ADVISORY PANELS ON CONSUMER PRICES – TECHNICAL

Minutes

12 April 2024

Teleconference

11:00 – 12:30

Members in attendance
Mr Grant Fitzner (ONS) (Chair)
Mr Mike Hardie (ONS)
Professor Paul Smith
Professor Ian Crawford
Professor Bert Balk
Mr Rupert de Vincent-Humphreys
Dr Jens Mehrhoff

Guest Presenter
Dr Hannah Randolph
Ms Brodie Gillan

Secretariat
Mr Dawid Pienaar (ONS)
Mr James Wilkins (ONS)

ONS attendees
Mr Chris Jenkins (ONS)
Mr Chris Payne (ONS)
Ms Abi Casey (ONS)
Mr David Beckett (ONS)

Apologies
Professor Rebecca Killick
Mr Peter Levell
Dr Martin Weale

1. **Introduction and apologies**

   1.1. Mr Fitzner opened the meeting and passed on apologies from members unable to attend.

2. **EDIF-funded research on HCIs**

   2.1. Dr Randolph from Fraser of Allander Institute presented a paper circulated with Panel members on improving price level data for different household groups. The purpose of the paper was explained and how it relates to the Household Cost Indices (HCIs) which measure inflation experienced by different types of households. This explored options for updating the HCIs to account for the different prices paid across household groups for the same or similar goods and services. The paper primarily focused on goods prices with consideration of services for future research.

2.2. Dr Randolph presented the background that other countries have measures similar to the HCIs produced by ONS, but none account for household groups paying different prices for the same or similar goods. A selection of academic papers which consider households paying different prices for the same or similar goods were summarised by explaining the typical data sources and methods used in the literature.

2.3. Dr Randolph explained the possible data sources that could be used to link average unit price and the type of good purchased with household characteristics. These include household scanner data, supermarket scanner data, household expenditure survey data, receipt scanning and banking data. The benefits and limitations of each data source were explained.

2.4. Dr Randolph then presented the potential options that could be explored, alongside the necessary considerations for each option. These include: the purchase of household scanner data; link supermarket scanner data to household characteristics; update the Living Costs and Food Survey (LCFS) methodology to collect the necessary data; use a periodic or one-off study to model dispersion in household group inflation rates relative to the all-household HCI rate, or household group adjustment factors for Class-Level price indices.

2.5. Dr Randolph asked the Panel for feedback on three categories:

2.5.1. Whether anything not considered in the paper should be taken into account?

2.5.2. What the relative merits of the different methods are? Are there any methods that seem most/least promising or practicable?

2.5.3. What is the applicability of the methods considered in the paper for services?

2.6. The Panel thanked Dr Randolph for an interesting paper and presentation.

2.7. A Panel member supported using consumer scanner data, with ideally an LCF module to capture service prices. This is because scanner data captures transaction prices at household level which then links to household spending patterns. The Panel member recommended trialling this approach with free scanner data before committing to purchasing expensive scanner data, as it is then possible to learn how to deal with problems that may occur in scanner data such as missing price data and dealing with zero quantities.

2.8. A Panel member supported calculating the index at an individual level and then grouping to avoid potential inequality biases from aggregating prices. Another Panel member suggested this approach may be too difficult and not what we are trying to measure. They provided support for starting with group specific indices for groups of households with similar characteristics, which has the added advantage of helping deal with zeroes in the dataset. They

acknowledged the introduction of inequality bias may need further investigation.

2.9. The Panel further discussed and asked what the purpose of the exercise is, and asked for clarification on what is the target of the measurement. This is because there are differences dependent on if the index is a pure price index or a cost-of-living index such as the approach to quality adjustment.

2.10. A Panel member questioned whether the data will be available now or in the future to perform the task that the paper is trying to achieve. Another Panel member questioned how big the issue presented in the paper is, given the size of these groups of goods in the consumer basket to understand the resources needed relative to the issue.

2.11. On the option of a one-off study to model dispersion in household group inflation rates, a Panel member suggested rather than a using an expensive national sample, a smaller sample to dig into individual household cost of items may be better, and less expensive to implement. The Panel member highlighted the benefits of seeing the model in advance, as they questioned whether the model would have enough predictive power. Dr Randolph agreed, as this option requires the most amount of work to develop. On the modelling approach, another Panel member highlighted caution to avoid importing the assumptions into the model that are hoped to be proven.

2.12. On the options presented, a Panel member questioned to what extent supermarket card data would be helpful. They also questioned if making changes to LCFS methodology would have negative consequences on the quality of data collected, due to the burden on respondents. Dr Randolph explained that conversations had been held with the LCFS team and changing the response methodology may actually decrease the burden on respondents, but would take time and resources to implement if this approach were chosen. The Panel member also highlighted considering the use of postcodes in the data, which has been useful in other areas of Consumer Prices development.

3. **Constructing variance estimates for the UK Consumer Price Indices: Progress update April 2024**

   3.1. Professor Smith introduced a paper which provided a progress update on constructing variance estimates for the UK Consumer Price Indices. This is an update on the item presented at the April 2023 APCP-T

   3.2. Professor Smith explained that as a result of the previous APCP-T, the jackknife is performed higher in the design. Previously, single prices were dropped whereas ultimate clusters are now dropped, ultimate clusters can be locations or shops dependent on where in the design the jackknife is. The calculations for which are currently in-progress due to processing difficulties because of the number of ultimate clusters in calculating the CPI to get an estimate of variance. Professor Smith highlighted that results would be presented at a future Panel meeting when they are ready.

   3.3. Professor Smith presented the theoretical framework for how the variance components join together. The variance due to the weights has been calculated previously in a separate paper using 2013/2014 data which may have to be updated. Variance due to representative items has been previously presented. The focus is currently on calculating variance due to other parts of the design, such as location, outlets, and prices inside. Professor Smith then discussed the implementation of the jackknife variance estimation and explained that consideration is currently being given to whether the current finite population correction is correct.

   3.4. The Panel thanked Professor Smith for the update and acknowledged the difficulties and challenges with producing variance estimates.

   3.5. A Panel member stated that they were interested in how the different presented sources of variance compare quantitively and asked for the data to be shared as available.

4. **Publication status of papers**

   4.1. Both papers presented at the Panel will be published alongside the minutes.

5. **AOB and date of next meeting**

   5.1. The next meeting will be held on Friday 5 July 2024.