

DESCRIPTION FOR THE GENERAL PUBLIC

In recent years many National Statistical Offices (NSOs) are experimenting with the use of online data in official consumer price indices, in particular, in compiling food price statistics (food CPI). However, in case of Central Statistical Office in Poland (CSO) prices of food products are still collected in a traditional way – mainly by price collectors employed by regional statistical offices, in selected outlets. The main goal of this research project is to address the issue of online data being not sufficiently utilized while measuring food CPI in case of Poland and to explore new possibilities this approach would offer.

The following research hypotheses will be verified:

H1. Online prices could be effectively used as an alternative source of price information to construct price indices that mimic the behaviour of official food CPI (compiled by CSO).

H2. By using daily online food prices it is possible to accurately nowcast/predict a monthly index similar to the official CSO food CPI a few day before the end of the reference period (i.e. current month).

H3. Daily online food CPIs allow assessment of the transmission of different shocks to retail food prices with higher precision (regarding its course, the time span as well as its strength) than the monthly official CSO CPI data.

H4. Due to inter alia lower so called “menu costs” (costs that are connected with the act of changing the price), the food prices in the Internet are less sticky (change more frequently) than their counterparts in the traditional stores.

In this research project an algorithm (a computer program) will be developed. It will allow automated collection of information about food products from the websites of supermarkets chains operating in Poland (e.g. Tesco, Piotr I Paweł) in daily frequency. The resulting product data will be stored in a database. The set of daily quotations will be the basis for calculation of daily and monthly online price indices in the “food and non-alcoholic beverages” category. The online food indices will be compared with official CSO food CPIs, and their leading properties will also be investigated. Additionally, the gathered data will be used to assess the transmission of various shocks (e.g. exchange rate and commodity shocks, weather disturbances – floods, droughts, etc.) to retail food prices. We will also investigate the frequency of food prices changes (so called price stickiness). This indicator will be compared with existing research regarding food price stickiness in physical stores.

Thorough search of the relevant literature yielded no published articles regarding the use of online prices to monitor food prices in Poland, despite widespread, international use of this method. Therefore, the proposed research project has a pioneering nature.