

Compendium

## Survey methodology: Appendix B

Appendix B provides further detailed information regarding the methodology of the Living Costs and Food survey, used to produce the estimates presented in Family Spending.



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# 1 . Description of the survey

A household expenditure survey has been conducted each year in the UK since 1957. From 1957 to March 2001 the Family Expenditure Survey (FES) and National Food Survey (NFS) provided information on household expenditure patterns and food consumption. In April 2001 these surveys were combined to form the Expenditure and Food Survey (EFS).

In 2008 selected Government household surveys, on which the Office for National Statistics (ONS) leads, were combined into one Integrated Household Survey (IHS). In anticipation of this, the EFS moved to a calendar-year basis in January 2006. The EFS questionnaire became known as the Living Costs and Food (LCF) module of the IHS in 2008, to accommodate the insertion of a core set of IHS questions.

More information about the IHS can be found on the ONS website. In summary, the survey design allows for the collection of common core data across the pooled samples of the constituent surveys, achieving the biggest pool of UK social data after the Census. The large sample allows a detailed level of analysis to be conducted, and allows results to be reported for smaller geographic areas. The IHS has become the key vehicle for high-profile national data collection initiatives including questions on subjective well-being, and on sexual identity.

The LCF is a voluntary sample survey of private households. The basic unit of the survey is the household. A household comprises one person living alone or a group of people (not necessarily related living at the same address) who share cooking facilities AND share a living room or sitting room or dining area (See 'Definitions').

Each individual aged 16 and over in the household visited is asked to keep diary records of daily expenditure for two weeks. Information about regular expenditure, such as rent and mortgage payments, is obtained from a household interview along with retrospective information on certain large, infrequent expenditures such as those on vehicles. Children aged 7 to 15 are asked to keep a simplified version of the diary.

Detailed questions are asked about the income of each adult member of the household. In addition, personal information such as age, sex and marital status is recorded for each household member. A copy of the LCF questionnaire is available from the [UK Data Service](#).

The survey is continuous, interviews being spread evenly over the year to ensure that seasonal effects are covered. The questionnaire content is reviewed thoroughly to ensure that it is up-to-date and captures information efficiently. Some changes reflect new forms of expenditure or new sources of income, especially benefits. Others are the result of new requirements by the survey's users. (See the section on 'Survey Improvements' for more information.)

## The sample design

The LCF sample for Great Britain is a multi-stage stratified random sample with clustering. It is drawn from the Small Users file of the Postcode Address File (PAF) – the Post Office's list of addresses. All Scottish offshore islands and the Isles of Scilly are excluded from the sample because of excessive interview travel costs. Postal sectors are the primary sample unit. 638 postal sectors are randomly selected after being arranged in strata defined by Regions (sub-divided into metropolitan and non-metropolitan areas) and two 2001 Census variables: socio-economic group of the head of household and ownership of cars. These census variables were new stratifiers originally introduced for the 1996/97 survey, and updated following the results of the 2001 Census. The results of the 2011 Census will be used in due course. The Northern Ireland sample is drawn as a random sample of addresses from the Land and Property Services Agency list.

# 2 . Uses of the survey

## LCF expenditure data

**Retail Prices Index** – The main reason, historically, for instituting a regular survey on expenditure by households has been to provide information on spending patterns for the Retail Prices Index (RPI) and the Consumer Prices Index (CPI). From April 2011 the CPI rather than the RPI is used as basis for indexation of benefits, tax credit and state and public service pensions. The RPI and CPI measure the change in the cost of a selection of goods and services (the ‘basket of goods’) representative of the expenditure of the vast majority of households. The pattern of expenditure gradually changes from one year to the next, and the composition of the basket of goods needs to be kept up-to-date. Accordingly, regular information is required on spending patterns and much of this is supplied by the LCF. The expenditure weights for the general RPI and CPI need to relate to people within given income limits, for which the LCF is the only source of information.

**Household expenditure and Gross Domestic Product (GDP)** – LCF data on spending are an important source used in compiling national estimates of household final consumption expenditure which are published regularly in United Kingdom National Accounts (ONS Blue Book). Household final consumption expenditure estimates feed into the National Accounts and estimates of GDP. They will also provide the weights for Purchasing Power Parities (PPPs) for international price comparisons. LCF data are also used in the estimation of taxes on expenditure, in particular VAT.

**Regional accounts** – LCF expenditure information is one of the sources used by ONS to derive regional estimates of consumption expenditure. It is also used in compiling some of the other estimates for the regional accounts.

**The statistical office of the European Union (Eurostat)** collates information from family budget surveys conducted by the member states. The LCF is the UK’s contribution to this important EU initiative to collect data on household expenditure from member countries.

**Other government uses** – The Department of Energy and Climate Change and the Department for Transport both use LCF expenditure data in their own fields relating to, for example, energy, housing, cars and transport. The Department for Transport uses LCF data to monitor and forecast levels of car ownership and use, and in studies on the effects of motoring taxes.

**Non-government uses** – There are also numerous users outside central government, including academic researchers and business and market researchers. One example is an academic study that has used LCF data, as part of a wider study, to obtain a clear picture of utility expenditure patterns across the European Union.

## LCF income data

**Redistribution of income** – LCF information on income and expenditure is used to study how government taxes and benefits affect household income. The Government’s interdepartmental tax benefit model is based on the LCF and enables the economic effects of policy measures to be analysed across households. This model is used by HM Treasury and HM Revenue and Customs to estimate the impact on different households of possible changes in taxes and benefits.

**Non-government users** – As with the expenditure data, LCF income data are also studied extensively outside government. In particular, academic researchers in the economic and social science areas of many universities use the LCF. For example the Institute for Fiscal Studies uses LCF data in research it carries out both for government and on its own account to inform public debate.

## Family Spending and Defra reporting

The Department for Environment, Food and Rural Affairs (Defra) publishes separate reports using LCF data on food expenditure to estimate consumption and nutrient intake.

It should be noted that Defra's reporting, in Family Food, on food consumption and nutrient uptake is at person level. Family Spending reports expenditure at household level, meaning that the figures cannot be directly compared to those presented in Family Food. The different approaches reflect the different analytical purposes of the two publications, with person-level being appropriate to nutritional analysis.

## Notes for uses of the survey

1. Great care is taken to ensure complete confidentiality of information and to protect the identity of LCF households. Only anonymised data are supplied to users

## 3 . Response to the survey

### Great Britain

A total of 11,484 households were selected in 2013 for the LCF in Great Britain. However, it is not possible to get full response. A small number of households cannot be contacted at all, and in other households one or more members decline to co-operate. 4,993 households in Great Britain co-operated fully in the survey in 2013; that is, they answered the household questionnaire and all adults in the household answered the full income questionnaire and kept the expenditure diary. A further 232 households provided sufficient information to be included as valid responses. The overall response rate for the 2013 LCF was 48% in Great Britain, a decrease from 52% in 2012.

Details of response are shown in Response table 1.

**Response table 1: Response in 2013 – Great Britain**

|   | Number of households or addresses | Percentage of set sample | Percentage of effective sample |
|---|-----------------------------------|--------------------------|--------------------------------|
| Sampled addresses                               | 11,484                            | 100                      | -                              |
| Ineligible                                      | 1,133                             | 10                       | -                              |
| Extra households (multi-households)             | 3                                 | 0                        | -                              |
| Total eligible                                  | 10,354                            |                          | 100                            |
| Co-operating households (includes 232 partials) | 4,993                             |                          | 48                             |
| Refusals  | 3,555                             |                          | 34                             |
| Non-contact                                     | 731                               |                          | 7                              |
| Unknown eligibility                             | 622                               |                          | 6                              |
| Other non-response                              | 453                               |                          | 4                              |

Source: Office for National Statistics

### Northern Ireland

In the Northern Ireland survey, the eligible sample was 251 households. The number of co-operating households who provided usable data was 152, giving a response rate of 61%. This represents a decrease of 6 percentage points from the 2012 survey year<sup>1</sup>.

Northern Ireland was over-sampled in the years 1997/98 to 2009 in order to provide a large enough sample for some separate analysis. This boost to the Northern Ireland sample was discontinued in 2010.

## Partial response

Three types of partial response are accepted on the LCF:

- All adults complete the full income section of the interview, but one or more adults in the household refuse to keep the diary
- All adults in the household keep the diary, but one or more adults provides only partial income information
- One or more adults refuse to keep the diary and one or more adults provide only partial income information

All partial responses must contain a diary from the Main Diary Keeper (MDK), who is the person who does most of the shopping in the household. If the MDK refuses to complete the diary the household is classified as a refusal.

In 2013 partial responses accounted for 5% (232 households) of all co-operating households. Of these partials, the majority (97%) occurred because one or more adults in the household refused to keep the diary. Partial income information was provided in 3% of cases.

**Response table 2: Type of partial response in 2013 – Great Britain**

| Type of partial response                                      | Number of households | Percentage of partials |
|---|----------------------|------------------------|
| 1. One or more adults refuse to keep the diary <sup>1</sup>   | 225                  | 97                     |
| 2. One or more adults provide only partial income information | 7                    | 3                      |
| All   | 232                  | 100                    |

Source: Office for National Statistics

Notes:

1. Diary is present for the main diary keeper.

## LCF Response rates over time

Response rates to household surveys have generally been declining in recent years. In 2013 the LCF's response rate for Great Britain was 48% (see 'Response to the survey' for a detailed breakdown), compared with around 59% in 2000/01. Response in 2013 was lower than in 2012, when 52% was achieved. It should be noted that the LCF requires satisfactory completion of both the household questionnaire and diary. For more information see the ['Living Costs and Food Survey Technical Report \(529.7 Kb Pdf\)'](#).

## The Fieldwork

The fieldwork is conducted by the Office for National Statistics (ONS) in Great Britain and by the Northern Ireland Statistics and Research Agency (NISRA) of the Department of Finance and Personnel in Northern Ireland using almost identical questionnaires. Households at the selected addresses are visited and asked to co-operate in the survey. In order to maximise response, interviewers make at least four separate calls, and sometimes many more, at different times of day on households which are difficult to contact. Interviews are conducted by Computer Assisted Personal Interviewing (CAPI) using laptop computers.

During the interview information is collected about the household; certain regular payments such as rent, gas, electricity and telephone accounts; expenditure on certain large items (for example vehicle purchases over the previous 12 months); and income. Each individual aged 16 and over in the household is asked to keep a detailed record of expenditure every day for two weeks.

Children aged between 7 and 15 are also asked to keep a simplified diary of daily expenditure. In 2013 a total of 1,318 children aged between 7 and 15 in responding households in the UK were asked to complete expenditure diaries; 249, or 19%, did not do so. This number includes both refusals and children who had no expenditure during the two weeks. Information provided by all members of the household is kept strictly confidential. Each person aged 16 and over in the household who keeps a diary (and whose income information is collected) is subsequently sent a £10 voucher as a token of appreciation. Children who keep a diary are given a £5 voucher.

Some survey cases are reissued if a response is not obtained, that is, the cases are reallocated to field interviewers at a later date to attempt to achieve a response. In 2013 859 addresses were reissued, of which 25 were converted into responding households. This increased the overall response by 0.2 percentage points.

## Eligible response

Under LCF rules, a refusal by just one person to respond to the income section of the questionnaire invalidates the response of the whole household. Similarly, a refusal by the household's main shopper to complete the two-week expenditure diary also results in an invalid response.

## Proxy response

Questions about general household affairs are put to all household members or to the household representative person (HRP), and questions about work and income are put to the individual members of the household. Where a member of the household is not present during the household interview, another member of the household (for example a spouse) may be able to provide information about the absent person. The individual's interview is then identified as a proxy interview. Under LCF rules, the expenditure diary cannot be completed by proxy; if a household member is not present during the diary period they are classified as an absent spender.

In 2013 the percentage of fully responding households with a proxy interview in Great Britain was 26%. Analysis of the 2013 data revealed that the inclusion of proxy interviews increased response from above average income households. For the 2013 survey, the average gross normal weekly household income was 21% higher than it would have been if proxy interviews had not been accepted.

Similar findings were obtained with respect to expenditure: total spending was 15% higher than if proxy interviews had not been included. Use of proxies enhances the sample size and hence the precision of the figures obtained. It also enables the survey to capture the income and expenditure from (on average) higher-earning households and hence ensures that these households are represented fully in the survey. This must be weighed against the risk that the proxy interviews may not provide exactly the same information as direct interviews, but the available evidence suggests that including proxies provides higher data quality overall.

## Reliability

Great care is taken in collecting information from households, and comprehensive checks are applied during processing so that errors in recording and processing are minimised. The main factors that affect the reliability of the survey results are sampling variability, non-response bias and some incorrect reporting of certain items of expenditure and income. Measures of sampling variability are given alongside some results in this report and are discussed in detail in 'Standard errors and estimates of precision'.

The households which decline to respond to the survey tend to differ in some respects from those that co-operate; it is therefore possible that their patterns of expenditure and income also differ. Currently, non responders are accounted for in the weighting process for LCF data, which compensates for non responders recognised from analysis of the 2001 Census (see 'Weighting' for more information). At present, the LCF is contributing towards the 2011 Census non-response linkage project, which will enable non-response weights to be updated.

Checks are included in the computer assisted personal interviewing (CAPI) program, which are applied to the responses given during the interview. Other procedures are also in place to ensure that users are provided with high quality data. For example, quality control is carried out to ensure that any unusual values (outliers) are genuine, and checks are made on any unusual changes in average spending compared with the previous year.

## Income and expenditure balancing

The LCF is designed primarily as a survey of household expenditure on goods and services. It also gathers information about the income of household members, and is an important and detailed source of income data. However, it is not possible to draw up a balance sheet of income and expenditure either for individual households or groups of households.

The majority of expenditure information collected relates to the two-week period immediately following the interview, whereas income components can refer to a much longer period (the most recent 12 months). LCF income does not include withdrawal of savings; loans and money received in payment of loans; receipts from maturing insurance policies; proceeds from the sale of assets (such as a car); and winnings from betting or windfalls, such as legacies. Despite this, recorded expenditure might reflect these items, as well as the effects of living off savings, using capital, borrowing money or income – either recent or from a previous period.

Hence, there is no reason why income and expenditure should balance. In fact measured expenditure exceeds measured income at the bottom end of the income distribution. However, this difference cannot be regarded as a reliable measure of savings or dis-saving.

For further information of what is included in income on the LCF see 'Income headings'.

## Imputation of missing information

Although LCF response is generally based on complete households responding, there are areas in the survey for which missing information is imputed (inferred, sometimes in conjunction with other sources). This falls into two broad categories: item imputation and diary imputation. Using a combination of reliable imputation procedures ensures that the LCF data provide a comprehensive picture of the spending patterns and income sources for each household. For more information see the ['Living Costs and Food Survey Technical Report \(529.7 Kb Pdf\)'](#).

## Notes for response to the survey

1. In 2012, the eligible Northern Ireland sample was 256 households. The number of co-operating households who provided usable data was 171 households, giving a response rate of 67%.

## 4 . Weighting

Since 1998/99 the survey has been weighted to reduce the effect of non-response bias and produce population totals and means. The weights are produced in two stages. First, the data are weighted to compensate for non-response (sample-based weighting). Second, the sample distribution is weighted so that it matches the population distribution in terms of region, age group and sex (population-based weighting).

### Sample based weighting using the Census

Weighting for non-response involves giving each respondent a weight so that they represent the non-respondents that are similar to them in terms of the survey characteristics. Non responders are accounted for in the weighting process for LCF data using results from the 2001 Census linked study of non responders.

The 2001 LCF Census-linked study matched census addresses with the sampled addresses of EFS. In this way it was possible to match the address details of the respondents as well as the non-respondents with corresponding information gathered from the Census for the same address. The information collected during 2001 Census/EFSS matching work was then used to identify the types of households that were being under-represented in the survey. Further details of how the weighting classes were produced can be seen in the 'Weighting' section of the '[Living Costs and Food Survey Technical Report \(529.7 Kb Pdf\)](#)'.

The results of the 2011 Census-linked studies will be used to further update non-response weighting in due course.

### Population-based weighting

The second stage of the weighting adjusts the non-response weights so that weighted totals match population totals. As the LCF sample is based on private households, the population totals used in the weighting need to relate to people living in private households. For 2013 data the population totals used were population projections based on estimates rolled forward from the 2011 Census, adjusted to harmonise with the LCF definition of a private household. These estimates used exclude residents of institutions not covered by the LCF, such as those living in bed-and-breakfast accommodation, hostels, residential homes and other institutions.

The non-response weights were calibrated<sup>1</sup> so that weighted totals matched population totals for males and females in different age groups and for regions. An important feature of the population-based weighting is that it is done by adjusting the factors for households not individuals.

The weighting is carried out separately for each quarter of the survey. The main reason is that sample sizes vary more from quarter to quarter than in the past. This is due to reissuing addresses after an interval of a few months where there had previously been no contact or a refusal to a new interviewer. This results in more interviews in the later quarters of the year than in the first quarter. Quarterly weighting, therefore, counteracts any potential bias from the uneven spread of interviews through the year. Quarterly weighting also results in small sample numbers in some of the age/sex categories that were used in previous years. The categories have therefore been widened slightly to avoid this.

### Effects of weighting on the data

Table B1 shows the effects of the weighting by comparing unweighted and weighted data from 2013.

**Table B1: The effect of weighting on expenditure, 2013**

United Kingdom

| Commodity or service                 | Average weekly household expenditure (£) |                       | Absolute difference | Percentage difference |
|--------------------------------------|--|-----------------------|---------------------|-----------------------|
|                                      | Unweighted                               | Weighted as published |                     |                       |
| All expenditure groups               | 441.50                                   | 444.30                | 2.79                | 0.6                   |
| Food and non-alcoholic drinks        | 59.30                                    | 58.80                 | -0.53               | -0.9                  |
| Alcoholic drink, tobacco & narcotics | 12.10                                    | 12.00                 | -0.10               | -0.8                  |
| Clothing and footwear                | 22.40                                    | 22.60                 | 0.18                | 0.8                   |
| Housing, fuel and power              | 70.00                                    | 74.40                 | 4.36                | 6.2                   |
| Household goods and services         | 33.80                                    | 33.10                 | -0.68               | -2.0                  |
| Health                               | 6.60                                     | 6.20                  | -0.39               | -5.8                  |
| Transport                            | 70.80                                    | 70.40                 | -0.31               | -0.4                  |
| Communication                        | 14.20                                    | 14.50                 | 0.27                | 1.9                   |
| Recreation and culture               | 66.40                                    | 63.90                 | -2.46               | -3.7                  |
| Education                            | 6.80                                     | 8.80                  | 1.96                | 28.6                  |
| Restaurants and hotels               | 39.80                                    | 40.40                 | 0.59                | 1.5                   |
| Miscellaneous                        | 39.20                                    | 39.10                 | -0.10               | -0.2                  |
| Weekly household income:             |  |                       |                     |                       |
| Disposable                           | 608                                      | 614                   | 7                   | 1.1                   |
| Gross                                | 727                                      | 739                   | 12                  | 1.6                   |

Source: Office for National Statistics

The weighting decreased the estimate of total average expenditure by £2.79 a week. It had the largest impact on average weekly expenditure on education, increasing the estimate by 28.6%. It also increased the estimate of spending on housing, fuel and power by 6.2%, and reduced the estimate of spending on recreation and culture by 3.7% and the estimate for household goods and services by 2.0%. Weighting also increased the estimates of average income, by £7 a week for disposable household income and by £12 a week (1.6%) for gross household income, which is the income used in most tables in the report.

Re-weighting also has an effect on the variance of estimates. In an analysis on the 1999/2000 data, weighting increased variance slightly for some items and reduced it for others. Overall the effect was to reduce variance slightly.

## Notes for weighting

1. Implemented by the CALMAR software package before 2007 and GES for 2006–08 (updated weights).

## 5 . Standard errors and estimates of precision

The Living Costs and Food Survey (LCF) is a sample of households and not a census of the whole population. Therefore, the results are liable to differ to some degree from those that would have been obtained if every single household had been covered. Some of the differences will be systematic, in that lower proportions of certain types of household respond than of others. That aspect is discussed in 'Response to the survey' and 'Weighting'. This section discusses the effect of sampling variability; in other words, the effect of differences in expenditure and income between the households in the sample and in the whole population that arise from random chance.

The degree of variability will depend on the sample size and how widely particular categories of expenditure (or income) vary between households. The sampling variability is smallest for the average expenditure of large groups of households on items purchased frequently and when the level of spending does not vary greatly between households. Conversely, it is largest for small groups of households, and for items purchased infrequently or for which expenditure varies considerably between households. A numerical measure of the likely magnitude of such differences (between the sample estimate and the value of the entire population) is provided by the quantity known as the standard error.

The calculation of standard errors takes into account the fact that the LCF sample is drawn in two stages: first a sample of areas (primary sampling units), then a sample of addresses within each of these areas. The main features of the sample design are described in 'Description of the survey'. The calculation also takes account of the effect of weighting. The two-stage sample increases sampling variability slightly, but the weighting reduces it for some items.

Standard errors for detailed expenditure items are presented in relative terms in [table A1 \(153.5 Kb Excel sheet\)](#) (standard error as a percentage of the average to which it refers). As the calculation of full standard errors is complex, this is the only table where they are shown. Tables B2 and B3 in this section show the design factor (DEFT), a measure of the efficiency of the survey's sample design. The DEFT is calculated by dividing the full standard error by the standard error that would have applied if the survey had used a simple random sample.

Further standard errors are calculated for the figures and tables in the trends chapter. Figures have been deflated to 2013 prices using the Consumer Prices Index (CPI), using indices specific to each major COICOP category. This is with the exception of specific items to which the CPI is not applicable: for mortgage interest payment and council tax payments the Retail Prices Index (RPI) was used. For the deflated figures using the CPI, standard errors have been calculated. For more information of the calculation of standard errors see the '[Living Costs and Food Survey Technical Report \(529.7 Kb Pdf\)](#)'.

**Table B2: Percentage standard errors of expenditure of households and number of recording households, 2013**

United Kingdom

| Commodity or service                 | Percentage standard error                         |               |                             |             | Households recording expenditure |                              |
|--------------------------------------|---|---------------|-----------------------------|-------------|----------------------------------|------------------------------|
|                                      | Weighted average weekly household expenditure (£) | Simple method | Design factor method (DEFT) | Full method | Recording households in sample   | Percentage of all households |
| All expenditure groups               | 444.30  | 1.0           | 1.1                         | 1.2         | 5,144                            | 100                          |
| Food and non-alcoholic drinks        | 58.80   | 0.9           | 1.1                         | 1.1         | 5,114                            | 99                           |
| Alcoholic drink, tobacco & narcotics | 12.00   | 2.3           | 1.0                         | 2.3         | 3,217                            | 63                           |
| Clothing and footwear                | 22.60   | 2.4           | 1.1                         | 2.6         | 3,326                            | 65                           |
| Housing, fuel and power              | 74.40   | 1.3           | 1.2                         | 1.6         | 5,133                            | 100                          |
| Household goods and services         | 33.10   | 3.4           | 1.0                         | 3.5         | 4,749                            | 92                           |
| Health                               | 6.20  | 6.2           | 0.9                         | 5.6         | 2,724                            | 53                           |
| Transport                            | 70.40   | 2.0           | 1.0                         | 2.1         | 4,455                            | 87                           |
| Communication                        | 14.50   | 1.1           | 1.1                         | 1.2         | 4,920                            | 96                           |
| Recreation and culture               | 63.90   | 2.4           | 1.1                         | 2.6         | 5,092                            | 99                           |
| Education                            | 8.80  | 12.2          | 1.5                         | 17.9        | 313                              | 6                            |
| Restaurants and hotels               | 40.40   | 1.8           | 1.1                         | 1.9         | 4,435                            | 86                           |
| Miscellaneous goods and services     | 39.10   | 2.1           | 1.0                         | 2.1         | 5,035                            | 98                           |

Source: Office for National Statistics

**Table B3: Percentage standard errors of income of households and number of recording households, 2013**

United Kingdom

| Source of income   | Percentage standard error                         |               |                      |             | Households recording income    |                              |
|--|---|---------------|----------------------|-------------|--------------------------------|------------------------------|
|  | Weighted average weekly household expenditure (£) | Simple method | Design factor (DEFT) | Full method | Recording households in sample | Percentage of all households |
| Gross household income                                       | 739.00  | 1.3           | 1.1                  | 1.3         | 5,130                          | 100                          |
| Wages and salaries   | 481.00  | 1.9           | 1.0                  | 1.9         | 2,980                          | 58                           |
| Self-employment  | 54.00   | 6.4           | 0.9                  | 5.9         | 648                            | 13                           |
| Investments  | 25.00   | 8.0           | 1.1                  | 8.7         | 2,325                          | 45                           |
| Annuities and pensions (other than social security benefits) | 67.00   | 3.7           | 0.8                  | 3.0         | 1,770                          | 35                           |
| Social security benefits                                     | 102.00  | 1.6           | 0.7                  | 1.1         | 3,684                          | 72                           |
| Other sources  | 9.00  | 7.7           | 1.1                  | 8.4         | 638                            | 12                           |

Source: Office for National Statistics

## Using the standard errors – calculating confidence intervals

A common use of standard errors is in calculating confidence intervals. Confidence intervals can be used to estimate a range within which the true population value should lie in. The 95% interval can be taken to mean that there is only a 5% chance that the true population value lies outside the 95% confidence interval (or that 95 times out of 100 the true population value will fall within the interval).

The following formulae are used to calculate a 95% confidence interval:

Lower limit:  $\text{mean} - 1.96 \times (\text{percentage standard error} \div 100) \times \text{mean}$

Upper limit:  $\text{mean} + 1.96 \times (\text{percentage standard error} \div 100) \times \text{mean}$

For example, using the expenditure on food and non-alcoholic drinks to illustrate this calculation; the average expenditure is £58.80 and the corresponding percentage standard error (full method) is 1.1% (rounded to one decimal place). The limits for a 95% confidence interval are then:

Lower limit:  $58.80 - 1.96 \times (1.1 \div 100) \times 58.80 = £57.60$

Upper limit:  $58.80 + 1.96 \times (1.1 \div 100) \times 58.80 = £60.00$

Similar calculations can be carried out for other estimates of expenditure and income. The 95% confidence intervals for main expenditure categories are given in table B4.

**Table B4: 95 per cent confidence intervals for average household expenditure, 2013**

United Kingdom

| Commodity or service                 | Weighted average weekly household expenditure (£) | 95% confidence interval |             |
|--------------------------------------|---|-------------------------|-------------|
|                                      |   | Lower limit             | Upper limit |
| All expenditure groups               | 444.30  | 434.00                  | 454.60      |
| Food and non-alcoholic drinks        | 58.80   | 57.60                   | 60.00       |
| Alcoholic drink, tobacco & narcotics | 12.00   | 11.50                   | 12.60       |
| Clothing and footwear                | 22.60   | 21.50                   | 23.70       |
| Housing, fuel and power              | 74.40   | 72.10                   | 76.70       |
| Household goods and services         | 33.10   | 30.90                   | 35.40       |
| Health                               | 6.20  | 5.50                    | 6.90        |
| Transport                            | 70.40   | 67.50                   | 73.30       |
| Communication                        | 14.50   | 14.10                   | 14.80       |
| Recreation and culture               | 63.90   | 60.70                   | 67.20       |
| Education                            | 8.80  | 5.70                    | 11.90       |
| Restaurants and hotels               | 40.40   | 38.80                   | 41.90       |
| Miscellaneous goods and services     | 39.10   | 37.50                   | 40.80       |

Source: Office for National Statistics

## Using the standard errors – statistical significance testing

Statistical significance testing indicates the probability with which we are confident that the difference between the estimates under examination did not occur by chance. Significance testing carried out in the trends chapter is at the 95% level unless otherwise stated. This means the probability that the difference happened by chance is low (1 in 20). For more information of the method used for significance testing see the '[Living Costs and Food Survey Technical Report \(529.7 Kb Pdf\)](#)'.

## 6 . Survey improvements

### Questionnaire review

In order to ensure the LCF questionnaire is up-to-date it is important that questions are regularly reviewed so that relevant changes can be made. Reviewing the questionnaire is a process of continuous improvement. For example, a pilot survey was carried out in 2012 to evaluate further questionnaire improvements. The changes tested in the pilot have been implemented for the 2013 survey year. Questionnaire changes included: the addition of a new breakdown of spending on different types of furniture and package holidays; collection of flight expenditure in the questionnaire rather than the diary; the addition of a section designed to capture expenditure on combined utility packages; and the addition of new questions about mobile phone ownership.

## 7 . Comparison with another source

A useful comparison for LCF estimates is with Household Final Consumption Expenditure (HHFCE) figures published in [Consumer Trends](#) and used in the UK National Accounts.

This section compares estimates from the LCF with the estimates used in the UK National Accounts. The Household Final Consumption Expenditure estimates use a number of administrative and survey sources, of which the LCF survey is one. As a result differences occur in the estimates published, because of sources and concepts.

For example, conceptual differences can be found for housing expenditure. As explained in [Chapter 2: Housing expenditure](#), Family Spending only includes rental costs in the housing, fuel and power category, whilst mortgage costs are included in the other expenditure items category. In contrast, National Accounts housing data in the housing, fuel and power category includes a value for rentals paid by owner occupiers in order to maintain international comparability. This is a theoretical cost that home owners would have to pay to rent their own home. By international convention, mortgage costs are excluded from National Accounts Household Final Consumption Data.

According to Family Spending data, housing, water, electricity, gas and other fuels was the category where the value of spending increased most over the period 2006 to 2013 (without adjusting for inflation, an increase of 36%). Despite the conceptual differences between the two outputs, National Accounts household expenditure estimates for the same category also show a large increase (54%) in spending.

Both National Accounts and [Chapter 4](#) of Family Spending provide estimates over time to remove the effects of inflation and to enable figures for different years to be compared on a like-for-like basis. The National Accounts figures adjusted for inflation are known as "volume measures". The volume measures of National Accounts show that housing expenditure has increased 7%, while the prices of goods and services in this category, measured as an implied deflator, have increased by 44% between 2006 and 2013. Adjusted for inflation, Family Spending shows an increase in housing expenditure of 12% over the same period (from £65.40 to £74.40).

A similar pattern can be seen in the food and non-alcoholic drinks category in National Accounts data, showing a reduction in volume (3%) and an increase in the monetary value of spending by around 35% since 2006. Family Spending reported a 21% increase in spending on food since 2006 (from £46.30 to 58.80, not adjusted for inflation). These figures indicate relatively little scope or willingness to cut back on these items, despite significant price rises in some goods and services and the recession of 2008/2009.

Family Spending shows that transport spending at 2013 prices fell from £80.50 in 2006 to £70.40 in 2013, a decrease of 14%. The National Accounts household expenditure on transport shows that spending adjusted for inflation fell by 2%. Prices in this category, again measured as an implied deflator, increased by 40% over the period which suggests that, as with food and non-alcoholic beverages, the rise in prices influenced households' decisions to reduce their purchases.

## 8 . Definitions

### Household

A household comprises of one person living alone or a group of people (not necessarily related) living at the same address who:

- share cooking facilities
- and share a living room or sitting room or dining area

Resident domestic servants are included. The members of a household are not necessarily related by blood or marriage. As the survey covers only private households, people living in hostels, hotels, boarding houses or institutions are excluded. Households are included if some or all members are not British subjects, however, information is not collected from households containing members of the diplomatic service of another country or members of the United States armed forces.

## Retired households

Retired households are those where the household reference person is retired. The household reference person is defined as retired if they have reached state pension age and are economically inactive. Since May 2010 the state pension age for women has been increasing gradually to be in line with the male pension age of 65 by 2018. Therefore, if for example a male household reference person is aged over 65 years of age, but working part-time or waiting to take up a part-time job, this household would not be classified as a retired household. For analysis purposes two categories are used in this report:

- 'A retired household mainly dependent upon state pensions' is one in which at least three-quarters of the total income of the household is derived from national insurance retirement and similar pensions, including housing and other benefits paid in supplement to or instead of such pensions. The term 'national insurance retirement and similar pensions' includes national insurance disablement and war disability pensions, and income support in conjunction with these disability payments.
- 'Other retired households' are retired households which do not fulfil the income conditions of 'retired household mainly dependent upon state pensions' because more than a quarter of the households income derives from other sources. For example, occupational retirement pensions and/or income from investments, or annuities.

## Household reference person (HRP)

From 2001/02 the concept of household reference person (HRP) was adopted on all government-sponsored surveys in place of head of household. The household reference person is the householder who:

- owns the household accommodation
- is legally responsible for the rent of the accommodation
- has the household accommodation as an emolument or perquisite
- has the household accommodation by virtue of some relationship to the owner who is not a member of the household

If there are joint householders the household reference person will be the one with the higher income. If the income is the same, then the eldest householder is taken.

## Members of household

In most cases the members of co-operating households are easily identified as the people who satisfy the conditions in the definition of a household (see above), and are present during the record-keeping period. However, difficulties of definition arise where people are temporarily away from the household or else spend their time between two residences. The following rules apply in deciding whether or not such persons are members of the household:

- Married people living and working away from home for any period are included as members, provided they consider the sampled address to be their main residence. In general, other people (such as relatives, friends and boarders) who are either temporarily absent or who spend their time between the sampled address and another address, are included as members if they consider the sampled address to be their main residence. However, there are exceptions which override the subjective main residence rule:
- Children under 16 years of age away at school are included as members.
- Older people receiving education away from home, including children aged 16 and 17, are excluded unless they are at home for all or most of the record-keeping period.
- Visitors staying temporarily with the household, and others who have been in the household for only a short time are treated as members, provided they will be staying with the household for at least one month from the start of record-keeping.

## **Household composition**

A consequence of these definitions is that household compositions quoted in this report include some households where certain members are temporarily absent, for example, a 'two-adult and children' household where one parent is temporarily away from home.

### **Adult**

In the report, people who have reached the age of 18 are classed as adults. In addition, those aged 16 to 18 who are not in full-time education, or who are married, are classed as adults.

### **Children**

In the report, people who are under 18 years of age, in full-time education and have never been married are classed as children.

However, in the definition of clothing, clothing for people aged 16 years and over is classified as clothing for men and women; clothing for those aged 5 to 15 as clothing for boys and girls; and clothing for those under five as babies clothing.

## **Main Diary Keeper (MDK) (or main shopper)**

The MDK is the person in the household who is normally responsible for most of the food shopping. This includes people who organise and pay for the shopping although they do not physically do the shopping themselves.

### **Rules for identifying the main diary keeper when the household cannot identify this for themselves :**

Rule 1: Establish who in the household has the highest income.

Rule 2: If each household member has the same income then find out who is the oldest.

If a paid domestic servant normally performs these tasks then the MDK is the person responsible for seeing that the domestic servant does the shopping.

No address may be coded as a full or partial interview if the diary of the MDK is missing or incomplete.

## Spenders

Household members aged 16 and over, excluding those who for special reasons are not capable of keeping diary record-books, are described as spenders. It is unimportant whether or not the individual earns or spends money. If a spender is absent for less than 7 days from the interviewers' initial contact, the interviewer can proceed with the interview.

## Absent spenders

If a spender is absent for longer than 7 days they are defined as an 'absent spender'. Absent spenders do not keep a diary and consequently are not eligible for the voucher that is paid to diary keepers.

## Non-spenders

If a household member is completely incapable of contributing to the survey by answering questions or keeping a diary, then they are defined as a 'non-spender'. However, incapable people living on their own cannot be designated as non-spenders as they comprise the whole expenditure unit. If this is the case, the interviewer should enlist the help of the person outside of the household who looks after their interests. If there is no-one able or willing to help, the address is coded as incapable.

## Economically active

These are people aged 16 and over who fall into the following categories:

- Employees at work – those who at the time of interview were working full-time or part-time as employees or were away from work on holiday. Part-time work is defined as normally working 30 hours a week or less (excluding meal breaks) including regularly worked overtime.
- Employees temporarily away from work – those who, at the time of interview, had a job but were temporarily absent due to, for example, illness, temporary lay-off, or strike.
- Government supported training schemes – those participating in government programmes and schemes who, in the course of their participation, receive training such as Employment Training, and including those who are also employees in employment.
- Self-employed – those who, at the time of interview, said they were self-employed.
- Unemployed – those who, at the time of interview, were out of employment and have sought work within the last four weeks and were available to start work within two weeks, or were waiting to start a job already obtained.
- Unpaid family workers – those working unpaid for their own or a relative's business. In this report, unpaid family workers are included under economically inactive in analyses by economic status ( [tables A17 \(69 Kb Excel sheet\)](#) and [B5 \(70.5 Kb Excel sheet\)](#) ) because insufficient information is available to assign them to an economic status group.

## Economically inactive

- Retired – people who have reached national insurance retirement age and are not economically active. Since May 2010 the female state pension age has been gradually increasing to align with the male pension age of 65 by 2018.
- Unoccupied – people under national insurance retirement age who are not working, nor actively seeking work. This category includes certain self-employed people such as mail order agents and baby-sitters who are not classified as economically active.

#### National Statistics Socio-economic Classification (NS-SEC)

From 2001 the National Statistics Socio-economic Classification (NS-SEC) was adopted for all official surveys, in place of Social Class based on Occupation (SC) and Socio-economic Groups (SEG). NS-SEC is itself based on the Standard Occupational Classification 2010 (SOC2010) and details of employment status. Although NS-SEC is an occupation-based classification, there are procedures for classifying those not in work.

The main categories used for analysis in Family Spending are:

1. Higher managerial and professional occupations, sub-divided into: 1.1 Large employers and higher managerial occupations 1.2 Higher professional occupations
2. Lower managerial and professional occupations
3. Intermediate occupations
4. Small employers and own account workers
5. Lower supervisory and technical occupations
6. Semi-routine occupations
7. Routine occupations
8. Never worked and long-term unemployed
9. Students
10. Occupation not stated
11. Not classifiable for other reasons

The long-term unemployed are defined as those unemployed and seeking work for 12 months or more. Members of the armed forces, who were assigned to a separate category in social class, are included within the NS-SEC classification. Individuals that have retired within the last 12 months are classified according to their employment. Other retired individuals are assigned to the 'Not classifiable for other reasons' category.

### **Socio-economic Classification (SE-SEC) regions**

These are the same areas as UK regions and countries.

## Urban and rural areas

This classification introduced in 2005/06 replaces the previous Department for Transport, Local Government and the Regions (DTLR) 1991 Census-based urban and rural classification, which was used in previous editions of Family Spending. The new classification is applied across Great Britain and is an amalgamation of the Rural and Urban Classification 2004 for England and Wales and the Scottish Executive Urban Rural Classification. These classifications are based on 2001 Census data and have been endorsed as the standard National Statistics Classifications for identifying urban and rural areas across GB. In broad terms, an area is defined as urban or rural depending on whether the population falls inside a settlement of 10,000 or more. For further details concerning these classifications please refer to the [Rural/Urban Definition and LA Classification](#) on the Office for National Statistics (ONS) website.

## Expenditure

Any definition of expenditure is to some extent arbitrary, and the inclusion of certain types of payment is a matter of convenience or convention depending on the purpose for which the information is to be used. In the tables in this report, total expenditure represents current expenditure on goods and services. Total expenditure, defined in this way, excludes those recorded payments that are really savings or investments: for example, purchases of national savings certificates, life assurance premiums, and contributions to pension funds. Similarly, income tax payments, national insurance contributions, mortgage capital repayments and other payments for major additions to dwellings are excluded. Expenditure data are collected in the diary record-book and in the household schedule. Informants are asked to record in the diary any payments made during the 14 days of record-keeping, whether or not the goods or services paid for have been received. Certain types of expenditure which are usually regular though infrequent, such as insurance, licences and season tickets, and the periods to which they relate, are recorded in the household schedule as well as regular payments such as utility bills.

The cash purchase of motor vehicles is also entered in the household schedule. In addition, expenditure on some items purchased infrequently (thereby being subject to high sampling errors) has been recorded in the household schedule using a retrospective recall period of either 3 or 12 months. These items include carpets, furniture, holidays and some housing costs. In order to avoid duplication, all payments shown in the diary record-book which relate to items listed in the household or income schedules are omitted in the analysis of the data, irrespective of whether there is a corresponding entry on the latter schedules. Amounts paid in respect of periods longer than a week are converted to weekly values.

Expenditure tables in this report show the 12 main commodity groups of spending and these are broken down into items which are numbered hierarchically (see 'Changes to definitions, 1991 to 2013' can be found in the the '[Living Costs and Food Survey Technical Report \(529.7 Kb Pdf\)](#)' which details a major change to the coding frame used from 2001/02). [Table A1 \(153.5 Kb Excel sheet\)](#) shows a further breakdown in the items themselves into components which can be separately identified. The items are numbered as in the main expenditure tables, and the average weekly household expenditure and percentage standard error is shown against each item or component.

Qualifications which apply to this concept of expenditure are described in the following paragraphs:

- **Goods supplied from a household's own shop or farm**

Spenders are asked to record and give the value of goods obtained from their own shop or farm, even if the goods are withdrawn from stock for personal use without payment. The value is included as expenditure.

- **Hire purchase and credit sales agreements, and transactions financed by loans repaid by instalments**

Expenditure on transactions under hire purchase or credit sales agreements, or financed by loans repaid by instalments, consists of all instalments that are still being paid at the date of interview, together with down payments on commodities acquired within the preceding three months. These two components (divided by the periods covered) provide the weekly averages which are included in the expenditure on the separate items given in the tables in this report.

- **Club payments and budget account payments, instalments through mail order firms and similar forms of credit transaction**

When goods are purchased by forms of credit other than hire purchase and credit sales agreement, the expenditure on them may be estimated either from the amount of the instalment which is paid or from the value of the goods which are acquired. Since the particular commodities to which the instalment relates may not be known, details of goods ordered through, for example, clubs or mail order firms, during the month prior to the date of interview, are recorded in the household schedule. The weekly equivalent of the value of the goods is included in the expenditure on the separate items given in the tables in this report. This procedure has the advantage of enabling club transactions to be related to specific articles. Although payments into clubs, etc. are shown in the diary record-book, these entries are excluded from expenditure estimates.

- **Credit card transactions**

From 1988 purchases made by credit card or charge card have been recorded in the survey on an acquisition basis rather than the formerly used payment basis. Thus, if a spender acquired an item (by use of credit/charge card) during the two week survey period, the value of the item would be included as part of expenditure in that period whether or not any payment was made in this period to the credit card account. Payments made to the card account are ignored. However any payment of credit/charge card interest is included in expenditure if made in the two week period.

- **Income tax**

Amounts of income tax deducted under the Pay As You Earn (PAYE) scheme or paid directly by those who are employers or self-employed are recorded (together with information about tax refunds). For employers and the self-employed the amounts comprise the actual payments made in the previous 12 months and may not correspond to the tax due on the income arising in that period, for example if no tax has been paid but is due or if tax payments cover more than one financial year. However, the amounts of tax deducted at source from some of the items which appear in the Income Schedule are not directly available. Estimates of the tax paid on bank and building society interest and amounts deducted from dividends on stocks and shares are therefore made by applying the appropriate rates of tax. In the case of income tax paid at source on pensions and annuities, similar adjustments are made. These estimates mainly affect the relatively few households with high incomes from interest and dividends, and households including someone receiving a pension from previous employment.

- **Rented dwellings**

Expenditure on rented dwellings is taken as the sum of expenditure on a number of items such as rent, council tax, and water rates. For local authority tenants the expenditure is gross rent less any rebate (including rebate received in the form of housing benefit), and for other tenants it is gross rent less any rent allowance received under statutory schemes including the Housing Benefit Scheme. Rebate on council tax or rates (Northern Ireland) is deducted from expenditure on council tax or rates. Receipts from sub-letting part of the dwelling are not deducted from housing costs but appear (net of the expenses of the sub-letting) as investment income.

- **Rent-free dwellings**

Rent-free dwellings are those owned by someone outside the household and where either no rent is charged or the rent is paid by someone outside the household. Households whose rent is paid directly to the landlord by the DWP do not live rent-free. Payments for council tax for example are regarded as the cost of housing. Rebate on rates (Northern Ireland)/council tax/water rates (Scotland) (including rebate received in the form of housing benefit), is deducted from expenditure on rates/council tax/water rates. Receipts from sub-letting part of the dwelling are not deducted from housing costs but appear (net of the expenses of the sub-letting) as investment income.

- **Owner-occupied dwellings**

In the LCF, payments for water rates, ground rent, fuel, maintenance and repair of the dwelling, among other items, are regarded as the cost of housing. Receipts from letting part of the dwelling are not deducted from housing costs but appear (net of the expenses of the letting) as investment income. Mortgage capital repayments and amounts paid for the outright purchase of the dwelling or for major structural alterations are not included as housing expenditure, but are entered under 'other items recorded', as are council tax, rates (Northern Ireland) and mortgage interest payments. Structural insurance is included in 'miscellaneous goods and services'.

- **Second-hand goods and part-exchange transactions**

The survey expenditure data are based on information about actual payments and therefore include payments for second-hand goods and part-exchange transactions. New payments only are included for part-exchange transactions, that is the costs of the goods obtained less the amounts allowed for the goods which are traded in. Receipts for goods sold or traded in are not included in income.

- **Business expenses**

The survey covers only private households and is concerned with payments made by members of households as private individuals. Spenders are asked to state whether expenditure that has been recorded on the schedules includes amounts that will be refunded as expenses from a business or organisation or that will be entered as business expenses for income tax purposes, for example rent, telephone charges, travelling expenses and meals out. Any such amounts are deducted from the recorded expenditure.

## **Income**

The standard concept of income in the survey is, as far as possible, that of gross weekly cash income current at the time of interview, that is before the deduction of income tax actually paid, national insurance contributions and other deductions at source. However, for a few tables a concept of disposable income is used, defined as gross weekly cash income less the statutory deductions and payments of income tax (taking refunds into account) and national insurance contributions. Analysis in Chapter 3 of this report and some other analyses of LCF data use 'equivalisation' of incomes: in other words adjustment of household income to allow for the different size and composition of each household. For more information see Chapter 3. The cash levels of certain items of income (and expenditure) recorded in the survey by households receiving supplementary benefit were affected by the Housing Benefit Scheme introduced in stages from November 1982. From 1984 housing expenditure is given on a strictly net basis and all rent/council tax rebates and allowances and housing benefit are excluded from gross income.

Although information about most types of income is obtained on a current basis, some data, principally income from investment and from self-employment, are estimated over a 12-month period.

For the annual publication of the results in the LCF Family Spending report, the following are excluded from the assessment of income:

- Money received by one member of the household from another (for example housekeeping money, dress allowance, children's pocket money) other than wages paid to resident domestic servants.
- Withdrawals of savings, receipts from maturing insurance policies, proceeds from sale of financial and other assets (such as houses, cars, and furniture), winnings from betting, lump-sum gratuities and windfalls such as legacies.
- The value of educational grants and scholarships not paid in cash.
- The value of income in kind, including the value of goods received free and the abatement in cost of goods received at reduced prices, and of bills paid by someone who is not a member of the household.
- Loans and money received in repayment of loans.

Details are obtained of the income of each member of the household. The income of the household is taken to be the sum of the incomes of all its members. The information does not relate to a common or a fixed time period. Items recorded for periods greater than a week are converted to a weekly value.

Particular points relating to some components of income are as follows:

- **Wages and salaries of employees**

The normal gross wages or salaries of employees are taken to be their earnings. These are calculated by adding to the normal 'take home' pay amounts deducted at source, such as income tax payments, national insurance contributions and other deductions (for example payments into firm social clubs, superannuation schemes, works transport, and benevolent funds). Employees are asked to give the earnings actually received including bonuses and commission the last time payment was made and, if different, the amount usually received. It is the amount usually received that is regarded as the normal take-home pay. Additions are made so as to include in normal earnings the value of occasional payments, such as bonuses or commissions received quarterly or annually. One of the principal objects in obtaining data on income is to enable expenditure to be classified in ranges of normal income. Average household expenditure is likely to be based on the long-term expectations of the various members of the household as to their incomes rather than be altered by short-term changes affecting individuals. Hence, if employees have been away from work without pay for 13 weeks or less, they are regarded as continuing to receive their normal earnings instead of social security benefits, such as unemployment or sickness benefit, that they may be receiving. Otherwise, normal earnings are disregarded and current short-term social security benefits taken instead. Wages and salaries include any earnings from subsidiary employment as an employee and the earnings of HM Forces.

- **Income from self-employment**

Income from self-employment covers any personal income from employment other than as an employee: for example, as a sole trader, professional or other person working on his own account or in partnership, including subsidiary work on his own account by a person whose main job is as an employee. It is measured from estimates of income or trading profits, after deduction of business expenses but before deduction of tax, over the most recent 12-month period for which figures can be given. Should either a loss have been made or no profit, income would be taken as the amounts drawn from the business for own use or as any other income received from the job or business. People working as mail order agents or baby-sitters, with no other employment, have been classified as unoccupied rather than as self-employed, and the earnings involved have been classified as earnings from 'other sources' rather than self-employment income.

- **Income from investment**

Income from investments or from property, other than that in which the household is residing, is the amount received during the 12 months immediately prior to the date of the initial interview. It includes receipts from sub-letting part of the dwelling (net of the expenses of the sub-letting). If income tax has been deducted at source the gross amount is estimated by applying a conversion factor during processing.]

- **Social security benefits**

Income from social security benefits does not include the short-term payments such as unemployment or sickness benefit, received by an employee who has been away from work for 13 weeks or less, and who is therefore regarded as continuing to receive his normal earnings as described within section labeled 'Definitions'.

## Quantiles

The quantiles of a distribution divide it into a number of equal parts; each of which contains the same number of households. In Family Spending, quantiles are applied to both household expenditure and income distributions.

For example, the median of a distribution divides it into two equal parts, so that half the households in a distribution of household income will have income more than the median, and the other half will have income less than the median. Similarly, quartiles, quintiles and deciles divide the distribution into four, five and ten equal parts respectively.

Most of the analysis in Family Spending is done in terms of quintile groups and decile groups.

In the calculation of quantiles for this report, zero values are counted as part of the distribution.

## **Changes in definitions**

Changes in definitions from 1991 to 2013 can be found in the the '[Living Costs and Food Survey Technical Report \(529.7 Kb Pdf\)](#)'. Changes to definitions made prior to 1991 can be found in earlier editions of Family Spending.

## **9 . Headings used for identifying 2013 income information**

## Source of income

a. Wages and salaries

- Normal 'take-home' pay from main employment
- 'Take-home' pay from subsidiary employment
- Employees' income tax deduction
- Employees' National Insurance contribution
- Superannuation contributions deducted from pay
- Other deductions

Explanatory notes

(i) In the calculation of household income in this report, where an employee has been away from work without pay for 13 weeks or less his normal wage or salary has been used in estimating his total income instead of social security benefits, such as unemployment or sickness benefits that he may have received. Otherwise such benefits are used in estimating total income (see notes at reference e).

(ii) Normal income from wages and salaries is estimated by adding to the normal 'take-home' pay deductions made at source last time paid, together with the weekly value of occasional additions to wages and salaries (see Income in 'Definitions').

(iii) The components of wages and salaries, for which figures are separately available, amount in total to the normal earnings of employees, regardless of the operation of the 13 week rule in note (i) above. Thus the sum of the components listed here does not in general equal the wages and salaries figure in tables of this report.

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b. Self-employment

- Income from business or profession, including subsidiary self-employment

Explanatory notes

(i) The earnings or profits of a trade or profession, after deduction of business expenses but before deduction of tax.

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c. Investments

- Interest on building society shares and deposits
  - Interest on bank deposits and savings accounts, including National Savings Bank
  - Interest on ISAs
  - Interest on Gilt-edged stock and War Loans
  - Interest and dividends from stocks, shares, bonds, trusts, debentures and other securities Rent or income from property, after deducting expenses but inclusive of income tax (including receipts from letting or sub-letting part of own residence, net of the expenses of the letting or sub-letting)
  - Other unearned Income
- 

d. Annuities and pensions, other than social security

- Annuities and income from trust or covenant
  - Pensions from previous employers
  - Personal pensions
- 

e. Benefits

- Child benefit
- Guardian's allowance
- Carer's allowance (formerly Invalid care allowance)
- Retirement pension (National Insurance) or old person's pension credit
- Widow's pension/bereavement allowance or widowed parent's allowance
- War disablement pension or war widow/widower's pension
- Severe disablement allowance

- Care component of disability living allowance
- Mobility component of disability living allowance
- Attendance allowance
- Job seekers allowance
- Winter fuel allowance
- Cold Weather Payment
- Income support
- Working tax credit
- Child tax credit
- Incapacity benefit
- Statutory sick pay (from employer)
- Industrial injury disablement benefit
- Maternity allowance
- Statutory maternity pay
- Statutory paternity pay
- Statutory adoption pay
- Health in pregnancy grant
- Any other benefit including lump sums and grants
- Social security benefits excluded from Income calculation by 13 week rule

#### Explanatory notes

(i) The calculation of household income in this report takes account of the 13 week rule described at reference a, note (i).

(ii) The components of social security benefits, for which figures are separately available, amount in total to the benefits received in the week before interview. That is to say, they include amounts that are discounted from the total by the operation of the 13 week rule in note (i). Thus the sum of the components listed here differs from the total of social security benefits used in the income tables of this report.

(iii) Housing Benefit is treated as a reduction in housing costs and not as income.

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#### f. Other sources

- Married person's allowance from husband/wife temporarily away from home
  - Alimony or separation allowances; allowances for foster children, allowances from members of the Armed Forces or Merchant Navy, or any other money from friends or relatives, other than husbands outside the household
  - Benefits from trade unions, friendly societies etc. other than pensions
  - Value of meal vouchers
  - Earnings from intermittent or casual work over 12 months, not included in a or b above
  - Student loans and money scholarships received by persons aged 16 and over and aged under 16
  - Other income for children under 16 e.g. from spare time jobs or income from Trusts or investments
- 

Source: Office for National Statistics

## 10 . Household characteristics and index to tables

[Table B5 \(70.5 Kb Excel sheet\)](#) and [Table B6 \(87 Kb Excel sheet\)](#) show characteristics of households and persons.

[Table B7 \(55.5 Kb Excel sheet\)](#) provides an index to tables in this report and previous editions of Family Spending.

## 11. Background notes

### 1. Symbols and conventions used in Family Spending 2014 edition

[ ] Figures should be used with extra caution because they are based on fewer than 20 reporting households.

.. The data is suppressed if the unweighted sample counts are less than 10 reporting households.

- No figures are available because there are no reporting households.

Rounding: Individual figures have been rounded independently. The sum of component items does not therefore necessarily add to the totals shown.

Averages: These are averages (means) for all households included in the column or row, and unless specified, are not restricted to those households reporting expenditure on a particular item or income of a particular type.

Period covered: Calendar year 2013 (1 January 2013 to 31 December 2013).

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