

Statistical Notice

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Coverage: United Kingdom
Theme: Economy

Changes to the Households Below Average Income (HBAI) statistics 2012/13

This Statistical Notice advises users of changes to the 2012/13 Households Below Average Income (HBAI) report, with a provisional publication month of June 2014.

In summary, the changes are:

- **Inflation measure:** Following consultation with users, the Retail Prices Index (RPI) will continue to be used as the inflation measure in the 2012/13 publication. Headline figures for income and absolute low income trends on a before housing costs basis (BHC) will be presented in an Annex using other inflation measures - (i) RPIJ, the improved variant of the RPI calculated using formulae that meet international standards, (ii) the Consumer Prices Index (CPI), and (iii) CPIH, the measure which includes owner occupiers' housing costs.
- **Publication format:** Following consultation with users, we will produce one report, including commentary, charts and summary tables - instead of a separate [First Release](#) and [Report](#) as is currently produced. All the existing publication tables will be available as Excel spreadsheets on the relevant HBAI GOV.UK web-page.
- **Grossing:** This is the process of applying factors to the HBAI data so that they yield estimates which represent the overall population. In line with the Family Resources Survey (FRS), the 2012/13 HBAI data will incorporate the 2011 Census based mid-year population estimates into the grossing regime, with a consistent back series produced. Following a methodological review, a number of minor methodological changes to the grossing regime have also been incorporated. We aim to publish a fuller report on the grossing changes prior to the HBAI release.
- **Additional tables:** We will publish additional three-year averaged time-series tables on regional income and three-year averages regional low income.
- **Disability:** The 2012/13 FRS adopted the new harmonised questions on disability as outlined on the [ONS website](#). The resulting classification that will be used in this year's HBAI publication is designed to measure the core population of currently disabled people in line with the Equality Act definition.
- **Derivation of income:** A number of minor improvements to income derivation have been made.
- **Reporting uncertainty:** We will be enhancing our reporting of uncertainty in the HBAI report, with the inclusion of a separate chapter explaining the accuracy of the survey estimates.

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- **Child material deprivation:** Four new questions about additional material deprivation items for children were introduced into the 2010/11 FRS and from 2011/12 four questions from the original suite were removed. We now have 3 years of data covering the new questions and so are able to present three-year average results by ethnicity and region based on these new questions.
- **State Pension age:** Pensioners are defined as all those adults above State Pension age. Prior to 6th April 2010, women reached the State Pension age at 60. From 6th April 2010, the State Pension qualifying age for women has been gradually increasing. The changes do not affect the State Pension age of men, currently 65. Therefore, as with the previous two reports, the age groups covered by the analysis of working-age adults and pensioners will change for the 2012/13 report. The material deprivation statistics will continue to be based on pensioners aged 65 and over.
- **Household bills in arrears:** The analysis of income by whether people are behind with household bills will be extended to include rent, mortgage payments and other loans.
- **Highest Qualification:** The 2012/13 FRS introduced some changes to the qualification questions to allow more detail of the level of the qualifications to be collected. Further to this, the qualification questions are now asked of all respondents aged 16 and over rather than those aged 16 to 75. There will be no change to HBAI outputs as a result of these changes.

What is the HBAI?

1. Households Below Average Income (HBAI) uses net disposable weekly household income, after adjusting for the household size and composition, as an assessment for material living standards - the level of consumption of goods and services that people could attain given the net income of the household in which they live. In order to allow comparisons of the living standards of different types of households, income is adjusted to take into account variations in the size and composition of the households in a process known as equivalisation. HBAI assumes that all individuals in the household benefit equally from the combined income of the household. 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.

Income is net of the following components:

- income tax payments;
- National Insurance contributions;
- domestic rates / council tax;
- contributions to occupational pension schemes;
- all maintenance and child support payments, which are deducted from the income of the person making the payment;
- parental contributions to students living away from home;
- student loan repayments.

Income Before Housing Costs (BHC) takes income from all household members including dependants and includes the following main components:

- usual net earnings from employment;
- profit or loss from self-employment (losses are treated as a negative income);
- all Social Security benefits and tax credits;
- income from occupational and private pensions;
- investment income;
- maintenance payments, if a person receives them directly;
- income from educational grants and scholarships (including, for students, top-up loans and parental contributions);
- the cash value of certain forms of income in kind (free school meals, Healthy Start vouchers and free school milk and free TV licence for those aged 75 and over).

Income After Housing Costs (AHC) is derived by deducting a measure of **housing costs** from the above income measure. These include the following components:

- rent (gross of housing benefit);
- water rates, community water charges and council water charges;
- mortgage interest payments;
- structural insurance premiums (for owner occupiers);
- ground rent and service charges.

2. HBAI presents analysis on the income distribution, income inequality, numbers and percentages of people in relative low income and absolute low income, and numbers and percentages of people in material deprivation. Analysis is available by individual, family and household characteristics.

3. **Relative low income** sets the threshold as a proportion of the average income, and moves each year as average income moves. It is used to measure the number and proportion of individuals who have incomes a certain proportion below the average.

4. **Absolute low income** sets the low income line in a given year, then adjusts it each year with inflation. This measures the proportion of individuals who are below a certain standard of living in the UK (as measured by income).

5. **Income inequality**, measured by the Gini Coefficient, shows how incomes are distributed across all individuals, and provides an indicator of how high and low-income individuals compare to one another. It ranges from zero (when everybody has identical incomes) to 100 per cent (when all income goes to only one person).

6. HBAI data comes from a survey of households (the Family Resources Survey). Surveys gather information from a sample rather than from the whole population and although the sample is designed carefully to make allowances for this, survey results are always estimates, not precise figures. This means that they are subject to a level of uncertainty.

Uses of HBAI

7. The main source of data used in the HBAI publication is the UK Department for Work and Pensions (DWP) Family Resources Survey (FRS). Prior to 2002/03 the survey covered Great Britain; from 2002/03 the survey was extended to cover the UK.

8. HBAI is a key source for data and information about household income. Users include: policy and analytical teams within the DWP, the Devolved Administrations and other government departments, local authorities, parliament, academics, journalists, and the voluntary sector.

9. Researchers and analysts outside government use the statistics and data to examine topics such as income inequality, poverty, the distributional impacts of fiscal policies and understanding the income profile of vulnerable groups.

Inflation measure

10. The HBAI uses variants of RPI to adjust for inflation. In January 2013 the National Statistician announced that the formula used to produce the RPI did not meet international standards and recommended that a new index be published (RPIJ) using formulae that meet international standards. In accordance with the Statistics and Registration Service Act 2007, RPI and its derivatives have been assessed against the Code of Practice for Official Statistics and found not to meet the required standard for designation as National Statistics. A full report can be found on the [UK Statistics Authority website](#).

11. DWP set up an HBAI Technical Advisory Group, made up of external stakeholders and government analysts with an interest in DWP household and family income statistics. The Technical Advisory Group considered the various options, and made recommendations to DWP's Head of Profession for Statistics by the end of 2013.

12. The group recommended that the HBAI publication should continue to use RPI as the measure of inflation for the 2012/13 publication without change. To supplement this, they recommended that the publication should also show key before housing costs figures using other inflation measures in an Annex. The use of RPI for another year was recommended because there are currently no suitable alternatives with appropriate before and after housing cost indices available.

13. Furthermore, the group thought it appropriate to keep monitoring the progress of the [Paul Johnson inflation review](#), which is looking at the range of price indices - considering what changes are needed to the range of consumer price statistics produced for the UK to best meet current and future user needs. The review will report to the Board of the UK Statistics Authority and deliver a final report for publication by summer 2014. It was agreed that once this review has been published we will make a more informed decision on the most appropriate inflation measure to use in future publications. If we do adopt a different inflation measure in future reports this will result in revisions of the current income time series.

14. DWP's Head of Profession for Statistics agreed these recommendations and has decided that headline before housing costs figures for Tables 2.1ts, 3.2tr, 3.4tr, 4.2tr, 4.4tr, 5.2tr, 5.4tr, 6.2tr and 6.4tr will be presented in an Annex using other inflation measures - (i) RPIJ, the improved variant of the RPI calculated using formulae that meet international standards, (ii) the Consumer Prices Index (CPI), and (iii) CPIH, the measure which includes owner occupiers' housing costs..

Material deprivation weighting methodology

15. Comments have been made about the methodology used to calculate the prevalence weights for material deprivation items. We currently recalculate the prevalence weights each year based on the question responses from that year. The maximum possible material deprivation score for each year is then rescaled to 100 for ease of interpretation, and children in a family with a score of at least 25, or pensioners with a score of 20 or more, are classed as being materially deprived. If over time more families can afford a certain item, then a family lacking such a good will see an increasing overall deprivation score, and will be considered as becoming more materially deprived.

16. The concern with the current method is that if there is a general increase in access to items, this should imply that a family lacking a particular number of items is now suffering from greater relative deprivation than before. But, because of the rescaling of scores to 100, each item lacked still counts the same amount towards the overall material deprivation score and a family is still required to lack the same number of items to reach a score of 25 and be declared materially deprived.

17. The HBAI Technical Advisory Group also considered this issue. The Group agreed that this is a complex issue and recommended that any changes made should be made following a considered and evidence based exploration of options. As such the Group agreed that the recommendation should be to continue to use the current methodology for material deprivation for the 2012/13 publication.

18. Looking to the future DWP will consider the best way to approach a longer term exploration of options and time scales for reaching a decision on the methodology for the material deprivation measure going forwards. DWP's Head of Profession for Statistics agreed the Group's recommendation.

Publication format

19. DWP published a [Statistical Notice](#) on 28th January 2014 inviting comments from users on proposed changes to the HBAI publication format. As a result of comments our changes to the report will be:

- in order to focus our publication on commentary and analysis that aid interpretation, we will produce one report, including commentary, charts and summary tables - instead of a separate [First Release](#) and [Report](#) as is currently produced.

- all the existing tables contained within the PDF of the Report will still be published as Excel spreadsheets on the relevant [HBAI GOV.UK web-page](#), alongside the new summary tables.
- the report will be shorter than the existing one, and will focus on commenting on and analysing the key findings.
- we will also publish a CSV file with a time series of key indicators so that users are able to easily produce their own analysis, charts and tables.

20. The 2012/13 publication will therefore show the following summary time-series tables of key indicators (Table numbers in the existing Report are given in brackets – in some cases the summary tables for simplicity will only include part of the information in the existing HBAI tables referred to):

The income distribution

- Key economic indicators (**Table 2.1tr**);
- Money values of quintile medians and overall population mean in 2012/13 prices (**Table 2.1ts**).
- Gini co-efficient (**Table 2.2ts**)

Whole population

- Number and percentage of individuals (i) falling below 60% of contemporary median income (relative low income) and (ii) falling below 60% of 2010/11 median income held constant in real terms (absolute low income) (**Tables 3.1tr-3.4tr**).

Children

- Number and percentage of children (i) falling below 60% of contemporary median income (relative low income), (ii) falling below 60% of 2010/11 median income held constant in real terms (absolute low income) (iii) in low income and material deprivation, and (iv) in severe low income and material deprivation (**Tables 4.1tr-4.5tr**).

Working-age

- Number and percentage of working-age adults (i) falling below 60% of contemporary median income (relative low income) and (ii) falling below 60% of 2010/11 median income held constant in real terms (absolute low income) (**Tables 5.1tr-5.4tr**).

Pensioners

- Number and percentage of pensioners (i) falling below 60% of contemporary median income (relative low income), (ii) falling below 60% of 2010/11 median income held constant in real terms (absolute low income), and (iii) in material deprivation (aged 65 and over) (**Tables 6.1tr-6.4tr, 6.7tr**).

Disability

- Number and percentage of individuals (i) falling below 60% of contemporary median income (relative low income) and (ii) falling below 60% of 2010/11 median income held constant in real terms (absolute low income) - by whether at least one member of the family is disabled or not. For the whole population, children, working-age adults and pensioners separately (**Tables 3.12ts, 3.15ts, 4.19ts, 4.25ts, 5.12ts, 5.15ts, 6.12ts, 6.17ts**).

21. A number of users made suggestions about additional tables to be published. It is not possible to include the suggestions made because of issues relating to the FRS sample size, other analytical issues or because we have had to concentrate on the other development work required for this publication. We may be able to consider other suggestions for future publications as we continue to make improvements.

22. We were also asked that key results are included in the report itself for women and men, different age groups and by ethnic group. We shall consider this as we prepare the commentary.

23. As stated above, all the existing publication tables will be available as Excel spreadsheets on the relevant [HBAI GOV.UK web-page](#), alongside the new summary tables. We also propose to publish a CSV file with a time series of key indicators so that users are able to easily produce their own analysis, charts and tables.

Grossing

24. This is the process of applying factors to the HBAI data so that they yield estimates which represent the overall population. In line with the FRS data, the 2012/13 data will be based on the 2011 Census based mid-year population estimates incorporated into the grossing regime for HBAI data, with a consistent back series produced.

25. A number of minor methodological changes to the grossing regime advised by ONS have also been incorporated. Methodological changes include the following; 1) a re-categorisation of tenure breakdown to avoid uncertainty around housing association and local authority split, 2) a more detailed regional breakdown of the total number of households, and 3) an adjustment to account for the different rates of sampling in England and Wales, Scotland, and Northern Ireland.

26. We aim to publish a fuller report on the grossing changes prior to the HBAI release.

Additional tables

27. We will publish additional time-series tables on three-year average regional income and three-year average regional low income.

Disability

28. The 2012/13 FRS adopted the new harmonised questions on disability as outlined on the [ONS website](#). The resulting classification that will be used in this year's HBAI publication is designed to measure the core population of currently disabled people in line with the Equality Act definition.

29. The *2011/12 definition of disability* used in the HBAI was if the respondent said that:

- They have any long-standing illness, disability or infirmity ('Long-standing' means anything that has troubled them over a period of at least 12 months or that is likely to affect them over a period of at least 12 months); and
- any of these health problem(s) or disability(ies) means that they have substantial difficulties with any of these areas of their life
 1. Mobility (moving about)
 2. Lifting, carrying or moving objects
 3. Manual dexterity (using your hands to carry out everyday tasks)
 4. Continence (bladder and bowel control)
 5. Communication (speech, hearing or eyesight)
 6. Memory or ability to concentrate, learn or understand
 7. Recognising when you are in physical danger
 8. Your physical co-ordination (e.g. balance)

9. Other health problem or disability

30. The 2012/13 *definition of disability* to be used in the HBAI is if the respondent said that:

- they have any physical or mental health conditions or illnesses lasting or expected to last for 12 months or more; and
- that their condition or illness reduces their ability to carry-out day-to-day activities a lot, or a little.

Derivation of income

31. A number of minor changes to income derivation have been made.

- New FRS variables on electricity, gas and liquid or solid fuel have been added to the estimate of the value of service charges included in rents, where respondents said that their rents included these services but did not include heating, lighting and hot water. These are used to adjust rents paid, as part of housing costs.
- The 16-19 Bursary payment introduced in 2011 to replace Education Maintenance Allowance (EMA) in England has been added.
- New FRS variables on the amount of tax paid on bonuses have been used to calculate the tax paid, rather than assuming a basic rate of 20% is deducted. These feed into secondary earnings.
- The new FRS variable on the amount of tax paid on the rent received has been included. Previously amount of tax paid on rent received was not deducted from rent before tax from other property. This feeds into net investment income and ultimately into net income.
- New FRS variables on receipt of free school fruit and vegetables and of free school breakfast have been added to miscellaneous income, alongside the previously included free school meals and free school milk.

Reporting uncertainty

32. With all sample surveys, the estimates produced are based on only one of a number of possible samples of households that could have been drawn at a given point in time. Each of these possible samples would produce an estimated number (for whatever topic is of interest), which may be different to the underlying true value that would have been obtained if the whole population could be surveyed. Confidence intervals are indicators of the extent to which the estimate may differ from the true value. The larger the confidence interval, the less precise is the estimate.

33. We will be enhancing our reporting of uncertainty in the HBAI report, with the inclusion of a separate chapter explaining the accuracy of the survey estimates.

Ethnicity breakdowns

34. As explained in the [Statistical Notice](#) published on 16th May 2013, the [harmonised standards](#) for Scotland were adopted for the 2012/13 FRS questionnaire. There will be no change HBAI outputs as we adopted the harmonised output standards for ethnic group for the UK in the 2011/12 publication.

Child material deprivation

35. As explained in the [Statistical Notice](#) published on 16th May 2013, four new questions about additional material deprivation items for children were introduced into the 2010/11 Family Resources Survey (FRS) and from 2011/12 four questions from the original suite were removed. We now have 3 years of data covering the new questions and so are

able to present three-year average results by ethnicity and region based on these new questions, in Tables 4.3db, 4.4db, 4.5db and 4.6db.

State Pension age

36. Pensioners are defined as all those adults above State Pension age. Prior to 6th April 2010, women reached the State Pension age at 60. From 6th April 2010, the qualifying age for women has been gradually increasing. The changes do not affect the State Pension age of men, currently 65. Therefore, as with the previous two publications, the age groups covered by the analysis of working-age adults (Chapter 5) and pensioners (Chapter 6) will change for 2012/13. The material deprivation statistics will continue to be based on pensioners aged 65 and over.

37. Tables 5.5tr and 5.6tr present a series including adults up to 64, and tables 6.5tr and 6.6tr present a series that only include pensioners aged 65 and over. These tables provide a consistent time series in light of the equalisation of State Pension age for men and women.

Household bills in arrears

38. New answer categories have been added to the FRS question “Sometimes people are not able to pay every bill when it falls due. May I ask, are you up-to-date with the bills on the card, or are you behind with any of them?”. The analysis of income by whether people are behind with household bills (Tables 4.2db, 4.4db, 4.6db, 5.3db, 5.6db, 5.9db) will therefore be extended to include rent, mortgage payments and other loans. This means the figures for 2012/13 will not be directly comparable with earlier years.

Highest qualification

39. The 2012/13 FRS introduced some changes to the qualification questions to allow more detail of the level of the qualifications to be collected. Further to this, the qualification questions are now asked of all respondents aged 16 and over rather than those aged 16 to 75. There will be no change to HBAI outputs as a result of these changes as we currently report on the education attainment of working-age adults, in the following categories:

- Qualification degree level or above
- Qualification below degree level
- Student
- No qualifications