

## Methodological notes

Starting from the year 2012, the development of consumer price indices (cost of living) is observed on new consumer baskets based on the set of selected kinds of goods and services paid by the population.

The new revised consumer baskets (index schemes) and the methodology of the consumer price index processing were determined on the base of the requirements of Eurostat resulting from the consumer price indices harmonization and remarks and proposals of the Consulting Commission for the Consumer Price Statistics consisting of representatives of ministries, the CNB, research institutes, the Economic University Prague, trade unions, organisations of the retired and selected branches of the CZSO.

A new selection of goods and services (price representatives) was made for the consumer baskets within a substantial revision, which took place for individual price areas during the years 2010 - 2011 and a new weighting system was constructed. The structure of the aggregate consumer price indices (cost-of-living) is based on the international Classification of Individual Consumption by Purpose (CZ-COICOP), which classifies goods and services into **12 divisions**.

1. **Food and non-alcoholic beverages** – comprises all food including non-alcoholic beverages.
2. **Alcoholic beverages and tobacco** – comprises alcoholic beverages and tobacco products.
3. **Clothing and footwear** – comprises textile products, ready-made clothing, footwear, including repair.
4. **Housing, water, electricity, gas and other fuels** – comprises rentals, payments for the use of cooperative dwellings, miscellaneous services relating to the dwelling, materials and services for the maintenance and repair of the dwelling, water supply, all kinds of energy (electricity, gas, heat), solid fuels.
5. **Furnishings, household equipment and routine household maintenance** – comprises furniture and furnishing, household textiles, bed and table linen, household appliances, cleaning and maintenance products, glassware, tableware and household utensils, dry-cleaning services, laundering services, repair of household appliances.
6. **Health** – comprises pharmaceutical and other medical products, dental products, services of optometrists, services of physicians, thermal bath care.
7. **Transport** – comprises personal transport equipment including repair and spare parts, insurance, automotive fuel, transport services (by railway, by road, by air, local), school transport services.
8. **Communications** – comprises postal services, telephone equipment (mobile phones), telephone services.
9. **Recreation and culture** – comprises radio and television receivers including repair, CD, DVD, MP players, books, periodicals, toys, musical instruments, stationery, sport equipment, cultural services, sporting services, domestic and foreign holiday.
10. **Education** – comprises all levels of education including language teaching.
11. **Restaurants and hotels** – comprises meals and drinks provided by restaurants, dinner in works canteens, catering services of canteens in schools and universities, accommodation services of hotels, boarding houses, chalets, accommodation in boarding schools and universities.

**12. Miscellaneous goods and services** – comprises personal care services, electrical appliances for personal care, beauty products, jewellery, watches, leather fancy goods, insurance (life insurance, insurance connected with the dwelling, car insurance), social and financial services, administration and application fees.

### **Selection of representatives**

The price representatives are especially products and services which have a significant share in population's expenditure and cover the entire sphere of consumption.

The numbers of price representatives in the new consumer basket for calculation of the consumer price indices are as follows:

<b><u>Group of goods and services</u></b>	<b><u>Number of representatives</u></b>
Total	692
1. Food and non-alcoholic beverages	161
2. Alcoholic beverages and tobacco	21
3. Clothing and footwear	65
4. Housing, water, electricity, gas and other fuels	45
5. Furnishings, household equipment and routine household maintenance	79
6. Health	18
7. Transport	80
8. Communications	4
9. Recreation and culture	110
10. Education	12
11. Restaurants and hotels	42
12. Miscellaneous goods and services	55

The selection of representatives is the same for all types of indices but some products and services are not represented in particular social groups of households.

### **Method of the consumer price survey**

Prices of individual kinds of goods and services are collected monthly, directly in selected shops (about 8.500) by statistical staff in 35 chosen districts across the Czech Republic and in Prague.

**Average price** of individual representatives for the Czech Republic is calculated from the collected prices, which is involved in the calculation of all types of consumer price indices except indices for households living in Prague. Average prices of representatives involved in the calculation of indices for households living in Prague are the same as average prices collected in Prague for the calculation of consumer price indices for the Czech Republic. Average consumer prices for the Czech Republic are assigned for the calculation to the representatives of spa treatment, ski lift ticket, accommodation in hotels, boarding houses, chalets, accommodation in boarding schools and universities, catering in university canteens and to the majority of representatives with centrally surveyed prices.

### **Weighting system**

The weights were calculated for the following groups of households: **households in total, households of pensioners, households living in Prague.**

In 2012 the CZSO began to publish price indices that were calculated according to new revised index patterns based on the structure of household consumption in 2010. The weights were determined using the national accounts statistics and for detailed elementary aggregates using household budget statistics. The aggregate consumer price index has weights based on the structure of average expenditures of all households; the CPI indices for the Capital City of Prague have weights based on the structure of expenditures of households living in the Capital City of Prague and for the households of pensioners on the structure of expenditures of households of pensioners.

**Households of pensioners** – for the purposes of household budget statistics they are defined as households without economically active members where the head of the household is a non-working pensioner and none of the other members is economically active. Only short-term working activity is permissible, and annual income from work of any member of the household is not allowed to exceed CZK 12 000.

### **Computation of indices**

Calculation of the consumer price indices (cost-of-living) is based on constant weights according to the Laspeyres formula:

$$I = \frac{\sum \frac{p_1}{p_0} * p_0 q_0}{\sum p_0 q_0} * 100$$

$p_1$  = the price of goods (service) in the reference (current) period.

$p_0$  = the price of goods (service) in the base period.

$p_0 q_0$  = constant weight: expenditures of households on goods (service) in the base period.

Starting from 2012, the base period was changed from December 2009 to December 2011. The calculated indices are chained at all levels of the consumer basket with the base period 2005 = 100. A constant is used to transfer the index with the base period December 2011 = 100 into an index time series 2005 = 100. The index with the base period 2005 = 100 is calculated by multiplication of the constant by the index December 2011 = 100. Thereby, a continuation of the existing index time series 2005 = 100, from which indices to other bases are derived (previous month = 100, corresponding period of previous year = 100 and annual rolling average, i.e. the average of index numbers over the last 12 months to the average for the previous 12 months) is ensured.