Methodical notes

Carrying out a task of price statistics of construction works and constructions was included in statistical surveys for trend of producer price levels.

An extraordinary revision of price indices has been made in 2011 using chain-linking method. The weighting scheme has been put together from results of construction production between 2007-2010. Aggregations of price indices have been put together in primary time series (technical price indices) and have been recalculated afterwards using constants to secondary time series – **aggregations** of price indices **can not be put together in the secondary time series**. Price indices **based on the 2005 average** have been published since 2007. The time series have been connected with the previous published data.

A monitoring of construction price indices is divided into price indices of **construction works** and price indices of **constructions**.
Price indices of construction works are classified by a new system of nomenclatures TSKPstat. Source of **TSKPstat** is a sort system of construction works "TSKP CS ÚRS" – a property of ÚRS PRAHA, a.s. Price indices of constructions are classified by the Classification of Types of Constructions (**CC**) which has been used for publication of price indices of constructions from the year 2004.

Ceny Stav 1-04 - a questionnaire used in a survey of prices of construction works - consists of 132 survey samples – each for a single construction work. Another 3 survey samples are dedicated for hourly rate survey of the work of construction professions. Representatives from the quarterly statistical survey Ceny Stav 1-04 have been sorted by the new system of nomenclatures TSKPstat since 2012.
730 respondents of all size classes and different legal forms (CZ-NACE 25, 28, 33, 41, 42, 43, 80) have been selected from the reporting database of establishments. The prices in the survey are in agreement between the supplier and consumer for a unit of a domestic construction work, which is realized by employees of the company, working owners of the company, contract job workers and cooperating self reporting units all over the territory of Czech Republic. Construction work prices from the second month of the particular quarter which are surveyed - are exclusive of VAT and are exclusive of the cost of building site accessories.

Price indices are calculated on the base of net price indicdes, i.e. **change in technology or change in material of construction is not included in the price index.**

Surveyed prices consist of:
- material and semi-finished products
- labour costs
- legal social insurance and health insurance
- expenses on operation of building machines and transport expense estimate for the earthmoving
- overhead expenses
- pre-tax profit

Price indices of Construction works are firstly calculated by arithmetic mean of unit prices linked to each representative. After that an aggregate index is calculated by aggregating of simple price indices. A modified Laspeyers formula is used.

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

p_1 = the reference period price,
p_0 = the basic period price (4Q 2010),
$p_0 q_0$ = the constant weight (average production structure of construction production in 2007-2010).

Price indices of construction works are calculated in these three levels:
1. Ratio of the surveyed price to the price of the previous period for each survey sample.
2. Aritmetic mean of all individual indices corresponding to each representative. Final index is then chained through the time series to the basic time period.
3. Items from the system of nomenclatures TSKPstat are calculated by arithmetic mean of price indices of relevant representatives. Individual price indices are aggregate into the higher levels of the **TSKPstat** by using a weighted average.

Price indices of construction structures and works are published in the table No. 1. ´Processed survey sample forms´ refers to representatives (from the questionnaire Ceny Stav 1-04) contributing to final results.

Price indices of constructions (four-digit CC) are calculated by using a weighted average of selected price indices of construction structures and works in the TSKPstat. These individual price indices of the representatives are aggregated into aggregate indices up to the sections ´CC 1 Buildings´ and ´CC 2 Civil engineering works´. Weighting scheme for aggregations in CC is determined by values of items of building budgets for each individual type of construction.
Price indices of constructions are published in the table No. 2.

Price indices by kinds of constructions nomenclature and **Constructions** are calculated by using a weighted average, according to type of construction on the level of three-digit CC. Price indices by kinds of constructions nomenclature are published in the table No. 3.

Indices of construction costs of construction output were revised in 2011. Volumes of materials and products were cumulated into items of Classification of Products CPA – these are included in industrial producer price indices. The index scheme contains 97 four-digit divisions and two three-digit sub-sections of CPA.
Indices of construction costs of construction output are composed from price indices of industrial producers, salaries, inland freight transport and outgoings entering into building industry. Finally, indices of outgoings are professionally estimated and extrapolate by values used in the past time.
Indices of construction costs of construction output are published in the table No. 4.

Price indices of material inputs of construction output
Price index calculation of material inputs of construction output is a part of calculation of construction cost price index.
Price indices of material inputs of construction output are published in the table No. 5.

Kinds of constructions compose of four-digit divisions CC: residential buildings are weighted average of one-dwelling buildings, two-dwelling buildings, three- and more dwelling buildings and residences for communities. Non-residential buildings are weighted average of hotel buildings, office buildings, public entertainment buildings, museums and libraries, schools, hospital or institutional care buildings and sports halls.
Non-residential industrial buildings are weighted average of wholesale and retail trade buildings, communication buildings, stations, terminals and associated buildings, garage buildings, industrial buildings, reservoirs, silos and warehouses and non-residential farm buildings.
Civil engineering works are weighted average of price indices in section ´2 Civil engineering works´ (four-digit divisions) except for hydraulic structures. Hydraulic structures are weighted average of harbours and navigable canals and dams.

The text was not edited for language.