

New and disappearing goods

Moderator: Keith Woolford, Australian Bureau of Statistics.

Summary of session

In order to minimise bias in the CPI the item samples need to be updated to include new goods and exclude those that disappear.

The traditional fixed weight/Laspeyres type indexes, which are used in the compilation of most consumer price indexes, do not allow for substitutions between commodities and cannot adequately allow for new goods. Similarly, the Paasche index using current period weights cannot handle goods that have disappeared since the base period. Changes to the item coverage of these indexes over time can only be handled by linking (or chaining) which also requires reweighting.

Lane identifies five broad categories of new goods. His concept of new is very broad, including generic equivalents, replacement models and innovative products. Current methods for handling these categories of items within the US CPI are described and improved approaches are identified. Some of the approaches discussed for new goods are specific to the collection and compilation practices used in the US CPI.

Opperdoes presents empirical results of efforts to handle new and disappearing goods by using a constant elasticity of substitution (CES) formula proposed by Balk at the fifth meeting of the Ottawa group. Scanner data is used and a new good is defined by the appearance of a new product code. It appears that for a number of products the computed elasticities of substitution are not particularly stable through time and this would be of concern to index compilers.

Since the traditional Fisher index is the geometric mean of Laspeyres and Paasche indexes it also cannot handle new and disappearing goods. De Haan extends the Fisher formula to include new and disappearing goods although it requires the use of imputed prices for these items. To avoid imputing prices an approximation is made with the help of Balk's CES based price index and this is compared with the Fisher index compiled on a matched sample basis using the same data and results from Opperdoes to measure the bias. The results show considerable differences in the estimates of bias across 9 commodity groups.

Recommendations for statistical agencies

The discussion in Lane is a useful overview of the new goods problem from a practical perspective.

The research of Opperdoes and de Haan points the way to a promising alternative approach for tackling the problem of new and disappearing goods but requires further study before it could be implemented in practice.