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# CONSUMER PRICE INDICES, OCTOBER 2022

In October 2022 compared to September 2022, the prices of goods and services for personal consumption, measured by the consumer price index, increased by 1.3% on average. Compared to October 2021, that is, at the annual level, they increased by 13.2% on average, while on the annual average they increased by 9.4%.

Observing the main divisions of the ECOICOP classification, **at the annual level**, the highest increase on average in consumer prices was recorded in the following divisions: Food and non-alcoholic beverages, of 19.7%, Restaurants and hotels, of 17.8%, Housing, water, electricity, gas and other fuels, of 16.1%, Furnishings, household equipment and routine household maintenance, of 15.8%, Transport, of 11.5%, Miscellaneous goods and services, of 10.7%, Recreation and culture, of 8.4%, Clothing and footwear, of 6.6%, Alcoholic beverages and tobacco, of 4.4%, Health, of 3.5%, and Education, of 2.3%.

The largest contribution to the growth rate of the annual index came from the following divisions: Food and non-alcoholic beverages (+5.11 percentage points), Housing, water, electricity, gas and other fuels (+2.72 percentage points), Transport (+1.69 percentage points), Furnishings, household equipment and routine household maintenance (+0.90 percentage points), Restaurants and hotels (+0.89 percentage points), Miscellaneous goods and services (+0.66 percentage points), Recreation and culture (+0.44 percentage points), Clothing and footwear (+0.39 percentage points), Alcoholic beverages and tobacco (+0.22 percentage points) and Health (+0.11 percentage points).

Observing the selected groups, the highest increase on average in consumer prices at the annual level was recorded in the group Energy, of 19.9% (contribution to the growth of +3.34 percentage points).

**At the monthly level**, the highest increase on average in consumer prices was recorded in the divisions Clothing and footwear, of 6.9% (contribution to the growth of +0.40 percentage points), Housing, water, electricity, gas and other fuels, of 2.8% (+0.47 percentage points), Food and non-alcoholic beverages, of 1.0% (+0.26 percentage points), Furnishings, household equipment and routine household maintenance as well as Health, of 0.8% in each group (contribution to the growth of +0.05 percentage points in the division Furnishings, household equipment and routine household maintenance and +0.03 percentage points in the division Health).

The increase in prices was alleviated by a decrease in the prices in the division Recreation and culture, of 0.8% (-0.04 percentage points).

### Harmonised index of consumer prices

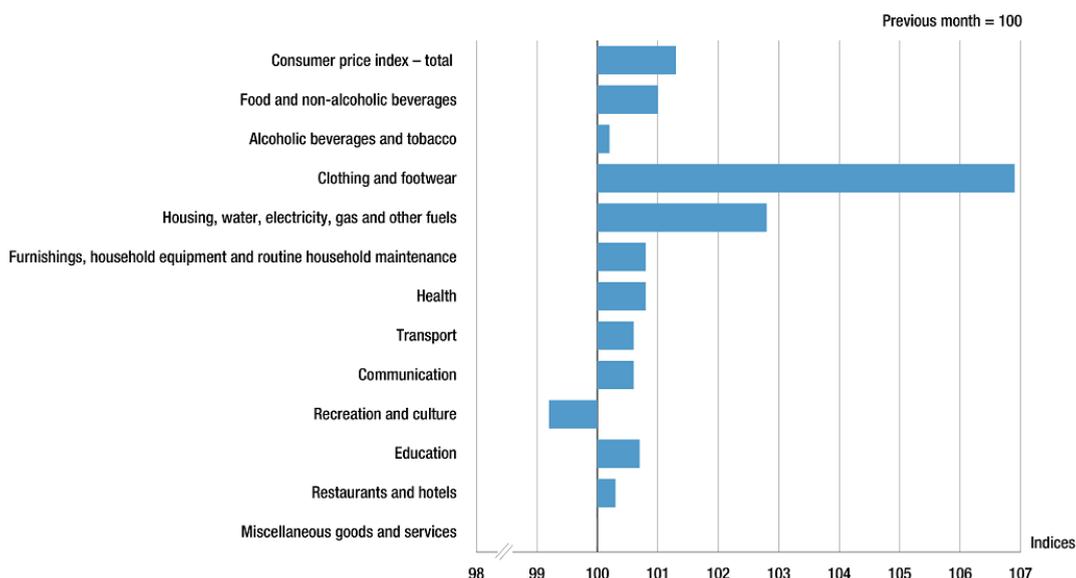
The prices of goods and services for personal consumption, measured by the harmonised index of consumer prices, increased by 1.0% on average in October 2022 compared to September 2022. Compared to October 2021, that is, at the annual level, they increased by 12.7% on average, while, on the annual average, they increased by 9.4%.

## 1 CONSUMER PRICE INDICES, OCTOBER 2022<sup>1)</sup>

ECOICOP		Structure (%)	X 2022 Ø 2015	X 2022 X 2021	X 2022 IX 2022	XI 2021 – X 2022 XI 2020 – X 2021
00	<b>Consumer price index – total</b>	<b>100,00</b>	<b>121,2</b>	<b>113,2</b>	<b>101,3</b>	<b>109,4</b>
01	Food and non-alcoholic beverages	25,93	129,7	119,7	101,0	113,8
02	Alcoholic beverages and tobacco	5,10	127,6	104,4	100,2	103,8
03	Clothing and footwear	5,84	117,4	106,6	106,9	106,0
04	Housing, water, electricity, gas and other fuels	16,87	118,3	116,1	102,8	107,9
05	Furnishings, household equipment and routine household maintenance	5,70	120,6	115,8	100,8	110,2
06	Health	3,21	109,0	103,5	100,8	101,3
07	Transport	14,72	121,8	111,5	100,6	114,5
08	Communication	5,47	99,6	100,9	100,6	100,3
09	Recreation and culture	5,27	113,1	108,4	99,2	106,1
10	Education	0,71	104,6	102,3	100,7	100,8
11	Restaurants and hotels	4,99	140,3	117,8	100,3	111,3
12	Miscellaneous goods and services	6,19	116,1	110,7	100,0	105,9

<sup>1)</sup> Time series of consumer price indices according to the ECOICOP classification can be downloaded on the website of the Croatian Bureau of Statistics within the Databases section under [PC AXIS Databases](#).

## G-1 MONTHLY CONSUMER PRICE INDICES, OCTOBER 2022



## G-2 ANNUAL CONSUMER PRICE INDICES, OCTOBER 2002 – OCTOBER 2022



## 2 CONSUMER PRICE INDICES, BY SELECTED GROUPS, OCTOBER 2022

	Structure (%)	X 2022 Ø 2015	X 2022 X 2021	X 2022 IX 2022	XI 2021 – X 2022 XI 2020 – X 2021
Goods	73,81	123,5	115,3	101,7	111,3
Services	26,19	114,3	107,2	100,1	104,1
Total, without energy	83,22	120,2	111,8	100,9	108,0
Total, without energy and food	59,85	116,3	108,5	100,9	105,5
Total, without energy, food, beverages and tobacco	52,20	114,8	108,6	101,0	105,5
Total, without energy and unprocessed food	74,76	120,2	111,3	101,0	107,6
Goods without electricity	68,26	124,6	115,6	101,7	111,6
Goods without electricity and water supply	65,89	125,2	116,1	101,8	112,0
Non-food industrial goods without energy	26,01	115,0	110,1	101,9	106,9
Energy	16,78	126,0	119,9	103,1	116,4
Food, beverages and tobacco	31,03	129,4	117,2	100,9	112,1
Goods without food, beverages and tobacco	42,78	119,2	114,0	102,4	110,6
Unprocessed food	8,46	120,4	116,4	100,8	111,8
Processed food	22,56	133,2	117,5	100,9	112,3

### 3 HARMONISED INDICES OF CONSUMER PRICES, OCTOBER 2022, RATES OF CHANGE<sup>1)</sup>

ECOICOP		X 2022 <sup>2)</sup> Ø 2015	X 2022 X 2021	X 2022 IX 2022	XI 2021 – X 2022 XI 2020 – X 2021
<b>00</b>	<b>Harmonised index of consumer prices – total</b>	<b>121,37</b>	<b>12,7</b>	<b>1,0</b>	<b>9,4</b>
01	Food and non-alcoholic beverages	129,51	19,4	1,1	13,6
02	Alcoholic beverages and tobacco	125,41	5,7	0,3	4,4
03	Clothing and footwear	118,27	7,1	6,9	6,1
04	Housing, water, electricity, gas and other fuels	120,66	16,4	2,3	11,6
05	Furnishings, household equipment and routine household maintenance	118,55	14,4	0,8	9,3
06	Health	112,09	3,6	0,8	1,3
07	Transport	119,78	11,2	0,3	13,1
08	Communication	100,33	1,3	0,6	1,0
09	Recreation and culture	112,39	8,5	-0,9	6,3
10	Education	104,49	2,3	0,7	0,8
11	Restaurants and hotels	132,38	18,1	0,2	11,9
12	Miscellaneous goods and services	117,21	10,7	-0,2	6,0

1) Time series of the harmonised index of consumer prices according to the ECOICOP classification can be downloaded on the website of the Croatian Bureau of Statistics within the [Statistics in Line](#) section under Prices and on the [Eurostat website](#).

2) Indices.

## NOTES ON METHODOLOGY

### Definitions

**Consumer price index (CPI)** is used as a general measure of inflation in the Republic of Croatia and reflects the changes in prices of goods and services acquired, used or paid over time by a reference population (private households) for consumption purposes. In addition, it is used to guarantee the value of contracts with index clauses (e.g. for indexing wages and salaries in collective agreements, for indexing pensions, etc.), as well as for the comparison of the price movements within a particular country between different economy sectors, it can serve as a basis for deflating individual categories of national accounts data and other statistical series, as well as for analytical purposes.

**Harmonised index of consumer prices (HICP)** is a set of European consumer price indices calculated according to a harmonised approach and a special set of definitions, which enable a comparable measure of inflation in the euro area, the European Union, the European Economic Area and in candidate countries.

CPI and HICP are calculated on the basis of the same representative basket of goods and services. The main difference is the coverage of the population (HICP includes the total consumption of institutional households and non-residents in the economic territory and this consumption is not included in the national consumer price index).

While the CPI is most often applied as a general measure of inflation within the national framework, the HICP is a comparable measure of inflation among the countries of the European Union.

### Coverage and price collection

The representative basket for monitoring consumer prices consists of about 900 products. About 38 000 prices are collected each month in predefined outlets. The CPI covers all goods and services purchased by the reference population for the purpose of final consumption. Imputed rents, expenditure on lotteries and gambling, as well as life insurance services are not included.

The coverage of goods and services is revised once a year in order to ensure the representativeness of the basket with respect to consumer tastes and their purchasing habits.

Most of the prices of goods and services from the basket are collected by authorised price collectors using tablet computers at nine geographical locations (Zagreb, Slavonki Brod, Osijek, Sisak, Rijeka, Pula, Split, Dubrovnik and Varaždin). For the selected products from the basket, price collectors independently choose a specific product offer whose price will be recorded at the outlet. In order to make sure that collectors record the prices of the same items each month, as well as to monitor which product offers are selected at outlets, price collectors also record a pre-defined set of additional product characteristics. Such a method of price collection enables the monitoring of changes in prices between two periods, but not the comparison of average prices between different geographic locations.

In addition to the prices collected directly by price collectors at outlets (local price collection), data on nationally homogenous prices are collected directly from reporting units or via the internet (central price collection). Since January 2021, the prices for selected groups of products (market rents, household appliances and electronics) are collected using the web scraping technique.

The majority of prices are collected once a month, on a working day (prices are not collected during weekends and public holidays), on approximately the same day of the month. The prices of agricultural products sold in market places, the prices of passenger air transport and the prices collected using the web scraping technique are recorded twice a month. The prices of fuel for passenger cars, the prices of package holidays, the prices of apartment rents and the prices of accommodation in camps are recorded weekly. The prices of school books and education fees are recorded once a year.

### Weights

The weights used for calculating the indices reflect the relative importance of the sampled goods or services in the total consumption of households within the domestic territory.

The main data source for determining the weights used in the calculation of the CPI is the Household Budget Survey (HBS), conducted on a regular basis by the Croatian Bureau of Statistics since 1998. This data source is supplemented by available additional data sources. Since January 2022, the compilation of CPIs has been based on the weights derived from data on household expenditures from the 2019 HBS recalculated to December 2021 prices. The COVID-19 pandemic has largely affected household personal consumption and therefore, for the calculation of weights in 2022, data from the 2019 HBS were further updated with estimated national accounts data on household final consumption expenditure for 2021.

The main data source for determining the weights for the calculation of the HICP at higher levels of aggregation are the national accounts data, and for lower levels of aggregation, the data from the HBS are used. Since January 2022, the calculation of the HICP has been based on estimated national accounts data on household final consumption expenditure for 2021, supplemented by additional available data sources and recalculated to the difference between the 2021 average and December 2021 according to the [Eurostat recommendations](#).

### Classification

The European Classification of Individual Consumption according to Purpose (ECOICOP) is used for the classification of products.

### Calculation of indices

The calculation of the CPIs begins with the computation of the elementary aggregate indices.

The elementary aggregate indices are compiled as a ratio of the geometric means of prices for each geographical location. It means that prices for product-offers within elementary aggregates in the current month are compared to prices of the reference period (December of the previous year). From elementary aggregate indices at the level of geographical locations, elementary aggregate indices at national level are then calculated using the formula for the weighted arithmetic mean.

Elementary aggregate indices at national level are aggregated to higher index levels using the Laspeyres' type formula.

#### **Harmonised index of consumer prices at constant tax rates (HICP-CT)**

HICP-CT is the harmonised index of consumer prices where the rates of taxes on products are kept constant in the observation period compared to the reference period, i.e. through time. In the event of a tax rate change, the difference between the current HICP-CT and HICP indicates the effect of the tax rate change on the price changes assuming that changes in tax rates are applied instantaneously and fully.

Time series of the total HICP-CT can be downloaded on the website of the Croatian Bureau of Statistics within the [Statistics in Line](#) section under Prices, while a detailed breakdown according to the ECOICOP classification is available on the [Eurostat website](#).

#### **Abbreviations**

COVID-19	COrona Vlrus Disease-19
EU	EUropean Union
Eurostat	Statistical Office of the European Union

#### **Published by the Croatian Bureau of Statistics, Zagreb, Ilica 3, P. O. B. 80.**

Phone: (+385 1) 48 06 111

Press corner: [press@dzs.hr](mailto:press@dzs.hr)

Persons responsible:

Suzana Šamec, Director of Macroeconomic Statistics Directorate

Lidija Brković, Director General

Prepared by:

Sanja Jurleka, Marija Gudelj, Jasminka Stančić, Gordana Šiletić, Ivana Ključarić and Tamara Golub

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Customer Relations and Data Protection Department

Information and user requests

Phone: (+385 1) 48 06 138, 48 06 154

E-mail: [stat.info@dzs.hr](mailto:stat.info@dzs.hr)

Subscription

Phone: (+385 1) 48 06 115

E-mail: [prodaja@dzs.hr](mailto:prodaja@dzs.hr)