The treatment of products seasonality in inflation estimate

Introduction

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Outline of the presentation

1. Strong versus weak seasonality

2. Seasonal or seasonally adjusted headline inflation

3. The state of play

4. The state of play: some open issues
Strong versus weak seasonality

- Strongly seasonal commodity: not available in marketplace during certain seasons of the year

- Weakly seasonal commodity: available throughout the year, but with regular fluctuations in prices or quantities synchronized with the season of the year

**Strongly seasonal commodities pose the most relevant problems in consumer price indices compilation because it becomes impossible to calculate a price relative (bilateral index number theory decades)**
Seasonal or seasonally adjusted headline inflation

• Focusing the attention on month to month fluctuations or on the yearly fluctuations (month to month – 12, quarter to quarter – 4) ?

• Taken for grant that seasonal commodities have to be included in CPI, in order not to reduce the scope of inflation measure, ILO manual suggests that index number theory can deal with seasonal commodities if the focus is moved to the comparison of one month with the same month of the previous year

• ILO manual, for many CPIs that are month to month indices that use annual basket quantity weights, suggests solution to estimate the price for the months when the commodity is not available. In this case seasonal fluctuations remain tremendous and the trend is hidden and seasonal adjustment techniques of headline inflation have to be considered
Seasonal or seasonally adjusted headline inflation

- If the attention is aimed at removing the month to month fluctuations in order to better identify the trend movements and forecast inflation developments, what are the issues to be managed and the solutions to be adopted?

Central issues appear to be which kind of index formula adopting in order to reduce seasonal fluctuations

Year-over-year monthly indices
It may be useful that statistical agencies make available approximate Fisher indices along with Laspeyres and Paasche indices

Rolling year annual indices
Disadvantage of providing a measure of year-over-year inflation with a lag of six months

Analytic series to be made available in order to help the interpretation of the month to month inflation
Seasonal or seasonally adjusted headline inflation

• If the attention is aimed at estimating the missing prices when a single strongly seasonal product is out of season (keeping, as a consequence, the seasonal fluctuations) what are the issues to be managed and the solutions to be adopted?

The main issues appear to be how estimating the unavailable prices or providing the seasonal products with variable weights along the year (later it will be discussed the European regulation choices) and how to treat the consequent seasonal headline inflation that is calculated in order to identify trend movements.

Annual basket indices with carry forward of unavailable prices

Annual basket indices imputing unavailable prices

Lowe, Young and geometric Laspeyres indices using both carried forward or imputed estimations of unavailable prices do not fulfill the aim of measuring month to month inflation because the do not predict their seasonally adjusted rolling year counterparts.
The state of play

• Conclusions of ILO manual are that “there is, as yet, no consensus of what is best practice in this area”

• After a long debate European Union approved in 2009 Regulation 330 to treat homogeneously seasonal products within the framework of fixed Annual Basket Laspeyres type indices

• A lot of papers and insights have been developed (also in the occasion of this UNECE meeting)

• Are we able to move ahead in sharing a common view about the issue of treatment of seasonal products?
The state of play: some open issues

• Is it better seasonally adjusting seasonal indices or to produce indices for which the prices of seasonal commodities have been treated? Or producing analytic series in order to allow users understand the trend movements of inflation?

• Are weakly seasonal commodities in some cases as relevant as the strongly seasonal commodities (i.e. airfares)? In particular when seasonality is due to customs and not to nature and in some cases depending on moving holidays as Easter?

• Unpredictable movements of seasonal commodities that are due to exogenous shocks (i.e. for fresh fruits and vegetables) have to be treated or not?

• What are the consequences of the possible future use of scanner data?
The state of play: weakly seasonal products

Italian HICP. 0733: Airfares. HICP (m/m-1)

Apr-14, 20.7

Apr-13, -2.6
The state of play: weakly seasonal products

Thank you for the attention