ADVISORY PANELS ON CONSUMER PRICES – TECHNICAL

Minutes
18 July 2025
Teleconference
10:00 – 12:00

Members in attendance
Mr Richard Heys (ONS, Chair)
Professor Paul Smith
Dr Jens Mehrhoff
Mr Peter Levell
Mr Rupert de Vincent-Humphreys
Dr Martin Weale
Mr Stephen Burgess (ONS)
Mr Mike Hardie (ONS)

Presenters
Dr Mario Spina (ONS)
Mr James McGregor (ONS)
David Hearne (University of Birmingham)

Secretariat
Ms Aimee North (ONS)
Ms Rifah Abdullah (ONS)

ONS attendees
Mr Chris Payne (ONS)
Mr Liam Greenhough (ONS)
Mr Luke Michaelides (ONS)

Apologies
Professor Ian Crawford
Professor Rebecca Killick
Mr Grant Fitzner (ONS)

1. **Introduction and apologies**
   1.1. Mr Heys opened the meeting as Acting Chief Economist and passed on apologies from members unable to attend.

2. **Update on Variance estimate**
   2.1. Professor Smith outlined since April 2024, they have completed the price sampling variance calculations using the ultimate cluster approach and found slightly larger variances than expected. He also highlighted ongoing work comparing design-based and model-based jackknife estimators, and deliberation on the best approach to multilateral indices calculated using scanner data, where full price data eliminates sampling variance, necessitating model-based approaches.

2.2. Professor Smith then outlined that next steps would revisit and update work previously completed by Jim O'Donoghue to assess feasibility of automated methods applying to the Living Costs and Food Survey (LCF) and to assess how National Accounts in ONS use the data for input-output tables. A panel membered queried the use of LCF data, highlighting concerns around quality. Professor Smith clarified that the use of additional data sources in National Accounts balancing processes reduce the quality concerns and that he intends to learn more about this. Mr Burgess also highlighted that additional data sources are used for the CPI weights and suggested ONS could provide a short note on how weights are determined in consumer prices and in national accounts input-output tables.

2.3. Another panel member asked whether variance could be calculated conditional to the weights, allowing focus to be on variance in prices. Professor Smith confirms that this is something that they have considered as weights have been relatively consistent historically. A panel member questioned whether there has been any investigation in the potential co-relationship between variance in weights and prices, whether areas of the basket with the highest price variance also had a high weight variance. Professor Smith agreed to look into whether there is an observable correlation. Another panel member raised that consideration would need to be taken on the best way to communicate that as the index increases over time, naturally so will the variance to the public.

3. **Retailer type stratification**
    3.1. Dr Spina presented updated analysis on retailer type stratification, between the current "multiple-independent" classification versus the newly proposed "big-small". The analysis, covering data from January 2019 to June 2024, revealed that while headline CPI impacts were minimal, sample size shifts at lower levels of aggregation resulted in potentially volatile indices, particularly in clothing and footwear. These results have led ONS to decide not to implement a change in retailer type classification until a fuller review on stratification can be done at a later date. Dr Spina instead presented some shorter-term improvements to the current methodology that could possibly be implemented in the next annual round such as reclassifying large retailers based on turnover data.

    3.2. Panel members were agreed with the proposed strategy but highlighted that further clarification is needed on the meaning and purpose of stratification and subsequent variance impact. A panel member suggested that in future, any analysis needs to consider replacement rates in divisions such as clothing and footwear. Another panel member suggested future research should also investigate how any change in stratification would impact the formula effect seen between the CPI and RPI.

4. **Methodology proposal for Northern Ireland**
    4.1. David Hearne from the University of Birmingham presented a Bayesian model designed to stabilize regional expenditure weights using LCF data. His approach used additive log-ratio transformations and compositional weighting to reduce volatility, particularly for infrequently purchased expenditure classes. The model showed promising results, tracking national CPI more closely than direct LCF weights.

    4.2. Mr McGregor then outlined practical application of Mr Hearne's model to Northern Ireland CPI. The current method uses a five-year average of weights from 2015, uprated by national changes in expenditure over time. This fails to reflect recent trends for Northern Ireland. He noted that the model could better capture regional consumption changes, such as increased gas use in Northern Ireland. Mr McGregor also mentioned exploring auxiliary data sources, including regional accounts and credit card data, to refine estimates. A panel member suggested using census data alongside credit card data to improve precision. Mr Hearne agreed that this may mitigate some of the bias seen in the LCF data.

    4.3. Mr McGregor confirmed that he would present the impact on NI CPI of bringing the current approach more closely into line with Hearne's methodology to the panel at the next meeting.

5. **Any other business**
    5.1. Publication of papers
        5.1.1. Papers presented at the meeting were confirmed to be published alongside the minutes. Mr Burgess confirmed that the paper presented at the previous panel meeting on Producer Price Index will be published once the impact analysis on the correction is published on the ONS website.

    5.2. Panel recruitment
        5.2.1. The panel were requested to provide suggestions for future members. Panel members raised the importance of recruiting members from diverse backgrounds and skillsets.

    5.3. Next Panel meeting
        5.3.1. Attendees provided verbal confirmation on whether they can attend the proposed next meeting date.

Action – ONS to compile short note on how weights are determined in CPI/CPIH and in national accounts input-output tables.

Action – Professor Smith to investigate the relationship between high price variance and high weight variance as part of his team's work.