Article

Research and developments in the transformation of UK consumer price statistics: December 2023

Research to modernise the measurement of consumer price inflation in the UK: seventh in a series of biannual articles to update users.

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1 . Other pages in this release

In this iteration of our research series, we present the following articles:

- [The redevelopment of private rental prices statistics, intended methodology: December 2023](#)

- [Outlier detection for grocery scanner data: December 2023](#)

2 . Overview

- This is the seventh in a [series of biannual articles on the transformation of consumer price statistics](#) that aims to update users on our research to modernise the measurement of consumer price inflation in the UK, while maintaining the quality and integrity of our outputs.

- Alternative data sources and new methods to use these data were introduced for rail fares in 2023, as detailed in our [Transformation of consumer price statistics: July 2023](#) article.

- In 2024, we aim to introduce alternative, big data for second-hand cars and private rents, and in 2025 for groceries.

- The other pages in this release provide impact analyses for second-hand cars and private rents, as well as updates on the methodology for private rents and the proposed outlier detection methodology to be used on grocery scanner data.

3 . Updates on our transformation work

Impact analysis series

In addition to this biannual research-focused series, we also update our [impact analysis series](#), to show the indicative impact of new data and methods on headline consumer price statistics. Our previous [Impact analysis on transformation of UK consumer price statistics: rail fares, February 2023](#) article in this series covered the introduction of new data sources and methods for rail fares in the lead up to the inclusion of these new data in headline statistics in March 2023.

This release contains two articles in the impact analysis series. The first article, [Impact analysis of transforming statistics for second-hand cars and private rents on UK consumer price statistics: December 2023](#), outlines the joint and individual indicative impacts of including new data and methods on second-hand cars and private rents in Consumer Prices Indices including owner occupiers' housing costs (CPIH) and the Consumer Prices Index (CPI). The second article, [Redevelopment of private rental prices statistics, impact analysis, Great Britain: December 2023](#), provides much more detail on the indicative impacts of including private rents into our headline measures, including lower-level rental breakdowns such as lower geography level.

Methods research

[The redevelopment of private rental prices statistics, intended methodology: December 2023](#) release sets out the approach we are implementing to transform our private rental statistics including creating a new monthly publication that provides more detailed insights into the rental market.

Our updated methods for incorporating second-hand cars were discussed in our [Using Auto Trader car listings data to transform consumer price statistics, UK: July 2023](#) article.

In preparation for the introduction of grocery scanner data in 2025, our [Outlier detection for grocery scanner data article](#) presents our proposed approach to data cleaning through removing out-of-scope observations, erroneous prices and end-of-lifecycle products. The article outlines the impacts of these data cleaning methods on our indices and justifies why the removal of such outliers results in high-quality indices.

4 . Future developments

The research presented in these articles should not be considered as final but should begin to demonstrate how some traditional methods will need to be transformed to process the magnitude of information that is becoming available to us. All results and statistics within this article should therefore be treated as experimental. A full research programme is outlined in our [Consumer prices development work plan](#).

During this period of research, we will continue to work with our [Advisory Panels for Consumer Price Statistics](#) and broader users. We welcome feedback on any of the research completed to date, which may help shape the ongoing transformation of consumer price statistics to include new data and methods. Share your feedback with us by emailing cpi@ons.gov.uk.

For more information see our [Transformation of consumer price statistics: July 2023](#) release.

5 . Related links

[Impact analysis on transformation of UK consumer price statistics](#)
Article series
This series demonstrates the indicative impacts on our headline consumer price statistics of introducing new data and methods into our consumer price inflation statistics.

[Transformation of consumer price statistics: July 2023](#)
Article | Released 6 July 2023
Our plans to transform UK consumer price statistics by including new improved data sources and developing our methods and systems for production from 2023.

[Consumer prices development plan](#)
Article | Released 24 July 2023
An update on the proposed development plan for consumer price statistics. Includes the rationale for our priorities, their potential impact, resource requirements, and a broad timeline of our planned development work.

[Consumer price inflation, UK](#)
Bulletin | Released monthly
Price indices, percentage changes, and weights for the different measures of consumer price inflation.

[Consumer Prices Indices Technical Manual, 2019](#)
Methodology | Revised 22 March 2023
This technical manual is a reference tool for anyone wanting to understand how measures of consumer price inflation and associated indices are compiled.

6 . Cite this article

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