Kristiina Nieminen, Satu Montonen, Antti Suoperä   11 April 2019

Abstract to the 16th Meeting of the Ottawa Group on Price Indices

TOPIC: Pricing seasonal products

Title

Construction strategy of index series for normal and seasonal commodities simultaneously. Numerical exercises.

Authors

Vartia, Yrjö, University of Helsinki
Suoperä, Antti, Statistics Finland
Nieminen, Kristiina, Statistics Finland &
Montonen, Satu, Statistics Finland

Abstract

Statistical institutions utilize more and more big data (a.k.a scanner-data, transaction data) in their CPI production because it provides enough information of the products. Now, one question arises; is it still necessary to treat seasonal products differently to ordinary products? Seasonal products are not available in the market every month (strongly seasonal) or have seasonal fluctuation in quantities (weakly seasonal). We show that this no longer needed.

Our paper analyzes use of scanner data that contains complete information on sold products; unit prices, quantities and sales value aggregated on week level. We show that seasonal products may be taken into account easily in the CPI-index series calculations.

We use properly defined bilateral price-links for normal and seasonal products simultaneously. Seasonal products are divided by their availability to two groups: weakly and strongly seasonal products. We use the base strategy and define the base period to be the normalized average month of previous year. This method produces prices and quantities for all commodities sold during the base period. We use comprehensive set of basic and excellent index number formulas in this strategy and present numerical results.

Our expectations are realized; with this method, we capture usual seasonal fluctuation to the price series. There is only one qualification in the method: just use any excellent index number formula such as Törnqvist for all complete datasets.