

2013

CONSUMER PRICE INDICES

Basket, weight structure and survey updating

■ The 2013 basket for the Italian consumer price indices for the whole nation (NIC) and for blue- and white-collar households (FOI) is made up of 1,429 products (1,383 in 2012), which are grouped into 603 representative items (597 in 2012).

■ The 2013 basket for the Italian harmonized consumer price index (HICP) is made up of 1,451 products, which are grouped into 608 representative items (in 2012 there were 602).

■ Compared with 2012 the item *Methane gas for cars* is included in the basket for the first time. The representative item *Smartphone* includes now also the new product "*Phablet*" and the item *Tablet* includes the new product "*Tablet transformer*".

■ Further, in the sub-class *Garments for children (3 to 13 years)*, five new representative items have been added.

■ The item *Netbook* has been taken out of the basket because the household expenditure for it decreased; also the item *Civil mediation* has been removed as consequence of Constitutional Court Sentence (24 October 2012), stating it is no more compulsory.

■ 129 item descriptions have been updated in order to adapt the consumer prices survey to changes of products characteristics and to allow a greater comparability of statistics on price levels produced in Italy and in the other European countries.

■ In 2013, data coming from chief towns of 82 provinces are processed to estimate monthly inflation (they were 84 in 2012). In the 82 chief towns, prices are collected in 41,300 statistical units (including outlets, enterprises and institutions) and rents are observed for 8,100 dwellings.

■ In total 584,000 price quotes are collected each month; 502,000 of them are collected locally by Municipal Offices of Statistics (MOS) using Tablet PCs and sent to Istat and 82,000 are collected directly by Istat.

■ In the weighting structure of the Consumer price index for the whole nation (NIC), the relative weights increased for the following divisions: *Housing; water, electricity, gas and other fuels; Restaurant and hotels; Furnishings, household equipment and routine household maintenance; Recreation and culture; Communication and Alcoholic beverages and tobacco*. In contrast, the largest decreases in absolute terms regarded *Health, Clothing and footwear and Transport*.

■ In 2013, NIC indices by purchase frequency at region and macro-region level will be released (they were already published at national and municipal level), thus widening territorial information. In addition, sub-national NIC indices for special aggregates (goods, food, processed and unprocessed food, energy, etc.) will be released.

■ In the perspective of a continuous quality improvement of compiled indices, the following revisions of survey and calculation methods have been carried out:

■ as regards calculation methodology, estimation of missing observations of not seasonal clothing and footwear products has been improved, following the accrued experience with the implementation of the EU Regulation no 330/2009;

■ as regards HICP data collection methodology, considering changes in pricing policies especially of large-scale retailers, the minimum time period, for which a price temporary reduction has to be taken into account, has been reduced from 14 to 7 days;

■ in the consumption segment *Mobile telephone services*, for the homonymous item, the data collection methodology has been extended to take into account the "tariff options" in addition to the already-surveyed "tariff schemes" for the different providers and consumption profiles.

The 2013 basket of goods and services

The 2013 basket for the Italian consumer price indices for the whole nation (NIC) and for blue- and white-collar households (FOI) is made up of 1,429 *products* (1,383 in 2012), which are grouped into 603 *representative items* (in 2012 there were 597). The 2013 basket for the Italian harmonized consumer price index (HICP) is made up of 1,451 products, which are grouped into 608 representative items (in 2012 there were 602). The difference between the two baskets is due to two elements:

- ▶ 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;
- ▶ in the NIC/FOI basket (but not in the HICP one), *Games of chance* are included.

It is worth to mention that the *products* are the most elementary level of consumption aggregation structure for which prices are collected once or twice a month. The *representative items* are, within the *Consumption segments*, the sample of products or groups of products for which consumer price indices are calculated monthly.

The updating operations of the 2013 basket are of different kind. With regard to operations which take more directly into account household expenditure behaviour changes, *Methane gas for cars* has been included in the basket. Likewise new items, such as for example *Frozen cod fillets* and *Bitter liquor* have been added in order to better represent, within their consumption segments, the expenditure habits which were expressed until 2012 by items *Frozen hake* e *Brandy*, now dropped. Like such revisions, within the consumption segment *Salami*, the item *Packaged bacon* have replaced the representative item *Bacon*. *Sports energy drink* (salts and vitamins supplement) has also been added.

Among dropped representative items there are the *Netbook*, for which household expenditure declined during the last year with a consequent decrease of market supply, and the *Civil mediation* due to recent legislation changes¹.

To be stressed that the household expenditure for consumption of dropped items, although now insignificant, continues to be taken into account in the aggregate weight in which they were included. Furthermore, the exclusion of one or more representative items assumes the maintenance of an adequate coverage of the consumption segment, in which they were included, by the already-existing items or new items which become part of the basket (for example, the household expenditure for *Netbook* continues to be taken into account in the weight of consumption segment *Laptop, Hand-held computers and tablets* where *Notebook* and *Tablet PC* continue to be included).

Some items have been included in the basket, aiming at improving coverage of some consumption segments. In particular,

- ▶ the two new items *Winter jacket* and *Short cloth jacket for babies* have been included in the new segment *Coats and jackets for babies*;
- ▶ the three new items *Tracksuit*, *Pyjamas* and *Pullover* have been added within as many consumption segments of garments for babies;
- ▶ the item *Cat litter* has been included within the new segment *Other products for pets*;
- ▶ the item *Passport* has been added in the segment *Birth, marriage, death certificates and other administrative documents*;
- ▶ the new item *Table lamp* has been added in the consumption segment *Lighting equipment*.

The updating basket operations have also concerned changes due to splits of already-existing representative items and due to new products addition. In order to improve the consumption coverage, many representative items have been modified in composite ones: for example, in the consumption segment *Passenger transport by taxi*, the representative item *Taxi* has been extended adding the new product "*Taxi-ride to the airport*"; within the consumption segment *Sauces and condiments*, the item *Vinegar* has been divided in the two products "*Wine vinegar*" and "*Balsamic vinegar*".

Further, in the segment *Mobile telephone equipment*, for the representative item *Smartphone*, the new product "*Phablet*"² has been added and within the segment *Laptop, Hand-held computers*

¹ Sentence of Constitutional Court of 24 October 2012.

² *Touch-screen* devices, with 5- to 7-inch screens, which combine *smartphone* and *mini tablet* features.

and tablets, the new product “*Tablet transformer*”³ has been included in the representative item *Tablet PC*.

Below, the list of representative items and products which have been included and excluded from the 2013 basket is reported. They are grouped by reason of their inclusion or exclusion:

NEW	
Changes in household expenditure behaviours	• Sports energy drink • <i>Methane gas for cars</i> • “ <i>Phablet</i> ” • “ <i>Tablet transformer</i> ”
Replacements	• <i>Packaged bacon</i> • <i>Frozen cod fillets</i> • <i>Bitter liquor</i>
Coverage improvements of some household expenditure aggregates	• <i>Winter jacket for babies</i> • <i>Short cloth jacket for babies</i> • <i>Tracksuit for babies</i> • <i>Pyjamas for babies</i> • <i>Babies’ pullover</i> • <i>Table lamp</i> • <i>Cat litter</i> • “ <i>Taxi – ride to the airport</i> ” • <i>Passport</i>
DROPPED	
Changes in household expenditure behaviours	• <i>Fresh figs</i> • <i>Netbook</i> • <i>Diary</i>
Replacements	• <i>Bacon</i> • <i>Frozen hake</i> • <i>Brandy</i>
Legislation changes	• <i>Civil mediation</i>

Further operations have been carried out maintaining continuity in methodological innovations adopted in 2011, in accordance with the EU Regulation no 330/2009: in particular, within division *Clothing and footwear*, some already-existing representative items have been split into winter and summer products and their prices collection has been scheduled according ad hoc defined seasonal calendars.

Other revisions and innovations

In the updating operations, revisions of product denomination and 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 example, the description change of item *Recording digital devices* excludes the CD and limits the local price collection of DVD, only). Moreover products short and long description updating has been carried out in order to improve the comparability of average prices in the European context⁴. For 2013, short and/or long descriptions and/or reference quantities of 129 representative items have been changed.

In the perspective of a continuous data quality improvement the following methodological revisions in consumer price collection and index calculation have been carried out:

- ▶ with regard to calculation methodology, estimation of missing observations of not seasonal clothing and footwear products has been improved, following the accrued experience with the implementation of the EU Regulation no 330/2009;
- ▶ with regard to HICP data collection methodology, considering changes in pricing policies especially of large-scale retailers, the minimum time period, for which a price temporary reduction has to be taken into account, has been reduced from 14 to 7 days;
- ▶ finally, in the consumption segment *Mobile telephone services*, for the homonymous item, the data collection methodology has been extended to take into account the “tariff options” in addition to the already-surveyed “tariff schemes” for the different providers and consumption profiles.

The new weighting structure

The weighting coefficients of indices are determined on the basis of the values of household final consumption expenditure as derived from National Accounts. Additional information used to define

³ With a docking keyboard, it turns into a notebook.

⁴ Within the European Commission project “Consumer Market Scoreboard” for the extension of descriptive detail of current consumer price statistics system by integration among temporal indices (HICP) and Purchasing Power Parities (PPP).

weights are originated from the Household Budget Survey, from other Istat survey and from external sources, which have an auxiliary function.

Table 1 shows the 2013 weighting structures by division of NIC, HICP and FOI indices and their differences. By ordering divisions according to their relative weights, the three indices, with exception of the division *Health*, show relatively small differences. For all indices the divisions with a comparatively higher weight are those of *Food and non-alcoholic beverages* and *Transport*, with weights ranging between 14.9% and 16.8%.

In the case of the NIC index, the divisions with highest relative weight are *Food and non-alcoholic beverages* (15.9%), *Transport* (14.9%), *Restaurant and hotels* (11.2%) and *Housing, water, electricity, gas and other fuels* (10.9%)⁵.

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 significant implications for determining the weight of the 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 the division *Health* in the basket of the harmonised index of consumer prices (3.4%) is significantly lower than the weight calculated for the national indices.

TABLE 1. WEIGHTS USED FOR CALCULATING CONSUMER PRICE INDICES
2013, percentage values

Divisions	Weights		
	NIC	HICP	FOI
Food and non-alcoholic beverages	15.9283	16.8380	15.3491
Alcoholic beverages, tobacco	3.1924	3.3736	3.5446
Clothing and footwear	8.3387	9.4556	9.0310
Housing, water, electricity, gas and other fuels	10.8990	11.5234	10.8647
Furnishings, household equipment and routine household maintenance	8.0405	8.5060	7.8477
Health	7.2976	3.4486	5.9820
Transport	14.9173	15.7538	16.0661
Communication	2.5293	2.6738	2.7213
Recreation and culture	7.9758	6.3424	8.5444
Education	1.1306	1.1958	1.3163
Restaurants and hotels	11.2287	11.8603	10.6628
Miscellaneous goods and services	8.5218	9.0287	8.0700
ALL ITEMS	100.0000	100.0000	100.0000

As to changes done between 2012 and 2013, in the weighting structure of the NIC index six divisions have undergone an increase in their relative weights: *Housing, water, electricity, gas and other fuels*; *Restaurants and hotels*; *Furnishings, household equipment and routine household maintenance*; *Recreation and culture*; *Communication* and *Alcoholic beverages and tobacco* (Table 2). In absolute terms, the largest increase regards the *Housing, water, electricity, gas and other fuels* division (+0.4624 percentage points) while the largest decreases concern *Health* (-0.4310 percentage points) and *Clothing and footwear* (-0.2976 percentage points).

⁵ It is pointed out that, in Italy, as in Europe, spending 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 18.0% of Italian households (the remaining 82.0% of households own their dwellings, or occupy them as usufructaries or free of charge).

TABLE 2. NIC INDEX: WEIGHTING STRUCTURE BY DIVISION
2012 and 2013, percentage values and absolute differences

Divisions	2012	2013	Absolute difference
Food and non-alcoholic beverages	15.9786	15.9283	-0.0503
Alcoholic beverages, tobacco	3.1521	3.1924	0.0403
Clothing and footwear	8.6363	8.3387	-0.2976
Housing, water, electricity, gas and other fuels	10.4366	10.8990	0.4624
Furnishings, household equipment and routine household maintenance	7.9370	8.0405	0.1035
Health	7.7286	7.2976	-0.4310
Transport	15.1985	14.9173	-0.2812
Communication	2.4796	2.5293	0.0497
Recreation and culture	7.8762	7.9758	0.0996
Education	1.1411	1.1306	-0.0105
Restaurants and hotels	10.8361	11.2287	0.3926
Miscellaneous goods and services	8.5993	8.5218	-0.0775
ALL ITEMS	100.0000	100.0000	-

Considering the weighting structure by type of consumption, the weights relating to the two main components have undergone slight changes for 2013, with goods falling from 56.7% to 55.9% while services rose from 43.3% to 44.1% (Table 3).

TABLE 3. NIC INDEX: WEIGHTING STRUCTURE BY TYPE OF CONSUMPTION
2012 and 2013, percentage values and absolute differences

Special aggregates	2012	2013	Absolute difference
Food including alcohol:	16.8888	16.8499	-0.0389
Processed food including alcohol	10.4302	10.3559	-0.0743
Unprocessed food	6.4586	6.4940	0.0354
Energy:	9.0350	9.4758	0.4408
Regulated energy products	3.8542	4.2914	0.4372
Non-regulated energy products	5.1808	5.1844	0.0036
Tobacco	2.2419	2.2708	0.0289
Other goods:	28.5747	27.3437	-1.2310
Durable goods	9.3906	8.9934	-0.3972
Non-durable goods	7.6462	7.1031	-0.5431
Semi-durable goods	11.5379	11.2472	-0.2907
Goods	56.7404	55.9402	-0.8002
Services related to housing	6.7062	7.1158	0.4096
Services related to communication	2.0310	2.0227	-0.0083
Services related to recreation and personal care	16.5911	17.1125	0.5214
Services related to transport	8.1556	8.1266	-0.0290
Miscellaneous services	9.7757	9.6822	-0.0935
Services	43.2596	44.0598	0.8002
ALL ITEMS	100.0000	100.0000	--
All items index excluding energy and unprocessed food (Core inflation)	84.5064	84.0302	-0.4762
All items index excluding energy	90.9650	90.5242	-0.4408

Concerning goods aggregate, it is worth mentioning the increase in the weight of *Energy* from 9.0% to 9.5%, due to the increase of *Regulated energy products* (from 3.9% to 4.3%). On the

other hand, *Other goods* recorded a decrease, from 28.6% to 27.3%. *Food* also recorded a decrease, although smaller (-0.0389 in absolute terms) and exclusively due to *Processed food*.

Concerning service aggregate, weight increase of *Services related to recreation and personal care* and *Services related to housing* is recorded.

The weight of *All items index excluding energy and unprocessed food (Core inflation)* fell (-0.4762 percentage points).

With regard to regulated products, *Regulated goods* recorded a slightly decrease (from 6.7% to 6.6%) and *Regulated services* recorded an increase (from 6.5% to 7.0%) (Table 4).

Finally, concerning products by purchase frequency, the weights of *Low-frequency* and *Medium-frequency purchases* fell (respectively, about a third and a quarter of percentage point), whereas the weight of *High-frequency purchases* increased and rose to 39.9% (Table 5).

TABLE 4. NIC INDEX: WEIGHTING STRUCTURE BY REGULATED AND NON-REGULATED PRODUCTS
2012 and 2013, percentage values and absolute differences

Regulated and non-regulated products	2012	2013	Absolute difference
Non-regulated goods	50.0734	49.3754	-0.6980
Regulated goods	6.6670	6.5648	-0.1022
Goods	56.7404	55.9402	-0.8002
Non-regulated services	36.7151	37.0242	0.3091
Regulated services	6.5445	7.0356	0.4911
Services	43.2596	44.0598	0.8002
ALL ITEMS	100.0000	100.0000	-

TABLE 5. NIC INDEX: WEIGHTING STRUCTURE BY PURCHASE FREQUENCY
2012 and 2013, percentage values and absolute differences

Purchase frequency	2012	2013	Absolute difference
High-frequency purchases	39.3220	39.9111	0.5891
Medium-frequency purchases	42.8344	42.5794	-0.2550
Low-frequency purchases	17.8436	17.5095	-0.3341
ALL ITEMS	100.0000	100.0000	-

Geographical basis and coverage rate

In 2013 the geographical basis of the survey is made up of 82 municipalities (20 regional chief towns and 62 provincial chief towns). In comparison with 2012, the municipalities of Asti, Savona and Salerno will no more participate in the index calculation while Siena has started again price collection activities after the interruption of the last year.

On the whole, the coverage of the index, in terms of resident population in the provinces with chief towns taking part in the survey, is 84.0%. The participation of provincial chief towns is total for 7 regions (Valle D'Aosta, Trentino Alto Adige, Veneto, Friuli Venezia Giulia, Emilia Romagna, Umbria and Basilicata) while it is still incomplete in the others, in particular in Puglia (40.7%), Sardegna (53.6%) and Marche (65.1%).

At the macro-regional level, coverage is total in the North-East, 90.4% in the North-West, 83.0% in the Centre, 69.2% in the South and 74.6% in the Island 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.

Local survey

In the 82 chief towns, taking part in the 2013 survey, prices are collected in 41,300 statistical units (including outlets, enterprises and institutions) and rents are observed for 8,100 dwellings. Around 502,000 prices are sent monthly to Istat by Municipal Offices of Statistics each month (511,000 in 2012).

4.1% of the current elementary items (in total about 414,500) comes out from the annual update of municipal price collection plans: 2.9% is accounted for new products, while the remaining 1.2% is accounted for products already included in last year's basket for which new references have been selected.

Central survey

In 2013 the percentage of products observed directly by Istat, calculated according to the weight assigned to each product within the NIC, is 23.1%. The division *Communication* is the one for which the greatest use of centralised observations was made, having been monitored exclusively by Istat, while prices of products included in the divisions *Food and non-alcoholic beverages* and *Clothing and footwear* are collected exclusively by the Municipal Offices of Statistics.

Changes in the central price collection activities on the occasion of the 2013 re-basing regard - as usual - the revision of the samples in their composition, numbers and weighting structure, as well as the introduction of methodological improvements.

Some of the main changes are described below.

With reference with division *Transport*, within segment *Passenger transport by train*, the survey of national rail transport services has been updated to include new operators that are significant at national level.

With regard to division *Communication*, within the segment *Mobile telephone equipment*, for the representative item *Smartphone*, the new product "*Phablet*" has been added. It is a touch-screen device which combines smartphone and mini tablet features. The new survey includes all the model offered on the Italian market by the main manufacturers. Still within *Communication*, in the consumption segment *Mobile telephone services*, for the homonymous item, the survey has been extended to the "tariff options" in addition to "tariff schemes" for the different providers and consumption profiles.

With reference to division *Recreation and culture*, some characteristic of consumer electronics survey have been revised, in order to take into account of recent technological innovations and of consumer preferences in these markets. In this context, within segment *Laptop, Hand-held computers and tablets*, the price collection of *PC Netbook* has been interrupted. This is because it has been replaced by tablet in the consumer preferences. At the same time, tablet price collection has been extended with the inclusion of the new product "*Tablet transformer*", which has absorbed an increasing share of personal computer sales over the last two years. This new product has tablet features but, with a docking keyboard, can turn into a notebook. Also in this case, prices of all the model offered on the Italian market by the major producers are monthly collected.

Finally, with regard to *Package holidays*, whose price collection was deeply revised in 2012, the number of international packages monthly collected has been increased from 200 to about 250, further travel religious destinations has been included, taking into account an always growing kind of tourism.

Finally, with reference to division *Miscellaneous goods and services*, in the segment *Birth, marriage, death certificates and other administrative documents*, the survey of *Passport* has been set up.

Changes in indices release

The NIC index release at territorial level has been extended in 2012, with the publication of indices by purchase frequency of municipalities. These indices are published in I.Stat, the warehouse of statistics produced by Istat, inside the theme Prices, sub-theme Consumer prices (<http://dati.istat.it/>).

With regard to I.Stat, in order to guarantee an easier and more immediate accessibility to consumer price data, the structure of the sub-theme Consumer prices has been reorganized with

the introduction of three separate sub-themes for the three indices NIC, IPCA and FOI. Within each sub-theme, data have been organized taking into account their periodicity (monthly, yearly) and their different reference base period; further data set titles have been revised in order to permit a more immediate identification of type index (national or sub-national), base, periodicity and reference classification⁶.

In the next months, still with regard to I.Stat, the population process of NIC indices by purchase frequency will be completed; therefore, all the NIC indices series by purchase frequency, calculated at national and sub-national level (municipalities, regions and macro-regions) will be available. In addition, in the perspective to extend statistical information on consumer prices available at sub-national level, the Institute will start the publication of sub-national NIC indices for the following special aggregates: *Goods, Food including alcohol, Energy, Tobacco, Other goods, Services, All items excluding energy and unprocessed food (Core inflation) and All items excluding energy*.

Finally, in order to provide information in advance for the analysis of inflation dynamics in the Euro area context, on the occasion of provisional data release, starting from data referred to January 2013, also provisional HICP indices by divisions will be published; further, starting from data referred to February 2013, provisional HICP indices by some special aggregates will be release, according to the current release policy of Eurostat that, since September 2012, on the occasion of *flash* estimate release of Euro area inflation, has also published data by following aggregations: *Food, alcoholic beverage and tobacco; Energy; Non-energy industrial goods and Services*.

⁶ In I.Stat, together with monthly indices, monthly rates of change and annual rate of change are published and together with annual average indices, annual average rates of change are available; furthermore, weights are published.