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

HICP Compliance Monitoring Report

Latvia

September 2022

1. Introduction

In May 2022, Eurostat reviewed the compilation of the harmonised index of consumer prices (HICP) for Latvia. 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 2021 inventory containing details of data sources, definitions and methods used in the HICP for Latvia.
- The discussions at the compliance monitoring meeting with the Central Statistical Bureau of Latvia (CSB), which was held via videoconference on 4 April 2022.
- The information note on the previous compliance monitoring exercise published in [September 2013](#).

For all main methodological topics related to the HICP, this report briefly summarises the Latvian 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 Latvia.

2. Coverage and classification

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

In line with this concept, the HICP reflects consumption expenditure by households, including the consumption expenditure incurred by institutional households. The domestic principle ⁽¹⁾ is applied by covering expenditures made by both resident and non-resident households on the economic territory of Latvia, while excluding expenditures made by resident households abroad. Only monetary expenditures are included. Social transfers in kind are excluded except for dwelling allowances that are part of D.632.

The product categories listed in Article 5(8) of the framework regulation as well as owner-occupied housing expenditures are excluded from the coverage of the Latvian HICP ⁽²⁾.

CSB classifies products and calculates the HICP according to the European Classification of Individual Consumption according to Purpose (ECOICOP), which was implemented in January 2016. At that moment, a new sub-index was added (08304 Bundled Telecommunication services) which is set to 100 in December 2015, while all other sub-series produced by CSB are

⁽¹⁾ This is a main difference with the national CPI which excludes the consumption expenditure of non-residents in the economic territory of the country but includes the expenditure of residents abroad.

⁽²⁾ Contrary to the HICP, the national CPI includes Games of Chance.

expressed in the 2015 index reference period. In 2021, the subclass 09142 (Unrecorded recording media) was discontinued.

In general, an ECOICOP category is included in the Latvian HICP if its expenditure share lies above the one part per thousand threshold defined in Article 5(7) of the framework regulation. However, in practice, this rule is implemented with some flexibility. CSB may decide not to include a category although its share is close to the 1 part per thousand threshold. This may occur if, for example, there is only a limited supply of products falling within that category, the products of that category are difficult to price or the expenditure data of that category are considered to be less reliable.

Compliance

The coverage and classification in the Latvian HICP is in line with the legal requirements.

Recommendation

CSB should systematically review the importance of all categories, and make sure to include a category in the HICP if its expenditure share lies above the 1 part per thousand threshold.

3. Weights

The weights in the Latvian HICP are updated annually. The main source for the weights are preliminary data on household consumption expenditure for the year t-2 that are provided by the national accounts and that are adjusted to the scope of the HICP. The expenditure shares are mainly derived at the 5-digit ECOICOP subclass level. The expenditures of categories for which no sub-index is produced are entirely distributed over similar categories.

The weights are flagged as 'not for publication' ('N') if the corresponding sub-indices have the same flag (see section 4).

The expenditure shares are further broken down by representative items that are chosen to represent the subclass. In general Household Budget Survey (HBS) data and other data sources are used to derive the shares for the representative items. The last HBS was conducted in 2019. As the HBS is not conducted each year, CSB attempts to use more timely data sources, such as tourism or transport statistics, during the annual weight updates, if possible.

In general the representative items are the lowest level for which weights are derived. Internal weights are used within the representative items where available, such as population weights, or market shares (see section 4).

The weights for 2021 and 2022 were compiled in line with Eurostat's guidance on the compilation of weights in case of large changes in consumption expenditures. CSB used quarterly national accounts data referring to the three first quarters of year t-1. The fourth quarter was assumed to be equal to the average of the three first quarters. Expenditure shares

were estimated down to group or class level, and were further broken down to subclass level using shares estimated for t-2.

The price-updating is performed at the 5-digit subclass level. In general the expenditure shares from t-2 are price updated to December t-1. For the 2021 and 2022 weights, the expenditure shares explicitly referred to t-1 and therefore were only price-updated between t-1 and December t-1.

The weight for insurance is based on the service charge.

Compliance

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

4. Sampling and representativity

Prices are collected in 11 price collection areas that have been selected in a purposive manner. The sample of price collection areas includes the capital Riga and several other larger and smaller cities in which households typically do their shopping. Each selected price collection area is representative for a certain region of the country. The sample of price collection areas has been kept relatively stable over time. Population weights are assigned to each price collection area.

Within a selected price collection area, outlets are selected in cooperation with price collectors taking into account the importance of outlets measured in terms of turnover and availability of products.

Price collectors select specific product-offers in these outlets that fall within the item specifications defined at the central level. In order to ensure a good representativity, these item specifications are kept relatively loose. Price collectors are asked to choose the most frequently sold product in each selected outlet.

The staff at the central level continuously evaluates if the samples are balanced in terms of types of outlets and brands, taking into account any specific regional patterns. For example, more prices are collected for more popular brands or the previously selected outlets are replaced by more popular ones.

For some products with national pricing policies, such as electricity, telecommunication services, or insurance, explicit company weights are used based on turnover.

There is an annual review of the representative items, and the item specifications. This analysis is mainly based on market information and price collectors' feedback. A decision is made towards the end of each year for including new products or excluding previously collected products. The prices of the new products are then collected for the first time in December.

The CSB currently flags several sub-indices transmitted to Eurostat as 'not for publication'. The CSB considers that the quality of these series is not satisfactory because the number of

selected representative items in that subclass is too small, there is a large heterogeneity of possible representative items to be selected within that subclass, or price change is volatile. Often these subclasses have a small weight and the supply of products falling under these categories is very small. A possible remedy would be to broaden the item specifications in order to ensure a wider representativity. This may have to be considered together with a change in the index formula used to compile the elementary indices. Price collection frequency could be increased and it may be possible to collect more prices online.

The Latvian HICP also includes prices collected online. Currently, only national websites are covered. The CSB monitors the share of cross-border internet purchases. CSB expects that in the future, more accurate information on cross-border purchases can be obtained using credit card data.

The sample of new cars is divided into four strata. The selected models within each stratum and the weights for each stratum are obtained from the Road Safety Directorate on newly registered cars.

The price index for rents is obtained from two separate indices representing new contracts, on the one hand, and existing contracts, on the other hand. The new contracts are currently over weighted compared to the existing contracts. In Latvia, the rental market is very small and most of the dwellings are occupied by their owner. Data for the existing rental contracts come from the quarterly Labour force survey that has another primary purpose than collection data on existing rents. Therefore, due to the lack of another data source and with an aim of improving the accuracy of the overall rent index, CSB assigns a higher weight to the new rental contracts.

For mobile telecom services, a consumer profile method is used. The profiles represent various consumption types based on data provided by data provider. The consumer profile specifications are reviewed annually and are kept fixed throughout the year. The cheapest and most popular tariff that matches the profile specification is selected for pricing.

Compliance

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

Recommendations

- CSB should improve the samples of the currently 'N' flagged sub-indices with a view to start publishing the respective series.
- CSB should evaluate the share of cross-border internet purchases and include foreign websites in their samples if representative.
- CSB should review and update the internal weights of the rent price index so that both new and existing rental contracts are represented according to their share in the rental market (see also recommendation in section 5).

5. Price collection

Statistics Latvia obtains prices data for the HICP using different sources. The standard way of price collection is based on regional collection performed by 15 price collectors located in the different price collection areas across the country. Some products with national pricing (such as telecom, electricity, insurances) covering approximately 15% of the basket are collected centrally. For the purposes of the central collection CSB usually obtains the prices from web pages or from price lists. The prices for rents and second-hand cars are collected with web scraping tools. CSB does not yet use web scraping or scanner data for the coverage of other products. CSB does not rely on administrative data apart from some National Health Service data for different pharmaceutical products and health services.

The price collectors obtain prices by visiting outlets, or they collect their prices online or by phone. They are using tablets with a built-in interactive software which enables quick communication with the central office. The price collectors use a detailed flagging system to indicate for example replacements or discounts.

The regional price collection is generally carried out between the 4th and the 20th calendar day of each month. The price collection period for transport fuels is as an exception longer because of their volatility. Fuel prices are collected four times per month which is the only product type with a higher than monthly collection frequency. Most other products are collected monthly, while few products that rarely experience price changes are also collected less often than monthly.

Prices for flights and package holidays are collected in advance and enter the HICP in the month in which the travel is taking place.

In some social protection related services (i.e. staying in retirement homes) the price is a proportion of the monthly pension. Changes in the pensions are reflected as price changes in the index.

There are reimbursements that consumers receive after buying certain medicines and these are treated so that only the net prices after the reimbursement are considered.

An energy subsidy received by households as a fixed amount was not taken into account in the prices that enter the HICP as this payment could not be connected to the tariff plans. In 2022, a temporary elimination of some of the charges that make up the electricity price was however reflected in the HICP.

The prices for new rental contracts are obtained from a web portal. The prices for existing rental contracts are taken from the quarterly Labour Force Survey.

For electricity, different tariff plans are priced. Rolling average prices are used for tariff plans with binding prices over a certain period of time.

For insurance prices, gross premiums are observed. The premiums are in some cases defined as a percentage of a cover value. The cover-values are adjusted by indexation using the sub-indices of the relevant items.

Compliance

The treatment of prices in the Latvian HICP is in line with the legal requirements.

Recommendation

- CSB should assess if the quality of the prices data for existing rental contracts can be improved (e.g. by finding other data sources, etc.).

6. Replacement and quality adjustment

CSB estimates a temporarily missing price by applying the average price change of available product-offers for the representative item to the price of the previous month. A replacement product-offer that meets the item specifications is selected at the latest after two months of estimation. Price collectors select a replacement product-offer that meets the item specifications. The price collector also enters detailed product characteristics of the replacement product-offer. The decision if the two product-offers are comparable or not is made at the central level. In the latter case, the prices are directly compared, whereas in the former case, bridged overlap is typically applied. For some products, the difference in quality is assessed by expert estimation. More formal quality adjustment techniques based on hedonics are not used because they would require larger samples of prices and product characteristics. Such data could possibly be obtained with the help of web scraping.

As the prices observed by price collectors are transformed into a price per reference unit, any changes in package size are correctly adjusted.

In line with the recommendations on bridged overlap ⁽³⁾, a special procedure is applied if the last price of a product-offer is a reduced price. In that case, the reduced price is first replaced by the last observed normal price before applying the bridged overlap calculations.

For new rental contracts, an average price by homogeneous stratum (defined in terms of district, number of rooms and type of flat) is calculated on the basis of the rents scraped from the web portal. For existing rental contracts, no further quality adjustments are made, and only matched contracts are taken into account.

For new cars, adjustments are made to account for changes in fuel efficiency of the cars. In case of major changes, bridged overlap is applied. For second-hand cars, adjustments are made to keep the mileage and the age of the car constant, while bridged overlap is used for major changes.

⁽³⁾ See [HICP Recommendation on Bridged Overlap](#).

Compliance

The quality adjustment procedures in the Latvian HICP are in line with the legal requirements.

Recommendations

- CSB should examine if data can be collected to apply hedonic methods instead of expert estimation in relevant product categories.

7. Treatment of seasonal products

In the Latvian HICP, seasonal representative items are included in:

- 01.1.6 Fresh fruits,
- 0.1.1.7 Fresh vegetables,
- 03.1 Clothing,
- 03.2 Footwear,
- 05.5.1.1 Motorised major tools and equipment,
- 07.2.1.1 Tyres and
- 09.3.2 Equipment for sport, camping and open-air recreation.

CSB applies the seasonal imputation method to treat seasonal products. Either counter-seasonal or all-seasonal estimation is applied. The estimated price in the out-of-season period for a seasonal representative item is estimated as the previous month's average price adjusted by the average change obtained from other representative items in the same subclass. A typical price during the season period is used for the estimation of the first out-of-season price. For seasonal products in fresh fruits and vegetables, the average price during the season is used as first out-of-season price.

While there is only one representative item for package holidays, the same principle is applied to product-offers for package holidays that are out-of-season. If a price of a product-offer is not available because the specific package holiday is out-of-season, a price is estimated by adjusting the previous month price with the price change of available package holidays.

Compliance

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

8. Index calculation

The Latvian HICP is structured according to ECOICOP. A 5-digit sub-class is further broken down by representative items which represent the elementary aggregates. In general, CSB uses a Dutot index to compile an elementary price index. An arithmetic average price is calculated by representative item and collection area. Population weights are used to combine the average price by collection area into a national average price for that representative item.

A chained version of the Dutot is applied in practice, meaning that the average price in the current month is compared to the average price in the previous month. These successive month-on-month price changes are linked together starting with the December month of the previous year which corresponds to the price reference period.

One problem with the Dutot price index is that the price changes are implicitly weighted by the price levels in the base period. This disadvantage can be overcome with the Jevons index formula (ratio of geometric means). CSB uses already the Jevons index for long-term rentals and reimbursement medicines. CSB explained that further investigations are required to extend the Jevons index formula to other product categories.

A Laspeyres-type index is applied to obtain the sub-indices for the different ECOICOP levels. The sub-indices are chain-linked via December and are expressed in the index reference period 2015=100.

Compliance

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

Recommendation

- CSB should use the Jevons index instead of the Dutot index to compile elementary price indices if the price levels within an elementary aggregate are not sufficiently homogeneous.

9. HICP at constant tax rates and administered prices

CSB provides the HICP at constant tax rates (HICP-CT) to Eurostat following the methodology defined by Eurostat. Tax changes in the HICP are generally included from the month when the tax comes into force. New tax rate changes that are effectively introduced later than the first day of a given month are reflected in the HICP-CT of the following month.

Some products, for example cigarettes, may be sold with the new and the old tax rates simultaneously or during the same month. In practice, the new tax rate is implemented in the calculation of the HICP-CT at the time of its introduction, although some of the prices of such products available in outlets may still be based on the old tax rate.

The classification of administered prices (AP) is reviewed and updated annually. The list for the compilation of the HICP-AP is delivered on an annual basis to Eurostat in line with the established transmission practice.

Compliance

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

10. Follow-up from the previous compliance report

The main findings from the previous compliance monitoring exercise were published in [September 2013](#). CSB has successfully developed a price index for electricity that captures the price developments since the market liberalisation in 2014. However, the other recommendations made in the 2013 report have not been fully addressed yet. CSB has incorporated Jevons index formula to compile elementary indices into the new system, the arithmetic mean is used so far until the comparison and detailed investigation of the results is done. CSB considers it difficult to replace list prices with transaction prices if the required data sources are not available. The use of regressions for making explicit quality adjustments has proven to be less conclusive so far but could be considered again given the possibilities with alternative data collection methods. While some progress was already made on improving the index for actual rents, there are still some limitations with this index that would need to be overcome.

11. Overall assessment

On the basis of the information listed in section 1, Eurostat assesses that the HICP for Latvia is in line with legal requirements. Eurostat assesses the HICP for Latvia to be comparable to that of the other EU Member States. Furthermore, if CSB follows up on the recommendations given in sections 2, 4, 5, 6 and 8, the comparability of the Latvian HICP will improve further.