



EUROPEAN COMMISSION  
EUROSTAT

Directorate C: Macro-economic statistics

**Unit C-4: Price statistics. Purchasing Power Parities. Housing statistics**

# HICP Compliance Monitoring Report

**Czechia**

**January 2020**

## 1. Introduction

In May 2019 Eurostat reviewed the compilation of the harmonised index of consumer prices (HICP) for Czechia. 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:

- A document with the inventory of the sources and methods used for the Czech HICP. The document was provided to Eurostat in October 2018.
- The metadata of the Czech HICP in Eurostat's dissemination database.
- The discussion at the compliance monitoring visit that took place on 28-29 May 2019 at the Czech Statistical Office (CSO) in Prague.
- The report on the previous compliance monitoring exercise.

For all main methodological topics related to the HICP this report briefly summarises the Czech practice 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 Czech HICP.

## 2. Coverage and classification

The definition of the economic territory is in line with the Regulation (EU) No 2016/792. The HICP covers all of the 14 regions (NUTS3) in the country.

All monetary consumption expenditure by private households on the economic territory of Czechia as accounted for in the national accounts is covered, including expenditure incurred by individuals living in institutional households and foreign tourists within Czechia.

All categories of the European Classification of Individual Consumption by Purpose (ECOICOP), which are known to account for more than one part in a thousand of the total, are included in the HICP. Indices for some subclasses (other tobacco products, other actual rentals, rentals for secondary residences, services of carpenters, other household textiles and major durables for outdoor recreation) are not produced as no reliable expenditure data is available for these subclasses. It is assumed that the share of those subclasses in total household final monetary consumption expenditure lies below one part of a thousand each.

The 5-digit level of ECOICOP was implemented with the publication of the January 2016 HICP. The same classification has been implemented also in the national CPI.

The classification of certain representative items into the ECOICOP subclasses (e.g. ice cream, diet chocolate) needs further investigation by the CSO. Eurostat welcomes the plans of the CSO to reclassify those items with effect of January 2020.

The consumer basket includes also items such as washbasins, which normally belong to materials for major repairs of the dwellings. However, the specific situation in the Czech market justifies the inclusion of these items as they are commonly paid for by tenants. It needs further clarification if the expenditure on broadcasting fees shall rather be treated as taxes or purchase

of services. The HICP also covers fees of real estate agents for purchases of dwellings, which are out of scope for the HICP (but are in-scope of the owner-occupied housing price index). Eurostat welcomes the plans of the CSO to exclude this item from the HICP as from January 2020.

### **Compliance**

The coverage of household final monetary consumption expenditure and the classification used for the Czech HICP are generally in line with the legal requirements.

### **Recommendations**

The list and the classification of representative items should be reviewed with a view to correctly representing ECOICOP subclasses.

Items that are out of scope of the HICP should be excluded.

The CSO should carry out research into the estimation of expenditures for those subclasses that are currently not covered due to missing expenditure information.

## **3. Sampling and representativity**

Within each region of Czechia, several districts are selected for price collection. Prices are collected in the centres of the selected districts. Price collection does not cover villages and rural areas, but some smaller towns are included in the sample for rentals.

Outlets are selected at the regional level based on the local knowledge about retail sales distribution for the representative items. The outlets are chosen to represent the existing trade and services network based on popularity with consumers, turnover from consumer sales and availability of goods and services included in the product sample.

Market stalls are included by the price collectors for fresh fruit and vegetables in those areas of the country where these sales are considered important. Petrol stations for other products than petrol are excluded as these sales are considered as negligible. Mail order and internet shopping is included. The main source of information to calculate the share of internet purchases are market research companies. The CSO is observing a shift to purchases via internet and in supermarkets.

Price collectors propose replacements of outlets when a previously selected outlet is shut down or loses popularity with consumers. A major outlet sample review is done every 5-6 years.

The general product sample review is performed every 5-6 years based on detailed data from the Household Budget Survey and at the same time with the outlet sample review. The last review was carried out in 2016.

Representative items are chosen using the purposive sampling method. This method allows the CSO to include all items in the sample, whose contribution to the consumption expenditure is significant. There are 674 representative items included in the index. Representativity of the sample is further improved with the ongoing analysis of scanner data.

The selection of the specific products is up to the price collectors. The price collector selects for each representative item one or two product-offers in one or two outlets, respectively. The detailed description of each product-offer is examined at the central level.

The information about obsolete products comes mostly from the price collectors. Decisions about the necessity of the inclusion of new products are often subjective. Obsolete products are removed from the consumer basket or new products added by the central staff, usually in December for the following year in connection with the index chaining procedure.

Resampling in the telecom services is carried out biannually. The data is coming from the Czech Telecommunication Office and it takes into account the number of users and usage of different types of telecommunication services divided by individual providers. Based on the offers of the providers a new tariff may be identified and included.

### **Compliance**

The sampling and representativity are in line with the legal requirements.

### **Recommendations**

The CSO should carry out research into alternative data sources with a view to identify newly significant products in a more systematic way and include them in the sample without unnecessary delay.

## **4. Weights**

The main source for the weights are national accounts down to the ECOICOP subclass level (5-digit). Weights for elementary aggregates are based on data from the Household Budget Survey. Other sources include commercial market surveys, scanner data and detailed information from service providers (such as transport). HICP and CPI weights differ because of the domestic vs. national concept and because of the non-inclusion of OOH in the HICP.

The weights at subclass level are updated annually based on national accounts from year t-2 and price updated to December t-1. Weights of elementary aggregates are updated every 5-6 years. No price updating is applied at this level. Additionally, internal weights are calculated for 19 specific items such as tariff items or electricity.

Weight less than one per thousand are redistributed to other subclasses within the same class proportionally to their respective weights.

### **Compliance**

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

## **5. Price collection**

The price collection in the field is spread over a period ranging between the 1st and the 20th day of each reference month. This period usually comprises also the week around the middle of the month.

Observed prices are recorded by the 47 price collectors using tablets, which include a software to identify outliers. For each product around 100 price quotations are collected monthly.

There are no automatic rejections as all suspicious data is double-checked by the price collectors. The data is then validated by the regional office, which is responsible for the processing of regional data. In case of doubts they contact the price collectors and verify the prices. In exceptional cases the surveyed price can be directly confirmed with the reporting unit. Prices are afterwards also validated by the central office staff.

Centrally collected prices are entered into the system by the central office staff, which also then processes a preliminary index. This stage is completed towards the end of the reference month.

For passenger transport by air, internet prices collection was added to monitor properly the market (consumers buy often via internet and well in advance).

All prices are collected every month except for prices of products that are either not available or their price is not expected to change from month to month. In case a price is not available the last observed price is carried forward in most cases.

Fruits' and vegetables' prices are collected every week during the price collection period. This results in 3 price observations for each product-offer per month. The CSO considers certain different similar products (some varieties of apples, early and late potatoes, etc.) as essentially equivalent.

The CSO is currently working on the implementation of scanner data from supermarkets as from January 2020 and is planning to replace field price collection by scanner data for the relevant product groups.

Furthermore, The CSO plans to reduce the number of price collectors in the field and extend internet price collection in order to reflect better the typical household's consumption via internet.

## **Compliance**

The price collection practice is in line with the legal requirements.

## **Recommendations**

The CSO should continue to collect prices in the field for those products for which scanner data is available during the first year of implementation. This would allow the CSO to assess the impact of the introduction of scanner data in compliance with Article 9 of the Regulation (EU) No 2016/792.

The CSO should review the extensive use of carrying forward the last observed price and verify if the last observed price can be regarded as the best estimate for the missing price. (See also points 8 and 9.)

## **6. Discounts**

Discounts available to all consumers with no special conditions attached (non-discriminatory) are taken into account.

The most common price reductions used in supermarkets are "action prices" and seasonal sales of clothing. The CSO is observing a consumer behaviour in the group of food and beverages that optimises the timing of purchase to periods of price reductions. The effect of this behaviour on the actual transaction prices can be better captured using scanner data, which is planned to be implemented.

The CSO expects that scanner data will also allow for taking account of discounts connected to loyalty cards, which are now not taken into account.

### **Compliance**

The treatment of discounts is in line with the legal requirements.

## **7. Replacement and quality adjustment**

Replacements are proposed by price collectors in case of non-availability of product-offers or of outlets according to methodological instructions provided and updated by the central office. The proposals are approved at the central level on a case-by-case basis. Practically all replacements are carried out immediately.

The most applied quality adjustment methods are direct comparison, expert judgement, bridged overlap and overlap.

For clothing and footwear products the mostly used method is direct comparison applied to essentially equivalent product-offers. For the product-offers, which are significantly different from the replaced one bridged overlap or overlap is applied.

For replacement of new cars where the changes of quality are significant, the preferred method is expert judgment. The CSO applies 50-percent option pricing if an estimate cannot be made. In case of minor changes, the usual method is direct comparison or sometimes expert judgment. If there is no direct successor of the car model the overlap method is used. For second-hand cars, the used method is bridged overlap.

### **Compliance**

The application of quality adjustment methods is in line with the legal requirements.

### **Recommendations**

The CSO should carry out research with a view to extend the application of explicit quality adjustment methods instead of the extensive use of overlap methods.

## **8. Treatment of seasonal products**

Only products that are completely unavailable during certain periods are treated as seasonal by the CSO. Strawberries, watermelons and kiwis are not treated as seasonal as they are available the whole year. While seasonal food products which are available in the market during a very limited season (such as raspberries, cherries), are excluded since it is assumed that even the most important ones of them (cherries) have less than 1 part per thousand weight in the peak sale

month. This assumption has been confirmed by estimations based on scanner data. Fish is not considered as seasonal.

Package holidays are not treated as seasonal although prices are not available for all types of holidays all over the year. Package holidays are not treated according to the requirements for seasonal products, see Section 9.

Clothing and footwear are currently the only products that are considered to be seasonal and winter/summer clothes and footwear are the only important product groups that can be considered completely out-of-season. During the out-of-season period, the price development is estimated using all-seasonal estimation with strict annual weights. During the first out-of-season month the estimated price equals a typical price, which is the price observed in November for the winter season and in April for the summer season.

### **Compliance**

The treatment of seasonal products is in line with Regulation (EC) No 330/2009.

### **Recommendation(s)**

The CSO should consider applying counter-seasonal estimation for clothing and footwear.

## **9. Package holidays**

Prices for package holidays are collected for the period of several months before the holidays start. Price collection also takes into account early-bird and last-minute prices. Prices are usually entered in the index in the month when the holidays commence. However, if the holiday ends in the following month, the price is calculated for the month with prevailing number of days of the whole trip. This practice will be changed by the CSO. As starting from 2020 the price will enter the month when the trip begins.

Package holidays are not treated as seasonal although prices are not available for all types of holidays all over the year. The CSO does not consider other holiday types suitable to estimate the price developments during out-of-season periods. If prices are not available, the last observed price is carried forward until a new price can be observed.

### **Compliance**

The treatment of package holidays is not fully in line with the legal requirements. The timing of entering prices is not in line with Article 2 of Regulation (EC) No 2601/2000.

### **Recommendation**

Prices during the period when the holidays are out of season should be estimated using appropriate methods set out in the Regulation (EC) No 330/2009 instead of carrying forward the last observed price.

The full price of a package holiday should be included in the month when the holiday commences. The CSO should follow its plans to change the methodology in this respect.

## **10. Index calculation**

The Czech HICP is a Laspeyres-type index.

Dutot price index (ratio of arithmetic means) is used for the elementary aggregate formula. The price reference period in year  $t$  is the December of year  $t-1$ . The resulting indices are chained, using the December of year  $t-1$  as the link month.

### **Compliance**

The index calculation is in line with the legal requirements.

### **Recommendations**

The CSO should consider applying Jevons price index (ratio of geometric means) at the level of the elementary aggregates.

## **11. Administered prices and constant tax rates**

Changes to the list of administered prices (AP) are introduced regularly to the beginning of the reference year. The list for the compilation of the HICP-AP is transmitted each year to Eurostat in line with the good practice established for the HICP.

The CSO provides the HICP at constant tax rates (HICP-CT) to Eurostat following the methodology defined by Eurostat.

### **Compliance**

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

## **12. Follow-up from previous compliance report**

The previous compliance monitoring report was published in 2009. In general the recommendations made in that report have been followed by the CSO.

The issues that need further improvement are pointed out in the previous parts of this report.

## **13. Overall assessment**

On the basis of the information listed in point 1, Eurostat assesses that the Czech HICP is generally in line with the legal requirements. If the CSO implements the recommendations given in points 2, 3, 5, 7-9 the comparability of the Czech HICP will improve further. Notwithstanding these issues, Eurostat assesses the Czech HICP to be comparable to that of the other EU Member States.