November 2019

CONSUMER PRICES

Final data

- In November 2019 the Italian consumer price index for the whole nation (NIC) decreased by 0.2% on monthly basis and increased by 0.2% on annual basis (the same as in the previous month). The flash estimate was +0.4%.

- The stability of the growth on annual basis of All items index was due to the stability of almost all the types of products whereas the slowdown of prices of Services related to transport (from +1.8% to +1.3%) was offset by the speed-up of process of Semi-durable goods (from +0.1% to +0.5%) and the lower decrease to those of Durable goods (from -0.9% to -0.4%).

- The core inflation excluding energy and unprocessed food was +0.7% (the same as in the previous month) and inflation excluding energy was +0.8% (up from +0.7%).

- The decrease on monthly basis of All items index was essentially due to the decreases, mainly due to seasonal factors, of prices of Services related to transport and of Services related to recreation, including repair and personal care (-1.3% for both), only partially offset by the increase of prices of Unprocessed food (+1.0%).

- The annual rate of change of prices of Goods was -0.4% (from -0.5% in October) and that one of prices of Services was +1.0% (down from +1.1%). As a consequence, the inflationary gap between Services and Goods was +1.4 percentage points (+1.6 in October).

- Prices of Grocery and unprocessed food increased by 0.5% on monthly basis and on annual basis (the same as in the previous month).

- In November the Italian harmonized index of consumer prices (HICP) decreased by 0.3% on monthly basis and increased by 0.2% with respect to November 2018 (the same as in the previous month). The flash estimate was +0.4%.

CHART 1. ITALIAN CONSUMER PRICE INDEX FOR THE WHOLE NATION (NIC)

January 2014 - November 2019, month on previous month and month on same month a year ago percentage changes (index, 2015=100)
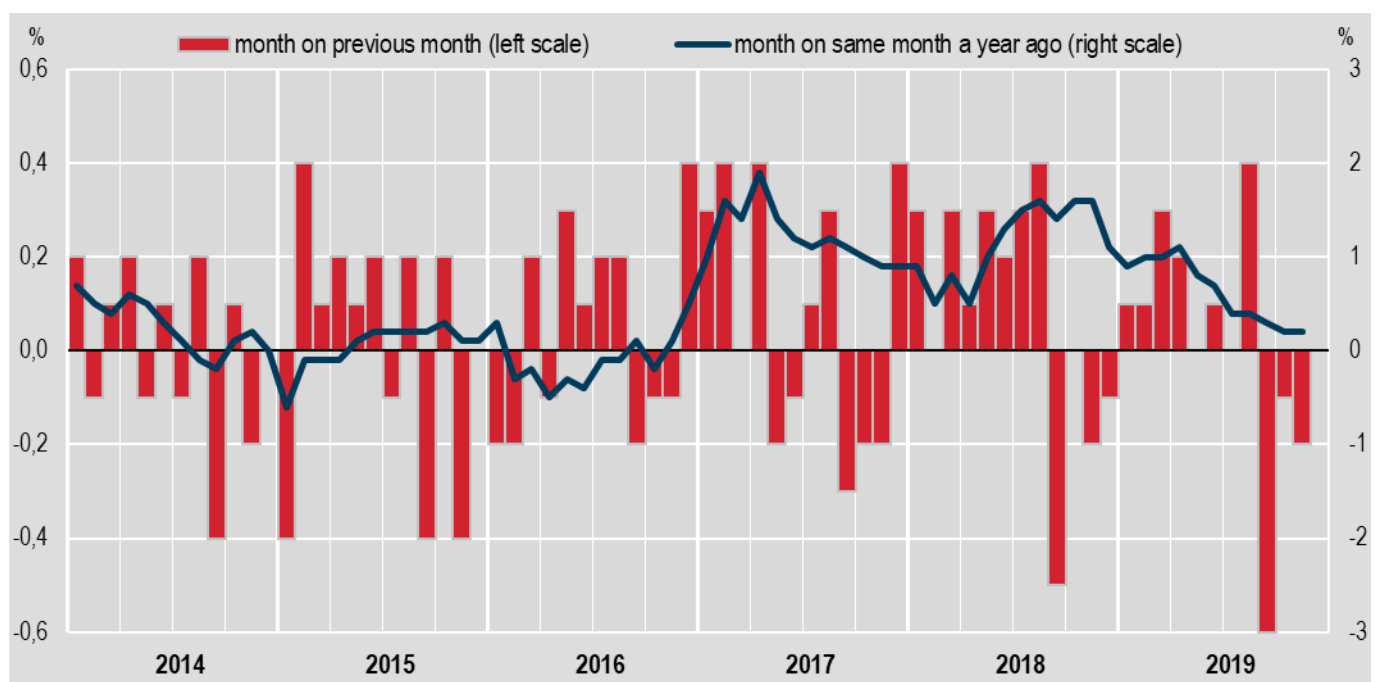
TABLE 1. ITALIAN CONSUMER PRICE INDICES

November 2019, month on previous month and month on same month a year ago percentage changes (index, 2015=100)

	INDICES	Month on previous month	Month on same month a year ago
	November 2019	Nov-19 Oct-19	Nov-19 Nov-18
Italian consumer price index for the whole nation (NIC)	102.6	-0.2	+0.2
Italian harmonized index of consumer prices (HICP)	103.6	-0.3	+0.2

TABLE 2. ITALIAN CONSUMER PRICE INDEX FOR THE WHOLE NATION (NIC) BY ECOICOP DIVISION

November 2019, weights, indices, month on previous month and month on same month a year ago percentage changes (index, 2015=100)

DIVISIONS	Weights	Indices	Month on previous month		Month on same month a year ago	
			Nov-19 Oct-19	Nov-18 Oct-18	Nov-19 Nov-18	Oct-19 Oct-18
Food and non-alcoholic beverages	163,321	104.2	+0.5	+0.5	+0.8	+0.8
Alcoholic beverages, tobacco	30,573	107.8	+0.2	+0.2	+1.9	+1.9
Clothing and footwear	70,421	101.6	+0.1	+0.1	+0.4	+0.4
Housing, water, electricity, gas and other fuels	110,312	103.4	+0.1	+0.1	-1.8	-1.8
Furnishings, household equipment and routine household maintenance	71,823	100.6	+0.3	0.0	+0.2	-0.1
Health	85,284	101.2	0.0	-0.1	+0.7	+0.6
Transport	144,119	104.8	-0.8	-0.5	-0.3	0.0
Communication	24,676	85.6	-0.6	-1.2	-6.4	-7.0
Recreation and culture	77,936	100.1	0.0	-0.6	+0.3	-0.3
Education	10,102	84.9	0.0	+0.1	+1.2	+1.3
Restaurants and hotels	118,409	103.9	-1.9	-1.7	+1.3	+1.4
Miscellaneous goods and services	93,024	105.7	+0.3	0.0	+1.8	+1.5
ALL ITEMS	**1,000,000**	**102.6**	**-0.2**	**-0.2**	**+0.2**	**+0.2**

CHART 2. ITALIAN NATIONAL CONSUMER PRICE INDEX (NIC) BY COICOP DIVISION

November 2019, month on same month a year ago percentage changes (index, 2015=100)
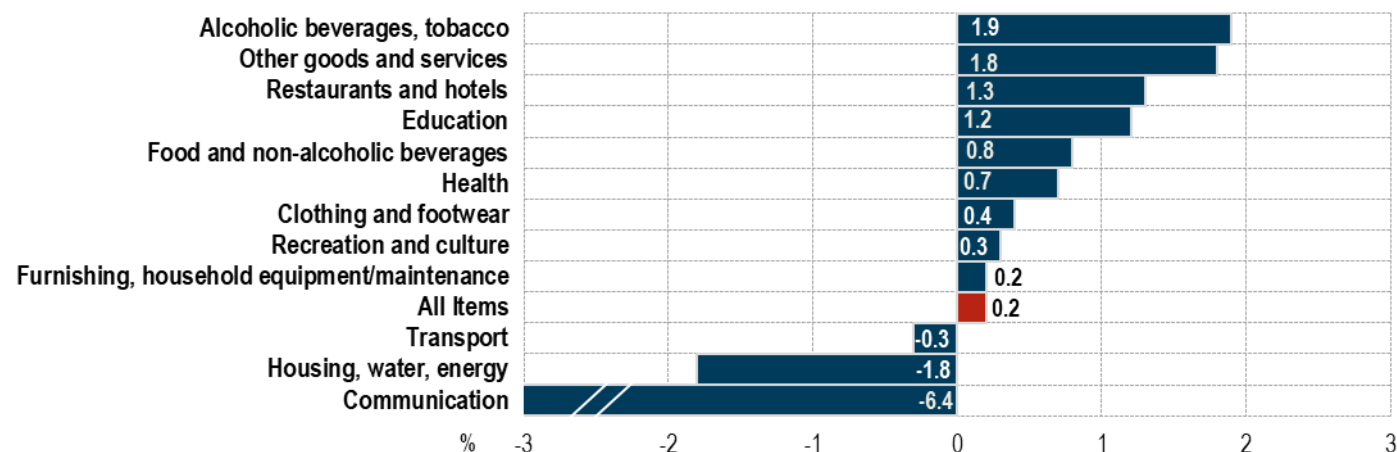
TABLE 3. ITALIAN CONSUMER PRICE INDEX FOR THE WHOLE NATION (NIC) BY TYPE OF PRODUCTS

November 2019, weights, indices, month on previous month and month on same month a year ago percentage changes (index, 2015=100)

SPECIAL AGGREGATES	Weights	Indices	Month on previous month		Month on same month a year ago	
			Nov-19 Oct-19	Nov-18 Oct-18	Nov-19 Nov-18	Oct-19 Oct-18
Food including alcohol:	173,403	104.2	+0.6	+0.5	+0.7	+0.6
Processed food including alcohol	106,055	102.3	+0.2	+0.2	+0.3	+0.3
Unprocessed food	67,348	106.9	+1.0	+1.1	+1.1	+1.1
Energy:	88,734	103.9	-0.1	-0.1	-4.6	-4.6
Regulated energy products	36,169	100.3	+0.1	0.0	-7.9	-8.0
Non-regulated energy products	52,565	105.9	-0.2	-0.3	-3.0	-3.1
Tobacco	20,491	109.5	0.0	0.0	+2.9	+2.9
Non energy industrial goods:	252,656	99.9	+0.1	-0.2	+0.1	-0.2
Durable goods	88,052	98.1	0.0	-0.5	-0.4	-0.9
Non-durable goods	63,972	100.1	+0.3	+0.1	+0.5	+0.3
Semi-durable goods	100,632	101.4	+0.2	-0.2	+0.5	+0.1
Goods	**535,284**	**102.3**	**+0.2**	**+0.1**	**-0.4**	**-0.5**
Services related to housing	74,389	102.6	0.0	0.0	+0.7	+0.7
Services related to communication	19,372	91.5	0.0	+0.1	-6.1	-6.0
Services related to recreation, including repair and personal care	179,708	103.4	-1.3	-1.3	+1.3	+1.4
Services related to transport	75,307	105.2	-1.3	-0.9	+1.3	+1.8
Services - miscellaneous	115,940	103.4	+0.1	0.0	+1.6	+1.5
Services	**464,716**	**103.1**	**-0.7**	**-0.6**	**+1.0**	**+1.1**
ALL ITEMS	**1,000,000**	**102.6**	**-0.2**	**-0.2**	**+0.2**	**+0.2**
All items excluding energy and unprocessed food (Core inflation)	843,918	102.1	-0.4	-0.4	+0.7	+0.7
All items excluding energy, food, alcohol and tobacco	717,372	101.9	-0.4	-0.5	+0.7	+0.6
All items excluding energy	911,266	102.5	-0.2	-0.3	+0.8	+0.7
Grocery and unprocessed food	196,354	103.4	+0.5	+0.5	+0.5	+0.5

CHART 3. ITALIAN NATIONAL CONSUMER PRICE INDEX (NIC) BY TYPE OF PRODUCTS

January 2014 - November 2019, month on same month a year ago percentage changes (index, 2015=100)
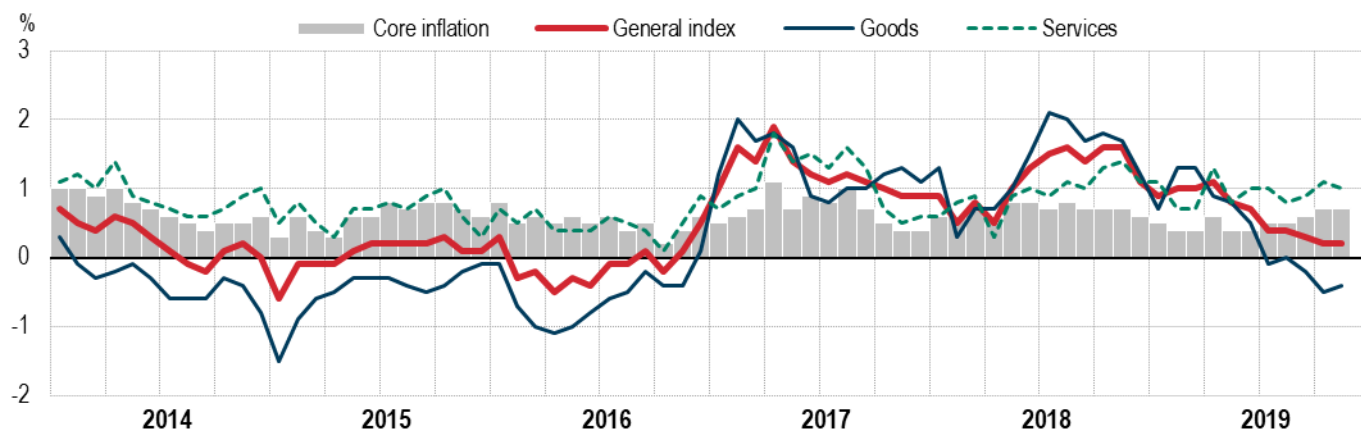
TABLE 4. ITALIAN HARMONIZED CONSUMER PRICE INDEX (HICP) BY ECOICOP DIVISION
November 2019, weights, indices, month on previous month and month on same month a year ago percentage changes (index, 2015=100)

DIVISIONS	Weights	Indices	Month on previous month		Month on same month a year ago	
			Nov-19 Oct-19	Nov-18 Oct-18	Nov-19 Nov-18	Oct-19 Oct-18
Food and non-alcoholic beverages	173,257	104.3	+0.6	+0.6	+0.8	+0.8
Alcoholic beverages, tobacco	32,419	107.6	+0.2	+0.3	+1.7	+1.8
Clothing and footwear	81,483	111.0	0.0	-0.1	+0.5	+0.5
Housing, water, electricity, gas and other fuels	117,221	103.5	+0.1	0.0	-1.7	-1.8
Furnishings, household equipment and routine household maintenance	76,564	100.7	+0.2	0.0	+0.2	0.0
Health	43,377	103.2	+0.1	-0.1	+0.8	+0.6
Transport	152,947	104.7	-0.9	-0.5	-0.4	0.0
Communication	26,228	85.7	-0.6	-1.2	-6.4	-7.0
Recreation and culture	60,987	100.2	0.0	-0.8	+0.4	-0.4
Education	10,737	84.9	+0.1	0.0	+1.3	+1.2
Restaurants and hotels	125,647	103.9	-1.9	-1.7	+1.2	+1.3
Miscellaneous goods and services	99,133	106.1	+0.3	0.0	+1.8	+1.5
ALL ITEMS	**1,000,000**	**103.6**	**-0.3**	**-0.3**	**+0.2**	**+0.2**
All items at constant tax rates	1,000,000	103.4	-0.3	-0.3	+0.1	+0.1

TABLE 5. ITALIAN HARMONIZED CONSUMER PRICE INDEX (HICP), BY SPECIAL AGGREGATES (*)
November 2019, weights, indices, month on previous month and month on same month a year ago percentage changes (index, 2015=100)

SPECIAL AGGREGATES	Weights	Indices	Month on previous month		Month on same month a year ago	
			Nov-19 Oct-19	Nov-18 Oct-18	Nov-19 Nov-18	Oct-19 Oct-18
Food, alcohol and tobacco:	205,676	104,8	+0.5	+0.6	+0.9	+1.0
Processed food (including alcohol and tobacco)	141,819	103,5	+0.2	+0.2	+0.8	+0.8
Unprocessed food	63,857	107,1	+1.2	+1.2	+1.2	+1.2
Energy:	92,346	104,1	-0.1	-0.2	-4.7	-4.8
Electricity, gas, solid fuels and heat energy	52,207	103,1	+0.2	+0.1	-4.7	-4.8
Liquid fuels and fuels and lubricants for personal transport equipment	40,139	105,6	-0.5	-0.3	-4.6	-4.4
Non-energy industrial goods:	269,340	103,5	+0.1	-0.3	+0.2	-0.2
Durable goods	92,199	98,1	-0.1	-0.4	-0.6	-0.9
Non-durable goods	60,072	102,7	+0.4	+0.2	+0.6	+0.4
Semi-durable goods	117,069	108,3	+0.1	-0.3	+0.6	+0.2
Goods	**567,362**	**104,0**	**+0.2**	**+0.1**	**-0.4**	**-0.5**
Services related to housing	79,065	102,5	0.0	0.0	+0.7	+0.7
Services related to communication	20,592	91,6	0.0	+0.1	-6.1	-6.0
Services related to recreation, including repairs and personal care	169,061	103,9	-1.4	-1.3	+1.5	+1.5
Services related to transport	79,842	105,2	-1.3	-0.9	+1.3	+1.8
Services - miscellaneous	84,078	103,7	+0.2	0.0	+2.1	+1.9
Services	**432,638**	**103,2**	**-0.8**	**-0.7**	**+1.1**	**+1.2**
ALL ITEMS	**1,000,000**	**103,6**	**-0.3**	**-0.3**	**+0.2**	**+0.2**
All items excluding energy and unprocessed food (Core inflation)	843,797	103,3	-0.4	-0.4	+0.7	+0.7
All items excluding energy, food, alcohol and tobacco	701,978	103,2	-0.5	-0.5	+0.7	+0.7
All items excluding energy	907,654	103,6	-0.2	-0.3	+0.8	+0.7

(*) With the dissemination of the definitive indices of January 2019, the special aggregates of the HICP are calculated by aggregating the subclass indices of the ECOICOP classification. The new indices are published from December 2016 - January 2017 and available on http://dati.istat.it.

revisions

TABLE 7. REVISIONS OF CONSUMER PRICE INDICES

November 2019, indices, month on previous month and month on same month a year ago percentage changes (index, 2015=100)

	FLASH ESTIMATES			FINAL DATA		
	indices	rates of change%		indices	rates of change %	
	November 2019	Nov-19 Oct-19	Nov-19 Nov-18	November 2019	Nov-19 Oct-19	Nov-19 Nov-18
Italian consumer price index for the whole nation (NIC)	102.8	0.0	+0.4	102.6	-0.2	+0.2
Italian harmonized index of consumer prices (HICP)	103.8	-0.1	+0.4	103.6	-0.3	+0.2

COICOP: classification of individual consumption by purpose.

Core inflation: it is calculated by excluding unprocessed food and energy.

Durable goods: they include cars, furnitures and appliances.

ECOICOP: European classification of individual consumption by purpose, which provides a level of detail (the sub-classes) greater than the COICOP.

Food: in addition to products such as bread, meat, cheese, it includes non-alcoholic and alcoholic beverages. The *Processed food* destined for final consumption are defined as the result of a process of industrial transformation (such as fruit juices, sausages, frozen products). *Unprocessed food* are fresh food (such as fresh meat, fresh fish, fruit and fresh vegetables).

Grocery and unprocessed food: it includes, in addition to food, the goods for cleaning and ordinary maintenance of the house and personal hygiene and beauty products.

HICP: harmonized index of consumer prices for the countries of the European Union.

HICP-SA: Harmonized indices of consumer prices for special aggregates. They are indicators compiled according to a different classification scheme from the ECOICOP-HICP and from that used for the NIC indices by product type. The classification scheme and calculation method are common to those used by Eurostat. From the dissemination of January 2019 definitive data, coherently with Eurostat strategy, the method of calculation of the special aggregates of the Italian HICP has changed and they are obtained by aggregating the indices of the ECOICOP subclasses (previously, for the calculation of these indicators the class indices were used). Series of the new SA indices were recalculated from January 2017, replacing the old ones and they are available on http://dati.istat.it/.

HICP-CT harmonized index of consumer prices with constant taxation for the countries of the European Union.

Inflation: it measures the temporal changes of prices of a basket of products that represents all the goods and services intended for the final consumption of households and purchasable on the market through monetary transactions.

Non energy industrial goods: they include consumer goods excluding food, energy and tobacco products.

Non-durable goods: they include housecleaning detergents, personal care products and medicines.

Regulated energy products: they include the tariffs for electricity - regulated market and gas for domestic use.

Regulated products: they include regulated energy products and other regulated products.

Semi-durable goods: they include clothing, footwear, books.

Non-regulated energy products: they include fuels for motor vehicles, lubricants, non regulated fuels for domestic use and electricity - liberalized market.

NIC: italian consumer prices index for the whole nation.

Services related to housing: they include services for repair, cleaning and maintenance of the house, refuse collection, rents, maintenance charges in multi-occupied buildings, water supply and sewerage collection.

Services related to communication: they include telephone services and postal services.

Services related to recreational, including repair and personal care: they include holiday packages, accommodation services, restaurants, bars and the like, canteens, repair of audiovisual, photographic and IT equipment, clothing services, services for personal hygiene, recreational and cultural services and games of chance.

Services related to transport: include air, sea, rail and road transports, maintenance and repair of personal transport equipment, insurance connected with transport.

Services - miscellaneous: they include education, medical services, social protection, financial services; Legal services and accountancy; funeral services, insurance connected with health.

Short-term percentage change: change compared to the previous period.

Trend percentage change: change compared to the same period of the previous year.

methodological**note**

Introduction and regulatory framework

The consumer price indices measure the variations over time of the prices of a collection of products (basket) that represents all the goods and services intended for the final household consumption, obtainable on the market through monetary transactions (free transactions, own-consumptions, rents, etc. are excluded).

The system of consumer price indices consists of two different indicators[1]:

▶ **the Consumer Price Index for the whole nation (NIC)** is used as a measure of headline inflation;

▶ **the Harmonized index** of Consumer Prices (HICP), calculated according to the EU regulations in force, is used for the comparison of inflation between Member States and as a key indicator for the monetary policy of the European Central Bank. In compliance with the European legislation, and consistently with the standards provided by the regulations, the HICP index is also processed in the "constant taxation" version (HICP-CT).

The HICP index is calculated and issued on the reference base of 2015=100 (Regulation (EU) 2016/792 of the European Parliament and of the Council). The same reference year is also used for the NIC index.

The survey of consumer prices indices is governed by different laws and regulations that define the actors involved (Italian National Institute of Statistcs - Istat and Municipalities) and their relative functions:

- the Regio Decreto Legge n. 222/1927, that gives Istat the task, of promoting the formation of price indices in all municipalities with more than 100,000 inhabitants and in others municipalities chosen among the provincial capitals or those with more than 50,000 inhabitants that have adequate statistics offices;
- the Law n. 621/1975 amends the Regio Decreto Legge n. 222/1927 with regard to the municipalities which are responsible for conducting the consumer price survey, as follows: "among the municipalities referred to in art. 1… must be understood to include all the provincial capital municipalities and those with over 30,000 inhabitants who have a suitable statistical office";
- D.lgs n. 322/1989, that governs the survey, processing, analysis and dissemination activities, and archiving statistical data performed by public authorities and bodies of statistical information, for the purpose of creating the single direction, organizational consistency and the streamlining of flows at a central and local level;
- the Regulation (EU) 2016/792, concerning the harmonized index of Consumer Prices and the House Pice index (HPI).

Survey coverage and organization

Data contributing to the calculation of monthly consumer price indices are collected using different sources: the *local survey*, carried out by municipal statistics offices, under Istat supervision and coordination; the *central survey* carried out directly by Istat or through different data providers; the *scanner data*; the *administrative sources*.

In 2019, the weight of the products exclusively collected by the local survey is equal to 59.6% (data referred to NIC index) and the weight of the products which are collected by central survey is 25.9%. In addition, for grocery products excluding fresh food, whose weight is 10.8%, prices are collected through both scanner data - with regard to the distribution channel of hypermarkets and supermarkets (for 55%) - and local survey - with regard to other types of points of sale (for the remaining 45%).

Finally, an administrative source is used: the database of fuel prices of Ministry of Economic Development whose weight is equal to 3.7%.

In 2019 the geographical basis of the survey is made up of 79 municipalities which contribute to the indices calculation of all the product aggregates included in the basket - and of other 15 municipalities[2] participating in the survey for a subset of products which includes local tariffs (water supply, solid waste, sewerage collection, gas for domestic use, urban transport, taxi, car transfer ownership, canteens in schools, public day nursery, etc.) and some local services (sport events, cinemas, theatre shows, secondary school education, canteens in universities, etc.).

In the all 94 municipalities (79 for the full basket and 15 for a subset of products) taking part in the 2019 survey, prices are collected in more than 41,900 statistical units (including outlets, enterprises and institutions) while rents are collected for about 8,000 dwellings. 458,000 quotes are sent on a monthly basis to Istat by Municipal Offices of Statistics (UCS in Italian) each month.

---

[1] A third indicator, the "household of workers and employees consumer price index" (FOI), which refers to the consumption of the whole households headed by an employed worker, is also calculated (as a satellite index of NIC) and released by Istat on monthly basis.

[2] Asti, Chieti, Fermo, Foggia, Frosinone, L'Aquila, Matera, Monza, Prato, Ragusa, Salerno, Savona, Vasto, Verbania and Vibo Valentia.

As a result of the annual update of the survey, 2.5% of the current price quotes collected by UCS are new (of these, 1.0% are price quotes of new products, while the remaining 1.5% refer to the product already in 2018 basket).

In 2019 prices/quotes collected each month directly by Istat are more than 238,000: 237,000 via web, also using web scraping techniques or collecting data from different providers, about 400 quotes directly provided by insurance companies (which refer to protection against most risks connected to property, such as fire, theft and other damages and are used for the Housing insurance services price index compilation) and over 600 detected by internal sources.

Regarding scanner data[3], a cut off sample of barcodes (GTINs) has been selected within each outlet/aggregate of products (covering 40% of turnover but selecting no more than the first 30 GTINs in terms of turnover). The products selected in December are kept fixed during the following year. About 1,800,000 price quotes are collected each week to estimate inflation. For each GTIN, prices are calculated taking into account turnover and quantities (weekly price=weekly turnover/weekly quantities).

Concerning fuels, the use of the MiSE database (firstly introduced in 2017) has improved the territorial coverage of the index which at present includes all 107 Italian provinces (approximately 86,000 price quotes are used every month for the inflation estimate).

Calculation of indices

Weighting structure

Not all goods and services included in the basket have the same importance in households' budget. Consequently, for the compilation of the consumer price index, weights are used that reflect the expenditure shares of different products on final consumption expenditure.

Specifically, for HICP the weighting coefficients are determined on the basis of the household final consumption expenditure as derived from National Accounts (for 2019 data refers to year 2017). Additional information, used to define weights at the lower levels of the classification of consumption expenditures, derives from the Household Budget Survey, from other Istat surveys and from external sources[4], such as Ac Nielsen and GfK Italia S.r.l.

To properly calculate the weighting coefficients, the expenditure shares are price-updated to the computation base period of indices (December 2018) using the price changes measured between the year 2017 and December 2018. Table 1 shows the 2019 weighting structures by expenditure division of NIC and HICP.

TABLE 1. WEIGHTS USED TO CALCULATE CONSUMER PRICE INDICESBY EXPENDITURE DIVISION.
Year 2019, percentage values

EXPENDITURE DIVISIONS	NIC	HICP
Food products and non-alcoholic beverages	16.3321	17.3257
Alcoholic beverages and tobaccos	3.0573	3.2419
Clothing and footwear	7.0421	8.1483
Housing, water, electricity and fuels	11.0312	11.7221
Furniture, home items and services	7.1823	7.6564
Health services and costs	8.5284	4.3377
Transportation	14.4119	15.2947
Communications	2.4676	2.6228
Entertainment, shows and culture	7.7936	6.0987
Education	1.0102	1.0737
Hospitality and restaurant services	11.8409	12.5647
Other goods and services	9.3024	9.9133

---

[3] The use of scanner data for the estimation of inflation concerns 79 indices of aggregate of products belonging to 5 ECOICOP Divisions (01, 02, 05, 09, 12).

[4] It should be noted that, due to the unavailability of sufficiently robust estimates of provincial consumption, in the first stage of indices aggregation the consumer price indices, chief towns of provinces contribute to the calculation of regional indices taking into account the relative importance of the province in the region in terms of population. For the calculation of this set of weights, which are based on provincial population data, in 2019, data coming from demographic balance - resident population of 2017, December, 31, have been used.

General index	100.0000	100.0000

Aggregation of national and territorial indices

The consumer price indices are calculated through subsequent aggregations of the indices of product aggregates compiled at provincial level.

In detail, the *national All-items index* is compiled as follows:

▶ the provincial indices of product aggregates are aggregated to build the corresponding regional indices. The weighting coefficients used are based on the weight of each provincial capital in terms of resident population;

▶ the regional indices of product aggregate are aggregated to build the corresponding national indices. The weighting coefficients used are based on the weight of each region in terms of household consumption;

▶ the All-items index is obtained as the weighted average of the national indices of product aggregates. The weighting coefficients used are based on expenditure shares of each product aggregate.

The *All-items index at provincial, regional and macro-regional level:*

▶ the All-items indices *by regions and macro-regions* are obtained as the weighted average of the regional indices of product aggregates. The weighting coefficients used are based on the weight of each component in terms of household consumption, defined at regional and macro-regional level.

▶ The All-items indices *by provinces* are compiled as the weighted average of provincial indices of product aggregates. The weighting coefficients used are based on the weight of each aggregate of product in terms of household consumption, defined at a regional level.

Classification of consumer prices indices

Classification of consumption so far used for HICP and NIC is the international classification ECOICOP (European Classification of Individual Consumption by Purpose), whose hierarchical structure has 4 levels of disaggregation: Divisions, Groups, Classes and Subclasses of product.

The classification ECOICOP was adopted in 2016, in compliance with the new European framework regulation on harmonized indices of consumer prices and the house price index, (2016/792).

For the calculation of Italian consumer price indices, subclasses of product are further broken down in Consumption segments and Product aggregates.

Consumption segments are the most disaggregated level for which NIC indices referring to the entire national territory are disseminated. Concerning HICP indices, the level of detail of the dissemination is that of the classes of product (the dissemination of HICP subclass indices is expected to start in 2019). At local level (geographical area, region, province), NIC indices are published up to the product groups.

HICP indices by special aggregates (**HICP-SA**) are released too. HICP-SA indices are calculated using the same classification scheme and method adopted by Eurostat (therefore different from the method used for the calculation of NIC indices by types of product), in order to guarantee comparability among the Italian HICPs and the HICP of the other EU countries and the HICPs for the EU and the euro area produced by Eurostat[5]. From the dissemination of January 2019 definitive data, coherently with Eurostat strategy, the method of calculation of the special aggregates of the Italian HICP has changed and they are obtained by aggregating the indices of the ECOICOP subclasses (previously, for the calculation of these indicators the class indices were used). Series of the new SA indices were recalculated from January 2017, replacing the old ones.

---

[5] HICP-SA indices have been released starting from data referred to February 2013.
The description of product classes which are included in the special aggregates is available on Eurostat web site at the following link:
http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=COICOP_5&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=HIERARCHIC.
The HICP-SA calculation method is described in the HICP Compendium which is downloadable at the following link:
http://ec.europa.eu/eurostat/documents/3859598/5926625/KS-RA-13-017-EN.PDF/59eb2c1c-da1f-472c-b191-3d0c76521f9b?version=1.0.
Back series starting from January 2001 are published on I.Stat, the warehouse of Istat statistics, inside the theme "Prices".

Survey and calculation of prices indices of seasonal products

From January 2011, the prices of *Fruit*, *Vegetables*, *Clothing* and *Footwear* are collected and processed in accordance with [Regulation (EC) no 330/2009 of 22 april 2009,](#) which sets out minimum standards for dealing with seasonal products in the HICP[6]. The same method is also used for the NIC[7]. In particular, the European Regulation defines as *seasonal product* those that consumers may not purchase for certain periods of the year, or they may purchase in modest or insignificant volumes. It also establishes that in a given month seasonal products are considered *in season* (at least one month) or *out of season*.

On the basis of this standard, Istat defines a monthly calendar for the whole year, which establishes, in a given month, when each specific product belonging to the above mentioned product groups or classes must be considered *in season* or *out of season*. The adoption of a seasonality calendar entails that the local consumer price survey is carried out only in months when the product in question is defined as *in season*, while prices of *out of season* products will be estimated on the basis of a method that is consistent with standards contained in the aforementioned European Regulation.

Flash estimates of HICP: accuracy and computation methodology

Flash estimate of Italian HICP (and NIC) are usually published on the last working day of the reference month according to the Eurostat release calendar of HICP flash estimate for euro area. Final data are generally published around 15 days later.

The aim of the inflation flash estimates is to provide a timely information on inflation, predicting as accurately as possible the final HICP (and NIC) annual rate of change released about two weeks later. The analysis of their revisions represents an important tool to evaluate the correct balancing between the two quality dimensions, timeliness and accuracy.

In line with the Eurostat Statistics Explained on Inflation – methodology of the euro area flash estimate, this section analyses the accuracy of the Italian HICP flash estimates and describes the methodology used in their computation.

Accuracy of flash estimates

Table 2 compares the final HICP annual rates of change and the flash estimates for the same reference month. Over the last thirteen months, the maximum difference between the final HICP (all items and the flash estimate) all items annual rates of change was -0.2 percentage points in November 2019.

Over the same period, with reference to the main special aggregates, the widest differences between final HICP annual rates of change and the flash estimates concerned Processed food (including alcohol, tobacco) (-0.6 percentage points in February and in November 2019), and consequently Food, including alcohol and tobacco (-0.4 percentage points in February and in November 2019), and Energy (-1.2 percentage points in April 2019).

The highest frequency of revisions is observed for Processed food, including alcohol and tobacco (in all 13 months, due to the use in the flash estimate of scanner data referred to the prices of grocery products from the modern retail trade distribution of one/two weeks compared to the three weeks included in the final index) and for Non energy industrial goods (11 months out of 13, mainly due to the seasonal sales dynamics of Clothing and footwear and to the availability for the flash estimate, for some durable goods, of the data referring to one or two weeks compared to the three included in the final index); the partial information available has a higher impact on the flash estimate and therefore it turns out to be less accurate.

---

[6] It has been adopted starting from data referred to January 2011.

[7] It is used for FOI indices, too.

TABLE 2. FLASH ESTIMATES AND HICP ANNUAL RATES FOR THE ALL-ITEMS AND MAIN SPECIAL AGGREGATES(*)
November 2018 – November 2019, percentage values (base 2015=100)

Special aggregates		Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19
Food including alcohol and tobacco:	**Flash**	1.3	1.0	0.8	2.4	1.5	0.6	0.8	0.7	1.2	1.4	1.1	1.2	1.3
	HICP	1.2	0.9	0.8	2.0	1.4	0.6	0.7	0.6	1.1	1.1	0.8	1.0	0.9
Processed food (including alcohol, tobacco)	**Flash**	1.4	0.8	0.3	1.7	1.3	0.5	0.9	0.8	0.9	1.0	1.1	1.1	1.4
	HICP	1.2	0.7	0.4	1.1	1.0	0.4	0.7	0.6	0.7	0.7	0.7	0.8	0.8
Unprocessed food	**Flash**	1.2	1.1	1.3	4.0	1.9	0.9	0.8	0.5	1.7	1.8	1.1	1.2	1.2
	HICP	1.1	1.0	1.3	4.0	1.9	0.9	0.8	0.5	1.6	1.8	1.1	1.2	1.2
Energy	**Flash**	9.2	6.5	3.3	4.2	5.6	6.2	4.5	2.6	-1.0	-2.0	-2.9	-4.8	-4.7
	HICP	9.2	6.5	3.7	4.2	5.6	5.0	4.5	2.6	-1.9	-2.0	-2.9	-4.8	-4.7
Non energy industrial goods	**Flash**	0.0	-0.1	0.0	0.0	-0.1	-0.5	-0.3	-0.5	-0.6	0.1	-0.1	-0.1	0.3
	HICP	-0.1	0.0	0.1	-0.1	-0.2	-0.5	-0.2	-0.5	-0.8	0.0	-0.2	-0.2	0.2
Services	**Flash**	1.2	0.9	1.0	0.7	0.6	1.4	0.9	1.0	1.0	0.9	0.9	1.2	1.2
	HICP	1.1	0.9	0.9	0.7	0.7	1.5	0.8	1.0	1.0	0.9	1.0	1.2	1.1
All-items	**Flash**	**1.7**	**1.2**	**0.9**	**1.2**	**1.1**	**1.2**	**0.9**	**0.8**	**0.4**	**0.5**	**0.3**	**0.2**	**0.4**
	HICP	**1.6**	**1.2**	**0.9**	**1.1**	**1.1**	**1.1**	**0.9**	**0.8**	**0.3**	**0.5**	**0.2**	**0.2**	**0.2**
All items excluding energy and unprocessed food (Core inflation)	**Flash**	0.9	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.4	0.7	0.6	0.8	0.9
	HICP	0.7	0.6	0.6	0.5	0.5	0.7	0.5	0.5	0.4	0.6	0.5	0.7	0.7
All items excluding energy, food, alcohol and tobacco	**Flash**	0.8	0.5	0.6	0.4	0.3	0.7	0.5	0.4	0.4	0.6	0.5	0.8	0.8
	HICP	0.7	0.5	0.6	0.4	0.3	0.7	0.5	0.4	0.4	0.6	0.5	0.7	0.7
All items excluding energy	**Flash**	0.9	0.6	0.6	0.9	0.7	0.6	0.6	0.5	0.5	0.8	0.6	0.8	1.0
	HICP	0.8	0.6	0.6	0.8	0.6	0.7	0.5	0.5	0.5	0.7	0.5	0.7	0.8

(*) For reasons of comparability. the provisional and definitive estimates of the annual rates of change shown in this table. including those of January 2019, refer to the indices of the special aggregates obtained according to the old calculation method, that is by aggregating the indices of the ECOICOP classes. From February 2019, to measure the accuracy of the estimates, the special aggregates of the HICP are calculated by aggregating the subclass indices of the ECOICOP classification.

The Mean Absolute Deviation (MAD) provides another way to measure accuracy. It is calculated as the average of the differences in absolute value between the final HICP annual rates of change and the flash estimates over the last thirteen months. Figure 1 shows the MAD for the all-item index and the main special aggregates. Over the last thirteen months Processed food (including alcohol tobacco) (0.277 percentage points). Food including alcohol and tobacco (0.169 percentage points) and Energy (0.192 percentage) recorded the highest MADs.

FIGURE 1. MEAN ABSOLUTE DEVIATION BETWEEN FLASH ESTIMATES AND HICP ANNUAL RATES.
November 2018 – November 2019, percentage points
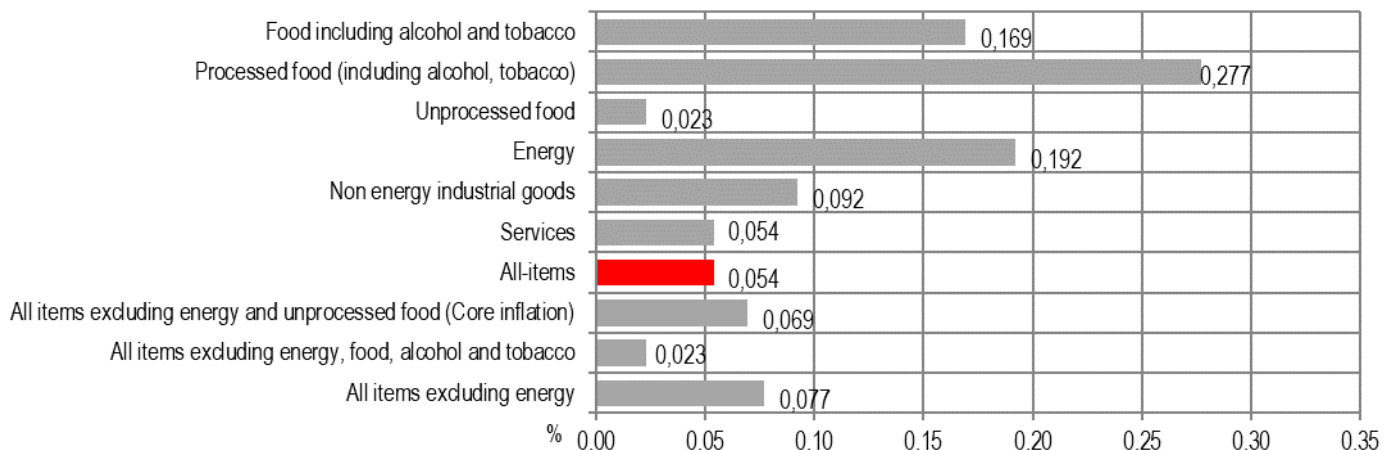
Dissemination: timing and database

Consumer prices indices dissemination by Istat occurs in two successive dates according to a different release method of the data: flash estimate and definitive estimate.

The dissemination of flash estimate of the NIC indices (general, by expenditure division, by product type and by purchase frequency) and the (general) HICP index occurs at the end of the reference month, while that one of the definitive data of the indices, NIC and HICP, occurs no later than the middle of the month following the reference month. The publication times are established by a https://www.istat.it/it/informazioni-e-servizi/per-i-giornalisti/appuntamenti/calendario-diffusioni-ed-eventi agreed upon with Eurostat, in the month of December of each year, for the next year, and according to the dissemination standards (SDDS – Special Data Dissemination Standard) defined by the International Monetary Fund.

Starting from the publication of the data of January 2019, the direct dissemination of the municipal indices of consumer prices is carried out by the authorized municipalities simultaneously with the dissemination of the definitive indexes by Istat.

The indices, for both flash and definitive estimates, are issued through the "Consumer prices index" press release on the Istat website at https://www.istat.it/en/archivio/consumer+prices.

The series of the updated indices are published, in conjunction with the issue of the press release, on the Istat data warehouse within the theme Prices - Consumer prices. Together with the monthly indices, the short-term and trend percentage variations, the average annual indices, the average annual variations and the annually calculated weights are issued.

Information on the consumer price indices is available in on the EconomicTrends.Stat database, that collects and organizes the short-term statistics produced by Istat, and offers itself as a study tool for policy makers, social workers, scholars and citizens.

Information on the historic series of all indices, beginning from 1861 to 2015, is available on the Istat website at Time Series.

Summary data and studies on consumer prices and on the basket of goods and services are in addition contained in some editorial publications issued by Istat annually, such as the Statistical Yearbook, the Annual Report and publication Noi Italia.

In compliance with European Regulation No. 792/2016, the data of the survey on consumer prices is transmitted to Eurostat twice per month. The main indicators, archived in the Eurostat database, are accessible at http://ec.europa.eu/eurostat/data/database (Theme "*Economy and finance*", topic "*Prices*").