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Directorate C: Macro-economic statistics
Unit C-4: Price statistics. Purchasing Power Parities. Housing statistics

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HICP Compliance Monitoring

Report – Slovenia

1. Introduction

In March 2024, Eurostat reviewed the compilation of the harmonised index of consumer prices (HICP) for Slovenia. The review was done against the existing legal framework, established HICP recommendations, and other guidelines and good practices in the field of consumer price indices (CPI).

The current report is based on:

- The 2023 inventory containing details of the data sources, definitions, and methods used in the HICP for Slovenia.
- The discussions at the compliance monitoring meeting, which was held on 13 March 2024.
- The information note on the previous compliance monitoring exercise published in September 2016.

For all main methodological topics related to the HICP, this report briefly summarises Statistical Office of the Republic of Slovenia (SURS) compilation practices, followed by Eurostat's appraisal of compliance and, if applicable, recommendations for improvement. The report concludes with Eurostat's overall assessment of compliance of the HICP for Slovenia.

2. Release policy

SURS produces the HICP flash estimate, which is not revised. Therefore, the flash estimate figures and the final HICP figures are the same. The all-items and the 12 ECOICOP divisions for the HICP and CPI are available and first released on the last working day of the month. In addition, SURS holds a press conference at the time of the CPI/HICP release, if there are any

special events regarding the release. From February 2024 onwards preliminary access to the data of the first release is provided to the Prime Minister (1 to 2 hours before the publication).

Statistical data are available on the SURS website in the SiStat Database. The CPI is published 7 days after the first release at the 5-digit ECOICOP level. The HICP at the 5-digit ECOICOP level is published only in the Eurostat Database. Regional indices are not compiled.

3. Coverage and classification

The target universe of the Slovenia HICP follows the household final monetary consumption expenditure (HFMCE) concept as defined in Article 2(20) of Regulation (EU) 2016/792 (framework regulation) and in the Annex of Commission Implementing Regulation (EU) 2020/1148 (implementing regulation).

In line with this concept, the HICP reflects consumption expenditure by all individuals made on the territory economic territory of Slovenia. These definitions follow the concepts of the European System of Accounts (ESA 2010).

The HICP comprises all purchases by households within the economic territory of the country by resident and non-resident households (i.e., domestic concept). The HICP covers actual prices paid for goods and services in monetary transactions.

The product categories listed in Article 5(8) of Regulation 2016/792 as well as owner-occupied housing expenditures are excluded from coverage in the Slovenian HICP.

The HICP covers the entire economic territory of Slovenia. Price collection takes place in the four major cities. For centrally collected prices and for some aggregates, additional municipalities are included in the price collection. Transaction data and web scraped data cover the whole country.

SURS classifies products and calculates the HICP according to the ECOICOP since January 2017.

SURS includes in the HICP all ECOICOP categories whose expenditure share lies above threshold of one part per thousand defined in Article 5(7) of the framework regulation.

Compliance

The coverage and classification in the Slovenia HICP are in line with the legal requirements.

4. Weights

The weights in the Slovenian HICP are updated annually; national accounts (NA) data of year t-1 is the main source at ECOICOP 4-digit level. Data from the quarterly NA are available for the first three quarters of year t-1. For the fourth quarter, estimates are made for goods and for services. Retail sales are used as a proxy for the expenditures of non-durable goods, and motor

cars sales are used as proxy for the expenditures of durable goods. The data for the first 10 months are available in November of year t-1. The remaining two months are estimated with the average growth of the year t-1 over November and December of year t-2. For services, the first three quarters are used, and the average growth of the first three quarters is applied to the data of the fourth quarter of year t-2.

The breakdown at the ECOICOP 5-digit level is done with a combination of data from NA and from the Household Budget Survey (HBS). The HBS takes place every four years, and the most recent one was conducted in 2022.

The lowest level with explicit weights is the unofficial ECOICOP 6-digit level. Weights at this level are obtained from several sources, specifically from other statistics on trade and services. Statistics on energy, education, health, and tourism are also taken into account. For ECOICOP Division 01, Food and non-alcoholic beverages, and Division 02, Alcoholic beverages and tobacco, data are collected through scanner data, and the elementary aggregate (EA) weights are based on the ratio of retail turnover in year t-1.

Outlets are implicitly weighted via the sampling frame used, i.e., the bigger the market share (turnover) of a retail chain of outlets, the more branches of that chain are sampled.

The weights are price-updated to the price level of the previous year's December, the price reference period.

SURS has started the preparatory work for the implementation of ECOICOP ver.2 supported by European Union financing provided by Eurostat through grants. The 2022 HBS follows ECOICOP ver.2, thus detailed information for sampling and weighting is available. The seasonal weights approach will continue to be used for seasonal products.

Compliance

The compilation of weights in the Slovenian HICP is in line with the legal requirements.

5. Sampling and representativity

Field price collection is undertaken in the four largest cities. The smallest town where data are collected has a population of 26,000 people. Scanner Data are obtained from the biggest supermarket chains, covering the whole country.

Outlets in each location are selected using the business register, turnover data from retail trade statistics, and in cooperation with the price collectors. Prices are monitored in several types of outlets: markets, specialised stores, discounters, and craftsmen. Since scanner data were included in the HICP in 2018, market stalls, fish shops, butcheries, and bakeries are excluded from field price collection.

The sample is first stratified in product groups at the 6-digit COICOP level using HBS data, then product specifications are discussed and agreed upon at the meetings with price collectors, who have previously collected information about them.

Newly significant and innovative products are identified throughout the year and discussed during the two annual meetings with price collectors. If approved, they are included in the price collection in December.

Compliance

The sampling in the Slovenian HICP is in line with the legal requirements.

6. Price collection

SURS has a mixed approach regarding price collection. Prices are mainly collected in the field, by web-scraping, and by scanner data.

All data for ECOICOP 09.1.3.1 Personal computers and 09.1.3.3 Software, and 75 % for ECOICOP 09.1.3.2 Accessories for information processing equipment are web scraped. Fifty percent of the data collected for 09.6 Package holidays and only 5% of the data for 09.5.4.9 Other stationary and drawing materials are web scraped.

Data are web scraped each week but only two weeks of data are processed. The last two weeks are not processed as there would be insufficient time to for index calculations. The last two weeks are used to monitor the variability of prices during the month and adjust the methodology if needed. During the development of web scraping, it was found that prices do not vary for different days of the week.

Missing metadata are estimated using the 'closer donor' method. SURS creates dummy variables based on consumer profile (low-price, mid-priced, or high-quality electronics). The product characteristics are used in the product grouping process. Different grouping methods were tested. The method that produced the best results was developed at SURS and is a combination of two approaches: the MARS method and the method of representative variables.

Scanner data was introduced in 2018 for all ECOICOPs in Division 01 and 02. The coverage is currently being expanded to pharmaceutical products, and transaction data are received from three large pharmacies. Only two full weeks of scanner data enter the calculation of the HICP. SURS does not use more than two full weeks because the data are published on the last day of the month. Test calculations taking into account the data for all four weeks of the month revealed that there were no significant differences in the overall index.

Currently, SURS has a contingency plan in place to deal with potential failure of the scanner data transmission. SURS has prepared the software for the estimation of missing scanner data files using the data of received files.

Compliance

Price collection in the Slovenian HICP is in line with the legal requirements.

7. Replacement and quality adjustment

Treatment of missing prices

Carry forward is the default methods used by SURS for dealing with temporarily missing prices. However, carry forward should only be used under exceptional circumstances, such as administered prices that only change on specific dates. According to Article 9 of the implementing regulation, a previously observed price shall not be used as an estimated price. Missing prices shall be estimated using an appropriate price index.

Replacements

A substitute product is selected for permanently missing products; the selection ensures that the substitute product is representative and as closely related to the original product as possible. Whenever possible, the replacement is done by the price collector within the same outlet, otherwise a new outlet is found. A quality adjustment is applied if there are quality differences between the old item and the replacement.

Quality adjustments

The most frequently used method for quality adjustment is changing the base price, e.g., estimating the price that the new product would have in December of the previous year. SURS should use this method only in the first quarter, in the context of low inflation, and if the price of the new product is available in December. Otherwise, this method may distort the inflation estimate as it does not account for the actual price change that consumers face when they change their consumption due to market changes. SURS should evaluate the impact of using the base price method compared to explicit quality adjustment methods.

Compliance

The treatment of missing products in the Slovenian HICP is not fully in line with the legal requirements. According to Article 9 of the implementing regulation, a previously observed price shall not be used as an estimated price, unless it can be justified as an appropriate estimate.

The treatment of replacements in the Slovenian HICP is fully in line with the legal requirements.

Recommendations

SURS should investigate the possibility of implementing explicit quality adjustment methods and reducing the use of the base price method.

8. Treatment of seasonal products

A seasonal weights method is applied to seasonal products. Product groups treated as seasonal are fruit, vegetables, clothing, footwear, household appliances, sports equipment, recreational services, and package holidays.

Compliance

The treatment of seasonal products in the Slovenian HICP is in line with the legal requirements.

9. Index calculation

The Slovenian HICP is an annually chain-linked Laspeyres-type index.

The average national price of each non-food product or service is first calculated, using the weighted arithmetic mean of previously calculated average prices in each location.

Where scanner data are used, the chain-linked elementary aggregate indices per individual retailer are aggregated to the elementary aggregate using a weighted arithmetic mean. SURS does not currently treat relaunches and package size changes in the scanner data files. SURS has prepared guidelines for the software code needed to properly monitor relaunches and package size changes, but it has not yet been implemented. Eurostat recommends using text mining to perform a labels search and match. SURS uses the dynamic basket approach to process scanner data. Eurostat suggested to investigate the use of multilateral methods since these are found more appropriate to deal with dynamic product samples.

The aggregation method for web-scraped items is similar to the one used for scanner data, but homogenous groups are used instead of items. Homogeneous products are created using the data of all retailers according to selected key characteristics, which are the same than those used for field collection. Homogeneous groups are aggregated with the number of products. Eurostat recommends using the number of products multiplied by the average price as weights for the homogeneous groups.

Compliance

The index calculation in the Slovenian HICP is in line with the legal requirements.

Recommendations

- SURS should investigate the use of text mining to perform a labels search and match to identify relaunches and quantity changes in packages in the scanner data files.
- SURS should investigate the use of multilateral methods for scanner data.
- SURS should use the number of products multiplied by the average price as weights for the homogeneous groups.

10. HICP at constant tax rates and administered prices

SURS transmits the HICP at constant tax rates (HICP-CT) following the methodology defined by Eurostat. Changes in tax rates are reflected in the HICP-CT in the month for which the new rate is applied to the individual product and included in the observed price.

Most scanner data for alcohol do not have the alcohol volume in the product description. However, one large retailer has this information, and its metadata will be used to prepare the scanner data compilation system to calculate prices at constant taxes. Thus, when tax rates change during the year, the HICP-CT can be compiled with the December t-1 tax rates.

There are no situations where products are sold with both the old and new tariff overlapping in the market. Tobacco products do not include the price in the package stamp. Therefore, when the tax rate changes, all packages are sold with the new price, and the new tax can be incorporated in the HICP immediately. There is no need to phase-in the new price.

The classification of administered prices (HICP-AP) is reviewed and updated annually. The list of HICP-AP definitions is transmitted to Eurostat in line with the established transmission practice.

Compliance

SURS regularly compiles and transmits the HICP-CT and provides information on administered prices in line with the legal requirements.

11. Special products

Rents

The rental market in Slovenia is very small. Prices for social housing are collected monthly in four cities using a survey. Rents for the private rental market are obtained from the main online portal for rents, thus only new contracts are included in the HICP. Currently, there are no sources available for monitoring existing contracts in the rental market. Eurostat recommends that SURS seek to obtain data of sufficient quality on existing contracts for profit rents from the Surveying and Mapping Authority of the Republic of Slovenia (GURS) to be able to include them in the calculation of the HICP.

Financial services

Prices of the following individual products are monitored: electronic banking, withdrawals, credit cards, bundles, brokerage charges, stock brokerage and investment funds.

Energy products

There are six elementary aggregates, or consumer profiles, (e.g., low tariff, high medium fixed). Within the elementary aggregates, the prices of each supplier are aggregated with their turnover. Then the elementary aggregates are further aggregated with national accounts data and energy statistics.

Flights

For flights with a stop-over there is no data on number of passengers per destination, and the most popular destinations are considered instead. Only one intercontinental destination is covered. Transfers flights and low-cost carriers are included in the sample. Prices for direct flights are obtained from the websites of foreign carriers that depart from the Slovenian national airport. Prices for stop-over flights are obtained from the letalske.si website.

Second-hand cars

The sample is designed using data from the Central Register of Vehicles and Traffic Documents (the number of cars registered by natural persons) for the year t-2. Eurostat suggests using the most recent full 12-months period, for example September t-2 until August t-1. There are two strata according to the age of the vehicle, 5 and 7 years old. Within these, there is a more detailed breakdown with three strata for the engine size. The make and model are used to define the individual products. Prices are collected from the largest web site for second-hand car sales.

Compliance

The calculation of the special products sub-index in the Slovenian HICP is in line with the legal requirements.

Recommendations

- SURS should seek to obtain data of sufficient quality on existing rental contracts from Surveying and Mapping Authority of the Republic of Slovenia (GURS).
- SURS should use the most recent 12-months data to sample second-hand cars.

12. Follow-up from the previous compliance report

The main findings from the previous compliance monitoring exercise were published in September 2016, and a follow up report was published in January 2019. The recommendation

on the coverage of existing contracts for rents is the only one that has not been implemented since the publication of the follow up report.

13. Overall assessment

Based on the information listed in section 1 and further obtained during the compliance monitoring visit, Eurostat assesses that the Slovenian HICP is in line with most legal requirements. SURS should improve compliance by implementing the requirement formulated in section 7 with regards to the estimation of missing prices. Notwithstanding this issue, Eurostat assesses the HICP for Slovenia to be overall comparable to that of the other EU Member States. If SURS follows up on the recommendations given, the comparability of the Slovenia HICP will improve further.

Electronically signed on 11/06/2024 08:44 (UTC+02) in accordance with Article 11 of Commission Decision (EU) 2021/2121