Abstract for a paper for the 16th meeting of the Ottawa Group on Price Indices

Submission to topic 5: Quality Adjustment

Authors: Bernhard Goldhammer, Raffaella Traverso, Lukas Henkel (European Central Bank)

Bias related to the bridged-overlap method

A common method for quality adjustment in price statistics is the "bridged-overlap" method that assumes that the price change between an outgoing and incoming product in a replacement situation equals the average price change of those products of the same category currently observed on the market. Whether this assumption is correct, depends on the pricing policies on the market. After describing the bridged-overlap method and putting it into the context of quality adjustment methods, the paper shows first the conditions to be met under which the approach delivers reliable results; second, it elaborates in a theoretical manner the bias that can occur if using bridged overlap leads to neglecting actual price changes in replacement situations, which we will call the replacement bias; third, it illustrates the theoretical considerations with calculation examples using web-scraped data from German retailers. It concludes with a recommendation on when to use the bridged-overlap method for quality adjustment.