

Consumer trends QMI

Quality and Methodology Information for consumer trends and household final consumption expenditure in the UK, detailing the strengths and limitations of the data, methods used, and data uses and users.

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1 . Methodology background

National Statistic	
Survey name	Consumer trends - household final consumption expenditure (HHFCE)
Frequency	Quarterly and annual
How compiled	Sample based surveys
Geographic coverage	UK
Last revised	30 September 2019

2 . Executive summary

The Office for National Statistics (ONS) is committed to providing users with ways to assess the fitness for purpose of official statistics. This report relates to Consumer trends – household final consumption expenditure (HHFCE) (Consumer trends) publication and estimates, and aims to provide information on the usability of these estimates.

The [Consumer trends](#) publication presents comprehensive estimates of household final consumption expenditure (HHFCE). It includes all expenditure by members of UK households, but excludes expenditure by UK non-profit institutions serving households (NPISHs). Charities are examples of non-profit institutions.

Estimates are presented at current prices (that is, year of purchase) and constant prices (the equivalent value in a selected base year), both of which are shown with and without seasonal adjustment (which removes any seasonal influences on the data, for example, Christmas and Easter, to show the underlying trend path). Implied deflators (a measure of price pressures faced by households) are also calculated for each of the current price series presented in the publication. The data are classified using the [European Classification of Individual Consumption by Purpose](#) (COICOP).

Consumer trends is published to conform to the [European System of Accounts 2010: ESA 2010](#), which uses COICOPs to categorise household expenditure. Details of the methods terminology and sources used in Consumer trends can be found in the [Consumer trends methodology](#).

This report contains the following sections:

- Output quality
- About the output
- How the output is created;
- Validation and quality assurance
- Concepts and definitions
- Other information, relating to quality trade-offs and user needs
- Sources for further information or advice

3 . Output quality

This report provides a range of information that describes the quality of the data and details any points that should be noted when using the output.

We have developed [Guidelines for Measuring Statistical Quality](#); these are based upon the five European Statistical System (ESS) Quality Dimensions. This report addresses these quality dimensions and other important quality characteristics, which are:

- relevance
- timeliness and punctuality
- comparability and coherence
- accuracy
- output quality trade-offs
- assessment of user needs and perceptions
- accessibility and clarity

More information is provided about these quality dimensions in the following sections.

4 . About the output

Relevance

(The degree to which the statistical outputs meet users' needs.)

Estimates contained in the quarterly publication, Consumer trends, are used to calculate the UK estimate of gross domestic product (GDP). Although Consumer trends is a separate publication to the [Quarterly National Accounts statistical bulletin](#), household final consumption expenditure (HHFCE) comprises almost 60% of the expenditure measure of GDP.

Estimates from Consumer trends are used in both of the GDP measures, which are:

- the [GDP first quarterly estimate](#), published six weeks after the end of a quarter, which is called the UK output, income and expenditure measure of GDP
- the quarterly national accounts, published 12 weeks after the end of a quarter

The UK delivers quarterly and annual household final consumption expenditure tables to Eurostat, consistent with [Regulation \(EC\) Number 1392/2007](#). This regulation was established to provide a reference framework to ensure common standards, definitions, classifications and accounting rules for drawing up the accounts of member states. The production of comparable and timely national accounts results for member states are used for the conduct of monetary policy within the Economic and Monetary Union (EMU).

Estimates from Consumer trends are used by the Bank of England and Her Majesty's Treasury to evaluate UK monetary and economic policy. They are also used by the private sector to analyse the demand within particular markets.

The primary sources for Consumer trends (and therefore the quarterly estimate of household expenditure for GDP) are the [Living Costs and Food Survey](#) (LCF) and the [Retail Sales Index](#) (RSI). More information on the sources used in compiling Consumer trends are available in the [Consumer trends methodology](#).

Timeliness and punctuality

(Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates.)

Consumer trends is published quarterly, on the same day as the Quarterly National Accounts statistical bulletin. The release dates for Consumer trends are announced 12 months in advance on the [GOV.UK release calendar](#). In recent years, Consumer trends has consistently met its pre-announced publication dates, the exception being a delay in June 2010 in order to coincide with the publication of Blue Book 2010.

The timeliness of data collected varies between sources. Some source data become available before the publication of Consumer trends, for example, the Retail Sales Inquiry publishes estimates of retail sales on a monthly basis between 2 and 3 weeks after the end of the reference month. Some estimates are updated on an annual basis, for example, estimates of expenditure on water and sewerage, which come from the Office of the Water Regulator (OFWAT). This means that Consumer trends quarterly estimates are published (and delivered to Eurostat) 3 months after the end of the reference period.

For more details on related releases, the [GOV.UK release calendar](#) is available. In the unlikely event of a change to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully at the same time, as set out in the [Code of Practice for Official Statistics](#).

5 . How the output is created

Household final consumption expenditure (HHFCE) is an important economic statistic produced as part of the compilation of UK gross domestic product (GDP). It measures the personal expenditure on goods and services by UK households. At the national level this includes consumption expenditure in the UK and abroad by UK-resident households, and excludes expenditure by foreign residents in the UK. At the domestic level, all expenditure on goods and services in the UK is included (by both foreign and domestic residents), but expenditure by UK residents abroad is not included.

Chained volume measures

Consumer trends provides volume measures of HHFCE estimates. These chained volume measures allow users to identify changes in expenditure on a good (or service) resulting from a change in the quantity purchased, rather than a change in the price of that good (or service).

In the Quarter 2 (Apr to June) 2003 edition of Consumer trends the volume measures of expenditure (shown in the KN and KS tables) moved to a calculation method using annual chain-linking. The move to annual chain-linking involved a change in the reference year used for volume series. In the reference year the current price series and the corresponding volume measures equal each other (or take the value 100 in index number form). The reference year is 2016 at the time of this update.

Although the use of chain-linking produces more accurate growth rates, it does mean that volume series are only additive for the most recent periods. Currently this means annual data are additive from 2016 onwards and quarterly data are additive for Quarter 1 (Jan to Mar) 2017 onwards. This is because growth in each year up to and including 2016 is calculated at average prices of the previous year. Growth from 2017 onwards is calculated at average prices of 2016.

In the Quarter 2 (Apr to June) 2011 edition of Consumer trends the Consumer Prices Index (CPI) replaced the Retail Prices Index (RPI) for deflation purposes for most HHFCE data.

Seasonal adjustment

Both seasonally and non-seasonally adjusted estimates are provided in Consumer trends. Seasonal adjustment is the process of removing the variations associated with the time of year, or the arrangement of the calendar, from a time series.

Implied deflators

By using deflators, current price estimates can be adjusted for the effects of changing prices. This allows the separation of changes in current price series into the price effect and the volume effect. Different price indices are used to deflate series in Consumer trends at a low level. For example, the price index for food is different to the price index used to deflate tobacco.

In Consumer trends each current price and chained volume table has an implied deflator equivalent (both seasonally and non-seasonally adjusted). The implied deflators in these tables are calculated by dividing the current price series by the chained volume measures series.

Compilation

The primary sources for Consumer trends (and therefore the quarterly estimate of household expenditure for GDP) are the Living Costs and Food Survey (LCF) and the Retail Sales Index (RSI).

COICOP	Source(s)
Food and non-alcoholic beverages	LCF Survey
Alcoholic beverages and tobacco	Her Majesty's Revenue and Customs (HMRC) and an external market research survey for alcohol
Clothing and footwear	RSI
Housing	Estimates are produced by using data from different sources including local authorities and administrative data from utility companies
Household goods and services	Predominantly RSI, but also the LCF Survey
Health	Information from NHS payments and the LCF Survey
Transport	Transport Regulator and the Department for Transport
Communication	Large communication companies and a regulator for the sector
Recreation and culture	RSI and other sources
Restaurants and hotels	LCF survey, some government data for accommodation and HMRC data for alcohol
Miscellaneous	Includes expenditure on financial services, estimates are produced by using data from the Bank of England data

6 . Validation and quality assurance

Accuracy

(The degree of closeness between an estimate and the true value.)

There is not a readily available measure for the accuracy of household final consumption expenditure. This is because so many of the series in the publication use different sources (including administrative data, surveys and point-in-time estimates) and the estimated value for each of the Classification of Individual Consumption by Purpose (COICOPs) is aggregated to provide the total consumption figure for the quarter.

During the compilation of statistics for Consumer trends the underlying data are checked against other indicators. For example, both the Retail Sales Inquiry and the Living Costs and Food Survey provide estimates (with different coverage) of food. This allows a comparison of growth in sales and expenditure of food from two sources. These consistency checks are carried out for each COICOP, where possible.

The two primary sources of data, the Retail Sales Inquiry and the Living Costs and Food Survey, do have information on the accuracy of their estimates. Detail on the accuracy of the seven Living Costs and Food Survey sources can be found in the annual [Family Spending in the UK](#) publication and the [Living Costs and Food Survey Quality Report](#). Detail on the accuracy of the Retail Sales Inquiry can be found in the [Retail Sales methodology](#) and the [Retail Sales Quality and Methodology Information Report](#).

As the majority of Consumer trends estimates are derived from sample surveys, sampling and non-sampling error do affect the HHFCE estimates. Only collection of data by a census can avoid sampling error. In a sample survey, if a number of different samples are selected, then each can produce a different result. Sampling errors measure the extent to which these estimates can be expected to differ from the “true” value. In addition to sampling errors, there is the potential for non-sampling errors, which cannot be easily quantified. Examples where these errors may occur are deficiencies in the register (sampling frame) and errors made by respondents in completing any survey.

Some of the data used to produce estimates of HHFCE for Consumer trends are only available on an annual basis. This means that some quarterly estimates are estimated by interpolation between releases of data.

An additional dimension of measuring accuracy is reliability. An indication of an estimate’s reliability is the extent to which it is revised. Reliability can be assessed using evidence from analyses of revisions to compare the closeness of early estimates to subsequent estimated values. We have a comprehensive [Revisions Policy](#) for its outputs. The household final consumption expenditure estimates are compliant with the [National Accounts Revisions Policy](#).

Revisions to the most recent annual and quarterly estimates of household final consumption expenditure are published in Consumer trends and reflect updated source data for agreed periods only. For longer-term revisions to back data, an ONS Revisions Task Force decides whether they should be introduced. Any methodological changes are subject to a national accounts standard process of quality assurance.

Comparability and coherence

Comparability

(Comparability is the degree to which data can be compared over time and domain, for example, geographic level.)

Every effort is made to ensure that the series are comparable over time, and [time series data](#) are available back to 1997 for national total HHFCE annual and quarterly estimates. Where possible, changes to methodology are applied to the whole series to ensure this comparability is maintained. However, the National Accounts Revisions Policy may mean that this is not always possible.

The main method used to deflate current prices to create chained volume measure estimates, changed in the Quarter 2 (Apr to June) 2011 publication, with Consumer Prices Indices (CPI) replacing Retail Prices Indices (RPI). Chained volume measures deflated using the CPI are available from Quarter 1 (Jan to Mar) 1997 onwards.

Consumer trends applies the international standards consistent with the European System of Accounts 2010: ESA 2010 to comply with the EU regulation on the transmission programme. This governs the provision of data for the purposes of compilation of Quarterly National Accounts for comparison across the European Community ([Regulation \(EC\) Number 1392/2007](#) replacing Regulation (EC) Number 2223/96). Consumer trends also meets the requirements of the System of National Accounts 1993: SNA 1993 making estimates published by the UK comparable with the accounts of countries beyond the EU. UK attendance at working groups and committee meetings at the European Central Bank (ECB) and Eurostat help ensure that changes to UK accounts are made in line with the European Union member states.

Coherence

(Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar.)

The concepts and definitions within Consumer trends are consistent with the expenditure approach to measuring GDP. This means the definitions are not always the same as those used elsewhere within national accounts for the income and output approaches to measuring GDP. It also means that Consumer trends uses alternative sources to those used in the income and output approaches.

The Household Final Consumption Expenditure estimates in Consumer trends are consistent with those published in Tables E1 to E4 of the [Quarterly National Accounts statistical bulletin](#). There are two different definitions of HHFCE, national and domestic. The national total HHFCE is currently only available annually back to 1997, and quarterly back to Quarter 1 (Jan to Mar) 1997. The distinction between national and domestic concepts takes account of the UK relationship with the rest of the world. The national concept requires that the exports of services to the rest of the world are deducted from household expenditure and the imports of services from the rest of the world are added to the total.

7 . Concepts and definitions

(Concepts and definitions describe the legislation governing the output and a description of the classifications used in the output.)

Consumer trends is published to conform to the [European System of National Accounts 2010: ESA 2010](#), which uses the Classification of Individual Consumption by Purpose (COICOPs) to categorise household expenditure. Details of the methods terminology and sources used in Consumer trends can be found within the [Consumer trends methodology](#).

The estimate of HHFCE where net tourism expenditure is included is called the UK national estimate. When net tourism is excluded, this produces the aggregate total UK domestic expenditure. These and other points that affect the general definition of household final consumption expenditure are discussed in greater detail in [Definitions and Conventions for UK HHFCE](#).

Classification of Individual Consumption

For presentation purposes, HHFCE for Consumer trends is broken down according to [COICOP](#). However, the underlying data series are assembled by a variety of methods and routes, depending on the data sources used. As a result, some of the historic details in the COICOP presentation are derived from older presentations used for UK purposes. Direct collection of data using the COICOP framework was introduced during 2001 and historic COICOP estimates continue to be reviewed as necessary in the light of recent data and in accordance with the National Accounts Revisions Policy.

8 . Other information

Output quality trade-offs

(Trade-offs are the extent to which different dimensions of quality are balanced against each other.)

HHFCE estimates are compiled for the first quarterly estimate and final estimate of GDP each quarter. Only the aggregate HHFCE estimates are published for the first quarterly estimate of GDP. This is because not all source data are available at this time, so the more detailed estimates will include a larger proportion of estimates produced by interpolation. At the time of the final quarterly estimate for GDP, the HHFCE estimates are more robust and contain the most recent source data available at a lower level, meaning that more detailed estimates can be published.

Further information can be found in paragraph 3 of “Accuracy” section of Validation and quality assurance.

Assessment of user needs and perceptions

(The processes for finding out about users and uses, and their views on the statistical products.)

HHFCE statistics are used regularly by policy departments working on both the wider economy and particular industries. The total estimate of household expenditure is an important indicator for the wider economy because household expenditure accounts for 60% of gross domestic product (as measured by expenditure). The components of total household expenditure or Classification of Individual Consumption by Purpose (COICOPs) are useful for government departments interested in particular industries, some examples follow.

HM Treasury

Analysts from HM Treasury use HHFCE estimates to understand the changing expenditure patterns across the economy, for example, on housing.

Her Majesty's Revenue and Customs

HMRC use the information contained within the household expenditure estimates to analyse the tax expenditure on alcohol and tobacco products.

Digital Department of Culture Media and Sport

DCMS use household expenditure estimates to monitor spending in their areas of responsibility: arts, broadcasting, the press, museums and galleries, libraries, sport and recreation.

Home Office

The Home Office use household expenditure estimates for analysis related to crime and the economy.

Low Pay Commission

The Low Pay Commission use household expenditure estimates to monitor expenditure in low pay sectors, for example, in retail and hospitality.

Department for Environment, Food and Rural Affairs

The Department for Environment, Food and Rural Affairs use household expenditure estimates to monitor the demand for types of food and drink.

Quality Assurance of Administrative Data

We have published a [Quality Assurance of Administrative Data report](#). This details the findings of our investigation into the quality of the data sources that are used in HHFCE.

9 . Sources for further information or advice

Accessibility and clarity

(Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the release details, illustrations and accompanying advice.)

[Consumer trends](#) is published on the ONS website.

[Time series data](#) for Consumer trends are also available to download.

General enquiries about any of the series contained in Consumer trends, compilation methods, quality information or difficulties in finding latest figures can be emailed to the Consumer trends enquiry point at consumer.trends@ons.gov.uk

Our recommended format for accessible content is a combination of HTML webpages for narrative, charts and graphs, with data being provided in usable formats such as CSV and Excel. Our website also offers users the option to download the narrative in PDF format. In some instances other software may be used, or may be available on request. For further information please refer to the contact details at the beginning of this report.

For information regarding conditions of access to data, please refer to the following links:

- [Terms and conditions](#) (for data on the website)
- [Copyright and reuse of published data](#)
- [Pre-release access \(ended from 1 July 2017\)](#)
- [Access to microdata](#) via the Virtual Microdata Laboratory
- [Accessibility](#)