The construction producer price index (CPPI) is a European Union (EU) business cycle indicator that measures the prices of construction activities (new residential buildings) from the point of view of the building constructor. The construction cost indicator (CCI) shows the trend in the cost for new residential buildings. The current European business statistics regulation (EBS-R) (EC) No 2019/2152 calls for quarterly indices on construction prices for new residential buildings (excluding residences for communities). The construction price indicator may be approximated by an appropriate cost indicator. Some countries produce both price and cost indicators. Some countries also produce monthly indicators on a voluntary basis. Figure 1 shows that the indicators for prices and costs for the EU develop in a very similar way.
Construction costs - development since 2005

Between 2005 and mid-2008, construction producer prices and costs (for residential buildings) increased relatively steadily in the EU (Figure 1). After peaking in the third quarter of 2008 the indices began to fall and reached their lowest level about one year later. In total, however, the decline was not particularly pronounced. In 2010, the price and cost indices started to increase again. About one year later they regained the level they had displayed before the financial and economic crisis. Until 2012, the indices increased further and then stagnated for a relatively long period between 2012 and 2016, when another continuous increase set in.

The construction price and cost indices were not strongly affected by the Covid-19 crisis in the first and second quarters of 2020. In 2021, a dynamic growth set in that was particularly driven by the costs for input materials. The development continued in 2022. Between the first quarter of 2021 and the last quarter of 2020, construction prices and cost increased by around 23%.

Table 1 provides the annual growth rates for the EU, the euro area, and the EU Member States for the period between 2005 and 2022. With a few exceptions, the EU countries display a development that is broadly similar to the one for the EU aggregate.

In the wake of the financial and economic crisis the construction price index for residential buildings first fell in Ireland (in 2008), in the other countries this development occurred several months later. The reductions in the price index were relatively strong in Ireland, the Baltic States, and in Croatia. In a number of countries the rates of change in 2008 and 2009 remained positive although generally lower than in the first half of the period under observation. During the years 2011 to 2016, construction prices in the EU annually increased by around 1.3%. In the following three years, 2017 to 2019, the prices on average went up and reached an average of almost 3.0% per year. The annual data for 2020 do not show a dramatic effect of the Covid-19 pandemic although the price increases were somewhat more moderate than before. While during the first quarters of the year the costs might have stagnated or declined, the development during the second half of the year compensated this. In 2021, prices increased quite strongly in the majority of countries with double-digit growth rates in Bulgaria (11.0%), Hungary (12.2%), Malta (12.5%), and Slovenia (10.7%). In 2022, this development was even accelerated. In a large majority of countries, prices increased with double-digit rates, and there was no country, for which data are available, where prices dropped.
Table 1: Annual growth rates, producer price indices for new residential buildings, unadjusted data

| Source: Eurostat (online data code: sts_copigr_a) |

**Data sources**

The Regulation (EU) No 2019/2152 of 27 November 2019 (European Business Statistics Regulation) calls for quarterly indices on construction costs for new residential buildings, excluding residences for communities. Data are revised when additional information from national statistical authorities becomes available. In general, no special surveys are undertaken in order to calculate the construction cost index since it is possible to use other indices that are already available from different sources.

Data collected by Member States are transmitted to Eurostat as an index. The weighting for aggregating this index between Member States is generally turnover in building construction and is derived from information obtained from structural business statistics or other statistics. The base year is usually changed every five years.

Countries that do not have data on construction prices may use construction costs as an approximation (see above).

The CCI presents the total costs for new buildings. Labour, material and energy costs represent the most important cost components for construction (Figure 2). Fees for architects are not included in the costs.
The construction price and cost indices provide important additional aspects to the information provided by other construction data. The indices measures developments from the points of views of the building contractors. It reflects the prices that they have to pay for the input factors in the construction process (see A in Figure 2). The cost index therefore has to be distinguished from the producer price index for construction (also called output price index) which affects the cost for the contractors' clients. The cost and producer price indices has to be distinguished from the “selling price index” (item C) which measures changes in the prices paid by the final owner of the output to the client. It includes the price of the land, architect's fees and client's margins.

The construction cost index measures the relationship between the costs, at constant technology and constant input mix, that are associated with the implementation of a fixed amount of construction work. This type of index is different from a producer price index, which measures movements in prices charged to clients of construction work. This is especially true when the price index is calculated from tender prices, which can vary from time to time and

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**Table 2: Sources for the construction cost index**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>Price lists, Produc Price Index, Statistical offices of trade chambers, Wholesale prices</td>
</tr>
<tr>
<td>Labour</td>
<td>Collective agreements, Labour cost survey</td>
</tr>
<tr>
<td>Equipment</td>
<td>Producer Price Index for machinery</td>
</tr>
<tr>
<td>Energy</td>
<td>Producer Price Index, Wholesale price index</td>
</tr>
</tbody>
</table>

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**Figure 2: Construction cost index**

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Context
place to place depending on the state of competition and market conditions. Producer price indices include
changes both in productivity and in the contractor’s margins. This corresponds to item B in Figure 2.

The CCI is made up of aggregated price indices for materials, labour costs and other types of costs. The
aggregation takes into account the relative weights for the different cost components. It is assumed that neither the
construction method nor the building organisation have undergone any change, and consequently the calculations
take no account of factors such as productivity improvements, more efficient utilisation of materials, etc. which may
influence cost trends. Changes in the profit margins, which also affect a producer price index, are not been taken
into account either.

The construction producer price index (CPPI) measures the development of transaction prices for the quarterly
construction output. The CPPI is an output index – it measures price changes from the makers of a product. The
appropriate price for calculating the PPI is the basic price that excludes VAT and similar deductible taxes which are
directly linked to turnover. Price indices are calculated as a weighted average of the relevant products.

Other articles

• All articles on short-term business statistics

Publications

• A decade and more of monthly construction statistics, Statistics in focus 129/2007

Main tables

• Short-term business statistics (t_sts)
  Construction, building and civil engineering (NACE F) (t_sts_cons)

Database

• Short-term business statistics
  Construction, building and civil engineering (sts_cons)
    Construction cost (or producer prices), new residential buildings (sts_cons_pri)

Dedicated section

• Short-term business statistics

Methodology / Metadata

• European business statistics methodological manual for compiling the monthly index of production in
  construction – 2021 edition
• Short-term business statistics - Metadata in SDMX format (ESMS metadata file — sts_esms)
• More information on Metadata in Eurostat