



Republika e Kosovës

Republika Kosova-Republic of Kosovo

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Agjencia e Statistikave të Kosovës - Agencija za Statistiku Kosova – Kosovo Agency of Statistics

Construction Cost Index Q1 - 2016

Construction Cost Index (CCI) / quarter I of 2016

Overall Construction Cost Index (CCI) in the first quarter (Q1) 2016 in Kosovo has increased by 1.0% compared with the fourth quarter (Q4) of 2015. Compared with the first quarter of 2015, CCI had a drop of -0.1%.

The growth of Construction Cost Index was seen in the machinery with an increase of 2.7% and in construction materials by 1.6%.

The decline of the construction costs index price was observed in electrical materials of -2.1%.

First quarter of 2016 / First quarter of 2015

Compared with the same period of the previous year (Q1 2016 / Q1 2015), CCI fell by -0.1%.

The decline of the price index of construction costs was observed in several categories as: transportation with -20.0%, and electrical materials from -3.0%

The fall in prices in the same period of the previous year was offset by raising prices of wages by 4.2%, machinery 3.1% and energy by 1.6%.

Note:

Calculation of **Energy** index category is made from data from the Producer Price Index which is in accordance with the standard classification of activities NACE rev .2, based on 'Regulation no. 11/2013 Article 7.

In the category of **other costs**, the calculation of indices is done by the performance of the harmonized indices of consumer prices.

Table 1: Construction Cost Index for multi-storey buildings (base year 2015=100)

		Materials (a+b+c)	(a).Construction materials	(b).Electrical materials	(c).Hydro-sanitary materials	Wages	Machinery	Transportation	Energy	Other costs	Total
Peshat		69.8	60.4	5.1	4.3	16.4	5.9	3.8	1.4	2.7	100.0
2013	Periods Q1	100.4	100.7	96.4	99.8	96.8	95.5	105.3	86.2	100.8	99.5
	Q2	100.6	101.0	96.7	99.5	96.8	95.5	105.3	81.8	99.8	99.6
	Q3	100.8	101.3	95.8	99.5	96.8	95.5	105.3	81.8	99.5	99.7
	Q4	100.5	101.0	95.7	99.4	96.8	95.5	105.3	88.9	100.3	99.6
2014	Periods Q1	100.7	101.4	95.7	97.8	96.8	96.1	105.3	89.0	101.0	99.8
	Q2	100.8	101.3	97.4	97.8	96.8	98.4	105.3	86.4	100.2	99.9
	Q3	100.7	101.2	97.7	97.8	96.8	98.4	105.3	87.2	100.5	99.9
	Q4	100.3	100.6	98.7	97.8	97.0	99.8	105.3	99.4	100.4	99.9
2015	Periods Q1	100.5	100.6	100.4	99.5	97.0	99.8	105.3	99.4	100.6	100.1
	Q2	100.1	100.2	99.2	99.5	101.0	99.8	105.3	100	99.8	100.4
	Q3	100.2	100.2	100.9	100.5	101.0	100.1	105.3	100.1	99.6	100.5
	Q4	99.2	99.0	99.5	100.5	101.0	100.2	84.2	100.4	100.0	99.0
2016	Periods Q1	100.4	100.6	97.4	100.5	101.0	102.9	84.2	101.0	100.6	100
	Q2										
	Q3										
	Q4										

Graph 1: CCI development, Q1 2013 – Q1 2016 (2015=100)

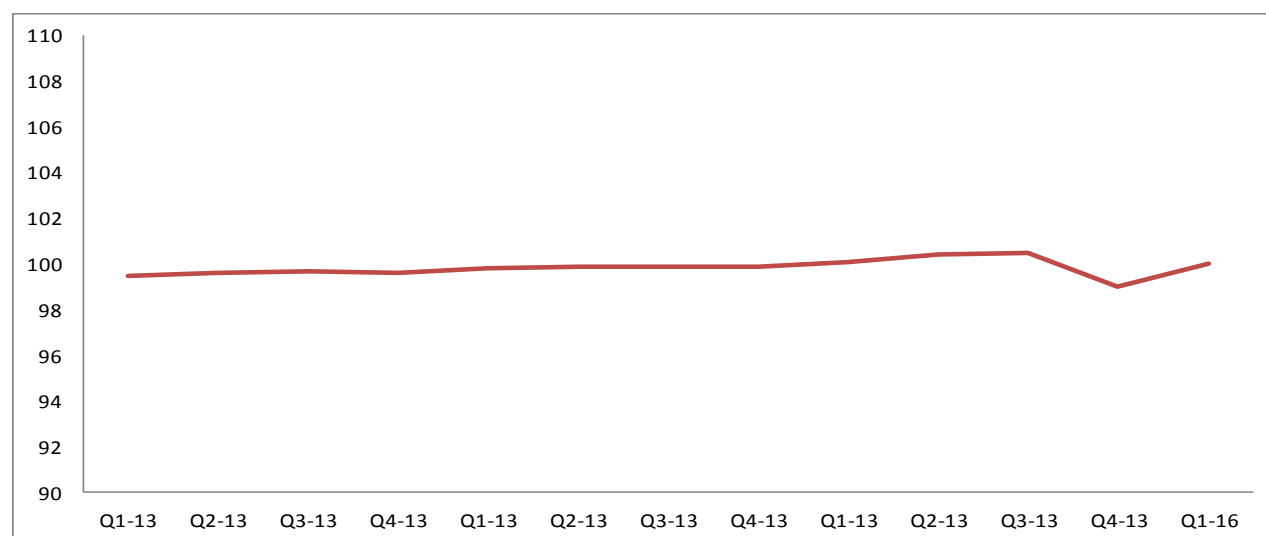


Table 2: Construction cost index for multi-storey buildings (2015=100) - quarterly and annual changes in percentage

Index (2015=100)		Quarterly changes in%	Annual changes in percentage %
2013 Periods	Q1	99.5	:
	Q2	99.6	0.1
	Q3	99.7	0.1
	Q4	99.6	-0.1
Annual average 2013		99.6	:
2014 Periods	Q1	99.8	0.1
	Q2	99.9	0.0
	Q3	99.9	0.0
	Q4	99.9	0.0
Annual average 2014		99.9	:
2015 Periods	Q1	100.1	0.3
	Q2	100.4	0.1
	Q3	100.5	-1.5
	Q4	99.0	1.0
Annual average 2015		100.0	:
2016 Periods	Q1	100.0	1.0
	Q2		
	Q3		
	Q4		
Annual average 2016			

Table 3: Weights, monthly and annual changes in percentage by categories of costs

Code	Cost categories	Weight	Q1-2016 2015=100	Q 1 - 2016 Q 4 - 2015	Q 1 - 2016 Q 1 - 2015
1	Materials (a+b+c)	69.8	100.4	1.2	-0.1
	a. Construction materials	60.4	100.6	1.6	0.0
	b. Electrical materials	5.1	97.4	-2.1	-3.0
	c. Hydro-sanitary materials	4.3	100.5	0.0	1.0
2	Wages	16.4	101.0	0.0	4.1
3	Machinery	5.9	102.9	2.7	3.1
4	Transportation	3.8	84.2	0.0	-20.0
5	Energy	1.4	101.0	0.6	1.6
6	Other costs	2.7	88.1	0.6	0.0
Total		100.0	98.3	1.0	-0.1

Methodological description of the Construction Cost Index for residential multi-storey buildings

Construction Cost Index measures the price development of production factors of the raw material, wages, machinery, transport, energy and other costs that are used in construction projects. The index measures the change in price for individual factors of production and weighs them according to a set measuring system. The index does not measure productivity changes such as better exploitation of materials or other factors, and neither reflects its profit margins.

Population

Construction Cost Index is limited to newly built multi-storey buildings, which is the most common type of construction project in Kosovo. The index is calculated for the whole of Kosovo.

Categories of Cost

Construction Cost Index for multi-storey buildings includes six categories of costs as follows:

- Materials
- Wages
- Machinery
- Transport
- Energy
- Other costs

The model index

From the first quarter of 2016, the index model for the Construction Cost Index has been changed from a fixed base index with Laspeyres chain type of index with annual link. The main reason for the change of model-based index of the fixed index with the chain index is that it allows the inclusion of new items or delete old items that are no longer important. The second reason is CCI's harmonization with other price indices produced by KAS which use the chain index.

Reference period of the reference index (base period) at the same time is changed from the first quarter of 2013 with the average of 2015 (base year 2015 = 100).

Laspeyres index is defined as

$$I^t = \frac{\sum_{i=1}^n P_i^t Q_i^0}{\sum_{i=1}^n P_i^0 Q_i^0} = \sum_{i=1}^n \frac{P_i^0 Q_i^0}{\sum_{i=1}^n P_i^0 Q_i^0} \times \frac{P_i^t}{P_i^0}$$

Where P^0 and P^t are the price per unit in the base period (0) and the comparison period (t), respectively, and Q^0 is the amount of the base period. Summation is across the n products. In the first element above, the index is expressed as the ratio between the value of the amounts collected during the period under comparison and, respectively, the price level of the base period. The index can also be expressed, as in the second element, as the average of the prices of products weighted with the values of the base period.

Links of the index are calculated with the current quarter **q** in year **y** as the comparison period, and the fourth quarter in year **y-1** as price reference period. The weighting period is the first quarter of 2013. Therefore, the connection is defined as:

$$I_{y-1,q4}^{y,q} = \sum_{s=1}^k \frac{V_s}{\sum_{s=1}^k V_s} \times \frac{I_s^{y,q}}{I_s^{y-1,q4}}$$

Where the value of weight V_s is the value of transactions in Q1 2013 represented by the item's cost **s**. Summation is across the **k** cost items. Index price of the reference period for the comparison period is calculated in two steps:

$$\frac{I_s^{y,q}}{I_s^{y-1,q4}} = \frac{I_s^{y,q}}{I_s^{y,q-1}} \times \frac{I_s^{y,q-1}}{I_s^{y-1,q4}}$$

Calculation of the chained index

The chained index number is calculated for quarters and indicates the particular level of the price of the quarter compared to the average price level in the year 2015 (2015 = 100).

$$I_{2015}^{y,q} = \frac{100}{\frac{1}{4} \sum_{q=1}^4 I_{2014,q4}^{2015q}} \times \prod_{Y=2015}^{y-1} I_{Y-1,q4}^{Y,q4} \times I_{y-1,q4}^{y,q}$$

Calculation of changes

The quarterly change is calculated as:

$$\left[\left(\frac{CCI_{2015}^{Y,q}}{CCI_{2015}^{Y,q-1}} \right) - 1 \right] * 100 = \text{Change of the percentage in the quarter}$$

The annual change is calculated as:

$$\left[\left(\frac{CCI_{2015}^{Y,q}}{CCI_{2015}^{Y-1,q}} \right) - 1 \right] * 100 = \text{Change of the percentage in the year}$$

$CCI_{2015}^{Y,q}$ = The chained index of construction costs for the current quarter q

$CCI_{2015}^{Y,q-1}$ = The chained index of construction cost for the previous quarter q-1

$CCI_{2015}^{Y-1,q}$ = The chained index of construction cost for the previous year y-1 and the quarter q

Data collection

For construction materials, the prices are collected from suppliers of construction materials. Suppliers deal directly with the contractor. In order to collect price information, questionnaires are sent to companies where KAS specifically indicates for what product the price information is collected. Data suppliers can see what price they delivered to KAS in the last quarter. KAS requires companies to provide their average prices for their products, every three months.

Wage costs are collected from construction companies.

For the cost of machinery, KAS collect prices for small machinery used in the construction sector.

KAS collects prices for transport for transport services of the construction materials from some logistic companies.

Energy costs are collected from Producer Price Index within KAS.

Data for other costs are collected by the Consumer Price Index within KAS.

Weights

Weights for the Construction Cost Index are based on a questionnaire for construction companies. As mentioned above, the weights are from the first quarter of 2013.

Using the Construction Cost Index

Construction Cost Index for multi-storey buildings is an important indicator for stakeholders, as well as the construction sector analysis. Can be used as a price deflator to the national accounts for the construction of multi-storey buildings

Publication of results

Results of the construction cost index are published on the KAS website online every three months.

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