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*Agjencia e Statistikave të Kosovës - Agencija za Statistike Kosova - Kosovo Agency of Statistics*

## Series 3: Economic Statistics

# Import Price Index Q4 2017



## **F o r e w o r d**

Kosovo Agency of Statistics (KAS), the Department of Economic Statistics and National Accounts, has started to publish the Import Price Index (IMPI) in June 2009. Import prices started to be collected at the beginning of 2006. Prices are collected on a quarterly basis and cover the most representative import companies which were active in most municipalities for the first quarter of 2006 - the fourth quarter 2017.

The publication contains the Kosovo Import Price Index table on a quarterly basis, Q1 2006 to Q2 2017, annual average for 2006 - 2018 (2010 = 100) with quarterly and annual percentage changes, with graphs presentation, weight charts, quarterly index for Q4 2017, quarterly changes (Q3 2017 - Q4 2017) and annual changes (Q4 2016 - Q4 2017) for sectors according to the Harmonized System.

IMPI has been prepared in accordance with European standards and methodologies and in cooperation with experts from Swedish Statistics and Swedish Agency for International Development Cooperation (SIDA). IMPI is under development and in the future more price observations will be added.

Comments, remarks, and suggestions regarding this publication are welcomed and they are sent to the e-mail: [ekonomic@ks-gov.net](mailto:ekonomic@ks-gov.net)

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## Symbols and abbreviations

IMPI	Import Price Index
WCO	World Customs Organization
KAS	Kosovo Agency of Statistics
Q1	Quarter 1
Q2	Quarter 2
Q3	Quarter 3
Q4	Quarter 4
:	Figure not available
0	Less than half the unit used
-	Not applicable
%	Percentage
W	Statistical weight
Ø	Average

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### **Import Price Index (IMPI) for the fourth quarter 2017**

The total import price index in Kosovo rose by 0.6% in Q4 2017 compared to Q3 2017. Compared with Q4 2016, import prices rose to an average of 2.5%.

#### **Third quarter 2017 - Fourth quarter 2017 0.6%**

Import prices in Kosovo rose to an average of 0.6% in Q4 2017 compared to Q3 2017. The highest rise in prices by sectors was mineral products (5.3%), edible oil (2.3%), metals and articles of base metals (1.6%), live animals; animal products (0.5 %), miscellaneous manufactured articles (0.5%), machinery and electrical appliances (0.3%), products of chemical industries (0.1%), transport means (0.1%) and wood and articles thereof (0.1%).

The increase was counteracted mainly by decreases of prices of paper and articles thereof (-7.4%), prepared foodstuffs, beverages and tobacco (-1.0%), footwear (-0.4%), stone, plaster, ceramic products and glass (-0.3 %), vegetable products (-0.2%), textile and textile articles (-0.2 %) and leather and articles thereof (-0.2%).

#### **Fourth quarter 2016 – Fourth quarter 2017 2.5 %**

Import prices in Kosovo increased by an average 2.5 % between the Q4 2016 and the Q4 2017. The largest increases by sectors were by vegetable products (16.1 %), metals and articles of base metals (11.7 %), mineral products (6.4 %), textile and textile articles (5.2 %), live animals; animal products (2.7 %), plastics, rubber and articles thereof (2.1 %), wood and articles thereof (0.9 %), stone, plaster, ceramic products and glass (0.8 %) and transport means (0.2 %).

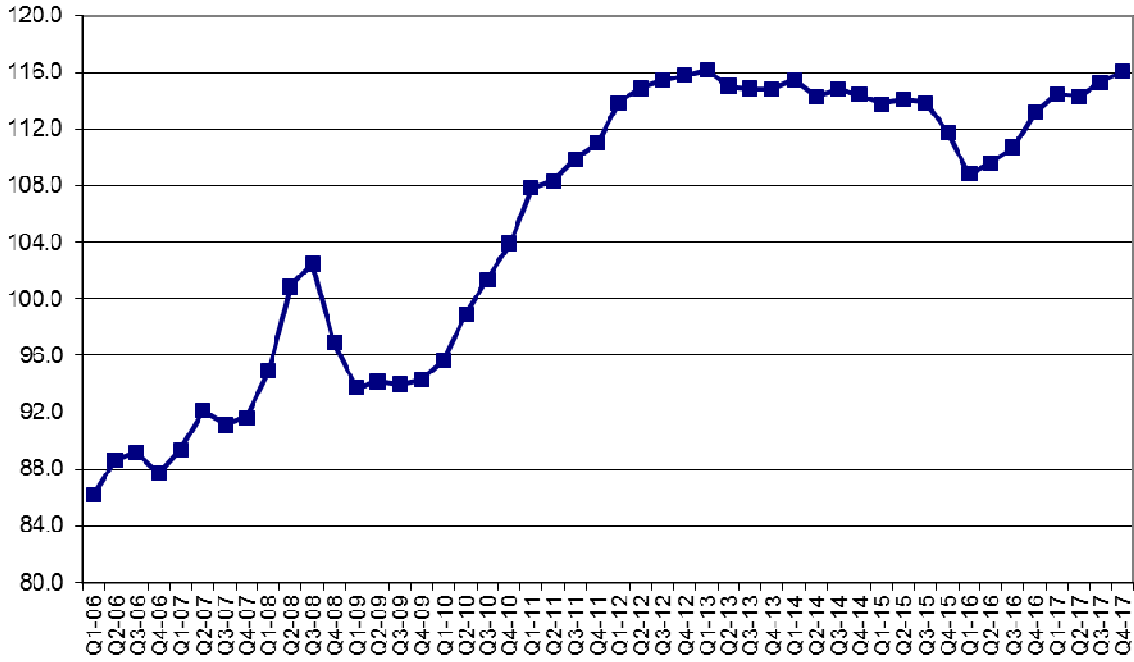
The increase was counteracted mainly by decreases of prices of paper and articles thereof (-10.8 %), leather and articles thereof (-5.3 %), miscellaneous manufactured articles (-2.6 %), machinery and electrical appliances (-2.5 %), footwear (-2.4 %), prepared foodstuffs, beverages and tobacco (-1.0 %) and products of chemical industries (-0.7 %).

Due to an error of price calculations in Q4 2016, the Index was corrected for 000.2% and this change rate reflected the following quarters.

**Table 1: Import Price Index (IMPI), First quarter 2006 – Fourth quarter 2017 (2010=100), quarterly and annual changes in percentage**

Quarter	Quarter	Index (2010 = 100)	Quarterly change in per cent	Annual change in per cent
2006	Q 1	86.2	:	:
	Q 2	88.7	2.9	:
	Q 3	89.1	0.5	:
	Q 4	87.7	-1.6	:
	<b>Annual average 2006</b>	<b>87.9</b>	:	:
2007	Q 1	89.4	1.9	3.7
	Q 2	92.1	3.1	3.9
	Q 3	91.1	-1.1	2.2
	Q 4	91.6	0.6	4.5
	<b>Annual average 2007</b>	<b>91.1</b>	:	<b>3.6</b>
2008	Q 1	95.0	3.6	6.3
	Q 2	100.9	6.2	9.5
	Q 3	102.5	1.6	12.5
	Q 4	96.9	-5.4	5.8
	<b>Annual average 2008</b>	<b>98.8</b>	:	<b>8.5</b>
2009	Q 1	93.7	-3.3	-1.3
	Q 2	94.2	0.5	-6.6
	Q 3	94.0	-0.2	-8.3
	Q 4	94.3	0.4	-2.7
	<b>Annual average 2009</b>	<b>94.1</b>	:	<b>-4.8</b>
2010	Q 1	95.7	1.5	2.1
	Q 2	99.0	3.4	5.1
	Q 3	101.4	2.5	7.9
	Q 4	103.9	2.5	10.2
	<b>Annual average 2010</b>	<b>100.0</b>	:	<b>6.3</b>
2011	Q 1	107.8	3.7	12.6
	Q 2	108.4	0.5	9.5
	Q 3	109.9	1.4	8.3
	Q 4	111.0	1.0	6.8
	<b>Annual average 2011</b>	<b>109.3</b>	:	<b>9.3</b>
2012	Q 1	113.9	2.6	5.6
	Q 2	114.9	0.9	6.0
	Q 3	115.4	0.5	5.0
	Q 4	115.8	0.3	4.3
	<b>Annual average 2012</b>	<b>115.0</b>	:	<b>5.2</b>
2013	Q 1	116.1	0.3	2.0
	Q 2	115.0	-1.0	0.1
	Q 3	114.8	-0.1	-0.5
	Q 4	114.8	0.0	-0.8
	<b>Annual average 2013</b>	<b>115.2</b>	:	<b>0.2</b>
2014	Q 1	115.5	0.6	-0.6
	Q 2	114.3	-1.0	-0.6
	Q 3	114.8	0.5	0.0
	Q 4	114.4	-0.4	-0.3
	<b>Annual average 2014</b>	<b>114.7</b>	:	<b>-0.4</b>
2015	Q 1	113.8	-0.5	-1.4
	Q 2	114.1	0.3	-0.2
	Q 3	113.9	-0.2	-0.8
	Q 4	111.8	-1.8	-2.3
	<b>Annual average 2015</b>	<b>113.4</b>	:	<b>-1.2</b>
2016	Q 1	108.8	-2.6	-4.4
	Q 2	109.6	0.7	-3.9
	Q 3	110.7	1.0	-2.8
	Q 4	113.2	2.2	1.3
	<b>Annual average 2016</b>	<b>110.6</b>	:	<b>-2.5</b>
2017	Q 1	114.5	1.2	5.2
	Q 2	114.3	-0.1	4.3
	Q 3	115.3	0.9	4.2
	Q 4	116.0	0.6	2.5
	<b>Annual average 2017</b>	<b>115.0</b>	:	<b>4.0</b>

Graph 1: IMPI development, Q1 2006 – Q4 2017 (2010=100)



**Table 2: Weight, index numbers, monthly and annual changes in percentage by sector according to Harmonised System (HS)**

Code	Group	Weight	Q4 - 2017	Q4 - 2017	Q4 - 2017
			2010=100	Q3 - 2017	Q4 - 2016
<b>01-21</b>	<b>TOTAL IMPI</b>	<b>1000</b>	<b>116,0</b>	<b>0,6</b>	<b>2,5</b>
01	Live animals; animal products	38	126,8	0,5	2,7
02	Vegetable products	54	189,8	-0,2	16,1
03	Edible oils	10	155,9	2,3	2,9
04	Prepared foodstuffs, beverages, and tobacco	133	111,3	-1,0	-1,0
05	Mineral products	119	116,4	5,3	6,4
06	Products of chemical industries	82	107,8	0,1	-0,7
07	Plastics, rubber and articles thereof	69	112,9	0,0	2,1
08	Leather and articles thereof	2	101,5	-0,2	-5,3
09	Wood and articles thereof	26	124,9	0,1	0,9
10	Paper and articles thereof	16	101,9	-7,4	-10,8
11	Textile and textile articles	44	114,5	-0,2	5,2
12	Footwear	12	148,0	-0,4	-2,4
13	Articles of stone, plaster, ceramic products and glass	40	110,8	-0,3	0,8
14	Pearls, precious stones, metals etc.	:	:	:	:
15	Base metals and articles of base metals	99	104,0	1,6	11,7
16	Machinery appliances and electrical appliances	129	108,0	0,3	-2,5
17	Transport means	81	110,7	0,1	0,2
18	Optical, photo, measuring, medical & musical instruments, & timepieces	12	111,9	0,0	0,0
19	Arms and ammunition	:	:	:	:
20	Miscellaneous manufactured articles	34	113,6	0,5	-2,6
21	Works of art	:	:	:	:



## Methodology

Prices are collected on a quarterly basis in 7 regional centers in Kosovo: Gjakova, Gjilan, Mitrovica, Peja, Prizren, Prishtina and Ferizaj covering the most representative import companies that were active in most of the municipalities.

Starting from the first quarter of 2006, prices were collected on a quarterly basis for around 180 items from seventy companies. During 2006 many new price estimates increased and for the period 2007-2008 the number of collected prices was around 250. From 2009 the number of collected prices was around 300, and since 2015 the number of prices is over 500 items.

The results are presented in accordance with the Harmonized System of the World Customs Organization (WCO).

Price data are collected for a sample of typical transactions related to imported goods in Kosovo.

## Sampling and calculation of weights

The sample was drawn from external trade data. These data are also used for calculating specific weights. Weights are based on information from trade data Y-1 (previous year) and are updated on an annual basis. By updating weights every year, the IMPI basket will reflect the changes in trade patterns. IMPI will be affected by both price changes and changes in the import structure

## Statistical variables

The main variable is the price; it can be reported in each monetary unit (in any currency). Prices reported in foreign currency units are converted into EUR. The invoice currency and the reporting currency are, therefore, complementary variables. Where prices are reported in foreign currencies, the Swedish Central Bank's quarterly average exchange rates are used for converting into EUR.

## Index formulas

The Import Price Index can be described as a Laspeyres chain-type index with annual links. The Laspeyres index is defined as follows.

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

Where  $P^0$  and  $P^t$  are prices per unit in the base period (0) and the comparison period (t), respectively, and  $Q^0$  is the quantity in the base period. Summation is done through products n. In the centre element above, the index is expressed as the ratio between the summated value of the base-period quantities at the comparison-period and base-period price level, respectively. The index can also be expressed, as in the final element, as an average of the price of goods weighted with the base-period values.

The index prices are calculated with the current quarter **q** in year **y** as the comparison period, and with the fourth quarter in year **y-1** as price reference period. The weighting period is the year **y-1**. The relation is thus defined as:

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

Where the value weight  $V_s$  is the value of the transactions in year  $y-1$  that are represented by the specification  $s$ . Summation is across the  $k$  specifications.

### Calculating the chained index of IMPI

The chained index number is calculated for quarters and indicates the particular quarter's price level compared with the average price level in 2010 (2008=100).

$$I_{2010}^{y,q} = \frac{100}{\frac{1}{4} \sum_{q=1}^4 I_{2009,q4}^{2010,q}} \times \prod_{Y=2010}^{y-1} I_{Y-1,q4}^{Y,q4} \times I_{y-1,q4}^{y,q}$$

### Calculating changes

The quarterly change is calculated as:

$$\left[ \left( \frac{IMPI_0^{Y,q}}{IMPI_0^{Y,q-1}} \right) - 1 \right] * 100 = \text{Quarterly percentage change}$$

$IMPI_0^{Y,q}$  = Import price index for the current quarter q

$IMPI_0^{Y,q-1}$  = Import price index for the previous quarter q-1

The yearly change is calculated as:

$$\left[ \left( \frac{IMPI_{2010}^{Y,q}}{IMPI_{2010}^{Y-1,q}} \right) - 1 \right] * 100 = \text{Yearly percentage change}$$

$IMPI_{2010}^{Y,q}$  = The chained Import price index for the current quarter q

$IMPI_{2010}^{Y-1,q}$  = The chained Import price index for the previous year and quarter q

# Kosovo Agency of Statistics

## *short description*

**Kosovo Agency of Statistics** is a professional institution which deals with collection, processing and publication of official statistical data. As such acts since 1948 and has passed through several historical stages, structured according to state regulation of those times.

On 2 August 1999, the Agency has resumed his professional work (after nine years of interruption of all statistical series detrimental to the interest of Kosovo), as an independent institution under the Ministry of Public Administration. Since 12.12.2011 the Agency operates in the frames of the Prime Minister's Office. Office is funded by the Kosovo Consolidated Budget, but also by donors for specific projects and for technical professional support.

**Kosovo Agency of Statistics** acts according to the Law No. 04/L-036 which entered into force on 12.12.2011. Programme of Official Statistics 2013/2017 is in implementation for the development of statistical system in correlation with the European Union statistics (EUROSTAT).

**Kosovo Agency of Statistics** has this organizational structure: production departments; (Department of Economic statistics and National Accounts, Department of Agriculture and Environment statistics and Department of Social statistics. **Support Departments**; Department of Methodology and Information Technology, Department of Policy Planning, Coordination and Communication, Department of Census and survey and Department of Administration. **Within the Agency are also established Regional Offices**; Gjakove, Gjilan, Mitrovica, Peja, Prizren, Pristina and Ferizaj

Number of employees and budget are still limited. In KAS are employed in total 143 workers, of whom 98 (68,58 %) at the headquarters of the Agency, while in the Regional Offices, 45 (31,5%). Agency's educational qualifying structure is as follows: 61,7% with university education, 15,4% with with non-tertiary education, and 17.5% with secondary education.

We have professional and technical cooperation with all Ministries of the Government of Kosovo, especially with the Ministry of Economy and Finance, Central Bank of Kosovo, with international institutions, EUROSTAT, International Monetary Fund, World Bank, Sweden's SIDA, DFID, UNFPA, UNDP, UNVEF, and with the statistical institutions of the countries in the region.

**Kosovo Agency of Statistics** almost completely covers the territory of Kosovo, based on the statistical structure of the enumeration areas as the basic unit and sole in the country from which it gets first hand information. All surveys conducted in the field use the extension of the samples in these enumeration areas but also a statistical methodology according to international recommendations. During the collection of statistical data and reports from reporting entities are involved professionals, technicians, administrators, servants of the country offices, field enumerators from regional offices, etc.

In 2011, the project of Population Census , Households and Dwellings was successfully implemented, and in 2014 was successfully carried out the Agriculture Census. The result obtained from these censuses will have an important role in the development policies.

**The mission of the Agency**; to meet the needs of users with qualitative statistical data, objective, in time and space so that users have reliable base to conduct regular analysis in the interest of planning and project development at the municipal and country level. To support government institutions, scientific institutes, research academies, businesses in order to provide proper information for decision-makers and other users in Kosovo.

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