



## ~ Methodology ~

# CONSTRUCTION PRODUCER PRICE INDEX FOR RESIDENTIAL BUILDINGS (ПЦГ)

## LEGAL BASIS

Quarterly report on construction prices for residential buildings (T KPS GRADJ-PCG) is carried out pursuant to the Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska", No.85/03) and in accordance with the Statistical programme for the period 2022-2025.

The obligation to submit data to the Republika Srpska Institute of Statistics (the Institute) is based on Article 8 of the Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska", No. 85/03).

Pursuant to Articles 27 and 28 of the Law on Statistics of Republika Srpska and in accordance with the Rules of protection of confidential data, the Institute must to protect submitted confidential data. Therefore, the Institute must not use the data collected for statistical purposes for any other purpose and these data must not be published as individual data.

## METHODOLOGY

The methodology for the implementation of the Quarterly report on construction prices for residential buildings complies with European statistical standards and its content is prescribed by the EU Methodology of short-term statistics <https://ec.europa.eu/eurostat/documents/3859598/5895945/KS-BG-06-001-EN.PDF/609c47c3-220a-48b4-874f-d9c589bf302c?version=1.0>.

## AIM AND CONTENT

The aim of this statistical activity is to obtain quarterly sale price indices for completed construction works on residential buildings (apartment buildings, residential houses, etc.), which is also the result of this activity. Construction producer price indices for residential buildings are calculated based on prices observed over time. The main purpose of these indices is to be used as deflators, with deflated values of production in residential construction being comparable over time (price effect is excluded).

## OBSERVATION UNITS / REPORTING UNITS

Quarterly report on prices of construction works for residential buildings is submitted by economically active enterprises from the Statistical Business Register.

Observation units are actually contracted or invoiced prices of construction works for new residential buildings. The prices are collected from construction enterprises that are engaged in residential construction and/or perform specialised construction works on residential buildings (electrical installations, water supply and sewerage installations, heating and air conditioning

installations, facade and plastering works, installation of carpentry, installation of floor and wall coverings, painting and glazing works, etc.).

### ***COVERAGE***

The statistical activity (T KPS GRADJ-PCG) covers active enterprises whose principal activity, according to the Classification of Economic Activities (NACE Rev.2), is classified in the section F- Construction, in divisions 41 – Construction of buildings (excluding class 41.10) and 43 - Specialised construction activities.

### ***METHOD AND PERIOD OF DATA COLLECTION***

The collection of data (prices) is conducted using the reporting method, through the Quarterly report on prices of construction works for residential buildings.

The form T KPS GRADJ-PCG contains forty-two construction works (items), divided into four basic groups:

- Architecture and design,
- Plumbing and sanitation,
- Electricall installations, and
- Heating installations.

These are representative construction works the producer prices of which are used to calculate the index.

The form also includes identification, address and type of activity data.

### ***DATA PROCESSING***

Construction producer price indices for residential buildings are calculated using the method of Standard Components (MSC), commonly used to compile output price indices. This method observes outputs in construction – residential construction as a package of standardised homogenous components. These components correspond to the offer of standard activities (the above mentioned four groups of works). A representative typical residential building is selected and used to define the selection of construction works and the corresponding weights.

Price indices are compiled based on prices of standard components/construction works in the current quarter of the current year and in the fourth quarter of 2015. The index is produced for each instance of construction works, at the enterprise level, and the elementary index (index of elementary aggregates) is obtained. To calculate the price index for the total residential construction, the geometric mean is applied for each instance of works, and further, by weighting, indices are obtained for subgroups and groups of works and in total.

Calculation of aggregated (group) indices is performed by weighting individual indices using the Laspeyres formula.

### ***WEIGHTS***

The weighting system for the construction producer price index for residential buildings is based on the bill of quantities for a typical residential building. This bill of quantities contains 296 different types of works. The bill of quantities covers four groups of works, for which the specifications of construction works are also available. Weights at the level of group of works are calculated using the ratio of the value of completed construction works at the group level and the value of all completed construction works for a typical residential building. Each group

of works consists of a certain number of subgroups of construction works. Within each group of construction works, 17 subgroups/activities were identified. Each subgroup of works consists of a certain number of construction works/items.

### ***DEFINITIONS OF MAIN CHARACTERISTICS***

**Price** is the unit value of construction works on residential buildings performed by construction enterprises in the observation quarter, i.e. the price that would have been offered for the given type of works in case the works were not performed in the observation quarter. The price includes the invoiced unit value of installed material, the labour used and the contractor's margin for a particular type of construction works per the corresponding unit of measurement, expressed in KM (excluding VAT). For each individual type of works, the reporting unit enters the price that was most often charged in the observation quarter.

**Construction producer price index for residential buildings (CPPI)** is defined as the output price index for the type of construction works performed by construction contractors. This index measures the rate of change in market prices of quarterly construction works, i.e. it provides a weighted average of the change in prices of "relevant products" (construction works) in the product group between two periods. The price used for the CPPI calculation is the basic price that excludes VAT and similar deductible taxes which are directly linked to turnover.

### ***COMPLIANCE WITH INTERNATIONAL RECOMMENDATIONS***

The implementation of activities complies with recommendations given in European regulations concerning the construction producer price index for residential buildings, which allows for the international comparability of data of Republika Srpska with other countries. EU Regulation 1165/98 (Annex B - Construction) <https://eur-lex.europa.eu/legal-content/HR/TXT/PDF/?uri=CELEX:31998R1165&from=EN> - regulation concerning definitions, variables, list of variables and frequency of data collection, and EU Regulation 1503/2006 <https://eur-lex.europa.eu/legal-content/HR/TXT/PDF/?uri=CELEX:32006R1503&from=EN> - implementing and amending Regulation 1165/98.

## **DESCRIPTION OF SURVEY ORGANISATION**

### ***AUTHORITIES IMPLEMENTING THE STATISTICAL SURVEY***

The Republika Srpska Institute of Statistics is the authority responsible for the CPPI production. The reports are collected by the Regional Offices of the Institute, while the Division of Production Statistics performs data entry and produces results. This Division performs formal, computational and logical controls, treatment of extreme microdata values, production and analysis of results, etc

### ***IMPLEMENTATION FREQUENCY***

The reports are completed in two copies, one of which is submitted to the Republika Srpska Institute of Statistics, no later than the 10<sup>th</sup> of the month following the end of the observation quarter.

The data are published forty days after the observation period.

## ***SURVEY INSTRUMENTS***

The following methodological instruments are defined for the implementation of Quarterly report on prices of construction works for residential buildings:

- The form and attached instructions for completing the form, and
- Letter to reporting units.

## **PUBLISHING**

In accordance with European recommendations, CPPI indices are presented at the level of four basic groups of works and in total for residential construction in Republika Srpska.

Quarterly report "Construction producer price index for residential buildings" is available at the website of the Republika Srpska Institute of Statistics: [www.rzs.rs.ba](http://www.rzs.rs.ba)

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