



EUROPEAN COMMISSION  
EUROSTAT

Directorate C: National Accounts, Prices and Key Indicators  
**Unit C-4: Price statistics. Purchasing Power Parities. Housing statistics**

# **HICP Compliance Monitoring Report**

**Croatia**

**July 2015**

## **1. Introduction**

In spring 2015 Eurostat reviewed the compilation of the harmonised index of consumer prices (HICP) for Croatia (HR). The review was done against the existing legal framework, established HICP methodological recommendations and other guidelines and good practices in the field of consumer price indices.

The current report is based on

- the inventory of the sources and methods of the HR HICP,
- the meta data of the HR HICP in Eurostat's dissemination database,
- the discussion at the Compliance Monitoring visit on 18 and 19 March 2015.

The production of the HR HICP is described in detail in the inventory of the sources and methods written by the Croatian Bureau of Statistics (CBS) and provided to Eurostat in December 2013.

In this report for each methodological issue, first a very brief summary of the CBS practice is given. This is followed by Eurostat's requirements or recommendations for improvement, if applicable. Finally, Eurostat's assessment of compliance is given.

## **2. Coverage and classification**

All monetary consumption expenditure by private households on the economic territory of Croatia is included. This comprises expenditure incurred by individuals living in institutional households as well as tourist expenditure.

All categories of the Classification of Individual Consumption by Purpose (COICOP)/HICP covered by household final monetary consumption expenditure which account for more than one part in a thousand of the total expenditure are included.

The ECOICOP, which is an European extension of the COICOP that includes one more hierarchical level of the classification, is implemented as of 2015 in the HR HICP production and it is planned to start publishing the data as of 2016.

### **Compliance**

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

## **3. Sampling and representativity**

The CBS has subdivided the country into three regions for the purpose of having a balanced regional representativity for the index. A precondition for regional representativity is that all regions are represented in the sample. The number of price collection locations is predetermined to be nine and they are selected based on the population figures from the last Census. All selected geographical locations are cities.

The total number of sampled outlets is predetermined by the central office and currently there are approximately 4100 outlets in the sample. The number of outlets by outlet-type and product

range in each geographical location is determined by regional weights and a point-of-purchase survey done within the household budget survey (HBS).

The maximum number of collected prices per product for each geographical location is predetermined by the population size and the total for each product shall not exceed 65 price quotes.

The actual sampling of outlets and product offers in the field is purposive as the local price collector selects the particular outlet and product offer. For the outlet selection price collectors are instructed to select outlets with a large volume of sale.

For each class of COICOP with a weight above the threshold (1/1000) at least one product is specified. The product specification is generally loose. Local price collectors are instructed to select product offers that are most sold in the outlet. The price collectors shall also record a pre-defined set of additional product characteristics. In 2015 the product sample consists of 917 products.

The outlet and product samples are both reviewed and updated annually.

The CBS is explicitly using consumption segments in COICOP 07.1.1 Purchase of motor vehicles in order to guide the selection of cars for the sample as well as in replacement situations.

For market rentals only new rental contracts are covered.

## **Recommendations**

As the price collection is done only in cities it is assumed that the price developments in smaller urban agglomerations and rural areas are the same as in the cities. This assumption should be verified periodically.

The CBS should develop further the explicit use of consumption segments — and introduce them to other classes of COICOP — and thus implement the concept as a guidance for product selection and replacement in order to support the continued representativity of the HICP.

The target samples should have a sufficient number of elementary aggregates to represent the diversity of items within each category. Applying these rules to the actual rentals sample, it should cover all types of rentals for housing, in particular new and existing rental contracts. The assumption that rental changes are approximately the same for existing contracts as for new contracts should be justified, or existing contracts should be included to the sample, as well.

## **Compliance**

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

## **4. Weights**

The main source for the weights is the National Accounts from which the weights for the indices at 4 digit level of COICOP are derived. Below that level HBS data is used for deriving the weights. Moreover, additional data sources are used for electricity, telecommunication services (Croatian Regulatory Authority for Network Industries), insurance (Financial Agency, Croatian

insurance Bureau), cars (Ministry of Interior), rents (Census 2011), accommodation services (tourism statistics) and transport (transport statistics).

The HBS is also the main source for computing weights at the level of regions, for which data from three HBS surveys are averaged and used. In case the regional weight has to be allocated to more than one geographical location the population numbers from the last Census are used.

The elementary aggregate is defined as the lowest level of aggregation for which weights are available. Elementary aggregates consist of one or more products. Products have no explicit weight.

Weights are annually reviewed and updated.

### **Compliance**

The compilation of weights, the sources and their regular review in the HR HICP are in line with the legal requirements.

## **5. Price collection**

Price collection is performed both by local price collectors and by central staff, generally on a monthly basis. Local price collectors visit outlets while the central (staff) price collection takes place using internet, telephone, telefax and paper questionnaires. Central price collection concerns approximately 30 per cent of the products.

The price collection is done on working days from 13<sup>th</sup> to 23<sup>rd</sup> of each month.

Fuel prices are collected weekly and fruit and vegetables twice a month. Rents are surveyed quarterly, services related to education as well as school books annually.

Airfares to specified destinations are collected 6 and 4 weeks before traveling date specified as the second Wednesday of each month.

The tariff method is used for all telecommunication services.

### **Recommendations**

Airfares should be recorded sufficiently in advance of traveling dates to ensure that they are representative of consumers' booking and purchasing behaviour. Therefore, the practice that airfares are collected 6 and 4 weeks ahead of traveling should be verified periodically.

Travelling date for flights is fixed to one specific day each month, which has an underlying assumption that airfares are not volatile within the month. This should be verified periodically.

The tariff method that is currently used in telecommunications index is considered as an appropriate pricing method in a stable market situation, such as fixed telecommunication services. In dynamic markets, such as wireless telecommunication services, the tariff method should not be used. The consumer profile method could be developed and used instead.

### **Compliance**

The price collection is in line with the legal requirements.

## **6. Discounts**

The legal requirements for price reductions are applied in the HR HICP. Discounts available to all consumers with no special conditions attached (non-discriminatory) are taken into account.

### **Compliance**

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

## **7. Quality adjustment**

All quality adjustments are performed by the central office staff. For the quality adjustment the case by case approach is adopted and there are no automatic procedures. The quality adjustment method chosen depends on the specific replacement situation.

Bridged overlap is the most prominent method for clothing and footwear, TV-sets, notebooks and audio, video and photo equipment.

Bridged overlap and supported expert judgment are in use for household appliances depending on the situation.

Both option pricing and supported expert judgment are in use for desktop computers, telephone and telefax equipment.

All three quality adjustment approaches mentioned above are used for cars.

### **Compliance**

The methods used for quality adjustment correspond to the good practice established for the HICP.

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

Minimum standards are applied to seasonal products within the following COICOP classes and groups: 01.1.6 Fruits, 01.1.7 Vegetables, 03.1 Clothing, 03.2 Footwear, 09.4.1 Recreational and cultural services, 09.6 Package holidays and 11.2.0 Accommodation services. In all cases the all-seasonal estimation approach is applied.

Fish is not treated as a seasonal product.

### **Compliance**

The methods used for treating seasonal products are in line with the legal requirements.

## **9. Index calculation**

The elementary aggregate indices are compiled as the ratio of the geometric mean of prices for each geographical location, i.e. bread and other bakery products in Zagreb, bread and other bakery products in Dubrovnik, bread and other bakery products in Split. 70 per cent of the elementary aggregates consist of more than one product.

Elementary aggregate indices at the geographical location levels are aggregated to the national level using geographical location weights. Finally, all national level elementary aggregates are weighted to all levels of COICOP.

The aggregated short-term indices with December of the previous year as price reference month are chained and expressed in term of the index reference period (2005=100) for all levels of COICOP.

### **Recommendations**

Elementary aggregates containing more than one product should be reviewed to ensure they consist of products that are homogeneous and with similar price movements.

### **Compliance**

The index calculation is in line with the legal requirements.

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

The CBS is not yet providing the HICP-CT data to Eurostat. Their ongoing project to start producing the data is expected to be finished during the second half of 2015 when they will start transmission of HICP-CT according to agreed deadlines to Eurostat and including the back series

According to the project description the main taxes relevant for the HICP-CT are VAT and excise duties/special taxes on specific products, which will be taken into account in the HR HICP-CT according to the methodology defined by Eurostat.

The list of administered prices for the compilation of the HICP-AP is transmitted to Eurostat. The treatment of administered prices in the HR HICP-AP is in line with Eurostat's recommendations.

### **Compliance**

When the CBS starts providing the HICP-CT data by the end of 2015 they will be in line with the legal requirements.

## **11. Overall assessment**

Eurostat considers that the methods used for producing the HR HICP are of a good standard and in line with the legal requirements. Comparability to the HICP of other countries can be regarded as assured.

However, a number of assumptions should be justified or verified regularly;

- The assumption that price changes are approximately the same in rural areas as in urban areas should be verified.
- The assumption that changes in actual rentals are approximately the same for existing contracts as for new contracts should be justified, or existing contracts should be included to the sample, as well.

- The assumption that airfares collected 6 and 4 weeks ahead of traveling is sufficiently representative should be verified periodically.
- The assumption that airfares are not volatile within the month should be verified periodically.

In addition, further improvements are proposed;

- To develop and broaden the explicit use of consumption segments.
- To develop and implement the consumer profile method for wireless telephone services and internet access.
- Elementary aggregates containing more than one product should be reviewed to ensure they consist of products that are homogeneous and with similar price movements.