Office for
National Statistics

Living Costs and Food Survey

User Guide Volume A - Introduction

January – December 2009

Great Britain & Northern Ireland

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User Guide
Volume A- Introduction

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If you have any queries relating to the 2009 LCF database please contact the customer response team on 01633 45 5678 or socialsurveys@ons.gov.uk

Introduction

This volume provides a brief overview of the Living Costs and Food Survey User Documentation, together with information on database and survey definitions, as well as background to the 2009 survey. The details it contains are about information resulting from the Living Costs and Food Survey (LCF) for the calendar year January to December 2009.

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Use of the 2009 User Documentation

Explanatory notes on the use of the volumes of the documentation are given in each volume. The following gives a summary only. See 'Definitions' (p25)

Volume A -*Introduction*

Guide to the 2009 User Documentation - This volume begins with a guide to the contents and the use of the User Documentation

The structure of the 2009 database – This section of the volume outlines the different parts of the database and includes a useful flow diagram which gives a pictorial summary of the database structure.

Database definitions - Provides definitions of the terms used both on the flow diagram and in other parts of the documentation.

Volume B – *Household Questionnaire*

The first part of the LCF questionnaire collects information about households; that is to say that the majority of the questions are asked at a household-level, with the household reference person typically responding on behalf of the household as a whole. The household questionnaire includes questions on a range of subjects which are of interest to the survey's users, including family relationships, ethnicity, employment details and the ownership of household durables. It is also the source of all expenditure information not recorded in the diary; principally that which concerns regular payments typically made by all households and large, infrequently purchased items such as vehicles, package holidays and home improvements.

Volume C – *Income Questionnaire*

The income questionnaire follows on immediately from the household questionnaire and collects the key person-level variables used on the survey. The principal components of the LCF income questionnaire are the sections covering income from employment, benefits and assets. These together form an overview of the total income received by each household, as well as each household member individually.

Volumes B and C outline the questions exactly as they appear within the computer-assisted personal interviewing (CAPI) program and are then asked in the LCF interview. The Blaise program ensures that the correct questionnaire routing is followed through the interview and applies range and consistency error checks where necessary. The Blaise-code and translated routing for each individual question in the household and income questionnaires are shown in Volume B and C respectively. This can be used to both trace the conditions under which a particular question or set of questions is asked and also to illustrate the overall flow and interdependence of the LCF interview as a whole.

Volume D - *Expenditure Codes*

In the Living Costs and Food Survey, information about expenditure is collected at a detailed level. It is collected through both the diary (which respondents fill in daily for a fortnight) and through the Household Questionnaire.

Part 1 Expenditure Codes gives an indication of the types of items to be found under each expenditure code and provides a look-up table between the EFS codes (e-codes) and the COICOP-plus c-codes.

Volume E - *The Raw Database*

This volume of the User Documentation describes the raw database. The raw database contains data 'as received' as well as derived variables calculated within the questionnaire. The volume is in three parts, as outlined below.

Part 1 - Raw table definitions
The raw variables are grouped into three data files (or tables); this part of the volume defines these raw files and gives information on the three sources of the data (diary, household and income questionnaire).

Part 2 - Raw variable list
This is a variable list, listing all raw variables in alphabetical order, and including information on the variable name, description and table name. This list allows details of a variable (such as the file in which it is found) to be looked up if the variable name is known. A column is also present to identify variables that are present in the UK Data Archive anonymised dataset.

Part 3 - Raw variable coding frame
This lists coding frames for each of the variables in the questionnaires.

Appendix A – Standard period code

Volume F - *The Derived Database*

This volume of the User Documentation, in four parts, describes the derived database. A summary of anonymisation, particularly in relation to council tax, is also given following the explanatory notes.

Part 1 - Derived table definitions
The derived variables are also grouped into separate files (or tables) and this part of the volume defines these files.

Part 2 - Derived variable descriptions
All derived variables are listed, including information on the variable name, description, file name (i.e. the table in which the variable is held) and coding frame (where relevant). A column is also present to identify variables that are present in the UK Data Archive anonymised dataset.

Part 3 - P-codes
Product codes (or p-codes) are aggregated codes, some at household level and some at person level. Part 3 gives descriptions of these codes as an aid to understanding their structure.

Part 4 - Coding frames
This part of the document contains a list of the coding frames associated with the derived variables, including an index of those most used.

Volumes G – *Derived Variable Flowcharts*

Volume G of the Documentation contains flowcharts and tables that demonstrate how the variables in the database are derived.
Flowcharts for person level, household level, loan transaction and hire purchase transaction variables are included, as well as tables for person level and household level Product Codes. These have been produced on tables rather than flowcharts as they are simply the sum of other variables and do not have any routing to flowchart.

Volumes H *- Database Changes*
Volume H of the Documentation describes the changes that have taken place in the 2009 database compared with 2008.

Part 1 - contains the new raw variables for 2009.

Part 2 - contains 2008 raw variables that have been deleted for 2009.

Part 3 - contains 2008 raw variables that have changed for 2009.

Part 4 - contains new derived variables for 2009.

Part 5 - contains 2008 derived variables that have been deleted for 2009.

Part 6 - contains 2008 derived variables that have changed for 2009.

Part 7 - contains new expenditure codes for 2009.

Part 8 – contains 2008 expenditure codes that have been deleted for 2009.

Part 9 - contains the 2008 expenditure codes amended in 2009.

Part 10 - Major changes, highlights some of the more important definitional changes for 2009.

There are five other items of documentation that can be provided to users (if required):

       The LCF Diary (adult and young person's)
       LCF Interview Prompt Cards
       Household Questionnaire – coding & editing notes and interviewer's instructions
       Income Questionnaire – coding & editing notes and interviewer's instructions
       LCF Diary – coding & editing notes and interviewer's instructions

The Structure of the 2009 database

For definitions of the terms used here, please see Part 3 - Database definitions.

Outline of the structure of the LCF database 2009

In the LCF database, variables are grouped to form a number of different SPSS DATA FILES. The raw files contain data as received and the derived files contain processed data. There are 12 anonymised SPSS data files.   These are:

RAWPER	DVloans_SET86	DV_SET900
RAWHH	DVcredit_SET87	DV_SET89
DVPER	DVhp_SET88	DV_pocketmoney
DVHH	DVdry_SET114	DVbenunit

The attached flow diagram, Outline of the structure of the LCF database, gives an approximation of the location of different categories of data and the flow of data between the files that comprise the database (data flow is shown by the arrows). It should be noted that it gives general flows only and is not definitive.

It can be seen that there are raw data tables relating to diary expenditure, expenditure recorded on household and income questionnaires, credit cards, loans and so on. Definitions of the raw database are to be found in Volume E of the User Documentation.

All derived file names are pre-fixed "DV" and definitions are to be found in Volume F of the User Documentation.

The data flow

For definitions of expenditure relating to loans, credit cards and hire purchase (DVLOANS_SET86, DVCREDIT_SET87 and DVHP_SET88) please see 'Definitions' (p25).

Items recorded in the two week diary are recorded in the raw diary file. At this stage, every separate instance of expenditure by every person is represented by a separate "record" or "row" and is assigned an expenditure code that indicates the type of item purchased and the type of transaction (e.g. cash, credit card, business expense). See Volume D for information on expenditure codes. Data at this level are not provided in the user dataset.

DVDRY_SET114 is the first derived file for the diary data and here the data are more aggregated. Each row represents the total expenditure for week one or week two of the diary keeping period for separate expenditure codes by person: one row represents the total expenditure by that person on that code in week 1 and the other represents the expenditure in week 2.

Following DVDRY_SET114, the diary data that relates to expenditure codes for which data are also collected through the questionnaire are re-directed to DVDRY_SET900 to avoid double counting. They are not used in any further tables.
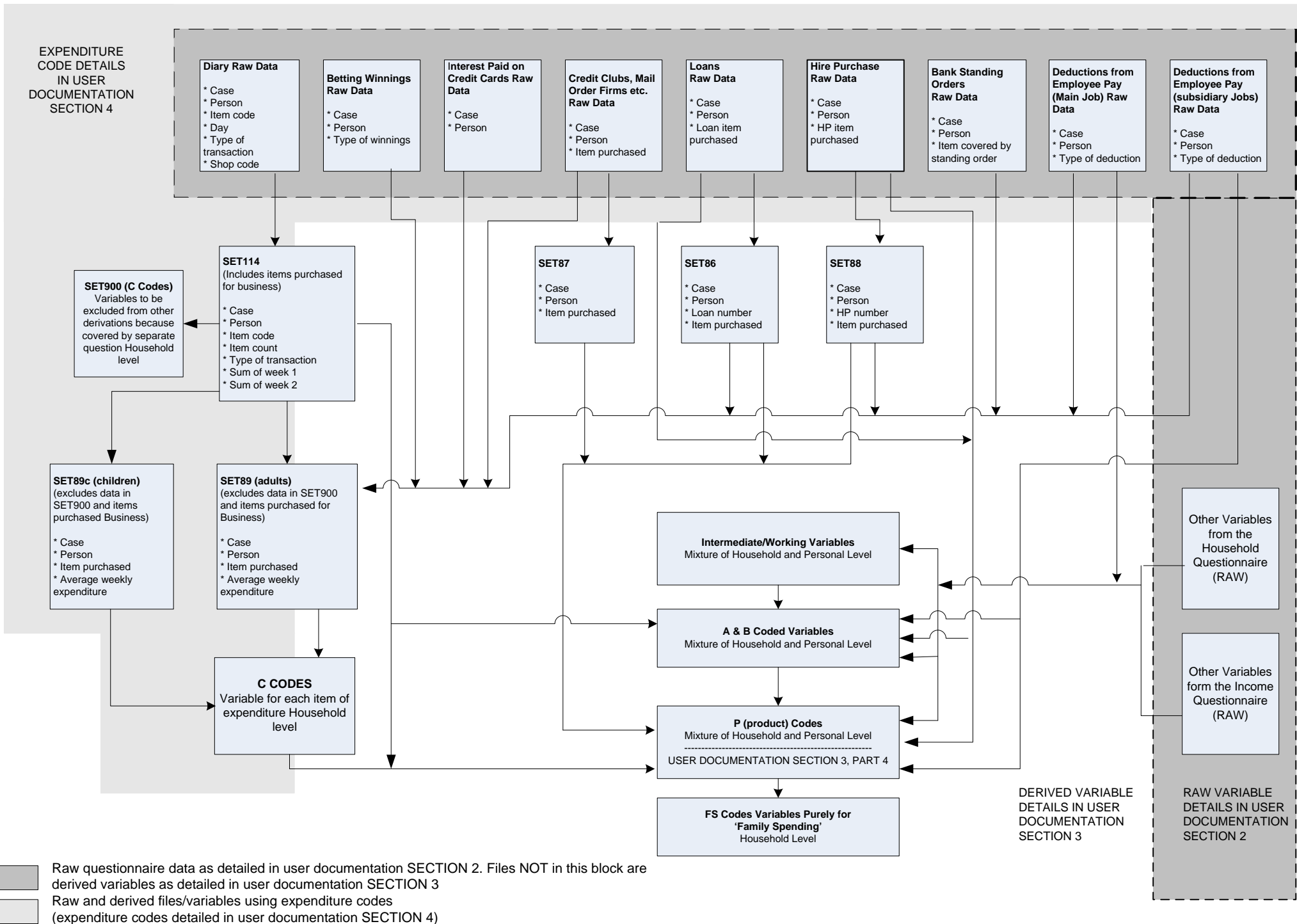
In DVADULT_SET89 (adults) and DVCHILD_SET89C (children), some expenditure relating to the expenditure codes but collected through the questionnaire is added to that collected through the diary. In this file, there is only one row per expenditure code. This represents the average

weekly expenditure for each person on items in that code. Excluded are entries from the diary that relate to types of purchase covered by individual questions in the questionnaire (i.e. the expenditure codes covered by the variables in the table set900). Included is pocket money given to a child who has completed a youth diary. This file feeds into various C-CODE files. In these, the expenditure codes become VARIABLES and are pre-fixed with 'C'. The two SET89 files are merged in the user dataset to form one larger file called DV_SET89.

DV_SET900 gives diary expenditure with data where appropriate for both adults and children, for items which are covered by specific questions in the household questionnaire, and are not used in subsequent derivations.

The four boxes in the centre of the flow-diagram represent various levels of aggregated variables at both household (DVHH) and person (DVPER) level. Information from the questionnaire not previously included (from the two raw data files RAWPER and RAWHH) feed in at this level. Details on p-codes are given in Part 3 of Volume F of the User Documentation.

Outline of the structure of the LCF database

EXPENDITURE CODE DETAILS IN USER DOCUMENTATION SECTION 4

Diary Raw Data
* Case
* Person
* Item code
* Day
* Type of transaction
* Shop code

Betting Winnings Raw Data
* Case
* Person
* Type of winnings

Interest Paid on Credit Cards Raw Data
* Case
* Person

Credit Clubs, Mail Order Firms etc. Raw Data
* Case
* Person
* Item purchased

Loans Raw Data
* Case
* Person
* Loan item purchased

Hire Purchase Raw Data
* Case
* Person
* HP item purchased

Bank Standing Orders Raw Data
* Case
* Person
* Item covered by standing order

Deductions from Employee Pay (Main Job) Raw Data
* Case
* Person
* Type of deduction

Deductions from Employee Pay (subsidiary Jobs) Raw Data
* Case
* Person
* Type of deduction

SET114
(Includes items purchased for business)
* Case
* Person
* Item code
* Item count
* Type of transaction
* Sum of week 1
* Sum of week 2

SET900 (C Codes) Variables to be excluded from other derivations because covered by separate question Household level

SET87
* Case
* Person
* Item purchased

SET86
* Case
* Person
* Loan number
* Item purchased

SET88
* Case
* Person
* HP number
* Item purchased

SET89c (children) (excludes data in SET900 and items purchased Business)
* Case
* Person
* Item purchased
* Average weekly expenditure

SET89 (adults) (excludes data in SET900 and items purchased for Business)
* Case
* Person
* Item purchased
* Average weekly expenditure

C CODES Variable for each item of expenditure Household level

Intermediate/Working Variables Mixture of Household and Personal Level

A & B Coded Variables Mixture of Household and Personal Level

P (product) Codes Mixture of Household and Personal Level

USER DOCUMENTATION SECTION 3, PART 4

FS Codes Variables Purely for 'Family Spending' Household Level

Other Variables from the Household Questionnaire (RAW)

Other Variables form the Income Questionnaire (RAW)

DERIVED VARIABLE DETAILS IN USER DOCUMENTATION SECTION 3

RAW VARIABLE DETAILS IN USER DOCUMENTATION SECTION 2

Raw questionnaire data as detailed in user documentation SECTION 2. Files NOT in this block are derived variables as detailed in user documentation SECTION 3

Raw and derived files/variables using expenditure codes (expenditure codes detailed in user documentation SECTION 4)

Database Definitions

The raw database
The raw database contains data "as received". At this stage, weekly equivalent values have been calculated for questionnaire data (see note on 'weekly equivalent values') and some imputation has been carried out. Care should be taken when using raw data.

The raw database is defined in Volume E of the User Documentation.

The derived database
The derived database consists of variables that have been adjusted in some way in relation to the state in which they were received. This adjustment might involve only a change in name, or it might involve some calculation or aggregation. The variables are grouped in files which have DV in the name. Examples are DVHH or DVLOANS_SET86.

The main variable prefixes and suffixes are briefly described below, but more information on the derived database is given in Volume F of the User Documentation.

'A' and 'B' codes
A-codes and B-codes are aggregate codes, some at household level and some at person level. They are all derived codes and so are listed in Volume F (The Derived Database) of the User Documentation. That they are pre-fixed 'a' or 'b' has no significance.

Anonymisation
Variables which could lead to the identification of a household or an individual are not released to users.

An 'anonymised' version of sensitive raw or derived variables is provided in the user dataset. Variables which have been anonymised can be identified because they are suffixed 'p' (those which are not have been detailed in the appropriate User Documentation). Un-anonymised versions are, in the main, suffixed 'u' and are not accessible to external users of the LCF. Raw diary information is not provided to any external users. The principles of anonymisation, particularly in relation to council tax, are explained in Volume F of the User Documentation. All variables that are released as part of the UK Data Archive anonymised dataset are identified alongside the variable lists in Volumes E and F.

Codes suffixed 'c'
These codes represent the expenditure of children, aged between 7 and 15, who completed a diary. The codes are aggregated to household level. Variables suffixed 'c' are only available as expenditure or product codes e.g. p522c.

Codes suffixed 't'
These codes represent total expenditure by children and adults. They are aggregated to household level by adding the original (adult) variable to those suffixed 'c', (i.e. p522 + p522c = p522t). Variables suffixed 't' are only available as expenditure or product codes.

Codes suffixed 'l'
These codes represent expenditure in nominated large supermarkets. Variables suffixed 'l' are only available as expenditure codes for food, alcohol, petrol, some household goods and regular purchases. For expenditure on clothing the suffixes are 'x' for selected clothing chains, 'y' for large supermarkets and 'z' for charity shops.

Codes suffixed 'w'

These codes represent expenditure for goods and services ordered via the internet. Variables suffixed 'w' are only available as expenditure codes for certain goods and services ordered via the internet.

Coding frame
If a variable has a coding frame, it means that it is allowed to take on only certain permitted values (i.e. the variable is not a 'free' field).

The name of a coding frame is usually the same as the name of the variable using it, however, the more commonly used coding frames have their own names. If a variable has a coding frame it is named in the final column of part 2 of Volume F of the User Documentation. The coding frames are listed in alphabetical order in Part 4 (Coding Frames) of the User Documentation.

Diary
The diary is completed by every spender. It is completed daily for 14 days and all expenditure in that period is recorded.

See 'Expenditure' in 'Definitions' (p29) for further information on the collection of data through the diary.

Expenditure codes
Each expenditure amount collected through the diary and some collected through the questionnaire are given a code which represents the type of item that was purchased. The LCF expenditure codes differ from those used for the Family Expenditure Survey (FES), therefore, care needs to be taken when comparing LCF and FES data. The LCF codes are based on the European standard classification, COICOP (Classification of Individual Consumption by Purpose).

Variables representing household aggregates of the expenditure codes are called C-codes (or C-variables): the variable name is the expenditure code pre-fixed with 'C'. A complete listing of the expenditure codes and more details on their use can be found in Volume D (Expenditure Codes) of the User Documentation.

Filename
The filename is the database reference name of the file, referring to individual SPSS datafiles.

In the LCF database, the data are stored in a number of different files. A single file may contain information on a number of variables that are related to one another in some way, such as the file called 'DVLOANS_SET86' which contains information about loans, or variables which are at the same level of detail, such as DVPER which contains the main person level derived variables.

Conceptually, a file can be perceived as consisting of rows and columns: the 'column headings' are the names of the variables contained in that table and each 'row' represents an individual 'record'. A 'row' or 'record' is uniquely labelled with, for example, case (household number), person (person number), or itemnum (item number). If both case and person are used, such as in the file DVPER, then there is a separate row in the table not only for every household, but for every person within that household.

FS Codes
FS codes are used only for the preparation of the publication 'Family Spending'.

Household questionnaire – Volume B
The Household Questionnaire must be completed for every adult in the household.

The household questionnaire collects information on household characteristics and the characteristics of the individuals living there. Also collected through the Household Questionnaire is information on mortgages, rents, bills, insurance policies, loans, hire purchase, standing orders, season tickets and other irregular expenditure such as that on cars or home improvements. Information on the irregular purchases is often obtained through retrospective recall (i.e. the question may be 'when did you last purchase a .... ?'). Expenditure on retrospective recall is converted to a weekly equivalent value. That is, if the recall period is one year, then the weekly equivalent value is calculated by dividing by 52.

See the Household Questionnaire for details on questions and recall periods.

Income Questionnaire – Volume C
The Income Questionnaire must be completed for EVERY adult in the household. The income questionnaire collects information on the income of the individuals in the household and the household as a whole. See 'Survey Definitions', Volume A, Part 5 for income definitions.

Period codes
Where expenditure amounts are not given on a weekly equivalent basis, a weekly equivalent is calculated by dividing the amount given by the appropriate period. The standard period codes can be found at the end of Part 1 of this volume.

Product codes (p-codes)
Product codes (or p-codes) are aggregate codes, some at household level and some at person level. Part 3 of Volume F of the User Documentation gives descriptions of these codes as an aid to understanding their structure, along with more detailed explanatory notes on their use.

Variable name
The variable name (sometimes just written 'variable' in the documentation) is the database reference name of the variable. Variable descriptions can be found in Part 2 of both Volume E and Volume F of the User Documentation.

Variable description
The variable description is a brief description of the variable. Variable lists ordered by variable description can be found in Part 3 of both Volume E and Volume F of the User Documentation.

Weekly equivalent values (wev) - codes prefixed 'DV'
So that expenditure from different sources can be aggregated, it is necessary for all expenditure amounts to be on an equivalent basis. In order to achieve this, all expenditure amounts collected through the questionnaire are converted to WEEKLY EQUIVALENT VALUES. In the dataset, weekly equivalent values can be identified because they are pre-fixed 'DV'. Information on weekly equivalent values is included as part of the questionnaire. Weekly equivalent values are RAW variables and so are listed in Volume E of the User Documentation.

Description and response rate of the survey

The survey

A household expenditure survey has been conducted each year in the UK since 1957. From 1957 to March 2001 the Family Expenditure and National Food Surveys (FES and 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) – known as the Continuous Population Survey in the public domain. 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. In addition to the LCF, the other surveys initially incorporated into the IHS were the General Household Survey (GHS) and the Omnibus Survey (OMN), (these surveys are now called the General Lifestyle Survey (GLF) and Opinions Survey (OPN) respectively) and the English Housing Survey (EHS). In 2009 the Labour Force Survey (LFS) and the Life Opportunities Survey (LOS) also joined the IHS.

The LCF is a voluntary sample survey of private households. The basic unit of the survey is the household. The LCF (in line with other Government household surveys) uses the harmonised definition of a household: A household comprises one person or a group of people who have the accommodation as their only or main residence and (for a group): *either share at least one meal a day* **or** *share the living accommodation, that is, a living room or sitting room* (see 'Definitions'). The previous definition (used on the FES) differed from the harmonised definition by requiring both common housekeeping **and** a shared living room.

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. Since 1998–99 the results have also included information from simplified diaries kept by children aged between 7 and 15. The effects of including children's expenditure were shown in Appendix F of Family Spending for 1998–99 and again for 1999–2000. Inclusion of the data is now a standard feature of the survey.

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. Paper versions of the computerised household and income questionnaires can be obtained from ONS at the address given in the Introduction.

The survey is continuous, interviews being spread evenly over the year to ensure that seasonal effects are covered. From time to time changes are made to the information sought. 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. An important example is the re-

definition of housing costs for owner occupiers in 1992 (see 'Changes in definitions, 1991 to 2009').

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 Government Office Regions (sub-divided into metropolitan and non-metropolitan areas) and two 2001 Census variables – socio-economic group of 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 Northern Ireland sample is drawn as a random sample of addresses from the Land and Property Services Agency list.

Response to the survey

Great Britain

Around 11,482 households were selected in 2009 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. 5,019 households in Great Britain co-operated fully in the survey in 2009; 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 204 households provided sufficient information to be included as valid responses. The overall response rate for the 2009 LCF was 50 per cent in Great Britain. This represented a 1 percentage point decrease in response from the 2008 survey year.

Details of response are shown in the following table.

Response in 2009 - Great Britain

		No of households or addresses	Percentage of effective sample
i.	Sampled addresses	11,482	-
ii.	Ineligible addresses: businesses, institutions, empty, demolished/derelict	1,198	-
iii.	Extra households (multi-household addresses)	82	-
iv.	Total eligible (that is i less ii, plus iii)	10,366	100.0
v.	Co-operating households (which includes 204 partials)	5,223	50.4
vi.	Refusals	3,752	36.2
vii.	Households at which no contact could be obtained	1,391	13.4

Northern Ireland

In the Northern Ireland survey, the eligible sample was 1,084 households. The number of co-operating households who provided usable data was 602, giving a response rate of 56 per cent. This represents an increase of 2 percentage points from the 2008 survey year. Northern Ireland is over-sampled in order to provide a large enough sample for some separate analysis. The weighting procedure compensates for the over-sampling.

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 portable 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 2009 a total of 1,512 children aged between 7 and 15 in responding households in the UK were asked to complete expenditure diaries; 232, or about 15 per cent, 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 paid £10, as a token of appreciation. Children who keep a diary are given a £5 payment.

In the last two months of the 1998–99 survey, as an experiment, a small book of postage stamps was enclosed with the introductory letter sent to every address. Response seemed to increase as a result of this experiment and it has become a permanent feature of the survey. It is

difficult to quantify the exact effect on response but the cognitive work that was carried out as part of the EFS development indicated that it was having a positive effect.

A new strategy for reissues was adopted in 1999–2000 and has continued since. Addresses where there had been no contact or a refusal, but were judged suitable for reissue, were accumulated to form complete batches consisting only of reissues. The interviewers dealing with them were specially selected and given extra briefing. In 2009 some 34 addresses were reissued, of which 14 were converted into responding households. This increased the overall response rate by 0.1 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.

While questions about general household affairs are put to all household members or to the household representative person (HRP), 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.

In 2001–02, the EFS began including households that contained a proxy interview. In that year, 12 per cent of all responding households contained at least one proxy interview. In 2009 the percentage of responding households with a proxy interview was 21 per cent. Analysis of the 2002–03 data revealed that the inclusion of proxy interviews increased response from above average income households. For the 2002–03 survey, the average gross normal weekly household income was some 3 percentage points higher than it would have been if proxy interviews had not been accepted. The analysis showed a similar difference for average total expenditure.

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 which co-operate. It is therefore possible that their patterns of expenditure and income also differ. A comparison was made of the households responding in the 1991 FES with those not responding, based on information from the 1991 Census of Population (A comparison of the

Census characteristics of respondents and non-respondents to the 1991 FES by K Foster, ONS Survey Methodology Bulletin No. 38, Jan 1996). Results from the study indicate that response was lower than average in Greater London, higher in non-metropolitan areas, and that non-response tended to increase with increasing age of the head of the household – up to age 65. Households that contained three or more adults, or where the head was born outside the United Kingdom or was classified to an ethnic minority group, were also more likely than others to be non-responding. Non-response was also above average where the head of the household had no post-school qualifications, was self-employed, or was in a manual social class group. The data were re-weighted to compensate for the main non-response biases identified from the 1991 Census comparison, as described in 'Weighting'. ONS has completed a similar comparative exercise with the 2001 Census data, which resulted in an update of the non-response weights for the estimates for 2007 onwards.

Checks are included in the 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 outliers are genuine, and checks are made on any unusual changes in average spending compared with the previous year.

When aspects of the survey change, rigorous tests are used to ensure the proposed changes are sensible and work both in the field and on the processing system. For example, in 1996–97 an improved set of questions was introduced on income from self-employment. This was developed by focus groups and then tested by piloting before being introduced into the main survey.

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. This falls into two broad categories:

(i)   Specific items of information missing from a response. These missing values are imputed on a case by case basis using other information collected in the interview. The procedure is used, for example, for council tax payments and for interest received on savings

(ii)   Imputation of a complete diary case. Where a response is missing a diary from a household member, this information is imputed using information from respondents with similar characteristics

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). The RPI plays a vital role in the uprating of state pensions and welfare benefits and in general economic policy and analysis. The RPI measures the change in the cost of a selection of goods and services 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 needs to be kept up-to-date. Accordingly, regular information is required on spending patterns and much of this is supplied by the Living Costs and Food (LCF) module of the Integrated Household Survey (IHS). The expenditure weights for the general RPI 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 also provide the weights for the Consumer Price Index (CPI), and 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 Communities (Eurostat) collates information from family budget surveys conducted by the member states. The LCF is the UK's contribution to this. The UK is one of only a few countries with such a regular, continuous and detailed survey.

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. Several other Government publications include LCF expenditure data, such as *Social Trends, Regional Trends* and the *Social Focus* series.

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.

Other LCF data

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

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.

Note: 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.

Definitions

Major changes in definitions since 1991 are described in 'Changes to definitions, 1991 to 2009'. Changes made between 1980 and 1990 are summarised in Appendix E of Family Spending 1994–95. For earlier changes see Annex 5 of Family Expenditure Survey 1980.

Household

A household comprises one person or a group of people who have the accommodation as their only or main residence and (for a group):

> *Either share at least one meal a day*
>
> *or   share the living accommodation, that is, a living room or sitting room*

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 are 65 years of age or more and male, or 60 years of age or more and female, and economically inactive. 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 household's 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, or
- is legally responsible for the rent of the accommodation, or

- has the household accommodation as an emolument or perquisite, or
- 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 persons 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:

    i.   Children under 16 years of age away at school are included as members;

    ii.   Older persons 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;

    iii. 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, persons 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, persons 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 persons 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)

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.

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.

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 monetary gift 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 should be coded as incapable.

Economically active

These are persons 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 A19 and A48) because insufficient information is available to assign them to an economic status group.

Economically inactive

- **Retired** – persons who have reached national insurance retirement age (60 and over for women; 65 and over for men) and are not economically active.

- **Unoccupied** – persons under national insurance retirement age who are not working, nor actively seeking work. This category includes certain self-employed persons 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 and Socio-economic group. NS-SEC is itself based on the Standard Occupational Classification 2000 (SOC2000) and details of employment status. Although NS-SEC is an occupationally 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 Government Office Regions as defined in 1994. See the region map on page 116 of Appendix A for more details.

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 Office for National Statistics (ONS) website: www.statistics.gov.uk/geography/nrudp.asp.

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 2009' which details a major change to the coding frame used from 2001–02). Table A1 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 against each item or component the average weekly household expenditure and percentage standard error is shown.

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 volume 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 of this volume. 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.

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. Persons 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 on page 140.

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.

Income headings
Headings used for identifying 2009 income information

Source of Income

References in tables	Components separately identified	Explanatory notes
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	(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 page 137). (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.

b. Self-employment	Income from business or profession, including subsidiary self-employment	The earnings or profits of a trade or profession, after deduction of business expenses but before deduction of tax.
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, PEPs, 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 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	(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.

	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.	
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

STANDARD STATISTICAL REGION		GOVERNMENT OFFICE REGION
NORTH	Cleveland Durham Northumberland Tyne and Wear	NORTH EAST
	Cumbria	NORTH WEST
NORTH WEST	Cheshire Greater Manchester Lancashire Merseyside	
YORKSHIRE AND HUMBERSIDE	Humberside North Yorkshire South Yorkshire West Yorkshire	YORKSHIRE AND THE HUMBER
EAST MIDLANDS	Derbyshire Leicestershire Lincolnshire Northamptonshire Nottinghamshire	EAST MIDLANDS
WEST MIDLANDS	Hereford and Worcester Shropshire Staffordshire Warwickshire West Midlands	WEST MIDLANDS
EAST ANGLIA	Cambridgeshire Norfolk Suffolk	EAST OF ENGLAND
	Bedfordshire Essex Hertfordshire	
	Greater London	LONDON
SOUTH EAST	Berkshire Buckinghamshire East Sussex Hampshire Isle of Wight Kent Oxfordshire Surrey West Sussex	SOUTH EAST
SOUTH WEST	Avon Cornwall Devon Dorset Gloucestershire Somerset Wiltshire	SOUTH WEST

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. From 1998–99 the EFS used results from the 1991 Census-linked study of non-respondents to carry out non-response weighting[1]. From 2007 onwards the EFS/LCF non-response classes and weights have been annually updated using 2001 Census-linked data.

The Census-linked studies matched Census addresses with the sampled addresses of some of the large continuous surveys, including FES for the1991 link study and EFS for the 2001 link study. 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 the 1991 and then the 2001 Census/FES/EFS matching work was then used to identify the types of households that were being under-represented in the survey.

For the 1991 Census-based non-response weights, a combination of household variables were analysed with the software package AnswerTree (using the chi-squared statistics CHAID)[2] to identify which characteristics were most significant in distinguishing between responding and non-responding households. These characteristics were sorted by the program to produce 10 weighting classes with different response rates. For the updated 2001 Census-based non-response weights, a combination of household variables were analysed using a mixed model approach. The mixed model is a combined approach to modelling, designed to benefit from the underlying statistical model of logistic regression as well as utilising AnswerTree. Updated weighting classes were produced, using this analysis, to further improve non-response weighting from 2007.

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. The population totals used are the most up-to-date official figures available; from 2006 onwards, these totals have been population projections based on estimates rolled forward from the 2001 Census. These estimates used exclude residents of institutions not covered by the EFS/LCF, such as those living in bed-and-breakfast accommodation, hostels, residential homes and other institutions.

The non-response weights were calibrated[3] 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.

Further information

Further information on the method used to produce the weights is available from the contacts given on page ii of this publication.

1 See Foster, K. (1994) *Weighting the FES to compensate for non-response, Part 1: An investigation into Census-based weighting schemes*, London: OPCS.

2 CHAID is an acronym that stands for Chi-squared Automatic Interaction Detection. As is suggested by its name, CHAID uses chi-squared statistics to identify optimal splits or groupings of independent variables in terms of predicting the outcome of a dependent variable, in this case response.

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