Miscellaneous areas of new or ongoing research

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Summary of session

The papers presented in this session covered various issues that did not belong in the specific topic sessions.

Dalén draws a distinction between what index numbers should ideally measure and what is actually achieved in practice. In many respects the difference between the two arises because the universe for price indexes (goods and outlets) is dynamic and not static. He discusses what should be the appropriate statistical target or methodology to handle the dynamic universe. He concludes that the most promising general target formulation involves short index links at the upper level of the index and a unit value index at the lowest level. A special case of this is the monthly chaining and resampling matching method using a superlative type index. Dalén saw this approach as preferable to hedonics.

Participant comments on Dalén mostly focussed on his downplay of the hedonic method. They did not necessarily see it as hedonics versus matched samples. Hedonics was seen as useful in handling quality changes when resampling and in handling the introduction of new goods when there were quality changes. When there was little change in samples and the quality of the items being sampled, the hedonic method and matched samples are expected to produce similar results. It was noted that Dalén had correctly drawn a distinction between new and disappearing goods and quality adjustment. In addition the unit value approach for elementary aggregates was equivalent to the ratio of arithmetic mean prices, the next preferred method for calculating average prices (after geometric means).

In general terms, the most preferred or superlative type indexes use weights from the current and base periods (or current and previous period in the case of chained indexes). Okamato investigates the performance of indexes compiled with weights estimated for the mid point year in a conventional fixed weight index and in a CES type index. For the main part he finds that the mid point year indexes produce results very close to the preferred indexes and perform much better than the laspeyres and chained laspeyres indexes. The advantage of mid point year is that it offers the potential to overcome the bias of the traditional Laspeyres index without needing weights for the current period.

The typical approach to incorporating items into the CPI is to identify expenditures on individual commodities and to price them separately (the fixed basket approach) even if expenditure on one item might be closely related to expenditure on another. Schultz follows an alternative approach of defining products more broadly in terms of the utility households derive, using as an example private transportation, and casts this in a user cost framework. Data are obtained on the total costs of running each of a sample of motor cars compiled by a private company and compared with published CPI data. Similar results are obtained in one city while there are substantial unexplained differences in another city. Further examination of the data from both the private sector company and the CPI was needed. At this stage there was no intention of introducing the methodology into the Canadian CPI.

Participants saw merit in the overall ideal. In some ways the use of utility could help in defining what are new products. An example given was recorded sound (music), where a utility classification would classify all equipment used to play recorded sound in the one

category. Diewert argued that the opportunity cost of capital (to measure the cost of purchasing the vehicle) should be adjusted for changes in the asset price (i.e. as real cost) and not simply be the nominal rate as used by Schultz. Participants also raised questions as to how quality change in vehicles would be handled and there was discussion as to what constituted quality change. Caution was urged in determining what is treated as quality change. It made little sense and could produce unsustainable results to, for example, treat every style or colour change as quality change. The approach adopted by Schultz handled changes in fuel economy by estimating fuel consumption and applying an average number of miles travelled. This contrasted with the approach used in for example, the Australian CPI where changes in fuel consumption are 'built in' to the purchase price of the vehicle. The user cost approach also raised issues such as the inclusion of interest costs and the principle purpose of the CPI.

As the Austrian market becomes more liberalised (less regulated), new suppliers and goods have entered the domestic market. Haschka outlines some of these recent and pending developments and the procedures used to update the CPI. For goods and services that are homogeneous or essentially of equivalent quality, average prices are/will be obtained by updating weights as frequently as possible to reflect changes in market shares. The electricity, gas and telecommunication industries have undergone liberalisation, although there has as yet been little impact on consumers.

It was suggested that the bill method would be an effective way of capturing price changes associated with market liberalisation. Haschka saw the bill method involving a lot of work and expected it to produce similar results to the approach being taken.

Recommendations for statistical agencies

The papers and discussion tended to enforce general observations along the following lines:

1. The universe of goods and services for the CPI is dynamic and compilation techniques and procedures need to be appropriate.

2. The concept of CPI commodity structures based more heavily on the utility concept is worth pursuing as it better handles complementary goods and may help provide a basis for determining new goods.

3. Changes in regulations regarding market entry of new suppliers and price determination poses substantial challenges and resource demands for CPI compilers if they are to 'get it right'.