

Article

# Developing the Household Costs Indices (HCIs): October 2020

The development of a set of measures that aim to reflect UK households' experience of changing prices and costs.

**Contact:**

Chris Payne, Domenica Rasulo  
cpi@ons.gov.uk

+44 (0)1633 456900 Consumer  
Price Inflation recorded message

(available after 9.45am on

release day): Telephone: + 44 (0)  
800 0113703

**Release date:**

14 October 2020

**Next release:**

To be announced

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# 1 . Overview of project

- This article documents the evolution of the Household Costs Indices (HCIs), including what they are, why they are being developed, how they differ from the UK consumer price indices that are currently in production and progress towards their development; this article will be updated as development of the HCIs progresses.
- The HCIs are a set of measures, currently in development, that aim to reflect UK households' experience of changing prices and costs; more specifically, they will aim to measure how much the nominal disposable income of different household groups would need to change, in response to changes in prices and costs, to enable households to purchase the same quantity of goods and services at a fixed quality.
- When considering the household experience of changing prices and costs, it is informative to look at different groups within the population, as we would expect them to experience changes in prices and costs differently.
- Our [analysis in 2014](#) and our series [Consumer Prices Index including owner occupiers' housing costs \(CPIH\) consistent inflation rate estimates for UK household groups](#) have demonstrated that different household groups (for example, retired households and low-income households) experience different levels of changes in prices and costs; therefore, the HCIs will focus on measuring the experience of a number of different population groups, although an all-households index will be produced for reference.

## 2 . Why we are developing the Household Costs Indices

The original idea for a UK-based household index was developed by Astin and Leyland (2015) who, supported by the Royal Statistical Society, proposed a [Household Inflation Index](#) that they argued would better reflect price changes as understood and experienced by the household. This work followed earlier proposals by the two authors individually in 2014.

They both considered that the Consumer Prices Index (CPI) was not, for various reasons, fully suitable for measuring inflation as experienced by households. This was in light of the EU Harmonised Index of Consumer Prices (HICP) having been developed as a technical index for comparing inflation between EU countries and as a target measure for interest rate setting by the European Central Bank for eurozone countries. A new index was needed to meet this purpose.

Paul Johnson discussed the case for a “household” measure as part of [UK Consumer Price Statistics: A Review](#) in January 2015. He concluded that there did not seem to be a case for publication of a single “household” measure but that measures of how inflation affects different groups of households would provide useful additional information to users.

Following this review, a [public consultation](#) was held and [advice of the Advisory Panels on Consumer Prices \(APCPs\)](#) was sought. Taking these views into account, in March 2016 the then National Statistician wrote to the chair of the UK Statistics Authority addressing the [future of consumer inflation statistics in the UK](#). In his letter, it was noted that such an index would provide information that would be valued by users and provide an important complement to our current measures of consumer price inflation.

In August 2016, we released [Developing an Index of Household Payments](#) that began to explore the concepts and feasibility of producing an index of this kind and requested responses to our paper that would help guide future development of the index.

The paper was discussed further at both the Technical and Stakeholder APCP in September 2016. A summary of discussions can be found in the [APCP 2016 Annual Report to the National Statistician](#).

Responses to our paper were considered alongside advice from the Technical and Stakeholder APCP in helping guide future developments. In December 2016, we published a [summary of responses](#) that provides a representation of the comments received and the advice provided to us. The report also outlined our next steps regarding future development of the work.

The responses resulted in the index being renamed the “Household Costs Indices” (HCIs), with an increased focus on household groups instead of a single aggregate measure. However, it is intended that an all-households index will still be produced for reference.

In July 2017, we published an [article](#) that aimed to present a clear future approach to measuring changes in prices and costs for consumers and households. In March 2020, we proposed an [update](#) to give users a view of what the approach would look like under the proposals put forward in the [consultation](#) on the future of the Retail Prices Index.

In 2019, the then National Statistician considered the advice from our [Advisory Panels](#) and a related [Economic Statistics Centre of Excellence \(ESCoE\) workshop](#) and issued a [statement](#) on the future of the HCIs. They will continue to be developed around consumption principles, with a view to achieving [National Statistics](#) status. Recognising a user need, we would then look to develop a variant that included mortgage capital costs – the HCI – Capital (HCICs) – in the longer term.

### **3 . How the Household Costs Indices differ from current UK consumer price indices**

Consumer price indices measure changes in the prices of goods and services consumed by households. Measuring changes in the cost of consumption goods and services is extremely important for measuring economic activity in the UK; however, it does not always reflect the changes in costs that are directly experienced by UK households. The Household Costs Indices (HCIs) are being developed as a set of measures that will reflect changes in prices and costs as they are directly experienced by households.

For example, the Consumer Prices Index including owner occupiers' housing costs (CPIH) measures owner occupiers' housing costs (OOH)<sup>1</sup> using a rental equivalence approach. This approach estimates the cost of consuming housing services by calculating the price that would need to be paid to rent an equivalent property. The HCIs use a measure of direct payments in place of rental equivalence (such as mortgage interest payments, dwelling insurance, ground rent and Stamp Duty Land Tax) to more closely reflect changes in costs as they are experienced by UK households.

We also produce [CPIH-consistent inflation rates for different household groups](#). These measures are important as they provide distributional analysis within a framework that is based on economic principles. They measure changes in the price of consumption goods and services and how these changes vary between different household groups.

While the HCIs also provide information on different household groups, they follow a different conceptual framework that is based on the household's experience of changing prices and costs. They measure changes in the price and cost of goods, services and other financial transactions and how these changes vary between different household groups.

#### **Notes: How the Household Costs Indices differ from current UK consumer price indices**

1. OOH are the costs of housing services associated with owning, maintaining and living in one's own home. This is distinct from the cost of purchasing a house, which is partly for the accumulation of wealth and partly for housing services.

## 4 . How the Household Costs Indices differ from those produced by other NSIs

We are not the only country to produce household-based measures for different groups of the population. The Australian Bureau of Statistics has been producing the [Selected Living Cost Indices \(SLCIs\)](#) since 2000. They were developed in recognition of the widespread interest in the extent to which the impact of price change varies across different groups of households in the Australian population. While, in principle, their national Consumer Prices Index (CPI) uses an acquisitions approach (changes in prices of goods and services acquired), the SLCIs use an outlays approach (changes in the prices of goods or services for which payments were made to gain access to goods and services).

Similarly, Stats New Zealand has been producing the [Household Living-costs Price Indexes \(HLPs\)](#) since 2016. This development stemmed from their CPI Advisory Committees' recommendation that extra indices should be provided that reflect changes in the purchasing power of incomes for different demographic groups. The conceptual design of the HLPs differs from the New Zealand CPI in two important ways: the treatment of owner-occupied housing and interest payments better aligns with individual household experience, and the aggregation method used better reflects the inflation experienced by a "typical" household within each group.

## 5 . Development of the Household Costs Indices

Several areas have already been considered with regards to the development of the Household Costs Indices (HCIs). These are both conceptual considerations, such as proposing a theoretical framework for the HCIs and considering the challenges regarding the measurement of real income, and practical considerations, such as producing democratic weights and indices for different population groups. This section details how these conceptual and practical challenges have been addressed.

### A theoretical framework for the Household Costs Indices

A theoretical framework for the HCIs was considered during 2017. This framework was discussed at both the Technical and Stakeholder Advisory Panels on Consumer Prices (APCPs) in September 2017, alongside the implications this framework would have on the scope of the indices. The [minutes](#) from the Technical Panel and the [minutes](#) and [paper](#) from the Stakeholder Panel provide an overview of the discussions held during these meetings.

Further discussions on the conceptual foundations of the HCIs took place at a [workshop](#) hosted by the Economic Statistics Centre of Excellence (ESCoE) in April 2019. Minutes from the session are available on the [UK Statistics Authority's](#) website. Feedback on the discussion is recorded in the minutes from the [Technical](#) and [Stakeholder panels](#) held the following month and led to the statement from the then National Statistician in June 2019 regarding the inclusion of capital housing costs.

### The conceptual challenges regarding the measurement of real income

It is useful to compare the HCIs with measures of nominal income growth to work towards a better understanding of the economic well-being of different household groups. Therefore, we have considered how measures of income and measures of changing prices and costs can be produced coherently. We discussed our thinking further with the Technical APCP in May 2017 (the [minutes](#) from this meeting provide an overview of the topics discussed).

[The measurement of real income in the UK: options for a coherent approach](#) was published in September 2017. This article explores the conceptual challenges regarding the measurement of real household income with consideration of all measures, including those that are available (namely, the Consumer Prices Index including owner occupiers' housing costs (CPIH) and those that are in development (namely the HCIs)).

## The impact of using democratic weighting and producing indices for different population groups

When looking at how households experience changing prices and costs, it is appropriate to use a democratic approach to weighting price indices. Furthermore, as different households will have different experiences of changing prices and costs (because of their different patterns of spending), it is most informative to measure the experience of UK household groups. Therefore, in 2017, we investigated different methods of weighting price indices and methods to produce indices for different population groups. Some aspects of the methodology we propose were discussed at the Technical APCP in May 2017 (the [paper](#) and [minutes](#) from this meeting provide an overview of the topics discussed).

In November 2017, we published an article, [Investigating the impact of different weighting methods on CPIH](#), and introduced quarterly tables of [CPIH-consistent inflation rates for household groups](#). Our [methodology article](#) provides details of how indices for household groups can be calculated. The [methodology used to calculate democratic indices](#) also utilises this methodology.

## The use of a measure of direct payments to calculate owner occupiers' housing costs

It is considered that when measuring the household's experience of changing prices and costs, it is most appropriate to use a "payments" approach to owner occupiers' housing costs (OOH). In October 2016, we published an article that looked at [understanding the different approaches of measuring OOH](#). This was the first article in a series published on a regular basis that aims to provide more information about the different approaches to measuring OOH.

We investigated the impact that these different approaches to measuring OOH would have, were they to be included in our consumer price inflation series. In January 2017, we published a [weights analysis](#) that compared the impact of three different approaches on the headline CPIH, including the impact of using a payments approach. Recently, we have updated the OOH payments measure by improving the methodology to make greater use of the microdata and isolating residential Stamp Duty expenditure to remove the element of commercial Stamp Duty ([Measures of OOH, UK: July to September 2019](#) and [Measures of OOH, UK: January to March 2020](#)).

Mortgage interest payments are included as part of the payments approach to measuring OOH. It is considered that to measure changes in prices and costs as experienced by households, interest on other forms of debt should also be included. The underlying methodology for calculating this component of the index was discussed at the Technical APCP in May 2017. The [minutes](#) and the [paper](#) from this meeting provide an overview of the topics that were discussed and the advice that was provided.

Initially, only credit card interest was included; however, these measures of debt have been further expanded to include mail orders, secured and unsecured loans, and overdrafts in the [third preliminary release of the HCIs](#). These additions to our measure of consumer debt were presented at the Technical APCP in January 2020. The [minutes](#) from this meeting are also available.

## Treatment of higher education costs

Currently, higher education costs are captured in the HCIs through both the cost of repaying a student loan and the price of tuition fees paid directly. The aggregate expenditure on student loan repayments is reconciled with households in the Living Costs and Food Survey (LCF) based on their reported expenditure on tuition.

The development of how we treat higher education costs began at the May 2018 [Technical APCP meeting](#), where we proposed a methodology to calculate a costs index for student loan repayments. At the December 2018 [Technical APCP meeting](#), we examined two approaches representing higher education costs on a payments basis, both relying on an assumption that all higher education costs are met through loans. These were:

- building a student loans repayments index from LCF data
- using a model based around the income repayment threshold and graduate salary data

The modelling approach was preferred as survey data are too volatile and not timely enough for use in a live series.

For the [third preliminary release](#) of the HCIs, we have made further improvements to how we model student loan repayments, and we now include tuition fees paid upfront. This methodological improvement was introduced at the January 2020 Technical APCP meeting, with the [minutes](#) and [supplementary paper](#) available to read online.

## The first preliminary estimates of the Household Costs Indices, December 2017

The [first preliminary estimates of the HCIs](#) were released in December 2017. These showed how prices and costs have been changing for different household groups over the years 2005 to 2017. Initially, this included different household income groups, retired and non-retired households, and those households with and without children. An all-households index was also provided for comparison.

The release was supported by a [methodology article](#) detailing how the new HCIs were calculated and how they contrast with the all-households CPIH. Four distinct differences between the HCIs and the CPIH were included:

- the use of democratic weighting
- the use of a payments approach to measuring OOH
- the inclusion of interest costs on credit card debt
- the use of gross expenditure to weight insurance premia

## The second preliminary estimates of the Household Costs Indices, April 2019

The [second preliminary estimates of the HCIs](#) were released in April 2019. These updated the series to the end of 2018 and incorporated changes and development items raised through user feedback from the first release, namely:

- the inclusion of student loan repayments rather than the full cost of tuition fees
- separating Council Tax from [OOH](#)
- introducing household tenure type as a demographic subgrouping for analysis

This release was also accompanied by a [methodology article](#) describing the changes between the first and second release and analysing their impact.

## The third preliminary estimates of the Household Costs Indices, July 2020

The [third preliminary estimates of the HCIs](#) were released in July 2020. This release is supported by a supplementary [methodology article](#) illustrating how the HCIs are calculated as well as impact analysis to demonstrate the effect of changes to the education and financial debt class in this release. The new additions to the July 2020 release were:

- including tuition fees paid upfront in our measure of higher education costs
- expanding our measure of interest on consumer financial debt to include mail orders, unsecured and secured loans, and overdrafts
- splitting the actual rentals class into subsidised and private renters
- updating the treatment of Stamp Duty in our measure of OOH
- including an additional demographic subgroup: disabled and non-disabled households

## 6 . Future developments

There are a number of other differences in methodology and scope between the Household Costs Indices (HCIs) and the Consumer Prices Index including owner occupiers' housing costs (CPIH) that can be considered when trying to reflect the experience of UK households. In no particular order, suggestions to date have included but are not limited to:

- measuring changing prices and costs as experienced by the national population (including expenditure by residents abroad and excluding foreign visitors' expenditure in the UK) as opposed to within the domestic territory (including foreign visitors' expenditure in the UK and excluding residents' expenditure abroad)
- reviewing the measure of mortgage interest payments within the owner occupiers' housing costs (OOH) class and assessing alternative methodologies
- including items that are seen as saving in traditional Consumer Prices Index (CPI) methodology (such as capital housing costs, savings and pension contributions) in a variant measure
- including recent student loan plans (Plan 2 and Plan 3) as repayment expenditure increases

We will continue to use the feedback we receive along with the advice of the [Advisory Panels on Consumer Prices \(APCPs\)](#) to determine our next steps with regards to HCIs development.