

Measuring Consumer Prices: the options for change

June 2015

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Introduction

The UK Statistics Authority's mission is to ensure the production and publication of high quality statistics, analysis and advice, to help Britain make better decisions.

Providing high quality consumer price statistics, which keep pace with rapid changes in society and technology, is one important focus of this mission.

A broad range of users – from the private sector, the public sector, within media, academia, finance, and members of the public – rely on these statistics to make decisions about our economy, about pensions, benefits and wages, and personal finances.

It was with this in mind that the Authority launched two separate, but complementary, reviews of consumer price statistics in 2013. One of these recommended a new set of governance arrangements and structures for the production of consumer price statistics, which have recently been initiated.

The second review, led by Mr Paul Johnson, took a comprehensive look at how inflation is measured in the UK, and made a series of recommendations about the development of these statistics going forward. Having taken some time to consider Mr Johnson's recommendations, as well as initial reactions to his report, I am launching this public consultation so that I can consider contributions from all those who have an interest in consumer price statistics.

The consultation begins on 15 June 2015, and will close on 15 September. In the autumn of 2015 we will publish a summary of the responses received in a report, and make the responses to the consultation available on our website. The Board of the Authority will consider that report carefully, alongside any advice from the Authority's regulatory function, before it issues its final response in early 2016.

I look forward to reading your contribution.

John Pullinger

A handwritten signature in black ink, appearing to read 'John Pullinger', with a stylized, cursive script.

National Statistician

Background

The UK's current range of consumer price indices

The Office for National Statistics (ONS) publishes four key measures of consumer price inflation:

1. The **Consumer Prices Index (CPI)** is currently ONS's principal measure of consumer price inflation. First published in 1997, it uses the framework of the Harmonised Index of Consumer Prices (HICP), which is regulated by Eurostat (the statistical office of the European Union). The rules underlying its construction are specified in a series of EU Regulations. State pensions, as well as some state benefits and taxes, have a link to the CPI, and the CPI is also used in some wage negotiations and contracts. However, the CPI does not currently include owner occupiers' housing costs (OOH).
2. The **CPIH** was launched in 2013, as a measure of consumer price inflation that includes OOH. These are the costs of housing services associated with owning, maintaining and living in one's own home. In August 2014, shortcomings in the methods and processing of the private rents data used to estimate OOH costs led to the removal of the CPIH's National Statistics status.¹ ONS has subsequently made improvements to the index, and has been submitting evidence to the Authority's Assessment team to initiate the re-assessment process. It is anticipated that the re-assessment will commence in the coming weeks.
3. The **Retail Prices Index (RPI)** is the UK's oldest measure of consumer price inflation. Under Section 21 of the *Statistics and Registration Services Act 2007*, the Authority is required to compile, maintain and publish the RPI on a monthly basis.

An Authority Assessment of the RPI in March 2013 found that methods used to produce the RPI (in particular, its use of the arithmetic *Carli* formula) were not consistent with international best practice.² Research conducted by ONS had shown that use of the *Carli* formula resulted in a consistent upward-bias.³ The National Statistics designation was removed from the RPI. Even so, the RPI is still in widespread use, in wage negotiations and long-term contracts, private sector pensions, rail fares, and index-linked gilts.

¹ See related correspondence, available at: <http://www.statisticsauthority.gov.uk/reports---correspondence/correspondence/letter-from-sir-andrew-dilnot-to-john-pullinger-14082014.pdf>

² See *Assessment 246: The Retail Prices Index (March 2013)*, available at: <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-246---the-retail-prices-index.pdf>

³ See for example:

Comparing Class Level Chain Drift for Different Elementary Aggregate Formulae Using Locally Collected CPI Data, available at: <http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/comparing-class-level-chain-drift-for-different-elementary-aggregate-formulae-using-locally-collected-cpi-data.pdf>, or

International Comparison of the Formula Effect between the CPI and RPI (March 2012), available at: <http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/improving-the-timeliness-of-the-cpi-and-rpi-publication.pdf>

4. The **RPIJ** was introduced in 2013, prompted by a need to address the gap between the estimates produced by the RPI and the CPI. It replaces the *Carli* formula, which was found not to meet international standards, with a formula that does. In other respects, its construction mirrors that of the RPI.

These indices are also complemented by a variety of supplementary and sub-indices.⁴

Recent Reviews

In May 2013, the Authority commissioned two separate, but complementary, reviews of consumer price statistics.

Review of the Governance of Consumer Prices Statistics

The first of these, led by Professor Sir Adrian Smith, considered matters relating to the arrangements and structures underpinning the production of consumer price statistics. The review report was published by the Authority in February 2014.⁵ It recommended the creation of two advisory panels on consumer prices: a stakeholder panel to advise the National Statistician on the uses and application of prices indices; and, a technical panel to provide advice on technical aspects of the statistics.

The Authority welcomed the report on its publication and has recently announced the establishment of the two panels.⁶

Review of the Range of Consumer Prices Statistics (the Johnson Review)

The *Review of the Range of Consumer Prices Statistics*, led by Paul Johnson, was published in January 2015.⁷ The report considered what consumer price statistics ONS should produce to meet user needs, and how the methodology of these statistics might be developed.

In his report Mr Johnson made clear that ‘inflation’ can mean a range of different things, and that consumer price statistics are used for a variety of purposes.

He concluded that the CPIH – once issues with the measurement of owner occupiers’ housing costs were resolved – could provide a “good estimate of price changes across the economy”. He recommended that ONS adopt this as its main measure of inflation.

Mr Johnson also considered whether ONS should publish an alternative measure to capture inflation as experienced by households, sometimes referred to as a “household index” or an “uprating index.” He did not recommend the development of a single household index; arguing that doing so would potentially create confusion and encourage inflation-rate

⁴ For further detail on the current suite of consumer prices statistics, please see:

<http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/cpi-technical-manual/consumer-price-indices-technical-manual--2014.pdf>

⁵ Report available at: <http://www.statisticsauthority.gov.uk/reports---correspondence/current-reviews/governance-of-prices-statistics.html>

⁶ Statement available at: <http://www.statisticsauthority.gov.uk/news/index.html>

⁷ Report available at: <http://www.statisticsauthority.gov.uk/reports---correspondence/current-reviews/range-of-prices-statistics.html>

'shopping', would be inappropriate for the uprating of pensions and benefits, and would be no better than the CPIH for understanding price changes faced by groups of households.

Instead he recommended that ONS publish, on an annual basis, a set of inflation indices as experienced by a range of different household types. This index could use a 'payments' approach; that is, it could focus on households' payments for goods and services, rather than the price at acquisition. Mr Johnson also recommended that ONS continue research on developing a 'cost-of-living' (or experimental superlative index), which would measure the amount by which spending would have to change to maintain living standards.

With regards to the RPI, Mr Johnson supported the Authority's view that the use of the *Carli* is statistically flawed and can result in an upward bias in recorded inflation. However he noted that – due to the widespread use of the RPI in commercial contracts and gilts – the RPI could not simply be discontinued. He recommended instead that the UK Statistics Authority re-state its position that the RPI is a flawed statistical measure, and – where it judged the continuing use of the RPI to be inappropriate – to say so publicly. Mr Johnson also recommended that the Authority consult users about discontinuing related sub-indices.

Consultation scope

Drawing from the issues raised by the Johnson Review, this document seeks users' views on the future development of the UK's range of consumer price statistics.

Like Mr Johnson, the Authority appreciates that 'inflation' can mean different things and that consumer price statistics can be used for different purposes:

- Sometimes, users may wish to understand how prices are changing across the economy as a whole;
- In other cases, users may wish to understand the impact of price changes on households;
- And sometimes, where measures are built into commercial contracts or gilts, users seek assurance about the stability of these measures.

Questions

It is around these different uses that this consultation document is framed:

- **Section One** asks users about how ONS can best measure price change across the economy;
- **Section Two** seeks views on the value of measuring the changes in prices experienced by different households, as well as the ways in which ONS could seek to do so;
- **Section Three** addresses the RPI, asking whether sub-indices of the measure should be discontinued, and about Mr Johnson's recommendation that development of the RPI be frozen; and
- **Section Four** asks users about how ONS can continue to improve quality, relevance and timeliness across its full range of consumer price statistics.

Consultation process

This consultation will run for 14 weeks, closing on 15 September 2015.

During this time, the Authority will hold a series of events at which users can speak with ONS statisticians and independent experts about the issues raised in the consultation. Details of those events are available on the Authority website.

Responding

We encourage respondents to provide their submission [online](#). If you do wish to respond to this consultation via email or on paper, please complete the attached template (also available as a Word document on [the Authority website](#)), and send to the consultation team at cpi@ons.gsi.gov.uk.

You can respond to all sections, or just those that are relevant to you. Responses should be submitted to the Authority by 5:00pm on 15 September 2015.

The Authority will publish all responses to the consultation on our website (unless respondents indicate otherwise), and will summarise the main findings in a report in the autumn of 2015. The Board of the Authority will consider that report, before making any further announcements in early 2016.

Please be aware that any information provided in a response to this consultation could be made publicly available if requested under a Freedom of Information request.

Section One: *Measuring prices across the economy*

ONS's current measures of inflation are often used to understand how prices are changing across the economy.

The CPI is ONS's current main measure and is used by HM Treasury to set a target inflation rate for the Bank of England. It is used to understand how inflation in the UK compares with inflation in Europe, and is used as a deflator in the UK's National Accounts. The CPI is also used to uprate a range of pensions and benefits.

The Johnson Review highlighted the benefits of ONS maintaining a main measure of inflation, but suggested that – once issues with the measurement of private rents had been resolved – ONS should move towards making the CPIH (rather than the CPI) its main measure.⁸ It suggested that the UK's control of the future development of the CPIH, as well as its inclusion of OOH, provided distinct advantages over the CPI.

The Johnson review also suggested that the CPIH would better meet users' needs if stronger, perhaps legally binding, governance arrangements were put in place. He recommended that the Authority consider making the case for legislation governing the production of the CPIH.

This section of the consultation seeks views on the measurement of price pressures across the economy; specifically, whether there is value in having a main measure, and whether users see a need for legislative governance.

1. Should ONS identify a main measure of price change across the economy?

- i. Yes.
- ii. No.

1a. Why? Please provide comments.

If yes:

2. What should this measure be?

- i. the CPIH, as recommended in the Johnson review. The CPIH includes owner-occupiers' housing costs. It does not currently hold the *National Statistics* designation (although its re-assessment is due to commence shortly). The index is a UK measure, designed by ONS to meet UK needs.
- ii. the CPI, ONS's current headline measure. The CPI is an EU measure, designed by Eurostat to ensure comparable consumer prices statistics across the EU.
- iii. Other (please provide details).

2a. Why? Please provide comments.

⁸ See *UK Consumer Price Statistics: A review*, Recommendation 1.

3. Should its production be governed by legislation?

iv. Yes.

v. No.

3a. Why? Please provide comments.

Section Two: *Measuring consumer price inflation for different household types*

As set out earlier in this document, consumer price statistics currently produced by ONS seek to understand how prices are changing across the whole economy.

The Johnson review recommended that ONS publishes, on an annual basis, complementary indices that seek to understand the impact of changes in prices on households. Of course, different groups of the population experience different rates of consumer price inflation, depending on the goods and services that they buy. The Johnson Review suggested that ONS develops a set of indices measuring inflation as experienced by a range of different household types.⁹

The Johnson Review noted that these indices could be constructed on the same basis as existing measures (such as CPI), or by using a ‘payments’ approach. The payments approach would focus on households’ payments for goods and services, rather than price at acquisition. For instance, using the payments approach, an index might focus on gross, rather than net, insurance costs. It would probably not include the full effect of Higher Education fees up front, but rather as they impact households year by year. It would also treat housing costs differently from how they are treated in the CPIH, by including costs associated with renovations and repairs, as well as mortgage interest payments.

The review suggested that it should be made clear to users what the measures of income are with which these should be compared.¹⁰

This section of the consultation seeks users’ views on whether there is a need for ONS to measure the changes in prices experienced by different households. It also seeks views on how ONS might seek to produce and publish such measures.

4. Should ONS seek to measure changes in prices as experienced by different households?

- i. Yes.
- ii. No.

4a. Why? How often? Please provide comments.

5. If yes, how should ONS seek to do so?

- i. Using a payments-based approach.
- ii. On the same basis as existing measures such as CPI.
- iii. Via another means (please provide details)

5a. Why? Please provide comments.

⁹ See *UK Consumer Price Statistics: A Review*, Recommendation 2.

¹⁰ In response to the UK Statistics Authority’s *Monitoring Review of the Coherence and Accessibility of Official Statistics on Income and Earnings*, ONS is seeking to develop complementary income and inflation data for different household groups. While exploratory findings from this work may be published prior to the close of this consultation, ONS will consider relevant responses in addressing the recommendations of the Monitoring Review.

Section Three: *The RPI*

The Authority holds a clear position on the RPI, which it has set out in a range of statements since 2013.¹¹ It considers that the methods used to produce the RPI are not consistent with international best practice and, consequently, that the series is not deserving of *National Statistics* accreditation.

The Johnson Review agreed with the Authority's view that there are basic statistical flaws in the construction of the RPI and recommended that Government and regulators move towards ending their use of the measure.¹² However it also acknowledged that in light of the continuing use of the RPI in commercial contracts and index-linked gilts, ONS could not simply discontinue the RPI, and we do not propose to do so.

But the Johnson Review did raise questions about whether related sub-indices and analytical indices should be discontinued.¹³ Sub-indices are those which are either building blocks of RPI, or are the RPI with certain items removed (the Rossi Index and RPIX are examples of these). The analytical indices of RPI still produced are the Tax and Price Index, RPIY and the Pensioner Price Indices. The review also recommended that – given that it suffered many of the same issues as the RPI, and in light of its limited use – ONS consider discontinuing the RPIJ.

Finally, the Review considered the Authority's current position with respect to future development of the RPI; "that the basic formulation of the RPI is accepted as currently defined and that any future changes should be limited to issues such as the annual update of the basket and weights, improvements to data validation and quality assurance etc."

The Review noted that, in the interests of improving the CPI or the CPIH, ONS may in future determine that changes need to be made to the way price information is collected and compared. According to ONS's current position, such changes could not be carried across to the RPI. The review found that over time this could result in parallel collection for, and production of, the RPI, thereby increasing costs of production and further reducing the RPI's appropriateness as a measure of inflation.

The Review concluded that the priority should always be to make the main measure of inflation as good as possible.¹⁴ It argued that only changes that are necessary to ensure the continuation of the RPI should be made, noting that this would emphasise the RPI's position as a 'legacy' index.

It is on these issues that we are seeking views.

¹¹ See, for example:

Statement following the RPI consultation (January 2015), available at:

<http://www.statisticsauthority.gov.uk/news/statement-consultation-on-the-retail-prices-index-10012013.pdf>

Assessment 246: The Retail Prices Index (March 2013), available at:

<http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-246---the-retail-prices-index.pdf>

¹² See *UK Consumer Price Statistics: A Review*, Recommendation 4.

¹³ Please see *UK Consumer Price Statistics: A Review*, Recommendation 6, for further detail on Mr Johnson's recommendation.

¹⁴ See *UK Consumer Price Statistics: A Review*, Recommendation 7.

6. Do you use the following indices?

- | | | |
|------|--|--------|
| i. | RPIJ | Yes/No |
| ii. | Tax and price Index | Yes/No |
| iii. | RPIY | Yes/No |
| iv. | RPI pensioner indices | Yes/No |
| v. | Component indices of the RPI | Yes/No |
| vi. | Any other RPI analytical- or sub-index | Yes/No |

6a. If yes, for what purposes? Please provide comments

7. Do you agree that the following indices should be discontinued?

- | | | |
|------|--|--------|
| i. | RPIJ | Yes/No |
| ii. | Tax and price Index | Yes/No |
| iii. | RPIY | Yes/No |
| iv. | RPI pensioner indices | Yes/No |
| v. | Component indices of the RPI | Yes/No |
| vi. | Any other RPI analytical- or sub-index | Yes/No |

7a. Why? Please provide comments.

8. Do you have any views on what 'freezing' changes to the RPI should mean in practice? Please provide comments.

Section Four: *Evolving consumer price statistics*

The Authority and ONS recognise the importance of responding to evolving statistical needs, using innovative, efficient and effective methods. We understand that delivering high-quality and relevant consumer price statistics will require ONS to keep pace with rapid changes in society and technology. Already, some academic institutions and private sector organisations are using big data to develop daily consumer price indices and indices broken down by sector.¹⁵

The Johnson review proposed several ways ONS might seek to develop its range of consumer price statistics over the coming years. For example, Mr Johnson recommended the use of electronic point of sale data (often referred to as ‘scanner data’), and suggested ONS conduct research into whether information on prices and descriptions might be ‘scraped’ from the internet in future. He made recommendations about the treatment of discounts, about outlet substitution, and quality change. He also suggested that council tax be included in CPIH.

In developing its consumer price work plan at **Annex A**, ONS has drawn from both Mr Johnson’s recommendations, and other exciting innovations in the field of price statistics. We now seek users’ views on ONS’s plans for future development.

9. Are the priorities identified by ONS in its forward work plan appropriate?

- iv. Yes.
- v. No.

9a. Why? Please provide comments.

10. Should ONS include council tax in the CPIH?

- vi. Yes.
- vii. No.

10a. Why? Please provide comments.

¹⁵ See, for example, the *Billion Prices Project*. The project is an academic initiative that uses prices collected from hundreds of online retailers around the world on a daily basis to calculate price indices. The scraped prices are weighted together using the weights applied to the CPI in each country. See www.bpp.mit.edu

Annex A: Consumer Price Statistics Work Plan

ONS has a programme of research and development aimed at improving and maintaining the suite of consumer price statistics – ensuring that they continue to meet user needs and make use of new and innovative methods.

The plan continuously evolves in light of new priorities. ONS expects that its priorities for the next five years will be to implement improvements to the methods and transparency of CPI and CPIH, ensure compliance with new EU regulations governing the production of the CPI, and to develop the use of new data sources such as point of sale scanner data.

Parts of the work plan detailed below are dependent on the outcome of the consultation process. Elements which have been addressed in the specific consultation questions (such as the development of inflation indices as experienced by a range of house hold types) are clearly marked.

Short term priorities

European compliance	
Overview	<p>The UK CPI is also the UK's Harmonised Index of Consumer Prices (HICP). The HICP is a measure of inflation produced by all EU member states in line with European regulations. ONS is working to ensure compliance in a number of areas including:</p> <ol style="list-style-type: none"> i. re-referencing the index to 2015 = 100; ii. introducing a lower level of aggregation, called COICOP5; iii. implementing a temporal sample for fresh fruit and vegetables; and iv. addressing compliance issues related to the double chain link. <p>CPI and CPIH indices are currently referenced to 2005 = 100. In 2016 both CPI and CPIH will be re-referenced to 2015 = 100, and at the same time COICOP5 will be introduced. COICOP5 is a new level of disaggregation which sits below the class level indices already published. The need introduce these changes into CPI is driven by the implementation of new European legislation.</p> <p>Prices for fresh fruit and vegetables are collected on a single Index Day, a Tuesday, around the middle of the month. To address temporal sampling requirements, a second collection day for fresh fruit and vegetables is in pilot and plans are in place to roll it out to a full collection in 2016 with implementation in the CPI and CPIH in 2018 following a parallel run in 2017. The results and recommendations for implementation will be presented to the Advisory Panels for Consumer Prices when they are established later this year.</p> <p>If the UK is required to comply with the temporal sampling regulation sooner, with the collection of prices from more days across the month, then a supplementary central collection of prices for fresh fruit and vegetables from the internet could be</p>

	<p>established and introduced into the CPI.</p> <p>The CPI uses a double chain link to introduce new class level weights in January, and new item level weights in February. Eurostat is in the process of considering whether this approach is compliant with HICP regulations. An independent report written for Eurostat on this issue is scheduled to be completed by the end of 2015.</p>
Relates to the following Johnson review recommendation	<p>The main driver of this work is ensuring the CPI remains compliant with European legislation. These changes represent improvements to the CPI and CPIH and thus are in line with the Johnson review recommendation to produce CPI and CPIH to the best possible statistical standard (recommendation 7).</p>

Producing CPIH and CPI to the best possible standard	
Overview	<p>Priority will be given to producing CPIH and CPI to the best possible standard, as recommended by Mr Johnson in his review¹⁶. This includes, but is not limited to:</p> <ol style="list-style-type: none"> i. CPIH regaining its National Statistics status; ii. possible inclusion of council tax in CPIH (dependent on the consultation response); iii. implementing a new data source of private housing rents for Northern Ireland; and iv. ongoing development and implementation of data collection and methodological improvements¹⁷. Current items being considered for improvement include airfares, package holidays and rail fares. <p>ONS has been submitting evidence to the Authority's Assessment team, and it is anticipated that the re-assessment will commence in the coming weeks.</p>
Relates to the following Johnson review recommendations	<ul style="list-style-type: none"> • Produce CPI and CPIH to the best possible statistical standard (recommendation 7). • ONS should give priority to developing the use of point of sale scanner data and web scraping techniques. ONS should set out a detailed plan for working towards greater use of these techniques in its consumer price statistics over the coming years (recommendation 13). • ONS should produce a full explanation of the difference between the rise in the owner occupiers' housing costs component and the larger rise in private rents measured by the VOA and other sources (recommendation 21).

¹⁶ *Ibid*, Recommendation 7.

¹⁷ Improvements can be identified via a number of avenues including, but not limited to, internal reviews, feedback from price collectors and auditors, Eurostat assessments and user feedback

	<ul style="list-style-type: none"> The UK Statistics Authority should consult on including council tax in CPIH (recommendation 22).
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Location Boundary Review

Overview	<p>The current sample frame used to select locations for the local price collection was drawn over ten years ago. While the sample has been updated using rotation of locations and selection of outlets, the location boundaries need to be updated to reflect changing expenditure patterns.</p> <p>New locations boundaries will be piloted in 2016 and, depending on feedback received from collectors in the field, the new boundaries could be rolled out over a 5 year period starting in 2017. The proposal will be presented to the Advisory Panels for Consumer Prices.</p>
Relates to the following Johnson review recommendation	<ul style="list-style-type: none"> Produce CPI and CPIH to the best possible statistical standard (recommendation 7).

Inflation indices as experienced by a range of different household types

Overview	<p>Research published in 2014¹⁸ shows that different household groups can experience difference rates of inflation. Mr Johnson recommended that ONS publish a regular analysis of the change in costs experienced by different household groups. In this publication it will be made clear to users what measures of income should be compared to the indices.¹⁹ The response to the consultation will be used to inform the need, use and development of these indices, which will influence the publication timetable. A publication considering how inflation indices for household types should be compared against suitable measures of income is planned for summer 2015.</p> <p>The existing research on the inflation rates experienced by different household groups is based on the same price data sourced from the CPI. The indices could be developed further by differentiating between different products purchased, producing specific prices indices for each household group.</p>
Relates to the following Johnson review	<ul style="list-style-type: none"> ONS should develop an annual analytical publication that produces inflation indices as experienced by a range of different household types, along with appropriate advice

¹⁸ Variation in the inflation experience of UK households: 2003 – 2014:

<http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/variation-in-the-inflation-experience-of-uk-households--2003-2014.pdf>

¹⁹ See *UK Consumer Price Statistics: A Review*, Recommendation 2.

recommendation	on what income measures these analytical indices can be compared to (recommendation 2).
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Experimental retrospective superlative indices

Overview	<p>Superlative indices make equal use of expenditure data from the base and reference periods to weight price changes. There are advantages to using a price index that incorporates expenditure weights in a symmetric way, in particular a superlative index incorporates changing spending habits into a measure of price change and under certain conditions can be used to approximate a Cost of Living Index. An experimental superlative CPI for the UK was published in 2014²⁰ and the result showed that 12 month growth in the CPI (using locally collected data) exceeds the superlative index by an average of 0.46 percentage points. Mr Johnson recommended ONS should continue its research in this area.²¹</p> <p>The publication of these indices will be coordinated with the publication of inflation indices for different household groups.</p>
Relates to the following Johnson review recommendation	<ul style="list-style-type: none"> • ONS should continue its research on producing an experimental superlative index for the UK and should aim to publish such an index annually in arrears once that work is complete and has been fully quality assured (recommendation 10).

Transparency and processes

Overview	<p>In his review Mr Johnson made several recommendations around transparency and process, specifically he suggested that ONS provide more information to explain:</p> <ol style="list-style-type: none"> why prices for some items are sourced from the internet, while others are obtained from local shop-based collections;²² what criteria are applied when deciding on the formula used to combine items at the lowest level of aggregation;²³ whether weights for some items should be based on more than one year of data to smooth irregular movements (and what causes those movements);²⁴ whether the stratification of items by shop type can be improved²⁵;
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²⁰ Calculating a Retrospective Superlative Consumer Prices Index for the UK: <http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/calculating-a-retrospective-superlative-consumer-prices-index-for-the-uk.pdf>

²¹ See *UK Consumer Price Statistics: A Review*, Recommendation 10.

²² *Ibid*, Recommendation 11.

²³ *Ibid*, Recommendation 12.

²⁴ *Ibid*, Recommendations 15-16.

²⁵ *Ibid*, Recommendations 17.

	<p>v. the extent to which consumers substitute between outlets²⁶ and</p> <p>vi. how item quality change is monitored.²⁷</p>
<p>Relates to the following Johnson review recommendations</p>	<ul style="list-style-type: none"> • ONS should set out a transparent, regular and frequent process for reviewing which individual items in the basket are collected by local price collectors and which are collected from web sites, catalogues and brochures, to ensure this reflects how different items are purchased in practice (recommendation 11). • ONS should review and publish its criteria for choosing how to combine price quotes at the lowest stage of aggregation (recommendation 12). • ONS should use more than one year of National Accounts data in cases where the weights are particularly volatile, or reflect particular circumstances in the latest year available (such as the weight for gas spending) (recommendation 15). • ONS should improve its commentary on the weights tables that accompany the RPI and CPIH, so that it explains why weights differ and/or move in different directions in the RPI and CPIH. ONS should aim to publish the annual article on the updated weights at the time the weights change (recommendation 16). • ONS should review the stratification of consumer price statistics by shop type. The aim should be to introduce an appropriate stratification where weights for the different types of shops are available and can be updated (recommendation 17). • ONS should introduce regular monitoring of the impact of quality adjustment on its consumer price statistics. This includes monitoring how often non-comparable replacements occur for each item in the basket of goods and services, and investigating those items where this is frequent. ONS should particularly seek to understand cases where the relevant price index deviates substantially from the average price collected (recommendation 19).

Long term priorities

<p>Alternative data sources</p>	
<p>Overview</p>	<p>Improvements in technologies have resulted in new, alternative, sources of price data which could be used in the compilation of price indices. Mr Johnson’s report recommended that ONS should give priority to developing the use of alternative data sources, specifically:</p> <ol style="list-style-type: none"> i. the use of electronic point of sale data (often referred to as ‘scanner data’);²⁸ and ii. whether information on prices and descriptions ‘scraped’ from the internet might be used to construct price

²⁶ *Ibid*, Recommendations 18.

²⁷ *Ibid*, Recommendation 19.

²⁸ *Ibid*, Recommendation 13.

	<p>statistics.²⁹</p> <p>Since May 2014 ONS has scraped daily prices from three large supermarket websites, collecting around 150,000 prices monthly for 35 grocery items. Preliminary indices using this data were published on 8 June 2015.³⁰</p>
Relates to the following Johnson review recommendations	<ul style="list-style-type: none"> • ONS should give priority to developing the use of point of sale scanner data and web scraping techniques. ONS should set out a detailed plan for working towards greater use of these techniques in its consumer price statistics over the coming years (recommendation 13).

<h2>Discounts</h2>	
Overview	<p>Retailers are offering an increasing array of discounts to attract customers. Single product discounts (available to all consumers without conditions) are already captured in consumer price statistics. However, many other types of discounts, such as multi-buy offers or loyalty schemes are excluded. In his report Mr Johnson recognised the difficulty of accurately reflecting all discounts in consumer price statistics. He recommended that ONS carry out more work in this area, ultimately seeking to reflect a wider range of discounts in its consumer price statistics³¹.</p> <p>Research in this area is ongoing. Before changes are introduced they will be considered by the Advisory Panels for Consumer Prices.</p>
Relates to the following Johnson review recommendations	<ul style="list-style-type: none"> • ONS needs to continue to examine the range and scale of different types of discounting and the extent to which this has been changing over time. It should publish estimates of the likely effects on CPIH of different ways of dealing with these discounts recommendation 23). • ONS should seek to reflect a wider range of discounts, such as multi-buy discounts, in its consumer price statistics, based on the outcome of its studies (recommendation 24).

<h2>Regional Indices</h2>	
Overview	<p>Relative Regional Consumer Price Levels (RRCPL) are an example of a spatial price index which can be used to compare relative price levels to the UK for the nine regions of England, as well as Scotland, Wales and Northern Ireland. ONS publishes RRCPLs every 6 years using data collected to calculate Purchasing Power Parity (PPP) Spatial Adjustment Factors</p>

²⁹ *Ibid*, Recommendation 13.

³⁰ See <http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/trial-consumer-price-indices-using-web-scraped-data.zip>.

³¹ *Ibid*, Recommendation 23 & 24.

	<p>(SAF). The next SAF collection will take place in 2016 with the RRCPL published in 2017.</p> <p>The regular collection of prices for consumer price inflation statistics is optimised for measuring inflation at the UK level. Prices are collected locally in 141 locations spread across Scotland, Wales, Northern Ireland and the nine regions of England. As a result the number of locations visited per region is small, making the data less suitable for regional indices. Additionally, the prices for many products are collected centrally with no regional breakdown. The viability of using the existing price data to produce more geographically disaggregated price indices will be re-assessed.</p>
<p>Relates to the following Johnson review recommendation</p>	<ul style="list-style-type: none"> • This work supports the Johnson review recommendation to produce measures of inflation as experienced by different households (Recommendation 2).

Annex B: Template for response

Section One: Measuring prices across the economy

1. Should ONS identify a main measure of price change across the economy?

- a. Yes
- b. No

1a. Why? Please provide any comments below:

Insert Response

If yes:

2. What should this measure be?

- a. the CPIH, as recommended in the Johnson review. The CPIH includes owner-occupiers' housing costs. It does not currently hold the *National Statistics* designation (although its re-assessment is due to commence shortly). The index is a UK measure, designed by ONS to meet UK needs.
- b. the CPI, ONS's current headline measure. The CPI is an EU measure, designed by Eurostat to ensure comparable consumer prices statistics across the EU.
- c. other (please provide details).

2a. Why? Please provide any comments below:

Insert Response

3. Should its production be governed by legislation?

- a. Yes
- b. No

3a. Why? Please provide any comments below:

Insert Response

Section Two: Measuring consumer price inflation for different household types

4. Should ONS seek to measure changes in prices, as experienced by different households?

- i. Yes
- ii. No

4a. Why? How often? Please provide any comments below:

Insert Response

If yes:

5. How should ONS seek to do so?

- i. Using a payments-based approach.
- ii. On the same basis as existing measures such as CPI.
- iii. Via another means (please provide details)

5a. Why? Please provide any comments below:

Insert Response

Section Three: The RPI

6. Do you use the following indices?

- | | | |
|------|---|--------|
| i. | RPIJ ³² | Yes/No |
| ii. | Tax and price Index | Yes/No |
| iii. | RPIY ³³ | Yes/No |
| iv. | RPI pensioner indices | Yes/No |
| v. | Component indices of the RPI | Yes/No |
| vi. | Any other RPI analytical- or sub- index | Yes/No |

6a. If yes, for what purposes? Please provide any comments below:

Insert Response

7. Do you agree that the below indices should be discontinued?

- | | | |
|------|--|--------|
| i. | RPIJ | Yes/No |
| ii. | Tax and price Index | Yes/No |
| iii. | RPIY | Yes/No |
| iv. | RPI pensioner indices | Yes/No |
| v. | Component indices of the RPI | Yes/No |
| vi. | Any other RPI analytical- or sub-index | Yes/No |

7a. If yes, why? Please provide any comments below:

Insert Response

³² RPI calculated using formulae that meet international standards

³³ RPI excluding Mortgage Interest Payments an indirect taxes

- 8. Do you have any views on what 'freezing' changes to the RPI should mean in practice? Please provide comments.**

Insert Response

Section Four: Evolving Consumer Price Statistics

8. Are the priorities identified by ONS in its forward work plan appropriate?

- a. Yes
- b. No

Insert Response

9a. Why? Please provide your comments below:

9. Should ONS include council tax in the CPIH?

- a. Yes
- b. No

10a. Why? Please provide your comments below:

Insert Response