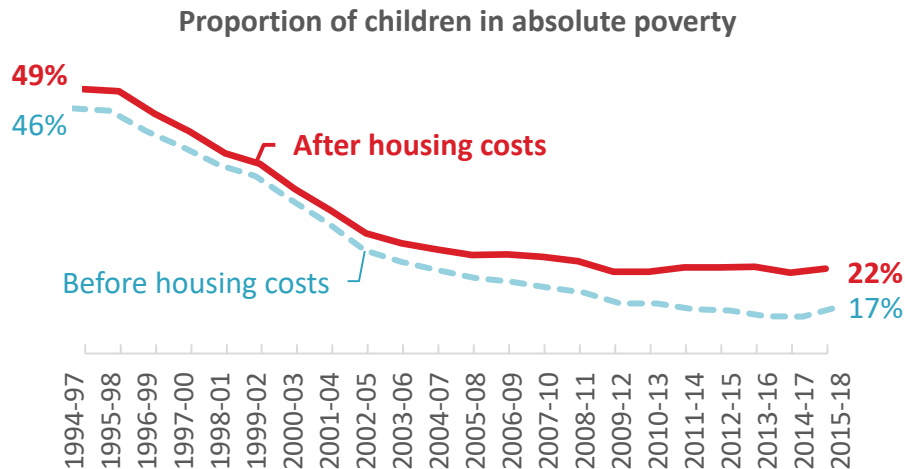
It is estimated that 24% of children (240,000 children each year) were living in relative poverty after housing costs in 2015-18. This compares to 24% (230,000 children) in the previous period.

Before housing costs, it is estimated that 20% of children (200,000 children each year) were in relative poverty, compared to 19% previously.

Child poverty rates had been falling for many years, but began to rise again since 2010-13 (after housing costs) and 2011-14 (before housing costs).

The Child Poverty (Scotland) Act 2017 requires us to report annually on a number of child poverty measures. The latest single-year estimates can be found in the associated tables.

Chart 4. Absolute poverty rate for children stable

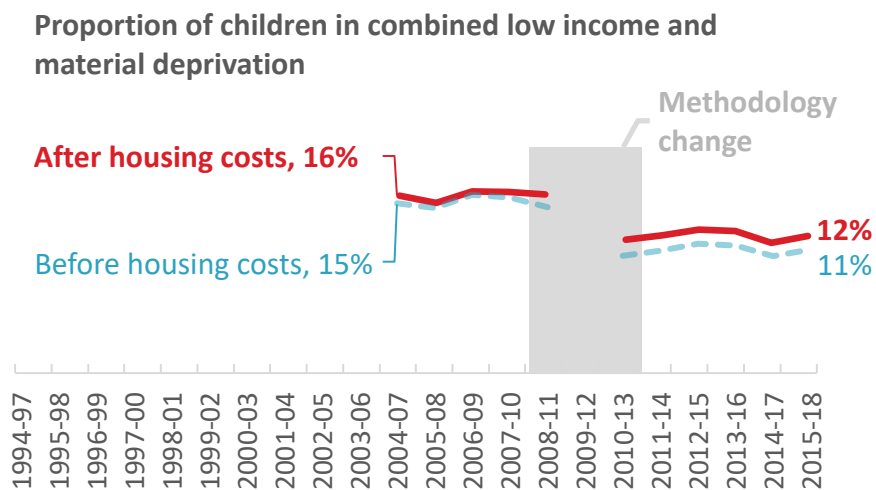


Absolute child poverty after housing costs remained at 22% (220,000 children each year) after a long, slow decrease.

Before housing costs, absolute child poverty was at 17% (170,000 children each year) compared to 15% in the previous period.

Absolute child poverty before housing costs had continued to decrease when absolute child poverty after housing costs already stagnated. As a result, the gap between absolute poverty before and after housing costs widened in recent years.

Chart 5. Children in combined material deprivation and low income broadly stable



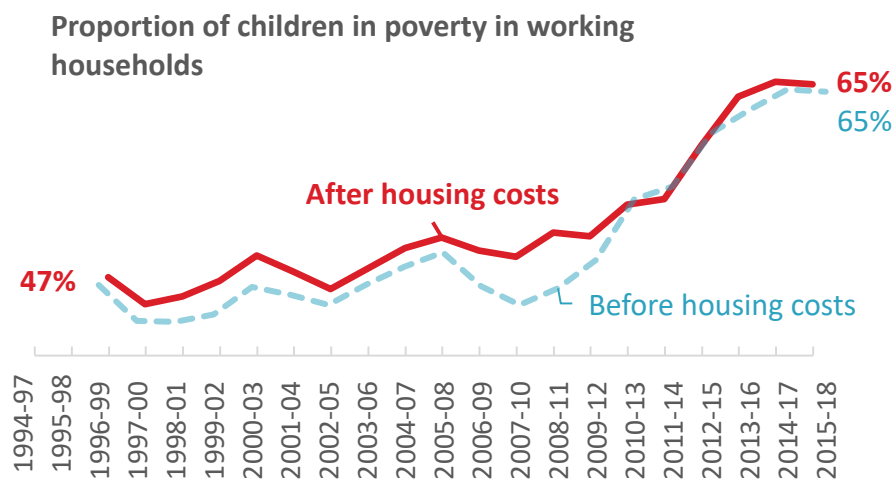
It is estimated that 12% of children (120,000 children each year) were living in combined low income and material deprivation, after housing costs in 2015-18, similar to 2014-17. Before housing costs, this was 11% of children (110,000 children), compared to 10% in the previous period.

Combined low income and child material deprivation is an additional way of measuring living standards and refers to the inability of households to afford basic goods and activities that are seen as necessities in society.

More detail on this can be found in the [Annex](#).

Material deprivation data has been collected since 2004. Due to a change in the methodology, it is not possible to compare the most recent years with years before 2010-13. The break in the time series indicates this change.

Chart 6. In-work poverty for children may be stabilising



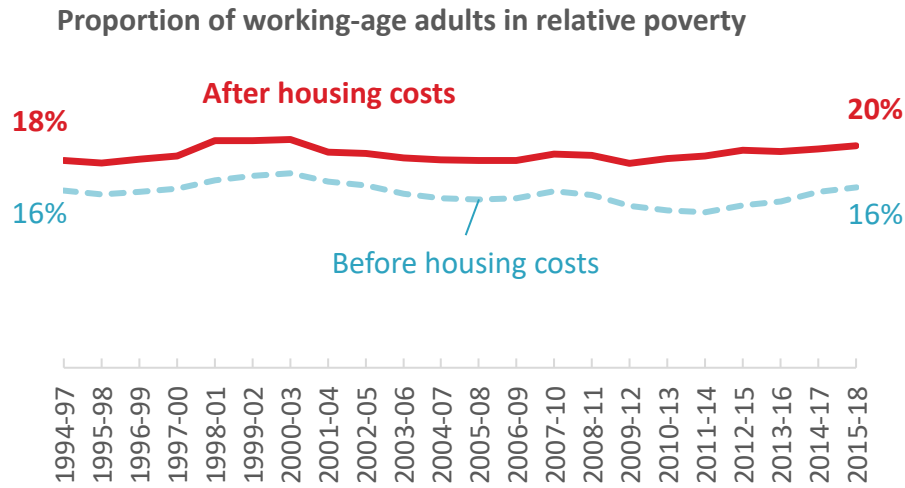
It is estimated that in 2015-18, 65% of children in relative poverty after housing costs (160,000 children each year) were living in working households. This compares to 66% in the previous period. Before housing costs, 65% of children in poverty (130,000 children) were living in working households, the same proportion as in the previous period.

This data suggests that after a steady increase of in-work poverty since 2007-10, the rise of in-work poverty may begin to slow down or stabilise.

The terms 'working' and 'in-work poverty' here refer to paid employment only. In-work poverty refers to people living in households where at least one member of the household is in either full or part-time paid work, but where the household income is below the relative poverty threshold.

Working-age adults in poverty

Chart 7. Relative poverty rate for working-age adults stable

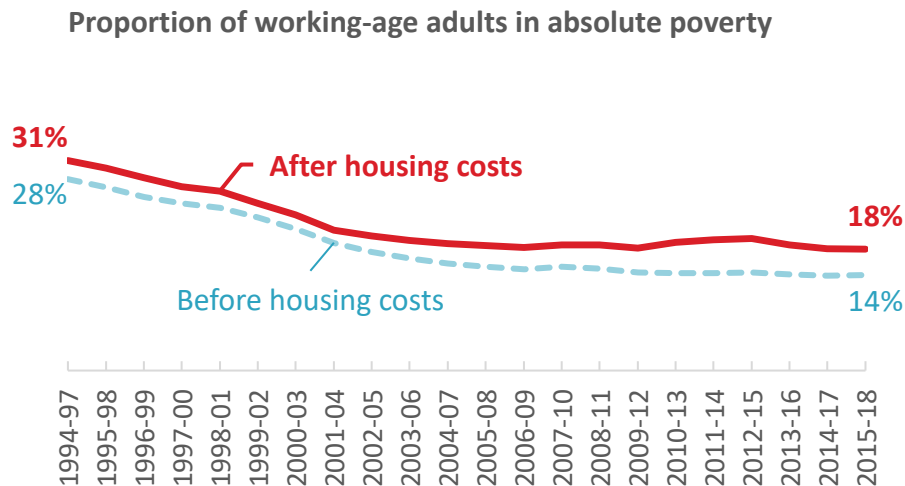


Relative poverty for working-age adults has been broadly stable since reporting began. Relative poverty in 2015-18 was estimated to be 20% after housing costs, and 16% before housing costs.

In 2015-18, there were 640,000 working-age adults in poverty after housing costs, compared to 520,000 before housing costs.

Working-age adults are defined as all adults up to the state pension age. Prior to April 2010, women reached the state pension age at 60. Between 2010 and November 2018, the state pension age for women increased to 65, the same as for men.

Chart 8. Absolute poverty rate for working-age adults stable



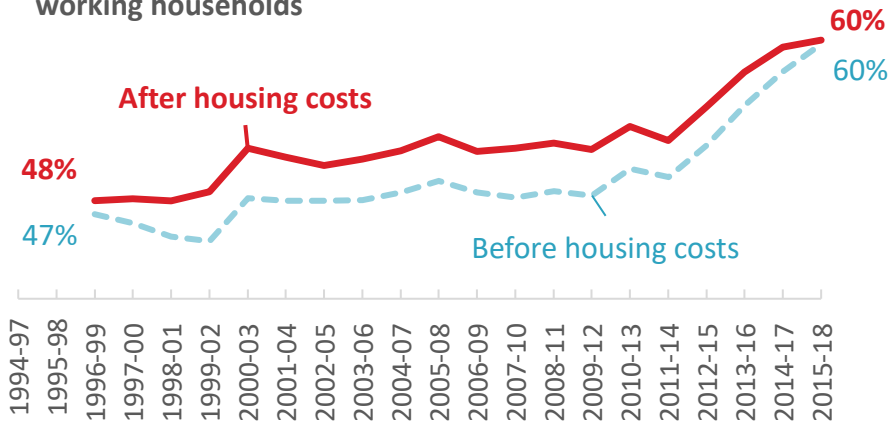
Absolute poverty amongst working-age adults remained broadly stable during the last ten years. In 2015-18, 18% of working-age adults were in absolute poverty after housing costs, and 14% before housing costs.

This means that in 2015-18, there were 590,000 working-age adults each year in absolute poverty after housing costs, compared to 460,000 before housing costs.

Working-age adults are considered to be in poverty when they live in a household which is in poverty.

Chart 9. In-work poverty for working-age adults rising

Proportion of working-age adults in poverty in working households



In 2015-18, 60% of working-age adults in relative poverty after housing costs as well as before housing costs were living in working households. This represents 390,000 working-age adults in in-work poverty after housing costs, and 310,000 working-age adults before housing costs.

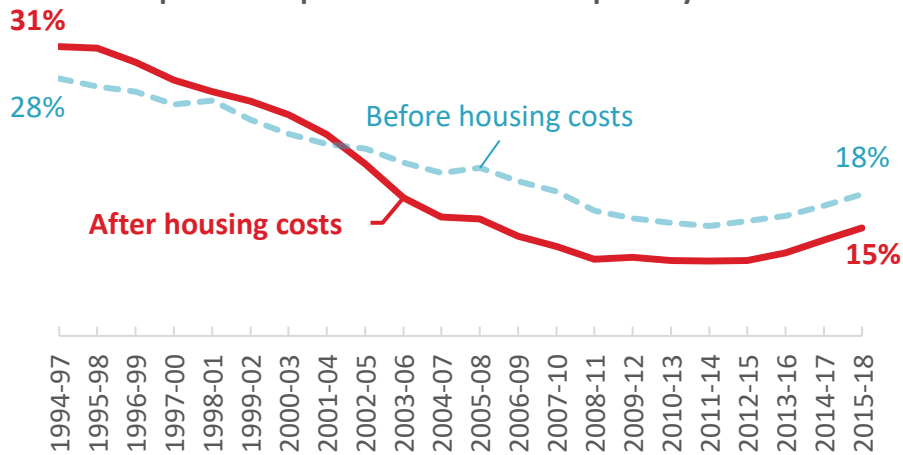
In-work poverty for working-age adults continuously increased since 2011-14, and since reporting began, both before and after housing costs measures were at an all time high in 2015-18.

The terms 'working' and 'in-work poverty' here refer to paid employment only. In-work poverty refers to people living in households where at least one member of the household is in either full or part-time paid work, but where the household income is below the relative poverty threshold.

Pensioners in poverty

Chart 10. Relative poverty rate for pensioners rising

Proportion of pensioners in relative poverty

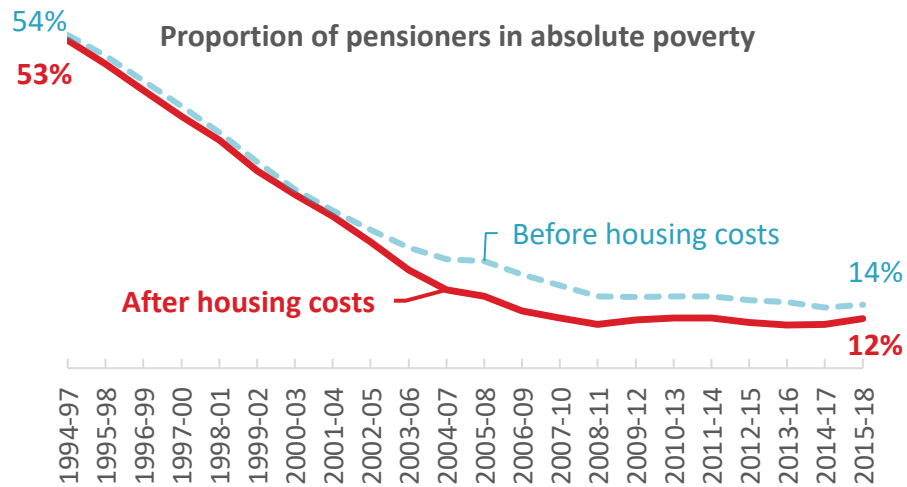


Relative poverty after housing costs for pensioners was 15% in 2015-18 (150,000 pensioners each year). Before housing costs, 18% of pensioners (180,000 pensioners) were in relative poverty in 2015-18.

Relative pensioner poverty had been stable for years after a long decline, but started to rise again in 2013-16 (before housing costs) and 2014-17 (after housing costs).

The majority of pensioners own their home. Examining pensioners' income after deducting housing costs allows for more meaningful comparisons of income between working-age adults and pensioners, or for pensioners over time.

Chart 11. Absolute poverty rate for pensioners stable



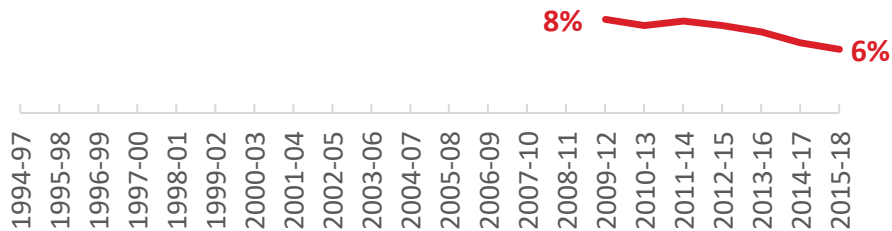
Absolute poverty after housing costs for pensioners was 12% (130,000 pensioners each year) in 2015-18. Before housing costs, it was 14% (150,000 pensioners).

Absolute poverty has remained broadly stable since 2008-11 following a continuous decrease since reporting began.

Pensioners are defined as all those adults above state pension age. State pension age for men is 65, state pension age for women increased from 60 in 2010 to 65 in November 2018.

Chart 12. Pensioners in material deprivation broadly stable

Proportion of pensioners in material deprivation



In 2015-18, 6% of pensioners (60,000 pensioners each year) were in material deprivation, the same proportion as in the previous period.

This data has been collected since 2009.

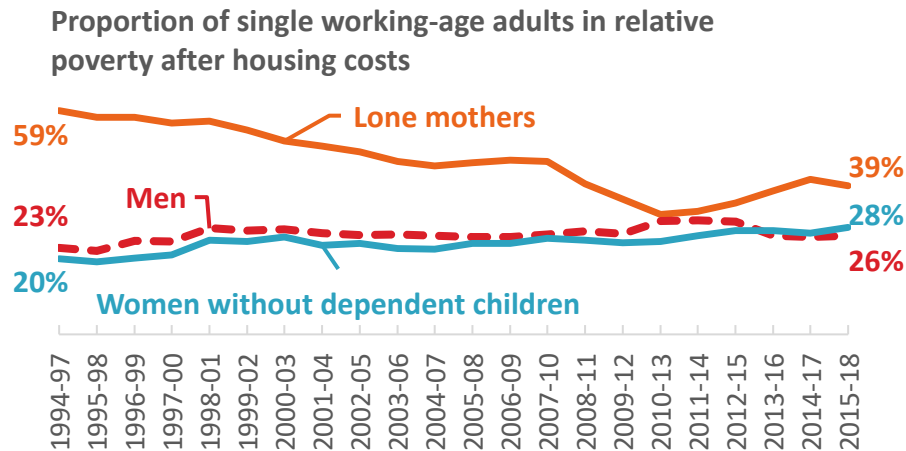
Pensioner material deprivation is different to other measures of poverty, including the child low income and material deprivation measure, in that it is not associated with an income threshold. It captures issues such as whether poor health, disability and social isolation prevent access to goods and services, rather than solely low income. More information about pensioner material deprivation can be found in the [Annex](#).

Pensioner material deprivation is included for those aged 65 and over only and therefore is not the same pensioner population as relative and absolute poverty measures.

Gender and poverty

Income is measured at a household level, which makes it difficult to measure the poverty rate for individual adults living with a partner. For the 60% of women and men who live in couple families (with or without dependent children), both adults will either be above or below the poverty threshold. In the analysis below, we therefore exclude adults living with partners.

Chart 13. Relative poverty rates higher for lone mothers

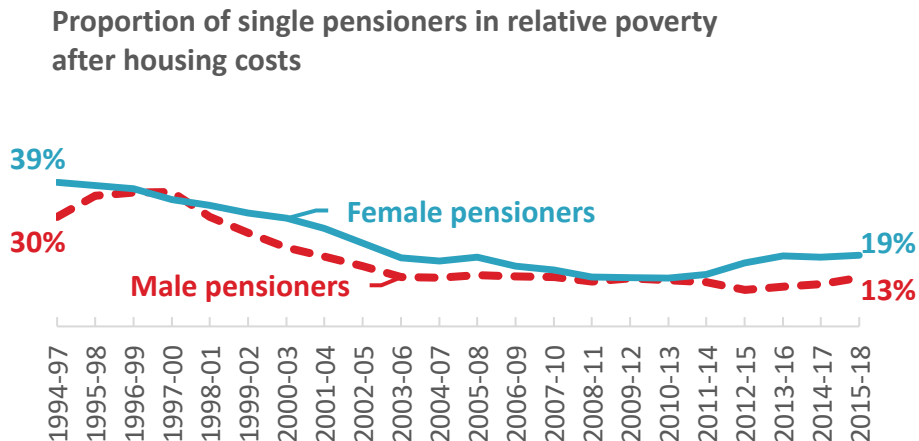


In 2015-18, the relative poverty rate after housing costs was higher for lone mothers (39%, 60,000 lone mothers each year) than for other single working-age adults. The poverty rate for single working-age women without dependent children was 28% (130,000 women), and for single working-age men it was 26% (150,000 men).

Until 2010-13, the gap in poverty rates between lone mothers and other single working-age adults had narrowed, but in recent years it widened again.

The increased poverty rate for single men from 2010-13 through to 2012-15 is due to an unusually high poverty rate in the sample in one of the years, and might not entirely reflect a genuine increase.

Chart 14. Relative poverty rates higher for single female pensioners than male



In 2015-18, 19% of single female pensioners (60,000 each year) and 13% of single male pensioners (10,000) were in relative poverty after housing costs. In most years, the poverty rate after housing costs for single female pensioners had been higher than that for single male pensioners, with this gap widening since 2011-14

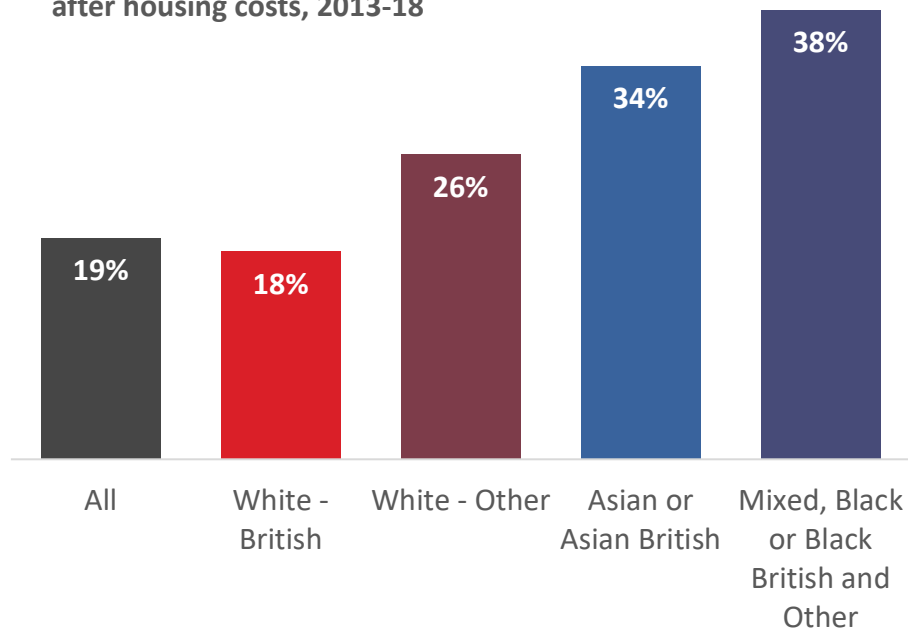
Some of the difference in pensioner poverty between genders may be due to different age profiles. For example, in 2015-18, 41% of female single pensioners were aged over 80 compared with 30% of male single pensioners. Older pensioners may have different sources of income which may result in them having lower incomes.

Before housing costs data is available in the associated tables.

Ethnicity and poverty

Chart 15. Relative poverty rates higher for ethnic minorities

Proportion of people in relative poverty after housing costs, 2013-18



Before housing costs data is available in the associated tables.

More information on ethnicity data

The above chart shows an ethnicity breakdown based on an average of data from the past five financial years. This provides a reasonably detailed breakdown, whilst still using relatively recent data. A more detailed ethnicity breakdown using ten years of data was previously published: www.gov.scot/Topics/Statistics/Browse/Social-Welfare/IncomePoverty/povertytable

Due to the small sample sizes for some of the ethnic groups, the measurement uncertainty will be fairly large. A time series hasn't been produced for poverty rates by ethnicity as this uncertainty in the data will obscure any long-term trends.

In 2013-18, people from minority ethnic (non-white) groups are more likely to be in relative poverty after housing costs compared to those from the 'White - British' group.

The poverty rate was 38% (30,000 people each year) for 'Mixed, Black or Black British and Other' ethnic groups, and 34% (40,000 people) for the 'Asian or Asian British' ethnic group.

The poverty rate amongst the 'White - Other' group (26%, 70,000 people) was higher than that of the 'White - British' group (18%, 850,000 people).

Ethnicity data relates to all people in a household and is based on the ethnicity of the adult with the highest income.

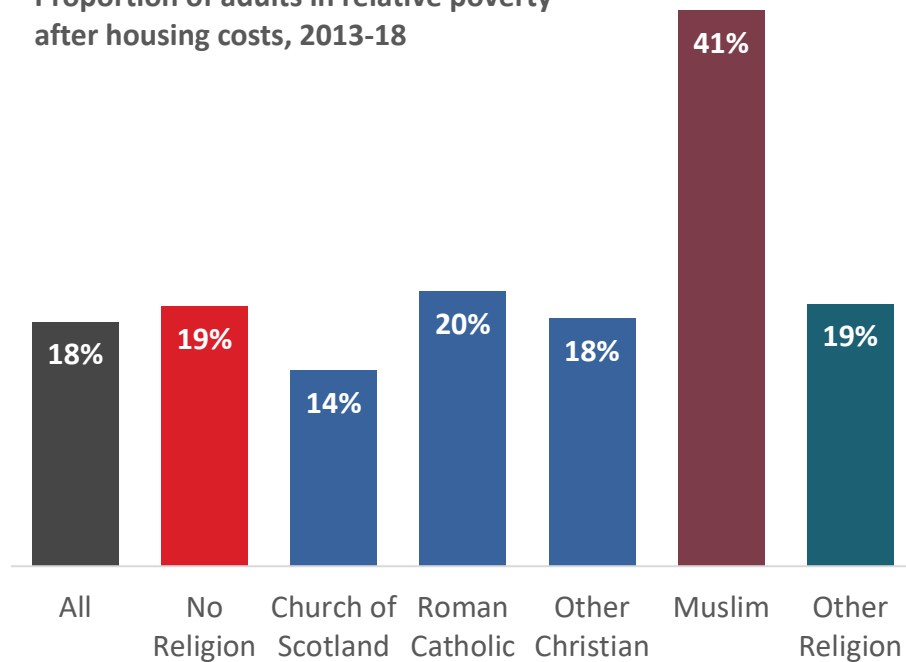
This analysis doesn't take into account differences in the age profiles of the ethnic groups. For the 'White - British' ethnic group the median average age of the highest income earner was 49 compared with a median age of 36 for the 'White - Other' ethnic group and 39 for 'Asian or Asian British' and 'Mixed, Black, Black British or Other' ethnic groups.

People in older age bands overall have a lower poverty rate, so the age profile partly explains the lower poverty rate for the 'White - British' ethnic group. However, this lack of age standardisation is unlikely to explain the entire gap in poverty rates between ethnic groups.

Religion and poverty

Chart 16. Relative poverty rates higher for Muslims

Proportion of adults in relative poverty after housing costs, 2013-18



In 2013-18, Muslim adults were more likely to be in relative poverty (41%, 20,000 adults) than adults overall (18%) after housing costs were taken into account.

Adults belonging to the Church of Scotland had a slightly lower poverty rate (14%, 180,000 adults) than Roman Catholic adults (20%, 120,000 adults) or adults of other Christian denominations (18%, 60,000 adults).

This analysis doesn't take into account differences in the age profiles of the religions. For adults belonging to the Church of Scotland, the median average age was 60. In contrast, the median age was 33 for Muslim adults, and 40 for adults belonging to no religion.

People in older age bands overall have a lower poverty rate, so age profile partly explains the lower poverty rate for people belonging to the Church of Scotland. However, this lack of age standardisation doesn't explain the entire gap in poverty rates between Muslims and the overall population.

Data on religion is available for adults only, so this chart doesn't include children in a household.

Before housing costs data is available in the associated tables.

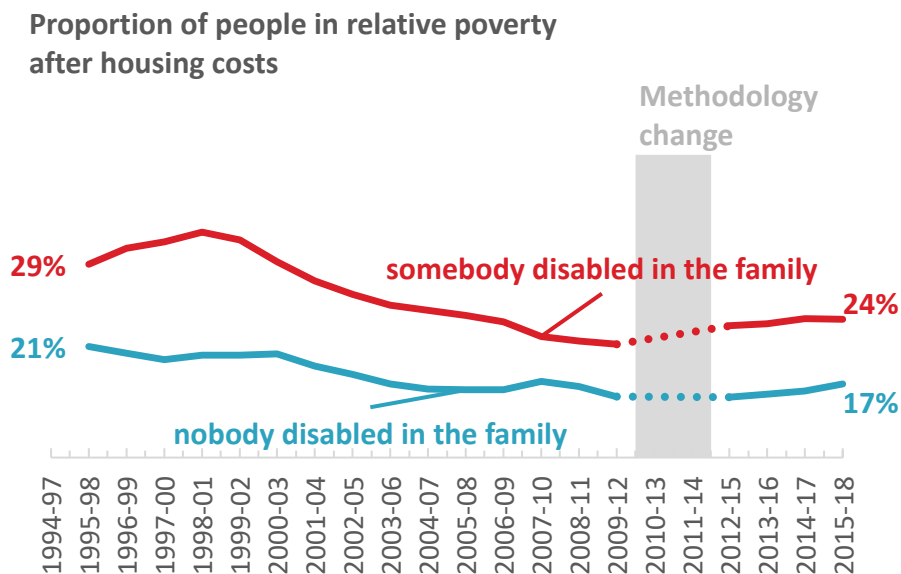
More information on religion data

The above chart shows an average for data from the past five financial years.

Due to the small sample sizes for some of the religious groups, the measurement uncertainty will be fairly large. A time series hasn't been produced for poverty rates by religion, as this uncertainty in the data will obscure any long-term trends.

Disability and poverty

Chart 17. Relative poverty rates higher where a family member is disabled



Poverty rates remain higher for families in which somebody is disabled compared to those without. The gap between the two groups has remained fairly steady over the last few years.

In 2015-18, the poverty rate after housing costs for people in families with a disabled person was 24% (440,000 people each year). This compares with 17% (600,000 people) in a family without a disabled person.

The term 'family' here refers to the core family in a household, consisting of one or two adults and their dependent children if any. If a household contains an extended family, for example including grandparents, these are treated as two separate family units for the purpose of the analysis.

Before housing costs data is available in the associated tables.

Due to changes in the way information on disabled people was collected, care should be taken when comparing the most recent years with years before 2012-15. Since 2012/13, disabled people are identified as those who report any physical or mental health condition(s) or illness(es) that last or are expected to last 12 months or more, and which limit their ability to carry out day-to-day activities.¹ Dashed lines in charts 17 and 18 indicate the period affected by the most recent change in methodology.

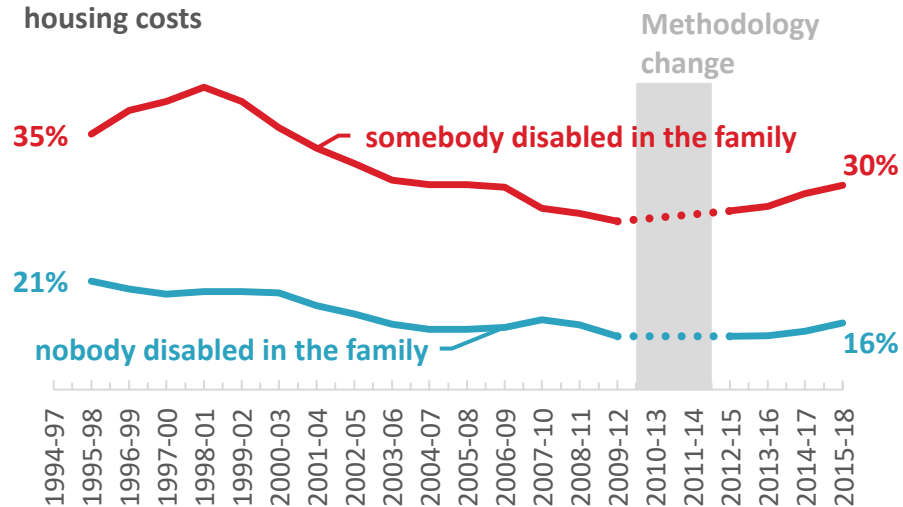
Additional living costs of disabled people

The previous measure of poverty doesn't take into account the fact that additional living costs may be incurred due to the illness or disability in question. The analysis on the following page attempts to make an adjustment to the poverty rates to partly account for additional living costs for those households where someone is in receipt of disability benefits.

¹ More detail can be found in the 2015/16 HBAI technical report: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/599163/households-below-average-income-quality-methology-2015-2016.pdf

Chart 18. Relative poverty rates, with disability benefits removed from household income, higher where a family member is disabled

Proportion of people in relative poverty (disability benefits removed from household income) after housing costs



Whilst it is recognised that there are additional costs associated with disability, research shows that these vary greatly in level and nature, and there is no general agreement on how to measure these costs.

Analysis on this page excludes Disability Living Allowance, Attendance Allowance and Personal Independence Payments from total household income. These benefits are paid as a contribution towards the additional living costs for disabled people. If this income is excluded from total household income, then we are able to compare families with and without a disabled family member on a more like for like basis.

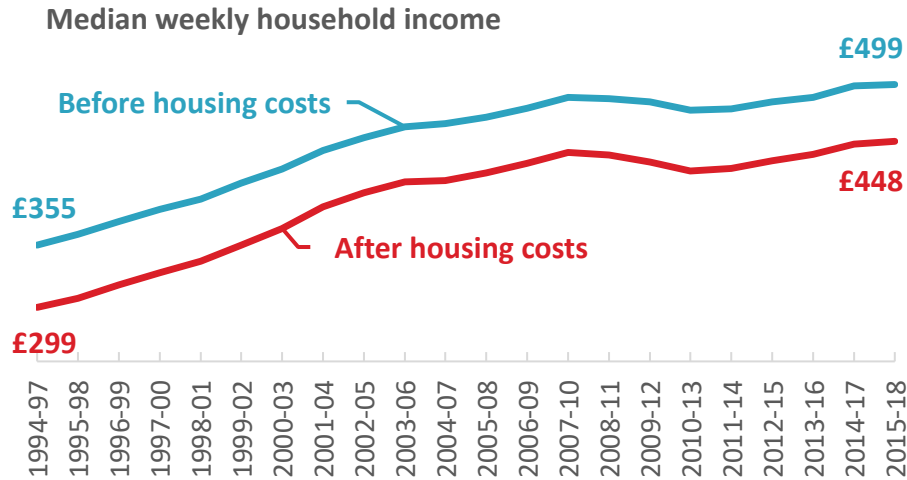
In 2015-18, as in previous years, the poverty rate was higher for individuals in families with a disabled person, when disability related benefits are not included in the household income. After housing costs, the poverty rate was 30% (550,000 people each year) for people with a disabled family member, and 16% (570,000 people) for those without a disabled family member.

Before housing costs data is available in the associated tables.

Excluding disability benefits from the analysis changes the poverty threshold. This is because some households now move down the income distribution, which lowers the median income and therefore also the poverty threshold. As a consequence, some families without a disabled person that were just below the poverty threshold in the previous analysis will now be above the threshold. As a result, the poverty rate for families without a disabled person is lower.

Household income trends

Chart 19. Median weekly household income growing more slowly



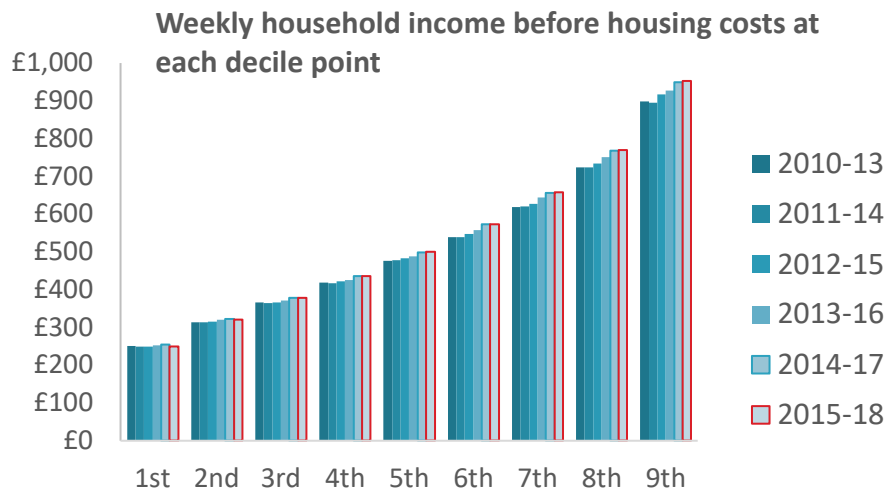
In 2015-18, median household income before housing costs was £499 per week, almost the same as £498 in 2014-17. Median income has increased slowly but steadily since the last recession and has reached its highest level since reporting began.

Median income after housing costs has followed the same trend to median income before household costs. Median income after housing costs was £448 per week in 2015-18, at its highest level since reporting began.

Median incomes have not risen for all age groups: pensioners' median household income declined, and children's median household income stalled. This data can be found in the associated tables.

All incomes are quoted in 2017/18 prices.

Chart 20. Higher incomes increasing more than lower incomes



This chart shows how weekly equivalised incomes before housing costs have changed from 2010-13 to 2015-18 across the different income decile points. The two bottom decile points saw small decreases, whereas the 7th to 9th decile points saw small increases.

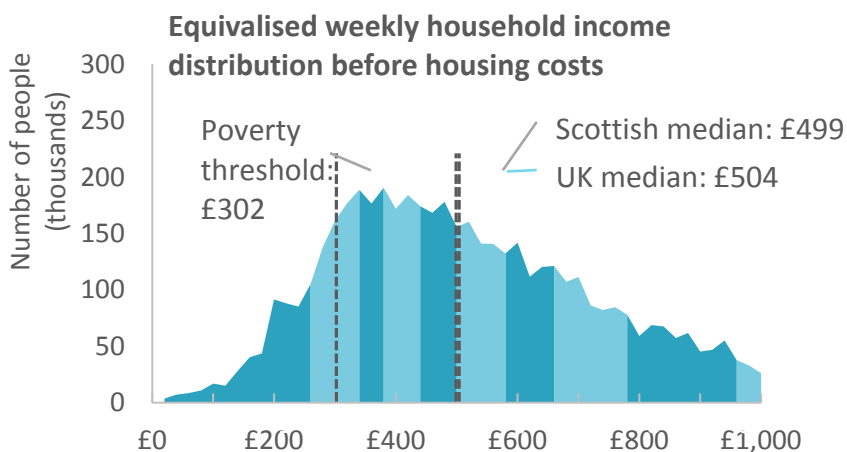
Over the full period shown in the chart, absolute and relative increases were generally larger for those with higher incomes than for those with lower incomes.

After housing costs data is available in the associated tables.

Deciles (or **decile points**) are the income values which divide the Scottish population, when ranked by income, into ten equal-sized groups. Therefore, nine decile points are needed in order to form the ten groups. Decile is also often used as a shorthand term for decile group; for example 'the bottom decile' is used to describe the bottom ten percent of the income distribution.

Income distribution and poverty thresholds

Chart 21. Distribution of weekly household income



This chart shows the distribution of weekly income before housing costs across Scotland in 2015-18 with relative poverty threshold, Scottish and UK median incomes, and income decile groups. Incomes below £0 and above £1,000 are excluded from this chart.

Many people have household incomes near the poverty threshold. This means that small movements in the overall distribution can sometimes lead to sizeable movements in poverty rates.

Decile groups are groups of the population defined by the decile points. The first decile group is the ten percent of the population with the lowest incomes. The second decile group contains individuals with incomes above the lowest decile point but below the second decile point.

Most of the income figures in this publication are based on **equivalised income**. This means that household income is adjusted to reflect different household sizes and compositions. There are different poverty thresholds for different household sizes. The table below presents some commonly used income thresholds, before equivalisation and after tax and transfers, for households of different sizes.

The incomes presented elsewhere in this report use the value for “Couple with no children” as the standard, and all other household types are adjusted to reflect their different household composition. An after housing costs table is available in the associated tables.

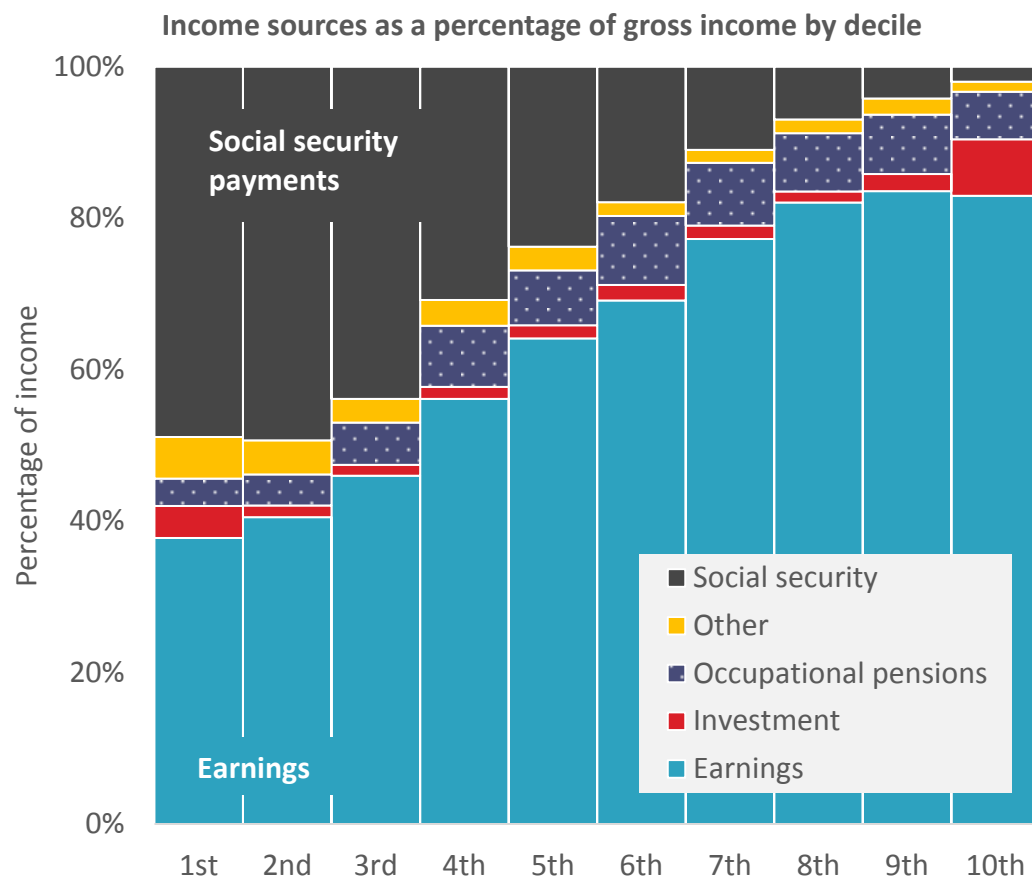
Table 1. Income and poverty thresholds for different household types before housing costs 2015-18

	Single person with no children		Couple with no children		Single person with children aged 5 and 14		Couple with children aged 5 and 14	
Before housing costs incomes	weekly	annual	weekly	annual	weekly	annual	weekly	annual
UK median income	£338	£17,600	£504	£26,300	£605	£31,500	£771	£40,200
Scottish median income	£334	£17,400	£499	£26,000	£599	£31,200	£764	£39,800
Relative poverty threshold: 60% of UK median income	£203	£10,600	£302	£15,800	£363	£18,900	£463	£24,100
Absolute poverty threshold: 60% of inflation-adjusted 2010/11 UK median income	£189	£9,800	£282	£14,700	£338	£17,600	£431	£22,500

Income sources

The chart below shows the different sources of gross income by decile, ranking the population by income and dividing it into ten equal-sized groups. Income components are considered before tax; this is therefore a different definition of household income from that used elsewhere in this report.

Chart 22. Earnings and social security payments main household income sources



Higher income households receive a large proportion of income from earnings, and lower income households more of their income from social security payments.

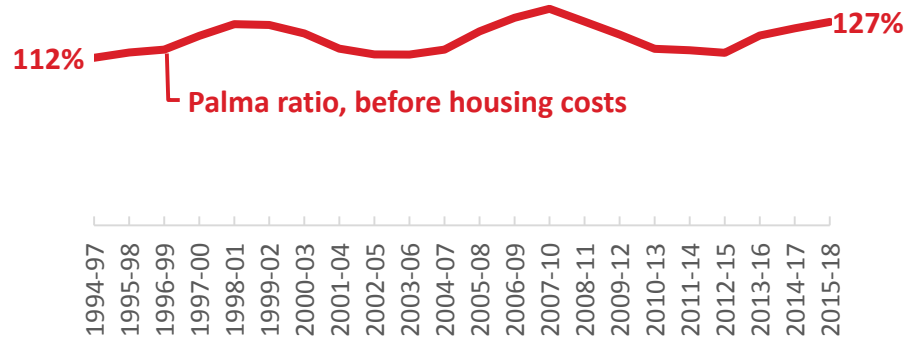
Earnings account for around 40% of gross income for those in the first two deciles compared to over 80% for those in the top three deciles.

The proportion of household income from earnings exceeds that from social security payments for around 80% of the population (those above the 2nd percentile point).

Income inequality

Chart 23. Palma ratio of income inequality rising

Palma ratio of income inequality: ratio of income shares of the top 10% and the bottom 40%



This chart shows the ratio of total income received by the top ten percent of the population divided by the total income of the bottom forty percent of the population (expressed as a percentage) over time. This measure of how equally income is distributed across the population is known as the “Palma ratio” or “S90/S40 ratio”. Palma is used internationally to estimate the extent of inequality between those at the top of the income distribution and those at the bottom. The Palma ratio is usually calculated from income before housing costs.

In 2015-18, the top ten percent of the population had 27% more income than the bottom forty percent combined. This compares to 24% more income of the top ten percent in the previous period.

Income inequality had been fluctuating since the beginning of this data collection in the mid-nineties, and, after the most recent low point in 2012-15, has been steadily increasing.

Additional income inequality data, including the Gini coefficient and income decile shares, is available in the associated tables.

Annex A. Data sources

Family Resources Survey, Households Below Average Income (HBAI) dataset

All the figures in this publication come from the Department for Work and Pensions' (DWP) Households Below Average Income dataset which is produced from the Family Resources Survey. UK figures are published by DWP in 'Households Below Average Income: 2017/18' on the same day as 'Poverty and Income Inequality in Scotland: 2015-18'. For the UK figures, as well as more detail about the way these figures are collected and calculated, see the [DWP website](#).

Persistent Poverty figures

New figures on persistent poverty were published on 28 March 2018 and can be found on [the Scottish Government's poverty webpages](#).

Persistent poverty identifies the number of individuals living in relative poverty for 3 or more of the last 4 years. It therefore identifies people who have been living in poverty for a significant period of time, the rationale being that this is more damaging than brief periods spent with a low income, with the impacts affecting an individual through their lifetime.

These figures come from the Understanding Society survey which tracks individuals over time. The persistent poverty figures are not directly comparable to the figures in this publication as they use different income definitions and cover different time periods, but they provide useful additional information on poverty in Scotland.

What does the HBAI measure?

Households Below Average Income (HBAI) uses household disposable incomes, adjusted for the household size and composition, as a proxy for material living standards. More precisely, it is a proxy for the level of consumption of goods and services that people could attain given the disposable income of the household in which they live.

The unit of analysis is the individual, so the populations and percentages in the tables are numbers and percentages of individuals – both adults and children.

The living standards of an individual depend not only on his or her own income, but also on the income of others in the household. Consequently, the analyses are based on **total household income**: the equivalised income of a household is taken to represent the income level of every individual in the household. Equivalisation, a technique that allows comparison of incomes between households of different sizes and compositions, is explained below. Thus, all members of any one household will appear at the same point in the income distribution.

Housing Costs

It could be argued that the costs of housing faced by different households at a given time do not always match the true value of the housing that they actually enjoy, and that housing costs should therefore be deducted from any definition of disposable income. However, any measure of income defined in this way would understate the relative standard of living of those individuals who were actually benefiting from a better

quality of housing by paying more for better accommodation. Income growth over time would also understate improvements in living standards where higher costs reflected improvements in the quality of housing.

Conversely, any income measure which does not deduct housing costs may overstate the living standards of individuals whose housing costs are high relative to the quality of their accommodation. Growth over time in income before housing costs could also overstate improvements in living standards for low income groups in receipt of housing benefit, and whose rents have risen in real terms. This is because housing benefit may also rise to offset the higher rents (for a given quality of accommodation) and would be counted as an income rise, although there would be no associated increase in the standard of living. A similar effect could work in the opposite direction for pensioners: if a shift from renting to owning their housing outright leads to a fall in housing benefit income, because fewer low income pensioners are paying rents, then changes in income before housing costs may understate any improvement in living standards.

Therefore, this publication presents analyses on two bases: **Before Housing Costs (BHC)** and **After Housing Costs (AHC)**. This is principally to take into account variations in housing costs that themselves do not correspond to comparable variations in the quality of housing.

Annex B. Definitions

Measures of income

The income measure used in HBAI is weekly net (disposable) equivalised household income. This comprises total income from all sources of all household members including dependants. An adjustment is made to sample cases at the top of the income distribution to correct for volatility in the highest incomes captured in the survey.

Income is adjusted for household size and composition by means of equivalence scales, which reflect the extent to which households of different size and composition require a different level of income to achieve the same standard of living. This adjusted income is referred to as equivalised income (see definition below for more information on [equivalisation](#)).

- **Income Before Housing Costs BHC** includes the following main components: net earnings; profit or loss from self-employment after income tax and NI; all social security payments, including housing and council tax benefits; all tax credits, including Social Fund grants; occupational and private pension income; investment income; maintenance payments; top-up loans and parental contributions for students, educational grants and payments; the cash value of certain forms of income in kind such as free school meals, free welfare milk and free school milk and free TV licences for the over 75s (where data is available). Income is net of: income tax payments; National Insurance contributions; contributions to occupational, stakeholder and personal pension schemes; council tax; maintenance and child support payments made; and parental contributions to students living away from home.
- **Income After Housing Costs AHC** is derived by deducting a measure of housing costs from the above income measure.
- **Housing Costs** include the following: rent (gross of housing benefit); water rates; mortgage interest payments; structural insurance premiums; ground rent and service charges.

Income sources

The analysis on income sources is the only analysis in this report **not** using net income. This analysis is based on income before taxes from employment or self-employment, social security payments, investment, occupational pensions and other income. In some cases, income from self-employment was negative in a year, for example, when someone in self-employment made a loss. In these cases, total income from earnings was reset to zero.

Real prices

Unless otherwise stated, all figures relating to income are in 2017/18 prices. Values from previous years are updated to account for inflation using variants of the Consumer Price Index (CPI). This follows a change in methodology for 2014/15. Prior to this the Retail Price Index (RPI) was used.

This change followed an announcement by the National Statistician that, in accordance with the Statistics and Registration Service Act 2007, the RPI and its derivatives had been assessed against the Code of Practice for Official Statistics and found not to meet the required standard for designation as National Statistics.

Following a subsequent review the National Statistician, John Pullinger, wrote to the Chair of the UKSA, Sir Andrew Dilnot, setting out his view that RPI “is not a good measure of inflation” and that future usage is strongly discouraged in favour of alternative measures.

This led to a change in HBAI methodology in 2014/15 and the Scottish Government adopted the change in deflator to allow consistent poverty estimates for Scotland and the UK.

Full details can be found at this link: [Methodological changes to poverty statistics](#)

Equivalisation

Equivalisation is the process by which household income is adjusted to take into account variations in the size and composition of the households in which individuals live. This reflects the common sense notion that, in order to enjoy a comparable standard of living, a household of, for example, three adults will need a higher income than a single person living alone. The process of adjusting income in this way is known as equivalisation and is needed in order to make sensible income comparisons between households.

Equivalence scales conventionally take an adult couple without children as the reference point, with an equivalence value of one. The process then increases relatively the income of single person households (since their incomes are divided by a value of less than one) and reduces relatively the incomes of households with three or more persons, which have an equivalence value of greater than one.

Consider a single person, a couple with no children, and a couple with two children aged fourteen and ten, all having unadjusted weekly household incomes of £200 (Before Housing Costs). The process of equivalisation, as conducted in HBAI, gives an equivalised income of £299 to the single person, £200 to the couple with no children, but only £131 to the couple with children.

The equivalence scales used here are the modified OECD scales. Two separate scales are used, one for income Before Housing Costs (BHC) and one for income After Housing Costs (AHC).

Modified OECD rescaled to a couple without children

	AHC	BHC
First Adult	0.58	0.67
Spouse	0.42	0.33
Other Second Adult	0.42	0.33
Third Adult	0.42	0.33
Subsequent Adults	0.42	0.33
Children aged under 14 years	0.20	0.20
Children aged 14 years and over	0.42	0.33

The construction of household equivalence values from these scales is quite straightforward. For example, the BHC equivalence value for a household containing a couple with a fourteen year old and a ten year old child together with one other adult would be 1.86 from the sum of the scale values:

$$0.67 + 0.33 + 0.33 + 0.33 + 0.20 = 1.86$$

This is made up of 0.67 for the first adult, 0.33 for their spouse, the other adult and the fourteen year old child and 0.20 for the ten year old child. The total income for the household would then be divided by 1.86 in order to arrive at the measure of equivalised household income used in HBAI analysis.

Further information on equivalisation can be found in the following report on [the Scottish Government website](#).

Poverty measurement from the Family Resources Survey

Individuals are defined as being in poverty if their equivalised net disposable household income is below 60 percent of the UK median. The median is the income value which divides a population, when ranked by income, into two equal sized groups. Since the mean is influenced considerably by the highest incomes, median income thresholds are widely accepted as a better benchmark when considering a derived measure for low income. Sixty percent of the median is the most commonly used low income measure.

For a couple with no children, the UK median income BHC in 2015-18 was £504 per week, which had increased by £5 in real terms since 2014-17. After housing costs, the UK median increased by £5 to £435 per week in 2015-18.

Consequently, the 60 percent low income threshold, which is used to derive the low income household figures, has also increased in real terms, before and after housing costs. This means a household has to have a larger income in real terms to be above the poverty threshold.

Relative and absolute poverty

- **Absolute poverty** - individuals living in households whose equivalised income is below 60 percent of inflation adjusted median income in 2010/11. This is a measure of whether those in the lowest income households are seeing their incomes rise in real terms.
- **Relative poverty** - individuals living in households whose equivalised income is below 60 percent of median income in the same year. This is a measure of whether those in the lowest income households are keeping pace with the growth of incomes in the economy as a whole.

Material deprivation for children

A suite of questions designed to capture the material deprivation experienced by households with children has been included in the Family Resources Survey since 2004/05. Respondents are asked whether they have 21 goods and services, including child, adult and household items. The list of items was identified by independent academic analysis. See McKay, S. and Collard, S. (2004). Together, these questions form the best discriminator between those households that are deprived and those that are not. If they do not have a good or service, they are asked whether this is because they do not want them or because they cannot afford them.

These questions are used as an additional way of measuring living standards for children and their households.

A prevalence weighted approach has been used, in combination with a relative low income threshold. The income threshold is 70 percent of the median income. Prevalence weighting is a technique of scoring deprivation in which more weight in the deprivation measure is given to households lacking those items that most in the population already have. This means a greater importance, when an item is lacked, is assigned to those items that are more commonly owned in the population.

Changes to measuring material deprivation in 2010/11

The 21 items in the suite of questions used to measure material deprivation are designed to reflect the items and activities people in the UK believe to be necessary. These items are reviewed periodically to ensure the measure remains a relative measure of poverty. In 2010/11 four new questions about additional items were included in the FRS to be used in the future calculation of material deprivation scores, replacing the four existing items that were identified by research as potentially out of date partly because the proportion of the population considering them necessary had fallen. As such, there is a break in the series for child low income/material deprivation and estimates from 2010/11 onwards cannot be compared to those from before 2010/11.

In the 2010/11 FRS, both the new and the old questions were asked. As such, estimates are presented based on both sets of questions for this year.

For further information about material deprivation see the DWP [Households Below Average Income publication](#).

Material deprivation for pensioners

A suite of questions designed to capture the material deprivation experienced by pensioner households has been included in the Family Resources Survey since 2009/10. Respondents are asked whether they have access to 15 goods and services. The list of items was identified by independent academic analysis. See:

- Legard, R., Gray, M. and Blake, M. (2008), *Cognitive testing: older people and the FRS material deprivation questions*, Department for Work and Pensions Working Paper Number 55. [Available on the Bristol University webpages](#).
- McKay, S. (2008), *Measuring material deprivation among older people: Methodological study to revise the Family Resources Survey questions*, Department for Work and Pensions Working Paper Number 54. [Available on the Bristol University webpages](#).

Together, these questions form the best discriminator between those pensioner households that are deprived and those that are not.

Where they do not have a good or service, pensioner households are asked whether this is because they do not have the money for this, it is not a priority on their current income, their health / disability prevents them, it is too much trouble or tiring, they have no one to do this with or help them, it is not something they want, it is not relevant to them, or any other reason. Where a pensioner lacks one of the material deprivation items for one of the following reasons - they do not have the money for this, it is not a priority for them on their current income, their health / disability prevents them, it is too much trouble or tiring, they have no one to do this with or help them, or any other reason - they are counted as being deprived for that item.

The exception to this is for the question on whether they could cover an unexpected expense, where the follow up question was asked to explore how those who responded 'yes' would cover this cost. Options were: use own income but cut back on essentials, use own income but not need to cut back on essentials, use savings; use a form of credit, get money from friends or family, or any other reason. Pensioners are counted as materially deprived for this item if and only if they responded 'no' to the initial question.

The same prevalence weighted approach has been used to that for children, in determining a deprivation score. Prevalence weighting is a technique of scoring deprivation in which more weight in the deprivation measure is given to households lacking those items that most already have. This means a greater importance, when an item is lacked, is assigned to those items that are more commonly owned in the pensioner population.

For children, material deprivation is presented as an indicator in combination with a low income threshold. However for pensioners, the concept of material deprivation is broad and very different from low income; therefore, it is appropriate to present it as a separate measure.

A [technical note](#) given a full explanation of the pensioner material deprivation measure is available for download.

Population coverage

The FRS is a survey of private households. This means that people in residential institutions, such as nursing homes, barracks, prisons or university halls of residence, and also homeless people are excluded from the scope of the analysis presented here. The area of Scotland north of the Caledonian Canal was included in the FRS for the first time in the 2001/02 survey year, and from the 2002/03 survey year, the

FRS was extended to include a 100 percent boost of the Scottish sample. This has increased the sample size available for analysis at the Scottish level. In 2002/03, the sample size was around five thousand. However, following cost savings introduced to the FRS in 2010, the sample size in Scotland has reduced. It was approximately 3,100 in 2017/18. For further information see the DWP [Households Below Average Income publication](#).

Reliability of estimates

The figures are estimates based on sample surveys and are therefore subject to sampling variation. Caution should be exercised in the interpretation of small year-on-year fluctuations. Identification of trends should be based on data for several years. Estimates for the confidence intervals around the key figures presented here will be available on [the Scottish Government Poverty statistics webpages](#) shortly after publication.

The method used to calculate these confidence intervals changed in 2015/16. Information on this can be in [DWP's statistical notice](#). The new method widens confidence intervals for most estimates making statistically significant results less likely than before.

The [Family Resources Survey publication](#) contains information on topics such as:

- Sample design, non-response biases, weighting
- Item non-response, imputation and editing
- Accuracy of income data

Detailed HBAI definitions and methodology

More detailed information on definitions and methodology can be found in [DWP's publication](#).

Annex C. Where to find more information

Further analysis

This publication contains the headline poverty and income inequality statistics. The associated tables contain all data used in the charts as well as additional data, for example, the equivalent before-housing-costs estimates where charts only show after-housing-costs estimates.

Additional relative and severe poverty and child poverty estimates including numbers, rates and compositions of those in poverty disaggregated by a wide range of personal characteristics are published as supplementary tables alongside this publication.

This and further analysis based on the FRS and HBAI datasets is published by the Scottish Government throughout the year on [the Scottish Government's poverty statistics webpages](#).

Additional analysis themes are based on the needs of users. If you have any suggestions for future analysis please email:

social-justice-analysis@gov.scot or phone 0131 244 5851.

Scottish Government websites

- The poverty statistics website contains a range of analysis on poverty and information about what the Scottish Government is doing to reduce poverty and income inequality <http://www.gov.scot/Topics/Statistics/Browse/Social-Welfare/>
- Confidence limits surrounding Scotland poverty estimates: <http://www.gov.scot/Topics/Statistics/Browse/Social-Welfare/IncomePoverty/PovertyMethodology/ConfidenceIntervals>
- For further information on all Scottish Government statistics: <http://www.gov.scot/topics/statistics/>
- Scottish Government approach to tackling poverty: <http://www.gov.scot/Topics/People/fairerscotland/tacklingpovertyinscotland>

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Correspondence and enquiries

For enquiries about this publication please contact: Maïke Waldmann
Communities Analysis Division
Telephone: 0131 244 5851
e-mail: social-justice-analysis@gov.scot

For general enquiries about Scottish Government statistics please contact::

Office of the Chief Statistician, Telephone: 0131 244 0442,
e-mail: statistics.enquiries@gov.scot

How to access background or source data

The data collected for this statistical bulletin cannot be made available by Scottish Government for further analysis as Scottish Government is not the data controller. Source data may be accessed through the UK Data Service: <https://www.ukdataservice.ac.uk/>

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