

“Online Price Index with Product Replacement: The Closest-Match Approach” to the 16th Meeting of the Ottawa Group on Price Indices.

"Current methodologies to calculate a consumer price index (CPI) with online prices have shown an abnormal downward trend. This paper introduces a new methodology that avoids this problem by effectively mitigating the effects of product turnover. The method mimics the decision-making process of the specialist that reviews forced-replacement items at the statistical offices, yet the method is scalable so that the price index can be calculated with thousands of products without manual intervention. The method reflects a change in paradigm for how old and new varieties of products are linked. While the traditional approach looks for a replacement when an item is discontinued, the closest-match approach searches for a replaced item every time a new product enters the market.

The price index presented in this study is remarkably similar to the traditional CPI for every country in the sample, namely Germany, the Netherlands, Spain, the United Kingdom, and the United States."