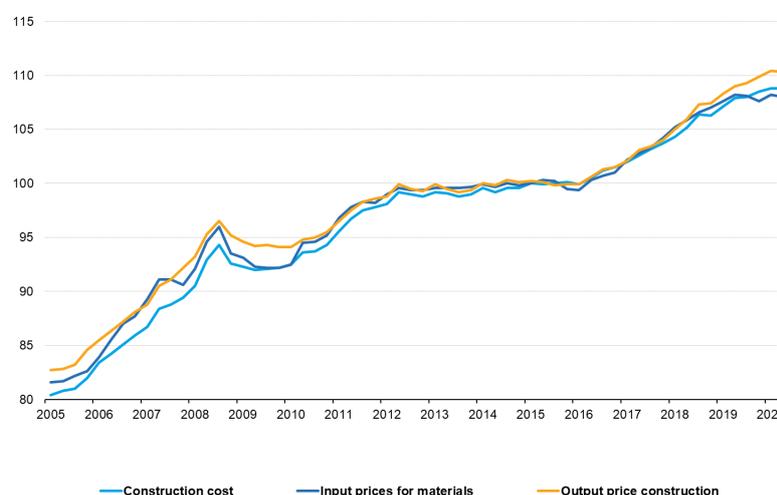


Construction producer price and construction cost indices overview

Statistics Explained

*Data extracted in October 2020.
Planned article update: October 2021.*

EU-27 Construction prices and costs 2005 - 2020, unadjusted data (2015 = 100)



Source: Eurostat (online data code: sts_copi_q)

eurostat

EU-27 Construction prices and costs 2005 - 2020, unadjusted data (2015 = 100) - Source: Eurostat (sts_copi_q)

The construction cost index (CCI) is a [European Union \(EU\) business cycle](#) indicator showing the trend in the cost for new residential [buildings](#) .

The current [Short-term statistics Regulation \(STS-R\) \(EC\) No 1165/98](#) calls for quarterly indices on construction costs for new residential buildings (excluding residences for communities). Countries that do not have data on construction costs may use the construction producer price indices (CPPI, sometimes also referred to as “construction output price index”) as an approximation. Some countries produce both - cost and price - indicators. Some countries also produce cost indicators on a monthly basis. Figure 1 shows for the EU-27 the indicators for costs and for prices develop in a very similar way. (A European labour cost indicator cannot be calculated as a result of a low coverage.)

Construction costs - development since 2005

Between 2005 and mid-2008 construction costs (for [residential buildings](#)) increased relatively steadily in the [EU-27](#) (Figure 1). After its peak in the third quarter of 2008 the index began to fall and reached its lowest level about one year later. In total, however, the decline was not particularly pronounced, it amounted to roughly one percentage point. In 2010 the index started to increase again. Less than one year later it regained the level it had displayed before the crisis. Between 2010 and 2015 construction costs and output prices grew at a very moderate pace and almost stagnated. Between 2016 and 2020 the increase accelerated to around 0.5 % per quarter.

The development of the construction cost index was mainly influenced by the material cost component (which accounts for around two thirds of the total costs), while the labour cost component continued to grow even during the crisis - although at a slower pace than before.

Table 1 provides the annual growth rates for the EU-27, the euro area and the Member States for the period between 2005 and 2019. With few exceptions, the EU countries display a development that is broadly similar to the one that can be found for the [EU-27 aggregate](#). Some differences can be found in the timing and the size of the decrease in the cost index. The construction cost index for residential buildings started to fall first in Ireland (in 2008), in the other countries this development occurred several months later. The reductions in the cost index were relatively strong in Ireland and in the [Baltic States](#). 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. In 2011 only Ireland experienced a decline in the construction cost index. During the years 2011 to 2016 construction costs annually increased by around 1.5 %, during the last three years the growth accelerated to around 2.3 % per year.

Annual growth rates, construction cost indices for new residential buildings, 2005 - 2019, unadjusted data

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
EU-27	2.8	4.4	4.4	4.9	-0.4	1.4	3.6	2.0	0.2	0.5	0.5	0.8	2.1	2.6	2.2
EA-19	2.8	4.5	4.0	4.7	-0.6	1.5	3.7	2.0	0.2	0.5	0.4	0.7	2.1	2.4	1.9
Belgium	2.9	4.8	4.5	2.4	-1.1	0.0	3.9	1.9	0.2	1.1	1.6	1.6	1.3	2.5	2.5
Bulgaria	8.3	6.0	6.6	12.5	7.5	-1.3	0.6	-0.6	1.4	0.7	1.3	0.8	2.5	2.9	5.0
Czechia	3.8	2.1	4.7	3.6	-0.3	1.1	1.8	0.5	-0.4	1.2	0.0	0.3	2.7	4.1	5.5
Denmark	2.4	4.8	6.3	2.9	-0.3	1.1	3.5	2.6	1.5	1.6	1.9	1.6	0.8	1.8	0.8
Germany	1.5	2.4	3.3	3.3	0.3	2.2	3.7	2.0	0.7	0.9	1.3	1.3	3.2	3.2	2.1
Estonia	6.3	10.4	12.8	3.5	-8.5	-2.6	3.4	4.3	5.0	0.2	0.9	-0.4	1.2	1.9	1.9
Ireland	8.7	9.6	1.7	-7.7	-9.8	0.5	-2.2	1.0	0.8	0.6	0.5	0.7	1.7	2.9	2.4
Greece	3.4	4.3	4.5	5.1	-0.3	1.8	1.0	-0.1	-1.4	-3.0	-2.3	-1.7	0.2	0.6	0.1
Spain	4.7	6.9	5.0	4.7	1.1	2.5	3.8	-0.3	0.3	0.2	-1.4	-1.3	2.1	2.5	1.1
France	2.4	6.9	4.0	7.7	-2.7	1.2	5.4	2.5	-1.0	0.2	-0.6	0.7	1.9	2.3	2.7
Croatia	4.7	1.8	11.6	10.4	-8.1	-5.3	1.4	-2.6	-5.7	0.3	3.2	-1.1	-0.3	1.7	4.3
Italy	4.0	2.8	3.6	3.8	0.9	1.5	3.1	2.3	0.6	-0.1	0.4	0.3	0.6	1.3	0.6
Cyprus	4.6	5.0	5.0	8.0	0.8	3.2	3.4	0.9	-4.0	-2.0	-0.5	-0.8	0.1	1.3	2.2
Latvia	11.9	36.6	22.4	8.7	-7.7	-7.5	2.6	3.0	4.1	0.7	3.3	5.7	2.5	4.5	4.8
Lithuania	8.3	10.7	16.1	9.6	-14.5	-4.8	3.8	3.1	4.5	3.2	2.1	2.2	4.2	3.5	4.9
Luxembourg	3.1	2.8	2.9	3.2	1.5	0.8	2.5	2.9	2.0	1.7	1.1	1.0	1.9	1.8	3.0
Hungary	3.5	5.9	7.6	7.5	3.0	-0.3	0.6	4.8	4.7	2.4	3.4	1.6	6.9	5.3	9.9
Malta	1.3	1.4	10.5	2.3	1.6	-2.6	1.5	2.3	1.5	2.5	1.1	2.2	1.7	1.2	1.0
Netherlands	1.3	3.3	4.0	4.6	0.3	0.3	1.9	2.3	0.2	0.9	1.3	1.6	2.3	2.5	2.8
Austria	2.1	4.6	4.5	5.3	0.6	3.2	2.3	2.2	1.8	1.1	1.5	0.6	3.5	2.9	1.1
Poland	3.1	1.7	7.0	6.9	0.2	-0.1	1.2	0.3	-1.6	-1.0	-0.6	-0.2	0.8	3.1	4.2
Portugal	1.8	3.3	3.5	6.2	-2.2	1.6	1.5	0.6	1.2	0.7	1.2	1.2	1.8	2.3	2.4
Romania	14.6	11.0	10.0	16.2	1.6	1.9	9.0	6.4	-4.3	-0.5	-0.7	0.8	7.8	11.7	9.8
Slovenia	4.6	6.1	6.9	6.6	-3.1	5.7	4.5	-1.2	-1.1	-0.5	0.7	-1.2	4.8	2.7	3.1
Slovakia	4.9	4.0	4.1	6.2	-0.1	0.7	0.1	0.6	0.9	1.4	1.1	2.8	3.8	4.5	
Finland	3.3	3.8	5.8	3.9	-1.1	1.1	3.3	2.5	0.9	1.0	0.5	0.5	0.3	2.3	1.0
Sweden	3.9	5.0	6.1	4.9	2.0	2.6	3.0	2.6	1.7	0.8	2.2	2.2	2.6	3.9	2.8
United Kingdom	5.5	5.7	3.2	5.2	2.7	-0.3	1.3	2.4	2.4	2.8	0.8	2.8	3.9	3.7	3.0
Norway	3.3	3.8	7.4	5.7	2.3	3.1	3.7	3.0	2.9	3.3	2.6	2.8	2.5	3.1	2.7
Switzerland	2.3	2.6	3.9	3.9	0.0	-0.1	2.0	0.2	0.2	0.4	-0.6	-0.7	0.0	1.0	0.8
Montenegro	20.6	36.3	25.1	14.0	-14.9	-4.3	6.6	-14.7	2.9	-3.4	-6.8	-8.1	6.5	3.6	7.0
North Macedonia	.	8.9	2.5	4.6	6.0	-2.2	5.1	1.6	1.9	-0.3	-1.7	-2.4	4.9	6.0	2.6
Turkey	8.7	15.9	8.4	13.8	-4.1	5.7	12.4	5.5	5.2	10.5	5.9	12.8	14.3	25.2	17.9

Special value : not available
Source: Eurostat (online data code: sts_copt_a)

eurostat

Table 1: Annual growth rates, construction cost indices for new residential buildings, unadjusted data, Source: Eurostat (sts_copigr_a)

Data sources

The [Short-term statistics Regulation \(STS-R\) 1165/98](#) 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 changed every five years.

The CCI presents the total costs for new buildings. In addition, an index for material costs and an index for labour costs are available. Material and labour costs represent the most important cost components for construction (Figure 2).

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

Context

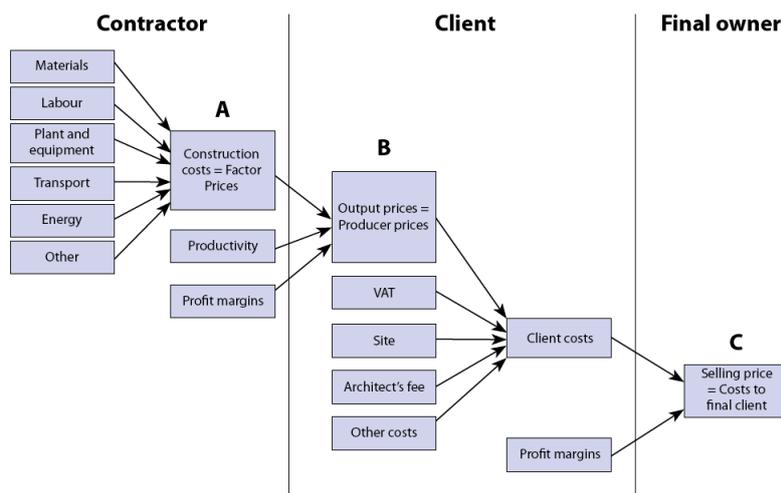


Figure 2: Construction cost index

	Sources
Materials	Price lists, Producer Price Index, Statistical offices of trade chambers, Wholesale prices
Labour	Collective agreements, Labour cost survey
Equipment	Producer Price Index for machinery
Energy	Producer Price Index, Wholesale price index

Table 2: Sources for the construction cost index

The CCI provides important additional aspects to the information provided by other construction data. The CCI 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 is seen from the point of view of the contractors' clients. The producer price index/output price index (see B) shows the development of prices paid by the client to the contractor. These two indices can 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 CCI 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 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. The component costs index (material costs and labour costs) shows the price developments of production factors used in the construction industry. Plant and equipment, transport, energy and other costs are also components of the construction costs. Architect's fees are not part of the construction costs.

The material costs index is generally calculated using materials prices and should be based on actual prices rather than list prices. They should also be based on a sample of products and suppliers. Prices are exclusive of [VAT](#) .

The labour cost index for the construction sector should cover wages and salaries and social security charges for all persons employed in the construction sector. Social security charges include statutory [social contributions](#) payable by the employer as well as collectively agreed, contractual and voluntary social contributions payable by the employer and also [imputed social contributions](#) (social benefits paid directly by the employer).

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, have not been taken into account either. The [coverage](#) of this indicator is limited only by the [Classification of types of construction \(CC\)](#) .

The construction producer price index (CPPI) measures the development of transaction prices for the quarterly construction output. According to the STS-Regulation National Statistical Institutes may produce the CPPI as an approximation for the construction cost index (see above).

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.

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