

## Methodological notes

Starting from the year 2007, 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) were discussed and approved by a commission set up of representatives of statistical authorities, ministries (MLSA CR, MF CR, MRD CR, MIT CR, MAg CR, MEYS CR), CNB, University of Economics, trade unions etc.

A new selection of goods and services (price representatives) was made for the consumer baskets, and a new weighting system was built up. 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, tape and cassette recorders, 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, clocks, leather fancy goods, insurance (life insurance, insurance connected with the dwelling, insurance connected with health, insurance connected with transport), social and financial services, administrative fees charges

### **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><i>Group of goods and services</i></b>	<b><i>Number of representatives</i></b>
Total	714
1. Food and non-alcoholic beverages	157
2. Alcoholic beverages and tobacco	21
3. Clothing and footwear	66
4. Housing, water, electricity, gas and other fuels	42
5. Furnishings, household equipment, repair	77
6. Health	53
7. Transport	82
8. Communications	4
9. Recreation and culture	108
10. Education	12
11. Restaurants and hotels	42
12. Miscellaneous goods and services	50

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 9000) 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 in all types of the 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, with the exception of representatives spa treatment, ski lift ticket, accommodation in hotels, boarding houses, chalets, accommodation in boarding schools and universities, catering in university canteens, examination fee for university enrolment procedure, tuition fee at higher professional school, and tuition fee at private university, whose calculation involves average consumer prices for the Czech Republic.

## Weighting system

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

All types of indices have weights derived from household expenditures measured by the household budget survey for 2005 and corrected by the national accounts statistics. The aggregate consumer price index has weights based on the structure of average expenditures for all households; the other CPI indices have weights based on the structure of expenditures of a given social group of households or on the structure of expenditures of households living in Prague.

**Households of pensioners** – for the purposes of Czech HBS 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.

Starting from 2010, the weights were updated at the 4-digit level of the COICOP classifications using expenditures of households taken from national accounts statistics in 2008. The weights of elementary aggregates in individual classes at the 4-digit COICOP level correspond with the structure of household expenditures from household statistics in 2005.

## 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 reference (current) period price of a good (service),

$p_0$  = the basic period price of a good (service)

$p_0 q_0$  = constant weight: expenditures of households on a good (service) in the basic period.

Starting from 2010, the base period was changed from December 2005 to December 2009. 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 2009 = 100 into an index time series 2005 = 100. The index with the base period 2005 = 100 is calculated by multiplication the constant by the index December 2009 = 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 last 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) are ensured.