Article

Developing the Household Costs Indices (HCIs)

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

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1 . Introduction

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.

2 . What are the Household Costs Indices?

The Household Costs Indices (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 2017 has 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.

3 . Why are we 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, which as the EU Harmonised Index of Consumer Prices (HICP) had 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, was not, for various reasons, fully suitable for measuring inflation as experienced by households. 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 (APCP) was sought. Taking these views into account, in March 2016 the 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 a paper 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 aims to present a clear future approach to measuring changes in prices and costs for consumers and households. Within this article three "use cases" were presented, along with how they relate to the measures that we currently publish and those that are under development.

4 . How do the Household Costs Indices differ from UK consumer price indices that are currently in production?

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)1 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 for: How do the Household Costs Indices differ from UK consumer price indices that are currently in production?

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.

5 . How do 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" (HLPIs) since 2016. This development stemmed from their CPI Advisory Committees recommendation that extra indexes should be provided that reflects changes in the purchasing power of incomes for different demographic groups. The conceptual design of the HLPIs 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, the aggregation method used better reflects the inflation experienced by a "typical" household within each group.

6 . Development of the Household Costs Indices

A number of 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, and will be updated as further development work ensues.

A theoretical framework for the Household Costs Indices (HCIs)

A theoretical framework for the HCIs was considered during 2017. This framework was discussed at both the Technical and Stakeholder APCP 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 from the Stakeholder Panel and paper from the Stakeholder Panel provide an overview of the discussions held during these meetings.

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 paper explores the conceptual challenges regarding the measurement of real household income with consideration of all measures, including those that are available (namely the 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 (due to their different patterns of spending) it is most informative to measure the experience of UK household groups. Therefore in 2017, we have 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 an article producing 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 (OOH)

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 OOH. In October 2016, we published an article that looked at understanding the different approaches of measuring owner occupiers' housing costs . This was the first article in a series published on a quarterly 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.

The inclusion of the cost of interest on credit card debt

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.

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

The preliminary estimates of the Household Costs Indices 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:

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

7 . Future work

There are a number of other differences in methodology and scope between the HCIs and the 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)

- using a measure of direct payments to calculate the cost of education (for example, including tuition fees as they are paid for via student loan repayments, rather than including the upfront cost)

- using a measure of direct payments to calculate items that are paid for in advance (for example, package holidays, airfares and cultural events)

- including the cost of interest on all debt (for example, mortgage interest and interest on credit cards and loans)

- including the cost of goods bought second-hand without taking into account goods sold (such that household-to-household transactions are included as a cost)

- including items that are seen as saving in traditional consumer price index methodology (such as capital housing costs, savings and pension contributions)

We are currently collating user feedback to our release in December 2017 and will continue to use this feedback along with the advice of the [Advisory Panels on Consumer Prices](#) to determine our next steps with regards to HCIs development.

8 . Author

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