Information note

nota

Istat 9c

Year 2016

CONSUMER PRICE INDICES

Basket, weight structure and survey updating

■ As every year, Istat updates the list of products included in the consumer price index basket. The update takes into account the novelty emerged in the household spending habits and enriches, in some cases, the range of products which represent consolidated consumption.

■ In 2016 the update of the basket also reflects the consequences of the introduction of the new classification ECOICOP (European Classification of Individual Consumption by Purpose).

■ The 2016 basket for the Italian consumer price indices for the whole nation (NIC) and for blue and white-collar households (FOI) is made up of 1,476 elementary products (1,447 in 2015), which are grouped into 901 products and 400 aggregates.

■ The 2016 basket for the Italian harmonized index of consumer prices (HICP) is made up of 1,484 elementary products (1,457 in 2015), grouped into 906 products and 404 aggregates.

■ Compared with 2015, *Vegetable drinks*, *Men's short pants for men*, *Leggings for baby girl*, *LED bulbs*, *Cloths capture dust*, *Telephony/Internet/television packages*, *University lodgings*, *Tattoo* have been included in the basket for the first time. *Second-hand motor cars* integrates *New motor cars* whereas *Drills* enriches the set of products in the consumption segment *Motorized major tools and equipment for house and gardens*. The product *Bunks and Wagon Lit* has been dropped from the basket.

■ In 2016, as in 2015, data coming from chief towns of 80 provinces are processed to estimate monthly inflation; the survey coverage, measured in terms of provincial population, is equal to 83.5%.

■ Other 16 towns (four more than in 2015) participate in the territorial survey with regard to a subset of products (local tariffs, fuels and some services). The weight of this subset of products on the NIC basket is 8.9%. For these products, the coverage of survey, measured in terms of provincial population, is 92.4%.

■ In the chief towns, prices are collected in more than 42,300 statistical units (including outlets, enterprises and institutions) and rents are observed for about 8,000 dwellings. There are 1,187 petrol stations for which prices are collected through the data base of the Ministry of Economic Development.

■ In total 607,000 price quotes are collected each month; 495,500 of them are collected locally by Municipal Offices of Statistics (MOS) and 111,500 are collected directly by Istat via web, using web scraping techniques or receiving information from different providers (Italian Customs Agency, Aiscat, Farmadati, Italian Association of Publishers, Quattroruote, etc.) or through the data base of the prices of automotive fuels of the Ministry of Economic Development (3,600 quotes).

■ Compared with 2015 and with regard to NIC, the weight of *Goods* increases slightly (from 53.55% a 53.72%), at the expense of *Services* (from 46.45% to 46.28%). This is mainly due to the growth of the weights of *Durables goods* and *Unprocessed food* and to the decrease of the weight of *Services related to transport*.

■ With regard to expenditure divisions, the most important weight increases occur for *Restaurants and hotels* and for *Miscellaneous goods and services*. The largest decreases occur for *Transport* followed by *Furnishings, household equipment and routine household maintenance*.

■ Starting with the final data for the month of January 2016, all three indices (HICP, NIC and FOI) will be expressed in reference base 2015=100.

■ For all the aggregates produced in both the previous classification (COICOP Rev.Istat) and the new (ECOICOP), HICP time series will be produced in the new reference base. For NIC and FOI indices, in order to ensure comparability between the temporal series expressed in the new reference base, and those in the previous base, the corresponding splicing coefficients will be made available.

The new classification of consumption expenditure

The classification of consumption used so far for HICP, NIC and FOI is the international classification COICOP (Classification of Individual Consumption by Purpose). Its hierarchical structure has 3 levels of disaggregation: Divisions, Groups and Classes of product.

The classification ECOICOP, annexed to the new European framework regulation on harmonised indices of consumer prices and the house price index, currently under approval, takes into account the introduction of an additional level of detail, the subclasses of product.

As of 2011, Istat, according to the guidelines that consolidated at European level(with the COICOP Rev.Istat) introduced two further levels of disaggregation, the subclasses of product and consumption segments. Starting with the final data of January 2016, the subclasses of product that Istat will use to classify HICP, NIC and FOI will be those of ECOICOP. Even if they reduced from 235 to 227, they largely coincide with those introduced in 2011; only 21 are non-connectable with one of the existing subclasses. Even the segments of consumption, representing an articulation of the subclasses of product developed by Istat, will be consistent with the ECOICOP and they will reduce from 326 to 300, of which 280 connectable with the previous ones. In the following cases, the new breakdown has a relevant impact on the indices that Istat will disseminate:

▶ Milk will be no longer grouped by *Fresh milk* and *Long-life milk* but by *Whole milk* and *Skimmed milk*;

▶ the product class *Motor cars* will be articulated in *New cars* and *Second-hand cars*;

▶ in the product class *Telephone and telefax services* a new subclass will be introduced *Bundled telecommunication services* (telephony/Internet/television packages);

▶ for the product class *Recreational and sporting services* two new subclasses will be introduced: *Recreational and sporting services – Attendance* and *Recreational and sporting services – Participation.*

Segments of consumption are still the most disaggregated level for which NIC indices referred to the entire national territory will be disseminated. For HICP indices, the level of detail of the dissemination will continue to be, at first, that of the product classes, but, during 2016, taking into account the choices made by Eurostat, will become the one of the product subclasses. FOI national indices will continue to be disseminated for the divisions. At local level (geographical area, region, province), the publication of NIC indices will continue up to the product groups and of FOI indices, just at provincial level, up to the divisions.

In Table 1 the amount of indices compiled and disseminated at level of consumption segments are reported, grouped by expenditure divisions. Expenditure divisions for which the amount of consumption segments decreases the most are *Miscellaneous goods and services*, *Furnishings, household equipment and routine household maintenance* and *Recreation and culture*; on the contrary for *Communication* and *Health* the information details increase. The expenditure division with the highest number of consumption segments produced and disseminated is still *Food and non-alcoholic beverages.*

TABLE 1. CONSUMER PRICE INDICES ACCORDING TO THE MAXIMUM LEVEL OF DETAIL OF THE CLASSIFICATION, BY DIVISION

Divisions	Consumption Segments 2015	Consumption Segments 2016	Absolute difference	Percentage change	Connectability
Food and non-alcoholic beverages	83	81	-2	-2.4	77
Alcoholic beverages, tobacco	11	11	0	0.0	11
Clothing and footwear	27	24	-3	-11.1	24
Housing, water, electricity, gas and other fuels	16	16	0	0.0	15
Furnishings, household equipment and routine household maintenance	40	33	-7	-17.5	32
Health	11	12	1	9.1	10
Transport	30	30	0	0.0	26
Communication	6	8	2	33.3	7
Recreation and culture	50	44	-6	-12.0	43
Education	5	5	0	0.0	5
Restaurants and hotels	17	14	-3	-17.6	10
Miscellaneous goods and services	30	22	-8	-26.7	20
ALL ITEMS	**326**	**300**	**-26**	**-8.0**	**280**

Consumption segments are now divided into 400 product aggregates and then into 901 products, for which the prices are collected for 1,476 elementary products. 357 of 400 of product aggregates will be connectable with the representative positions in which the classification below the consumption segments was previously divided.

The elementary products represent, therefore, the maximum level of the aggregation structure of the basket for which, one or more times a month, prices are collected. The products are the first grouping of elementary products (for example the product *Letter handling services* groups on the elementary products *Assured mail*, *Registered mail* and *Priority Mail*) which, in turn, are summarized in the product aggregates; the latter are the most detailed level of classification for which a weight is provided.

In Table 2 the new hierarchical structure adopted for the calculation of the NIC and FOI indices is compared with that used for the data published up to December 2015.

TABLE 2. CLASSIFICATION NIC AND FOI INDICES: COMPARISON BETWEEN COICOP REV.ISTAT AND ECOICOP

Year**2015**	Year**2016**
12 expenditure divisions	12 expenditure divisions
43 product groups	43 product groups
101 product classes	101 product classes
235 product sub-classes	227 product sub-classes
326 consumption segments	300 consumption segments
618 representative items	400 product aggregates
1441 elementary products	901 products
	1476 elementary products

The new structure of the indices of consumer prices will therefore result in the monthly publication of more than 680 indicators on the NIC, which are added to those by product type, with details of the different types of goods and services, of regulated and non-regulated goods and services, and for different frequency of purchase of the products.

For a comprehensive review of statistical information on consumer prices refer to the hierarchical structure of indexes, aggregated expenditure divisions, which is available on the Istat website at http://www.istat.it/en/archive/36294.

The 2016 basket of goods and services

The 2016 basket for the Italian consumer price index for the whole nation (NIC) and for blue and white-collar households (FOI) is made up of 1,476 elementary products (1,441 in 2015 grouped into 618 representative items according the previous classification) which are grouped into 901 products and into 400 product aggregates. The 2016 basket for the Italian harmonized index of consumer prices (HICP) is made up of 1,484 elementary products, which are grouped into 906 products and then into 404 product aggregates (1,457 in 2015 grouped into 623 representative items according the previous classification)[1].

It is worth mentioning that the products are the most elementary level of consumption aggregation structure for which prices are collected once or twice a month. The product aggregates are, within the Consumption segments, the lowest level of disaggregation for which a weight is available.

The basket of consumer prices is by now so complete and detailed that the number of products entering and leaving the price collection each year is really limited. As usual, the revisions made to the basket in 2016 are different in nature and designed to capture the evolution of the consumer spending behavior. The following new products are brought in the basket (Table 3):

▶ *Vegetable drinks* within the segment *Other products based on milk or similar*. Their inclusion is designed to represent the growing demand for milk made from soy, rice and other cereals or legumes;

▶ *Men's short pants,* that expands the products represented in the aggregate product *Fullbody man and pants*;

▶ *Leggings for baby girl* that expand the range of products which make up the consumer segment *Other garments for children (0-13 years)*;

▶ *LED bulbs* (in the consumption segment *Small electrical accessories*), the disclosure of which involves a growing number of consumers, it goes in the same segment as the *Energy saving bulb*, which is already present in the basket;

▶ *Capture dust cloths*, which fall within the segment *Other consumer non-durable household articles*;

▶ *Integrated telecommunications services (TV, Internet and voice)*, which increase the range of telecommunications services, taking into account a type of consumption which has has been consolidating in recent years thanks to a growing offer by major telecom companies;

▶ *University lodgings*, in the segment *Accomodation services of other establishments*;

▶ *Tattoos,* which fall within the segment *Personal grooming treatments.*

In addition, to expand the coverage of the aggregate consumption (by adding products and primary products that represent them or by further articulation of products already in the basket) and take into account the changes introduced with the adoption of ECOICOP it is to be noted what follows:
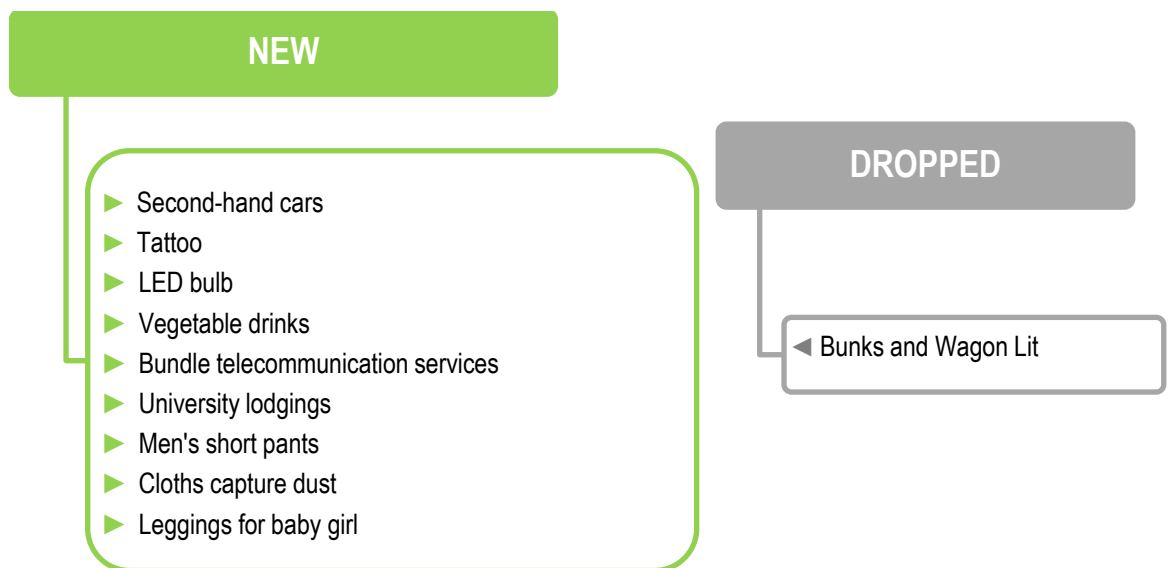
▶ the elementary products *Fresh whole milk* and *Long-life whole milk* were included under the new subclass *Whole milk* and *Fresh skimmed milk* in the new subclass *Skimmed milk*;

▶ the elementary product *Baby watermelon* was brought in to integrate the data collection of prices of *Watermelons*;

▶ the consumption segment *Other cultivated vegetables* now also includes the *Pumpkins* that are added to existing product aggregates *Cucumbers*, *Eggplants*, *Peas*, *Zucchini*, *Peppers* and *Green beans*;

▶ the *T-shirt* enriches the product aggregate *Men's shirts*;

▶ the *Drill* enriches the range of products in the consumption segment *Motorized major tools and equipment for house and gardens*;

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[1] The difference between the two baskets is due to two elements: on one hand in the HICP basket (but not in the NIC/FOI one), contribution to the NHS for pharmaceutical products, specialist practices and services of medical analysis (six items) are included; on the other hand in the NIC/FOI basket (but not in the HICP one), Games of chance are included.

▶ the products *Orthopedic (freelancer)* and *Pediatrician (intramural activities)* enrich the consumption segment *Medical specialist services*;

▶ the introduction of *Second-hand cars* within the new subclass integrates the collection of prices of *New cars*;

▶ the price paid for the use of a sport facility is detected in the new subclass of *Recreational and sporting services – Participation*;

▶ the prices of *Services of painters* will be used to calculate an index in this new subclass improving the coverage of the class of products *Services for the maintenance and repair of the dwelling*.

The products eliminated include *Bunks and Wagon Lit* (the expenditure incurred by households for this service is now negligible), the *Car ownership transfer* and *Motorcycle ownership transfer*, the costs of which will continue to be collected to calculate indices of prices of cars and motorcycles.

TABLE 3. CONSUMER PRICE INDICES BASKET 2016: NEW AND DROPPED PRODUCTS

NEW

► Second-hand cars
► Tattoo
► LED bulb
► Vegetable drinks
► Bundle telecommunication services
► University lodgings
► Men's short pants
► Cloths capture dust
► Leggings for baby girl

DROPPED

◄ Bunks and Wagon Lit

In the update of the basket, revisions of product denomination and of short and long description are included. The revisions have been carried out in order to adapt them to the changes in the characteristics products or to better guide data collection activity. For 2016 short and/or long descriptions of 15 product aggregates and of 38 products have been changed.

The new weighting structure

The weighting coefficients of indices are determined on the basis of the values of household final consumption expenditure and of household final monetary consumption expenditure (for HICP), as derived from National Accounts. Additional information used to define weights are originated from the Household Budget Survey, from other Istat surveys and from external sources, which have an auxiliary function[2]. National Accounts data, used for 2016 weight structure estimation, are classified according to the European system of national and regional accounts (Esa 2010) whereas HBS data (based on the new survey, whose data were disseminated on the 8th of July 2015) take into account the new ECOICOP.

Price changes of goods and services included in the basket concur in the calculation of All-item index with their own weight in terms of the expenditure share sustained by households to purchase them. However, in order to measure the expenditure shares with reference to the value of the computation base period of indices (December 2015), household final consumption data,

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[2] It should be noted that, for 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 2016, data coming from demographic balance - resident population of 2014, December, 31, have been used.

referred to the year 2014, are price-updated using the price changes measured between the year 2014 and December 2015.

Table 4 shows the 2015 weighting structures by expenditure division of NIC, HICP and FOI indices and their differences. Ordering expenditure divisions according to their relative weights, the three indices, with the exception of *Health*, show relatively small differences. For all the indices the expenditure divisions with a comparatively higher weight are those of *Food and non-alcoholic beverages* and *Transport.*

TABLE 4. WEIGHTS USED FOR CALCULATING CONSUMER PRICE INDICES, BY EXPENDITURE DIVISIONS
2016, percentage values

Expenditure divisions	Weights		
	NIC	HICP	FOI
Food and non-alcoholic beverages	16.5706	17.6326	15.3750
Alcoholic beverages, tobacco	3.2497	3.4597	3.4490
Clothing and footwear	7.1837	8.3102	7.9923
Housing, water, electricity, gas and other fuels	11.4454	12.2032	11.4024
Furnishings, household equipment and routine household maintenance	7.1798	7.6724	6.5215
Health	8.6049	4.1506	7.0294
Transport	13.3218	14.1802	15.4704
Communication	2.6950	2.8727	3.1950
Recreation and culture	7.7890	6.0996	8.1386
Education	1.2482	1.3314	1.4612
Restaurants and hotels	11.4490	12.1889	10.8368
Miscellaneous goods and services	9.2629	9.8985	9.1284
ALL ITEMS	**100.0000**	**100.0000**	**100.0000**

In the case of the NIC index, the expenditure divisions with the highest relative weight are *Food and non-alcoholic beverages* (16.57%), *Transport* (13.32%), *Restaurant and hotels* and *Housing, water, electricity gas and other fuels* (11.45% for both the expenditure divisions)[3].

The differences among the weighting structures of NIC, FOI and HICP indices are largely due to the different definition of the economic aggregate of reference for the three indices. This issue has relevant consequences for determining the weight of the expenditure division *Health* and in particular the weight of pharmaceutical products. The NIC and FOI indices include expenditure incurred by public administration for the household consumption of pharmaceutical products and health services, whereas it is excluded from the calculation of the HICP. Therefore the weight of *Health* in the basket of the harmonised index of consumer prices (4.15%) is significantly lower than the weight calculated for the national indices.

With regard to changes in the weighting structure of the NIC index, between 2015 and 2016, the highest increase in absolute terms concerns the expenditure division *Restaurant and hotels* (+0.2935 percentage points). This increase has been determined both by the relative importance ("expenditure effect") of this group of products, as measured in the National Accounts of 2014 compared to the previous year, and by the "revaluation effect" by which the expenditure in 2014 is reported to the index computation base period (December 2015). The increase observed for the weight of *Miscellaneous goods and services* (+0.2730 percentage points) is slightly lower but also in this case due to both the effects ("expenditure" and "revaluation"). Also the weights of expenditure divisions *Health*, of *Clothing and footwear*, of *Communication* and to a less extent of *Food and non-alcoholic beverages* (for which the decrease of household expenditure is offset by

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[3] It is pointed out that, in Italy, as in Europe, items in the division *Housing, water, electricity, gas and other fuels* exclude dwelling purchase, as it is an investment and not a consumer item, while they consider actual rentals for housing, which regard about 16.5% of Italian households according to 2011 Census data (the remaining 83.5% of households own their dwellings, or occupy them as usufructuary or free of charge).

"revaluation effect") and of *Education* (almost entirely due to the "expenditure effect") increase (Table 5).

Looking at the divisions of which weight in the NIC basket has reduced in 2016, the largest decrease concerns the weight of *Transport* (-0.4821 percentage points), entirely due to the price dynamics that was negative in 2015 and not balanced by the increase in the relative share of expenditure observed between 2013 and 2014. A large decrease has also been registered for the weight of *Furnishing, household equipment and routine household maintenance* (-0.4238 percentage points), due to the decline of expenditure and to the revaluation effect. Lower decreases are registered for *Housing, water, electricity, gas and other fuels* (-0.1509 percentage points) and reductions of the weight lower than 0.1 percentage points concern *Recreation and culture* and *Alcoholic beverages, tobacco.*

TABLE 5. NIC INDEX: WEIGHTING STRUCTURE BY EXPENDITURE DIVISION
2015 and 2016, percentage values and absolute differences

Expenditure divisions	2015	2016	Absolute difference	Spending effect	Revaluation effect
Food and non-alcoholic beverages	16.5266	16.5706	0.0440	-0.1552	0.1992
Alcoholic beverages, tobacco	3.2606	3.2497	-0.0109	-0.0848	0.0739
Clothing and footwear	7.0229	7.1837	0.1608	0.1553	0.0055
Housing, water, electricity, gas and other fuels	11.5963	11.4454	-0.1509	-0.1539	0.0030
Furnishings, household equipment and routine household maintenance	7.6036	7.1798	-0.4238	-0.3877	-0.0361
Health	8.4390	8.6049	0.1659	0.1264	0.0395
Transport	13.8039	13.3218	-0.4821	0.0470	-0.5291
Communication	2.5408	2.6950	0.1542	-0.0339	0.1881
Recreation and culture	7.8524	7.7890	-0.0634	-0.0809	0.0175
Education	1.2085	1.2482	0.0397	0.0405	-0.0008
Restaurants and hotels	11.1555	11.4490	0.2935	0.2573	0.0362
Miscellaneous goods and services	8.9899	9.2629	0.2730	0.2699	0.0031
ALL ITEMS	**100.0000**	**100.0000**			

Considering the weighting structure by type of products, in 2016 the relative weights of the two main components have undergone slight changes. Stopping the trend of the last years the weight of goods increases in household consumption behaviours from 53.55% to 53.75% (more precisely +0.1723 percentage points) and the weight of services decreases to 46.28% from 46.45% (-0.1723 percentage points) (Table 6).

Concerning goods, the weight of *Energy* decreases (from 9.35% in 2015 to 8.96% in 2016), due to the component of *Non-regulated energy products*, on which both the "expenditure" and the "revaluation effect" have an impact. The weight of *Food including alcohol* is substantially stable (17.63% from 17.60% of 2015) as that one of Tobacco (2.19% from 2.18% of the previous year). The increase of half percentage point of the *Non energy industrial goods* (from 24.41% in 2015 to 24.94% in 2016) is mainly due to the growth of weights of *Durable goods* (which include cars) and to a lesser extent to *Semi-durable goods* (which include clothing and footwear).

Concerning Services, the largest weight increases are registered for *Services - miscellaneous* (from 11.13% to 11.46%) and for *Services related to recreation, including repair and personal care* (from 17.24% to 17.56%), whereas the largest decrease regards *Services related to transport* (from 7.92% in 2015 to 7.39% in 2016), that reflects both "expenditure" and "revaluation" effects.

The weight of *All items index excluding energy and unprocessed food* (*Core inflation*) has a slight increase (+0.1648 percentage points) and that one of *Grocery and Unprocessed food* is stable.

TABLE 6. NIC INDEX: WEIGHTING STRUCTURE BY TYPE OF PRODUCTS
2015 and 2016, percentage values and absolute differences

Special aggregates	2015	2016	Absolute difference	Spending effect	Revaluation effect
Food including alcohol:	17.6032	17.6293	0.0261	-0.1594	0.1855
Processed food including alcohol	10.7365	10.5400	-0.1965	-0.1445	-0.0520
Unprocessed food	6.8667	7.0893	0.2226	-0.0149	0.2375
Energy:	9.3467	8.9593	-0.3874	-0.2150	-0.1724
Regulated energy products	4.6766	4.6894	0.0128	-0.1018	0.1146
Non-regulated energy products	4.6701	4.2699	-0.4002	-0.1132	-0.2870
Tobacco	2.1840	2.1910	0.0070	-0.0806	0.0876
Non energy industrial goods:	24.4136	24.9402	0.5266	0.3592	0.1674
Durable goods	7.3312	7.9828	0.6516	0.5052	0.1464
Non-durable goods	7.0570	6.7677	-0.2893	-0.3133	0.0240
Semi-durable goods	10.0254	10.1897	0.1643	0.1673	-0.0030
Goods	**53.5475**	**53.7198**	**0.1723**	**-0.0958**	**0.2681**
Services related to housing	8.0193	7.7764	-0.2429	-0.1236	-0.1193
Services related to communication	2.1410	2.0997	-0.0413	-0.1470	0.1057
Services related to recreation, including repair and personal care	17.2405	17.5565	0.3160	0.2949	0.0211
Services related to transport	7.9231	7.3869	-0.5362	-0.3112	-0.2250
Services – miscellaneous	11.1286	11.4607	0.3321	0.3827	-0.0506
Services	**46.4525**	**46.2802**	**-0.1723**	**0.0958**	**-0.2681**
ALL ITEMS	**100.0000**	**100.0000**			
All items excluding energy and unprocessed food (Core inflation)	83.7866	83.9514	0.1648	0.2299	-0.0651
All items excluding energy, food, alcohol and tobacco	70.8661	71.2204	0.3543	0.4550	-0.1007
All items excluding energy	90.6533	91.0407	0.3874	0.2150	0.1724
Grocery and unprocessed food	19.9953	19.9682	-0.0271	-0.2024	0.1753

With regard to regulated products, the weight of *Regulated goods* slightly declines (from 7.25% to 7.16%) as does the weight of *Regulated services* (from 6.65% to 6.52%) (Table 7).

TABLE 7. NIC INDEX: WEIGHTING STRUCTURE BY REGULATED AND NON-REGULATED PRODUCTS
2015 and 2016, percentage values and absolute differences

Regulated and non-regulated products	2015	2016	Absolute difference
Non-regulated goods	46.2975	46.5554	0.2579
Regulated goods	7.2500	7.1644	-0.0856
Goods	**53.5475**	**53.7198**	**0.1723**
Non-regulated services	39.8000	39.7575	-0.0425
Regulated services	6.6525	6.5227	-0.1298
Services	**46.4525**	**46.2802**	**-0.1723**
ALL ITEMS	**100.0000**	**100.0000**	

Finally, concerning products by purchase frequency (Table 8), the weight of *High-frequency purchases* decreases (-0.2671 percentage points), whereas the weight of *Low-frequency purchases* increases (+0.2336 percentage points). The weight of *Medium-frequency purchases* is substantially stable.

TABLE 8. NIC INDEX: WEIGHTING STRUCTURE BY PURCHASE FREQUENCY
2015 and 2016, percentage values and absolute differences

Purchase frequency	2015	2016	Absolute difference
High-frequency purchases	40.4323	40.1652	-0.2671
Medium-frequency purchases	43.0053	43.0388	0.0335
Low-frequency purchases	16.5624	16.7960	0.2336
ALL ITEMS	**100.0000**	**100.0000**	

Geographical basis and coverage rate

In 2016 the geographical basis of the survey is made up of 80 municipalities (19 regional chief towns and 61 provincial chief towns) - which contribute to the indices calculation of all the product aggregates included in the basket - and of other 16 municipalities (four more than in 2015; 14 provincial chief towns) 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.), some local services (building worker, football matches, cinemas, theatre shows, secondary school education, canteens in universities etc.) and automotive fuels (collected through the data base of the Ministry of Economic Development).

For the whole basket, the coverage of the index, in terms of resident population in the provinces whose chief towns take part in the survey, is 83.5%. The participation of provincial chief towns is total for six regions (Valle D'Aosta, Trentino Alto Adige, Veneto, Friuli-Venezia Giulia, Emilia-Romagna and Umbria) but it is still incomplete for the others, in particular in Puglia (40.8%) and Sardegna (53.9%); Molise participates in the consumer price survey for the basket subset only.

At the macro-area level, coverage is total in the North-East; it is equal to 90.4% in the North-West, 83.3% in the Centre, 66.2% in the South and 74.8% in the Island.

Concerning the basket subset including local tariffs, some local services and automotive fuels – whose weight on the NIC basket is equal to 8.9% – with the participation of the other 16 municipalities, the coverage of the survey, measured in terms of provincial resident population, rises to 92.4%. The participation become total for 13 regions (Molise is one of them, starting again the data collection for consumer price survey with two chief towns, Campobasso and Isernia and then Termoli) and it is stable in the remaining regions.

Price survey methods

Data contributing to the calculation of monthly consumer price indices are traditionally collected through two distinct surveys: the local survey, carried out by municipal statistics offices, under Istat supervision and coordination, and the central survey, carried out directly by Istat.

The prices of the products belonging to the expenditure division *Communication* are exclusively monitored by Istat, while prices of products included in the divisions *Food and non-alcoholic beverages* and *Clothing and footwear* are exclusively collected by the Municipal Offices of Statistics.

Local survey

In the 96 municipalities (80 for the full basket and 16 for a subset of product), taking part in the 2016 survey, prices are collected in more than 42,300 statistical units (including outlets, enterprises and institutions) and rents are observed for about 8,000 dwellings. 495,500 prices are sent on a monthly basis to Istat by Municipal Offices of Statistics each month (501,900 in 2015).

3.1% of the current elementary items comes out from the annual update of municipal price collection plans: 2.1% is accounted for new products, while the remaining 1.0% is accounted for products already included in last year basket for which new elementary items have been selected.

Central survey

In 2016, prices collected each month directly by Istat are 111,500 (of which 3,600 through the data base of automotive fuels of the Ministry of Economic Development).

Data collection is carried out by Istat via web, also using *web scraping techniques* for about 13,000 price quotes, or collecting data from different providers. The main data providers for the central price data collection are the following:

▶ Italian Customs Agency, for Tobacco products and games of chance;

▶ Aiscat, Italian association of concessionaries highways and tunnels, for motorway tolls;

▶ Farmadati, for pharmaceutical products;

▶ Italian Association of Publishers, for prices of school books;

▶ Specialized magazine "Quattroruote" for prices quotes of Second hand cars.

The percentage of products observed directly by Istat, calculated according to the weight assigned to each product within the NIC, is 23.6% in 2016 (23.1% in 2015).

Changes in the central price collection activities in the occasion of the 2016 changing base regard - as usual - the revision of the samples in their composition, numbers and weighting structure, as well as the introduction of methodological improvements. The main change in 2016 concerns the survey design for the data collection of prices of mobile phone services. The change regards the definition of consumption profiles (different mix of minutes to phone, SMS and Internet traffic) for which calculating the expenditure, whose time evolution has to be monitored to estimate inflation of this product. Consumption profiles have been reduced from over 250 to about 50, taking advantage of the availability of information about it. New profiles allow to better take into account bundle tariffs (that put together voice, with SMS and Internet services).

Updating the reference base year to 2015 and news regarding the dissemination of the indices

As it is known, the consumer price indices are calculated using a chained Laspeyres formula, in which the basket of products and the weighting system are updated annually. Monthly indices for the current year are calculated with reference to December of the previous year (calculation base) and subsequently chained over the period chosen as reference base in order to be able to measure price trends over a period of time longer than a year.

Until the data of December 2015 and the provisional data of January 2016 NIC and FOI, at both national and local level, are expressed with 2010=100 as a reference base year. The HICP, on the other hand, are calculated and published with 2005=100 as a reference base, as established by the Regulation (EC) no 1708/2005 of the 20th October 2005.

Since the final data for the month of January 2016, all three indices (HICP, NIC and FOI) will be expressed in reference base 2015 = 100.

For HICP this innovation reflects the EU Regulation 2015/2010 of the European Commission of 11 November 2015. Istat decided to extend this change also to NIC and FOI thus strengthening the elements of comparability between the three indices and aligning the update of the reference base.

For all the aggregates produced in both the previous classification (COICOP Rev.Istat) and the new one (ECOICOP), HICP time series will be produced in the new reference base. For NIC and FOI indices, in order to ensure comparability between the temporal series expressed in the new reference base, and those in the previous base, the corresponding splicing coefficients will be made available.

With reference to HICP index – already from November 2015 – in line with the release policy of Eurostat, the dissemination of HICP-CT indices in the datawarehouse I.Stat has been extended: the HICP-CT indices are published according to a breakdown which, in addition to expenditure divisions, also cover product groups and classes; the extension of the dissemination concerns the series starting from 2013. During 2016, in line with Eurostat releases, HICP-CT series for the periods before 2013 will be made available.

As occurred with the second half of 2015 data release, on the 15 January 2016, the HICP indices referred to population subgroups, identified by expenditure level, will no longer be published by a half-yearly press release. These indices will be made available in the datawarehouse I.Stat simultaneously with the release of consumer price indices of December and of June; in the corresponding press releases there will be a dedicated section.