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AGJENCIA E STATISTIKAVE TË KOSOVËS
AGENCIJA ZA STATISTIKE KOSOVA
KOSOVO AGENCY OF STATISTICS

Harmonised indices of consumer prices

March 2022

Prishtina, 12.04.2022: Kosovo Agency of Statistics (KAS) has started to publish the Consumer Price Index (CPI) in September 2002 until December 2015, while from January 2016 the CPI is harmonized according to the international concept and is published as a Harmonized Index of Consumer Prices (HICP). Consumer prices have started to be collected in May 2002 which is considered the base month.

From January 2016 the Harmonized Index of Consumer Prices (HICP), based on the recommendations of Eurostat, is published with the base year 2015 = 100 and all time series of the Consumer Price Index (CPI) respectively the Harmonized Index of Consumer Prices (CPI) in the country have been recalculated on this basis and are published on the KAS website (in the annual publication of the Harmonized Index of Consumer Prices 2002 - 2020).

Consumer prices are collected from the 10th to the 20th of the month, in 14 municipalities of Kosovo. Since September 2002 KAS has continuously published CPI - HICP on a monthly basis and seventeen publications on an annual basis (2004 - 2020).

This publication contains the table with the Harmonized Index of Consumer Prices in Kosovo on a monthly basis January 2010 - March 2022, annual average 2010-2021 (2015 = 100), with monthly and annual changes in percentage, graphical presentation, table for specific weights, index for March 2022, monthly and annual changes of the harmonized index of consumer prices in percentage (March 2022 / February 2022) and (March 2022 / March 2021) for groups and subgroups according to COICOP, the table with average prices for some consumer goods and the methodology for calculating harmonized consumer price indices.

You can send your suggestions, proposals and remarks to the web address infoask@rks-gov.net

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Symbols and abbreviations

CPI	Consumer Price Index
COICOP	Classification of Individual Consumption by Purpose
HBS	Household Budget Survey
NA	National Accounts
HICP	Harmonized Index of Consumer Prices
KAS	Kosovo Agency of Statistics

:	Figure not available
0	Less than half of the unit used
-	Not applicable
%	Percentage
‰	Promil
W	Statistical weights (specific weight - CPI/HICP)
Ø	Average

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Harmonized Index of Consumer Prices in March 2022

Monthly inflation measured by the harmonized index of consumer prices was 2.7% in March 2022. The annual inflation rate measured in March 2022 with March 2021 was 10.0%.

March 2022 / February 2022 2,7%

The total harmonized index of consumer prices is higher at an average of 2.7% in March 2022 compared to February 2022. This is mainly explained by the increase in consumer prices in the COICOP subgroups: bread and cereals (6.3%), meat (1.0%), milk, cheese and eggs (5.7%), edible oils and fats (11.3%), fruits (2.7%), sugar, jam, honey, chocolate and sweets (1.9%), water, non-alcoholic beverages, fruit and vegetable juices (1.7%), alcoholic beverages (5.9%) clothing (4.9%), electricity (13,0%) - ((explanation: average price reflects the price billed for March according to tariffs and the new tariff structure approved by the Electricity Regulator Office. According to the new structure, household consumers are divided into two blocks in consumption, below 800 kWh and over 800 kWh, which further differ according to *night and day* consumption, the average price varies (not fixed) depending on consumption in blocks and according to night / day), gas (11.4%) , solid fuels, firewood, pellets, etc. (2.5%), home and garden tools and equipment (4.0%), fuels and lubricants for personal transport means (10.9%), transport services (6.8%), hotel services (0,8%) with a combined impact of these subgroups of 2.7 percent on the HICP.

March 2022 / March 2021 10,0%

The total harmonized index of consumer prices is higher at an average of 10.0 percent in March 2022 compared to March 2021. This is mainly explained by the increase in consumer prices in this period in the COICOP subgroups: bread and cereals (23.0%), meat (9.6%), milk, cheese and eggs (18.3%), edible oils and fats (43.1%), vegetables (14.0%), sugar, jam, honey, chocolate and sweets (12.9%), various food products, sauces, spices, salt, baby food, etc. (8.4%), mineral water, non-alcoholic beverages, fruit and vegetable juices (5.2%), tobacco (4.7%), electricity (26.9%) - (increase in electricity price is because in the period January - May 2021 it was 0.0061 cents lower according to the Law on Economic Recovery (Covid - 19 No. 07 / L-016 article 15), while regarding the price change for tariffs, respectively the category on 800KW approved and applied from 09 February 2022, the average price reflects the price billed for March according to the tariffs and the new tariff structure approved by the Electricity Regulatory Office, the average price varies (not fixed) depending on consumption in blocks and according to night / day division). gas (28.3%), solid fuels, firewood, pellets, etc. (16.7%), furniture and furnishings, carpets and other floor coverings (3.5%) home appliances (6.5%), home and garden tools and equipment (9.7%), goods and services for routine household maintenance (6.2%), pharmaceuticals (3.2%), outpatient services (2.1%), vehicle purchases (5.8%), spare parts and accessories for transport means (4.9%), fuels and lubricants for personal transport means (35.8%), other services related to personal transport means (9.9%), transport services (16.8%), audio-visual, photographic equipment for information processing (1.8%), other recreational items and equipment, gardens and pets (5.8%), newspapers, books and office supplies (3.9%), hotel services (8.1%), personal care (16.0%), with a combined impact of these subgroups by 10.2% on the HICP.

While a decrease in prices is observed in the COICOP subgroups: fruits (-9.8%), alcoholic beverages (-5.0%) with an impact by -0.2 percent on the HICP.

Tab. 1: Harmonised indices of consumer prices (HICP) January 2010 – March 2022 (2015=100), monthly and annual changes of prices in percentage

Month/Year	Index (2015 = 100)	Monthly inflation %	Annual inflation %
Jan - 2010	88,0	0,6	0,7
Feb - 2010	88,2	0,2	1,1
Mar - 2010	88,1	-0,1	0,8
Apr - 2010	87,2	-1,0	1,6
May - 2010	87,5	0,3	2,2
June-2010	87,6	0,1	2,2
July - 2010	87,9	0,3	2,7
Aug - 2010	90,5	3,0	6,0
Sept - 2010	90,8	0,3	6,0
Oct - 2010	91,9	1,2	6,0
Nov - 2010	92,3	0,4	6,2
Dec - 2010	93,2	1,0	6,5
Annual average 2010	89,4	:	3,5
Jan - 2011	94,5	1,4	7,4
Feb - 2011	96,5	2,1	9,4
Mar - 2011	97,6	1,1	10,8
Apr - 2011	96,5	-1,1	10,7
May - 2011	96,5	0,0	10,3
June - 2011	95,7	-0,8	9,2
July - 2011	95,2	-0,5	8,3
Aug - 2011	95,3	0,1	5,3
Sept - 2011	95,1	-0,2	4,7
Oct - 2011	96,2	1,2	4,7
Nov - 2011	96,2	0,0	4,2
Dec - 2011	96,5	0,3	3,5
Annual average 2011	96,0	:	7,4
Jan - 2012	97,3	0,8	3,0
Feb - 2012	98,2	0,9	1,8
Mar - 2012	98,3	0,1	0,7
Apr - 2012	97,6	-0,7	1,1
May - 2012	97,6	0,0	1,1
June - 2012	97,3	-0,3	1,7
July - 2012	97,3	0,0	2,2
Aug - 2012	98,3	1,0	3,1
Sept - 2012	99,1	0,8	4,2
Oct - 2012	99,9	0,8	3,8
Nov - 2012	99,5	-0,4	3,4
Dec - 2012	100,1	0,6	3,7
Annual average 2012	98,4	:	2,5
Jan - 2013	100,7	0,6	3,5
Feb - 2013	100,8	0,1	2,6
Mar - 2013	100,8	0,0	2,5
Apr - 2013	100,0	-0,8	2,5
May - 2013	99,7	-0,3	2,2
June - 2013	99,9	0,2	2,7
July - 2013	99,6	-0,3	2,4
Aug - 2013	99,5	-0,1	1,2
Sept - 2013	99,3	-0,2	0,2
Oct - 2013	100,1	0,8	0,2
Nov - 2013	100,3	0,2	0,8
Dec - 2013	100,6	0,3	0,5
Annual average 2013	100,1	:	1,7

Tab. 1: Harmonised indices of consumer prices (HICP) January 2010 – March 2022 (2015=100), monthly and annual changes of prices in percentage (continued)

Month/Year	Index (2015 = 100)	Monthly inflation %	Annual inflation %
Jan - 2014	100,9	0,3	0,2
Feb - 2014	100,9	0,0	0,1
Mar - 2014	101,1	0,2	0,3
Apr - 2014	100,3	-0,8	0,3
May - 2014	100,2	-0,1	0,5
June - 2014	100,3	0,1	0,4
July - 2014	100,4	0,1	0,8
Aug - 2014	100,4	0,0	0,9
Sept - 2014	100,6	0,2	1,3
Oct - 2014	100,7	0,1	0,6
Nov - 2014	100,4	-0,3	0,1
Dec - 2014	100,2	-0,2	-0,4
Annual average 2014	100,5	:	0,4
Jan - 2015	100,3	0,1	-0,6
Feb - 2015	100,6	0,3	-0,3
Mar - 2015	100,7	0,1	-0,4
Apr - 2015	99,9	-0,8	-0,4
May - 2015	99,7	-0,1	-0,5
June - 2015	99,9	0,1	-0,4
July - 2015	99,6	-0,2	-0,8
Aug - 2015	99,7	0,1	-0,7
Sept - 2015	99,4	-0,3	-1,2
Oct - 2015	100,0	0,6	-0,7
Nov - 2015	100,1	0,1	-0,3
Dec - 2015	100,0	0,0	-0,2
Annual average 2015	100,0	:	-0,5
Jan - 2016	100,5	0,4	0,1
Feb - 2016	100,7	0,2	0,0
Mar - 2016	100,8	0,1	0,1
Apr - 2016	99,8	-1,0	-0,1
May - 2016	99,6	-0,2	-0,1
June - 2016	99,6	-0,1	-0,3
July - 2016	99,6	0,0	0,0
Aug - 2016	99,8	0,2	0,0
Sept - 2016	99,9	0,2	0,6
Oct - 2016	100,9	0,9	0,9
Nov - 2016	101,0	0,1	0,9
Dec - 2016	101,3	0,4	1,3
Annual average 2016	100,3	:	0,3
Jan - 2017	102,2	0,8	1,7
Feb - 2017	102,3	0,2	1,7
Mar - 2017	102,3	-0,1	1,5
Apr - 2017	102,0	-0,3	2,2
May - 2017	101,2	-0,8	1,5
June - 2017	101,5	0,3	1,9
July - 2017	101,3	-0,2	1,7
Aug - 2017	101,5	0,2	1,7
Sept - 2017	101,6	0,1	1,7
Oct - 2017	101,8	0,2	0,9
Nov - 2017	101,8	0,1	0,9
Dec - 2017	101,8	0,0	0,5
Annual average 2017	101,8	:	1,5

Tab. 1: Harmonised indices of consumer prices (HICP) January 2010 – March 2022 (2015=100), monthly and annual changes of prices in percentage (continued)

Month/Year	Index (2015 = 100)	Monthly inflation %	Annual inflation %
Jan - 2018	102.0	0.2	-0.2
Feb - 2018	102.3	0.3	0.0
Mar - 2018	102.4	0.1	0.1
Apr - 2018	102.4	0.0	0.4
May - 2018	102.2	-0.2	1.0
June - 2018	102.3	0.1	0.8
July - 2018	102.5	0.2	1.2
Aug - 2018	103.0	0.4	1.5
Sept - 2018	103.1	0.1	1.4
Oct - 2018	103.3	0.2	1.5
Nov - 2018	103.9	0.7	2.1
Dec - 2018	104.8	0.8	2.9
Annual average 2018	102.8	:	1.1
Jan - 2019	105.2	0.4	3.1
Feb - 2019	105.6	0.4	3.2
Mar - 2019	105.7	0.1	3.3
Apr - 2019	105.9	0.1	3.4
May - 2019	105.7	-0.2	3.4
June - 2019	105.3	-0.3	3.0
July - 2019	105.2	-0.1	2.6
Aug - 2019	105.7	0.5	2.7
Sept - 2019	105.6	-0.1	2.4
Oct - 2019	105.5	0.0	2.2
Nov - 2019	105.7	0.2	1.7
Dec - 2019	106.0	0.2	1.2
Annual average 2019	105.6	:	2.7
Jan - 2020	106.8	0.8	1.5
Feb - 2020	106.6	-0.2	1.0
Mar - 2020	106.5	-0.1	0.7
Apr - 2020	106.2	-0.3	0.3
May - 2020	105.9	-0.3	0.2
June - 2020	105.4	-0.4	0.1
July - 2020	105.1	-0.3	-0.1
Aug - 2020	105.2	0.1	-0.5
Sept - 2020	105.1	-0.1	-0.4
Oct - 2020	105.3	0.2	-0.2
Nov - 2020	105.4	0.1	-0.3
Dec - 2020	106.1	0.6	0.1
Annual average 2020	105.8	:	0.2
Jan - 2021	106.6	0.5	-0.2
Feb - 2021	107.4	0.7	0.7
Mar - 2021	107.8	0.4	1.2
Apr - 2021	108.2	0.3	1.9
May - 2021	107.9	-0.2	2.0
June - 2021	107.9	0.0	2.4
July - 2021	108.8	0.8	3.5
Aug - 2021	110.1	1.2	4.7
Sept - 2021	110.2	0.1	4.9
Oct - 2021	111.3	1.0	5.7
Nov - 2021	112.7	1.2	6.9
Dec - 2021	113.2	0.5	6.7
Annual average 2021	109.3	:	3.4
Jan - 2022	114.2	0.9	7.1
Feb - 2022	115.5	1.1	7.5
Mar - 2022	118.6	2.7	10.0

Fig. 1: Yearly harmonized index of consumer prices, 2010 - 2021 (2015 = 100)

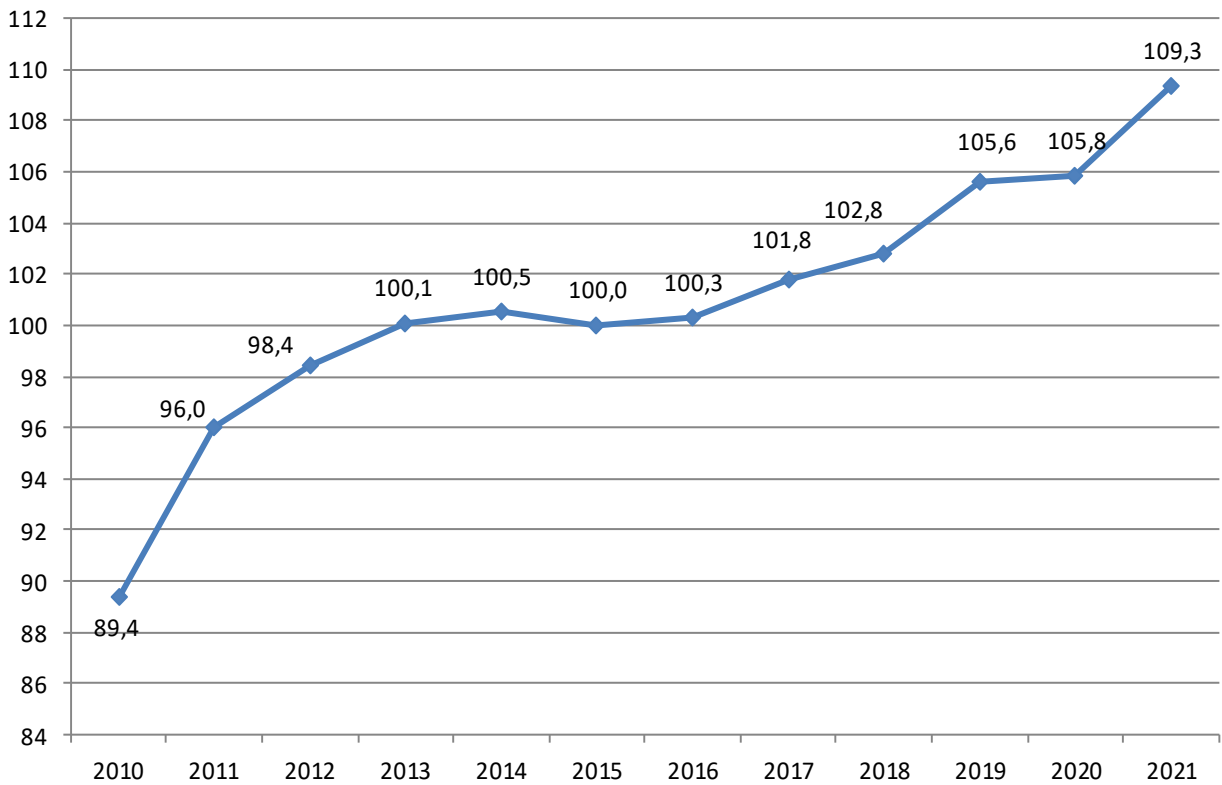
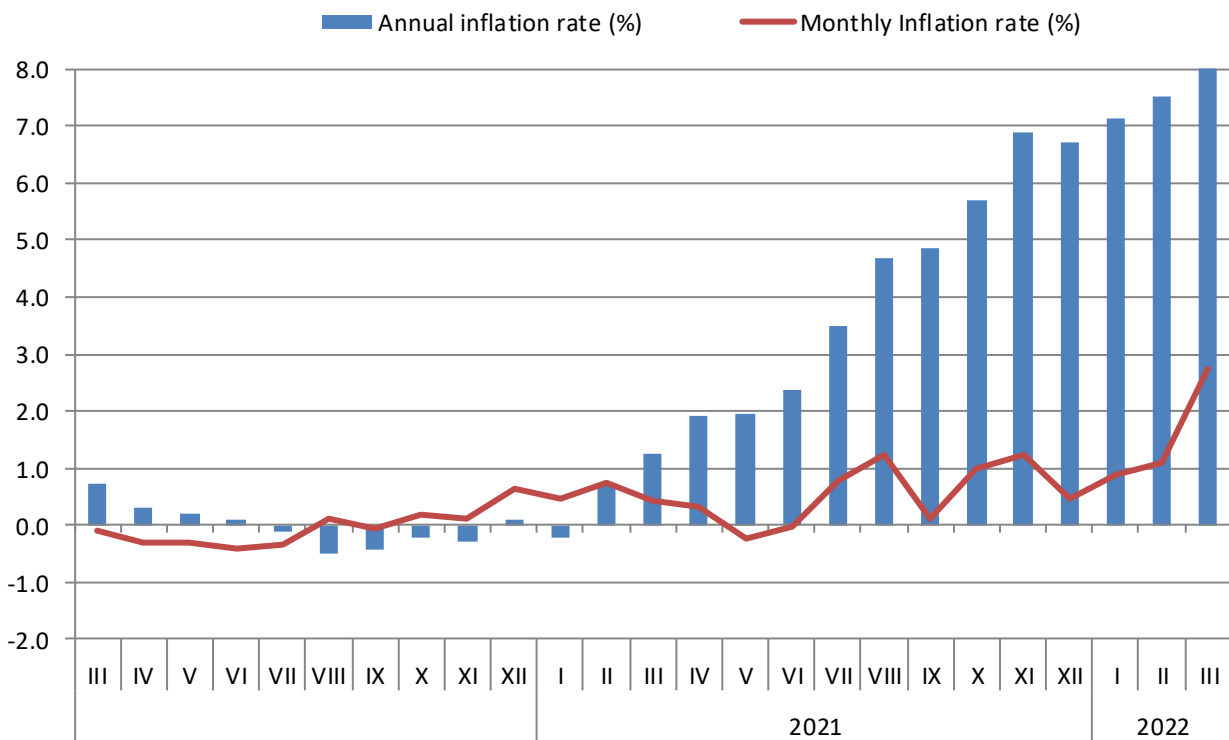


Fig. 2: Annual and monthly inflation rates in percentages measured by the HICP



Tab. 2: Weights, HICP for March 2022 (2015=100), monthly and annual price change in percentage for groups and sub-groups according to COICOP

COICOP	Groups and subgroups	Weight 2022 in %	III - 2022 2015=100	III - 2022 II- 2022	III - 2022 III - 2021
00	Total HICP	1000.0	118.6	2.7	10.0
01	Food and non-alcoholic beverages	395.7	125.9	3.1	13.0
01.1	Food	337.2	127.9	3.4	14.2
01.1.1	Bread and cereals	89.5	142.9	6.3	23.0
01.1.2	Meat	93.6	121.2	1.0	9.6
01.1.3	Fish	4.1	112.4	-0.2	2.5
01.1.4	Milk, cheese and eggs	57.9	131.2	5.7	18.3
01.1.5	Oils and fats	10.1	170.1	11.3	43.1
01.1.6	Fruits	23.3	83.2	2.7	-9.8
01.1.7	Vegetables	34.7	127.5	-1.3	14.0
01.1.8	Sugar, jam, honey, chocolate and confectionery	13.7	125.4	1.9	12.9
01.1.9	Food products n.e.c.	10.3	115.2	1.6	8.4
01.2	Non-alcoholic beverages	58.5	116.3	1.3	6.5
01.2.1	Coffee, tea and cocoa	13.1	143.0	0.0	12.4
01.2.2	Mineral waters, soft drinks, fruit and vegetable juices	45.4	109.9	1.7	5.2
02	Alcoholic beverages, tobacco	60.7	123.3	0.2	1.7
02.1	Alcoholic beverages	23.6	109.9	0.2	-2.4
02.2	Tobacco	37.1	134.5	0.1	4.7
03	Clothing and footwear	41.9	102.6	3.0	-0.2
03.1	Clothing	31.1	101.8	3.7	-0.3
03.2	Footwear	10.8	105.5	0.9	0.1
04	Housing, water, electricity, gas and other fuels	73.3	112.7	6.3	15.7
04.1	Actual rentals for housing	5.5	97.2	-0.3	-0.3
04.3	Maintenance and repair of the dwelling	7.5	111.8	1.7	6.5
04.4	Water supply and miscellaneous services relating to the dwelling	10.4	100.8	0.0	1.4
04.5	Electricity, gas and other fuels	49.9	115.4	9.0	22.7
04.5.1	Electricity	28.3	101.5	13.0	26.9
04.5.2	Gas	3.8	140.9	11.4	28.3
04.5.4	Solid fuels	15.6	139.3	2.5	16.7
04.5.5	Heat energy	2.2	91.8	0.0	0.0
05	Furnishing, household equipment and routine maintenance of the house	75.1	107.4	0.6	4.3
05.1	Furniture and furnishings, carpets and other floor coverings	16.7	104.6	0.7	3.5
05.2	Household textiles	3.2	100.6	0.6	1.2
05.3	Household appliances	13.7	107.7	-0.3	5.3
05.4	Glassware, tableware and household utensils	13.6	103.0	-2.0	-0.6
05.5	Tools and equipment for house and garden	12.5	114.3	3.5	8.7
05.6	Goods and services for routine household maintenance	15.4	110.3	1.4	5.9

Tab. 2: Weights, HICP for March 2022 (2015=100), monthly and annual price change in percentage for groups and sub-groups according to COICOP (continued)

COICOP	Groups and subgroups	Weight 2022 in %	III - 2022 2015=100	III - 2022 II- 2022	III - 2022 III - 2021
06	Health	25.7	111.3	0.6	2.0
06.1	Medical products, appliances and equipment	14.6	111.2	0.1	2.1
06.1.1	Pharmaceutical products	11.6	111.7	0.2	3.2
06.1.2	Other medical products	0.8	107.5	0.1	1.6
06.1.3	Therapeutic appliances and equipment	2.2	111.5	0.0	-2.3
06.2	Out-patient services	9.6	113.0	1.4	2.1
06.3	Hospital services	1.5	100.5	0.0	0.5
07	Transport	159.1	122.1	5.0	17.5
07.1	Purchase of vehicles	58.1	106.3	0.3	5.5
07.2	Operation of personal transport equipment	79.5	134.0	8.5	28.4
07.2.1	Spare parts and accessories for personal transport equipment	10.6	105.2	1.1	4.9
07.2.2	Fuels and lubricants for personal transport equipment	59.5	139.9	10.9	35.8
07.2.3	Maintenance and repair of personal transport equipment	4.0	116.5	1.0	5.6
07.2.4	Other services in respect of personal transport equipment	5.4	137.1	0.0	9.9
07.3	Transport services	21.5	115.6	3.9	9.5
08	Communication	36.2	114.9	-0.1	0.1
08.1	Postal services	2.5	104.6	0.0	0.0
08.2	Telephone and telefax equipment	4.6	82.6	-1.2	-0.3
08.3	Telephone and telefax services	29.1	121.3	0.0	0.2
09	Recreation and culture	41.5	99.4	0.4	2.0
09.1	Audio-visual, photographic and information processing equipment	10.4	88.1	-0.2	1.8
09.2	Other major durables for recreation and culture	1.5	103.1	2.1	2.3
09.3	Other recreational items and equipment, gardens and pets	7.3	105.5	1.5	3.9
09.4	Recreational and cultural services	5.5	103.1	0.0	1.5
09.5	Newspapers, books and stationery	10.5	102.6	0.4	2.4
09.6	Package Holidays	6.3	102.2	-0.1	-0.2
10	Education	12.7	102.6	0.0	1.5
11	Restaurants and hotels	35.7	116.7	0.9	7.7
11.1	Catering services	32.6	117.4	0.8	8.1
11.2	Accommodation services	3.1	113.8	1.5	4.1
12	Miscellaneous goods and services	42.4	111.2	0.3	2.8
12.1	Personal care	15.5	109.6	0.7	4.7
12.3	Personal effects n.e.c.	7.8	112.4	0.4	3.6
12.4	Social protection	0.7	109.7	0.0	0.0
12.5	Insurance	7.2	122.5	0.0	0.4
12.6	Financial services n.e.c.	8.9	107.1	0.0	1.8
12.7	Other services n.e.c.	2.3	99.4	0.0	0.0

Tab. 3: Average prices in Euros for some selected goods and services

Code	Item	Unit Mesaure	III 2021	II 2022	III 2022
101	Rice	1 kg	1.39	1.44	1.45
102	Wheat flour	1 kg	0.52	0.68	0.74
103	White bread	500g	0.35	0.42	0.46
111	Beef meat	1 kg	6.70	7.24	7.50
112	Veal meat	1 kg	7.59	8.09	8.32
114	Chicken	1 kg	2.62	3.06	3.11
131	Milk (tetrapak)	1 lit	0.89	0.97	1.00
133	Yoghurt	1 lit	0.90	0.95	0.99
137	Eggs	30 pcs	2.58	3.13	3.65
141	Edible oils	1 lit	1.25	1.72	2.06
151	Apple	1 kg	0.72	0.59	0.67
152	Pears	1 kg	1.47	1.38	1.47
153	Bananas	1 kg	1.18	1.22	1.30
155	Limon	1 kg	1.20	1.09	1.06
161	Potatoes	1 kg	0.52	0.62	0.67
162	Tomatoes	1 kg	1.03	1.65	1.47
163	Beans	1 kg	2.52	2.61	2.71
167	Pepper	1 kg	2.27	2.56	2.83
175	Sugar	1 kg	0.71	0.87	0.91
192	Ground coffee	1 kg	9.38	11.05	10.94
193	Tea	1 kg	7.77	8.05	8.11
195/1	Natural water	1.5 lit	0.31	0.33	0.34
196	Coca cola	2 lit	1.30	1.32	1.34
197	Fruit juice	1 lit	0.89	0.91	0.92
204	Beer	0.5 l	0.66	0.65	0.66
216	Cigarettes - Ronson	1 pack	1.78	1.88	1.88
217	Cigarettes - Marlboro	1 pack	2.79	2.89	2.89
416	Electricity (without fixed cost)	1 kwh	0.05	0.06	0.06
418	Firewood	1 m ³	40.20	46.24	47.05
701	Petrol	1 lit	1.07	1.33	1.44
702	Diesel	1 lit	1.04	1.32	1.52

Methodological explanations

Definitions

HICP Kosovo, produced by Kosovo Agency of Statistics (KAS), is produced by methods of the Harmonized Index of Consumer Prices (HICP). Eurostat has defined the HICP as the European standard of consumer price indices. Index calculated and their results are presented by Classification of Individual Consumption by Purpose (COICOP), the international classification which classifies consumption in divisions, groups and classes of items. By COICOP, KAS has allocated 91 classes of defined consumption (at 4-digit level) further to 420 products (elementary aggregate). KAS has defined aggregation weight for each element and each month collects prices for each elementary aggregate.

Each month the HICP is calculated in two steps:

Elementary indices (elementary aggregate indicator) calculated from the collected prices by using the formula of unweighted geometric average (Jevon).

The indices of the highest level, including the HICP itself, are calculated by averaging the elementary indices by formula of weighted arithmetic average (Laspeyres).

Aggregate elementary weights are based on estimates of annual consumption expenditures. KAS, for 91 classes of consumption, estimates annual consumption expenditures from the Household Budget Survey (HBS) and National Accounts (NA); the weights within consumer classes come from KAS's internal resources. The specific weights, as of January 2013, were based on estimates of Household Budget Surveys (HBS) and National Accounts (NA) data referring to 2012, and since January 2015, specific refreshed weights are based on data from National Accounts (NA) and the Household Budget Survey (HBS) of 2013. From January 2016, the specific weights for items and services harmonized according to E-coicop (recommendations from Eurostat) are based on National Accounts data (NA) and the 2014 Household Budget Survey (HBS). As of January 2017, specific items and services weights are based on the National Accounts (NA) data for 2015. As of January 2018, specific items and services weights are based on the National Accounts (NA) data of 2016. As of January 2019, specific items and services weights are based on the National Accounts (NA) data of 2017. As of January 2020, specific items and services weights are based on the National Accounts (NA) data of 2018. As of January 2021, specific items and services weights are based on the National Accounts (NA) data of 2019. Annually updated weighing ensures that the HICP reflects current consumer trends. Annually updated weighing ensures that the HICP reflects current consumer trends.

Total annual consumption expenditure is defined as all domestic (within-country) monetary purchases of the household sector. This matches the NA category called Household Final Monetary Consumption (HFMC) and means the weights must exclude the value of consumption of own production and costs for owner-occupied housing. Until December 2014 the weights included expenditure of only domestic consumers, while from January 2015 are also include expenditure of non-resident consumers.

To estimate monthly price change, KAS staff collect prices for a set of specific items (often called a market basket) chosen to represent the elementary aggregates. The goal is to collect all prices of exactly the same items every month; whenever a price cannot be collected, carefully developed procedures must be applied to avoid a biased result.

KAS data collectors, who are based in seven regional centers, collect approximately 6800 prices during the period of 10th - 20th of each month. They obtain prices in stores, markets, service enterprises and other retail outlets in fourteen municipalities of Kosovo:

- Gjakovë
- Gjilan
- Istog
- Kaçanik
- Kamenicë
- Mitrovicë
- Rahovec
- Pejë
- Podujevë
- Prishtinë
- Prizren
- Suharekë
- Ferizaj
- Vushtrri

The KAS central office staff in Prishtina collects prices for items such as electricity, water, postal and telecom services, and rail transport.

Elementary Indexes

Elementary index for a month is equal to its index in the previous month multiplied by the price change measured on a monthly basis, calculated from collected prices. KAS uses the geometric mean formula (Jevon) to calculate monthly changes: geometric average rate of the current month in geometric average price collected for the previous month.

Index for elementary aggregate *e* for month *m*

$$I_e^m = I_e^{m-1} \times \left[\frac{\left(\prod_{i=1}^{n_e} P_i^m \right)^{1/n_e}}{\left(\prod_{i=1}^{n_e} P_i^{m-1} \right)^{1/n_e}} \right] \quad I_e^0 \equiv 100$$

I_e^m = Price index for elementary aggregate *e* for month *m*

I_e^{m-1} = Price index for elementary aggregate *e* in month *m-1*

P_i^m = Price for item *i* in month *m*

P_i^{m-1} = Price for item *i* in month *m-1*

n_e = Number of collected prices for elementary aggregate *e*

Higher-level indexes

In Kosovo's HICP, indexes are calculated first for groups (of elementary aggregates) and these are combined to obtain the total HICP.

Higher-level indexes are weighted by arithmetic averages of elementary indexes. In the current CPI, which uses the *Young* formula until December 2013, the weights are shares of the unadjusted weight-period expenditures. Since January 2014, the index will use the *Lowe* formula, with weights that are shares of weight-period expenditures that have been updated for price change. (The *Lowe* formula is closer to the actual *Laspeyres* formula).

Both the *Young* and *Lowe* formulas are weighted by arithmetic averages with weights that are shares of consumption expenditure and so both are *Laspeyres-type* index formulas. Currently HICP uses the *Young* index formula whose weights are shares of expenditures during the weight period (year 2010). New weights from NA data and from the 2012 HBS and are applied since January 2014. CPI has passed in calculating indexes by *Lowe's* formula; (the weights were part of the 2012 expenditures calculated with the price changes of December of 2013. From January 2015, are applied specific weights from NA and HBS data for 2013 calculated with the price changes of December 2014. From January 2016, the specific weights are based on National Accounts data (NA) and the 2014 Household Budget

Survey (HBS) calculated with the price changes of December 2015. From January 2017, specific items and services weights are based on the National Accounts (NA) data for 2015 calculated with the price changes of December 2016. From January 2018, the specific items and services weights are based on the National Accounts (NA) data of 2016 calculated with the price changes of December 2017. From January 2019, the specific items and services weights are based on the National Accounts (NA) data of 2017 calculated with the price changes of December 2018. From January 2020, the specific items and services weights are based on the National Accounts (NA) data of 2018 calculated with the price changes of December 2019.

Index weights

Young Formula Weights for Elementary Aggregates within Groups

$$w_{e,g}^b = \frac{x_e^b}{\sum_{e=1}^{k_g} x_e^b} \quad \sum_{e=1}^{k_g} w_{e,g} = 1$$

$w_{e,g}^b$ = Weight for elementary aggregate e within group g in weight-period b

x_e^b = expenditure for elementary aggregate e in weight-period b (Currently $b = 2012$)

k_g = Number of elementary aggregates in group g

Young Formula Weights for Groups within the Overall CPI

$$w_g^b = \frac{\sum_{e=1}^{k_g} x_e^b}{\sum_{g=1}^h \sum_{e=1}^{k_g} x_e^b} \quad \sum_{g=1}^h w_{e,g} = 1$$

w_g^b = Weight for group g in weight period b

h = Number of groups in CPI

Lowe Formula Weights for Elementary Aggregates within Groups

$$w_{e,g}^b = \frac{x_e^b \times a_e^{b \rightarrow v}}{\sum_{e=1}^{k_g} (x_e^b \times a_e^{b \rightarrow v})} \quad \sum_{e=1}^{k_g} w_{e,g} = 1$$

$w_{e,g}^b$ = Weight for elementary aggregate e within group g in weight-period b
(Effective January 2014, $b = 2012$)

$a_e^{b \rightarrow v}$ = weight adjustment factor for elementary aggregate e

$$a_e^{b \rightarrow v} = I_e^v / \frac{1}{12} \left(\sum_{m=Jan}^{Dec} I_e^{m/b} \right)$$

I_e^v = Price index for elementary aggregate e for month v

(Effective January 2014, $v =$ December 2013)

$I_e^{m/b}$ = Price index for elementary aggregate e in month m in year b

Lowé Formula Weights for Group within Overall-CPI

$$w_g^b = \frac{\sum_{e=1}^{k_g} (x_e^b \times a_e^{b \rightarrow v})}{\sum_{g=1}^h \sum_{e=1}^{k_g} (x_e^b \times a_e^{b \rightarrow v})} \quad \sum_{g=1}^h w_{e,g} = 1$$

Indexes for higher-level groups

$$I_g^m = \sum_{e=1}^{k_g} w_{e,g}^b * I_e^m \quad I_e^0 = 100$$

period **0** is May 2002 for most items,
but later for items that entered at a later date

Total HICP

Total HICP is a weighted arithmetic average of the indexes of groups. CPI used in the formula of Young, but since January 2014 has passed in using Lowé formula.

Because the groups have different bases indexed (most have a base May 2002 = 100, but the groups added later have otherwise, since January 2016 the indices are calculated with base year 2015 = 100), indices of groups should be re-based on a common period, which is the month *v* (previous month before new weights being put into use).

$$\text{HICP}^m = \text{HICP}^v \times \sum_{g=1}^h w_g^b \times \frac{I_g^m}{I_g^v} \quad \text{HICP}^0 = 100$$

HICP^m = Harmonized index of consumer prices for the month ***m***

v = previous month before new weights being put into use. (Currently ***v*** = December 2020)

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