

2012

CONSUMER PRICE INDICES

Basket and weight structure updating

■ The 2012 basket is made up of 1,398 products, which are grouped into 597 representative items (in 2011 there were 591); they are the base for the monthly consumer price indices.

■ Compared with 2011 the following new items are included in the basket for the first time: *E-book reader*, *E-book download* and *Civil mediation*. No item has been dropped.

■ With regard to already-existing items, one of more important change regarded the representative item *Electricity*. This item, with the transition to bihourly pricing during the 2011, has been disaggregated into three representative items: *Weekday daytime range bihourly tariff*, *Weekend and (public) holiday night range bihourly tariff* and *Fix amount*.

■ The representative item *Computer desktop* includes now also the new product "*PC All-in-one*" and the item *Notebook* includes the new product "*Ultrabook*".

■ Changes has been also carried out in the consumption segment *Games of chance*, for the item *Forecast competitions*. Within this item, in addition to traditional lotteries, national toto and sport games, "*Instant lotteries*", "*Sporting bets*" and "*Horseracing games*" have been included.

■ As a consequence of the Law no 214 of the 22nd December 2011, which gives to pharmacies the option of giving discounts on prices of all range C medicines, included those with prescription, the two representative items *Range C Prescription medicines* and *Range C Over the counter medicines* have been merged in the item *Range C medicines*. Starting from January 2012 their prices are collected exclusively at local level by municipal statistics offices.

■ In 2012, the municipalities of 84 provincial capitals are taking part in calculating the indices (as against 85 in 2011). The municipality of Siena has stopped collecting prices. Coverage in terms of national population is 86.7%.

■ In the municipalities of the provincial capitals considered there are approximately 42,000 outlets where prices are collected and 8,300 dwellings for which rents are observed.

■ In total 591,000 price quotes are collected each month of which 511,000 are collected locally by municipal statistics offices using Tablet PCs and sent to Istat and 80,000 are collected by Istat centrally.

■ The weighting structure changes are affected by the revision of National Accounts data, carried out at the end of 2011 as agreed at the European level. In the weighting structure of the Consumer price index for the whole nation (NIC), the relative weights have increased for the following divisions: *Miscellaneous goods and services*; *Housing; water, electricity, gas and other fuels*; *Recreation and culture*; *Alcoholic beverages and tobacco*; *Clothing and footwear*; *Transport and Education*. In contrast, the largest decreases in absolute terms regarded *Health* and *Restaurant and hotels*.

The 2012 basket of goods and services

The 2012 basket reflects the important methodological changes adopted for the index calculation starting from January 2011. The revision of classification COICOP of consumer spending, carried out for disaggregation levels lower than *Classes* and the adoption of the new method for observing and calculating price indices of seasonal products, in accordance with Regulation (EC) no 330/2009, have determined both an enhancement of the descriptive detail of the information produced and an increase of the basket representativeness.

The updating operations of the 2012 basket have been carried out in order to strengthen and improve those innovations and, at the same time, to maintain high capacity of the basket to represent the structure of consumer spending, in relation to changes in consumer behaviour.

Furthermore, among prominent operations for the 2012 basket definition, there are the methodological and operational solutions adopted by Istat in order to take account of consequences of some recent legislative measures, such as the Law no 214 of 22nd December 2011, which gives pharmacies the option to give discounts on range C medicines prices, included prescription ones.

Therefore, different revision operations have been carried out: their effects on the 2012 basket were realized in changes of its structure and of survey procedures.

With reference to composition, the 2012 basket is made up of 1,398 *products* (in 2011 there were 1,377), which represent the most elementary level in the aggregation structure of household consumption, for which prices are observed on a monthly or bi-monthly basis throughout the year. The next highest level of aggregation, *Representative items*, is made up of 597 aggregates (in the 2011 there were 591). These constitute the sample of products or of groups of products for which the consumer price indices are calculated monthly.

Representative items

With regard to representative items, the changes concern both the inclusion of new items and the different decomposition of items that were already in the basket. In detail, the following representative items have been added in the 2012 basket:

- *E-book reader and E-book download*, within the division *Recreation and culture*;
- *Civil mediation* within the division *Miscellaneous goods and services*.

Moving on to changes of already-existing items, one of the most important change regarded the representative item *Electricity*. This item, with the transition to bihourly pricing during the 2011, has been disaggregated into three representative items: *Weekday daytime range bihourly tariff*, *Weekend and (public) holiday night range bihourly tariff* and *Fix amount*.

Another important change has concerned the items *Range C Prescription medicines* and *Range C Over the counter medicines* which were merged into *Range C Medicines*.

Further changes have concerned the item *Package holidays*, split into *Domestic* and *International*, and the composite item *Day nursery*, that has been divided in the two representative items *Public* and *Private*, which were included in the basket until 2011 at product level.

The changes carried out in the 2012 basket, as just pointed out above, are the result of different operations which have the aim to maintain the basket representativeness and consistency. In more detail, the entry of the new item *E-book reader* reflects the change in consumer behaviour relating to offer development of new technologies, whereas the inclusion of *E-book download* is the result of improvement classification structure oriented at coverage extension of the related consumption segment. Finally the inclusion of *Civil mediation* is due to the introduction of this activity within Italian Civil Court system, with the passage of Legislative Decree no 28/2010.

With regard to already-existing representative items, the decomposition of the item *Electricity* in the new three items has been carried out following the completion, foreseen by 2011, of gradually application of bi-hourly prices progressive fixed by the Italian Regulatory Authority for Electricity and Gas starting from the 1st July 2010.

The split of the item *Package holidays* into two representative items *Domestic* and *International* is due to the need to improve the survey in relation to the new classification of consumption spending adopted in 2011.

The introduction of the item *Range C medicines* (merge of *Range C Prescription medicines* and *Range C Over the counter medicines*), which prices are collected exclusively at local level, takes account of the option of pharmacies to giving discounts on prices of all range C medicines (both prescription and over the counter) as permitted by Law no 214 of the 22nd December 2011. This law, apart from determining also for range C prescription medicines the shift from the central survey to the local one, has entailed relevant revisions of local survey of medicine sample.

Finally, the change relating to the item *Day nursery*, which has been split in the two representative items *Public* and *Private*, permits to measure the price developments of these two service offer typologies.

Products

Moving on to changes at product level, there are many new products within already-existing representative items in order to improve the consumption coverage. Among these, within division *Clothing and footwear*, the representativeness of composite item *Laundry services for clothing* has been extended with the introduction of the new product “*Self-service clothing washing*” in addition to the already-existing products “*Skirt washing and ironing*” and “*Menswear washing and ironing*”.

Within the division Recreation and culture, with reference to *Information processing equipment*, for the representative item *Computer desktop*, the new product “*PC All-in-one*” has been added and for the item *Notebook*, the new product “*Ultrabook*” has been included. New products have been also added within some items of aggregate *Accessories for information processing equipment*: in particular, within the item *Printer*, the new printer segment “*Laser oriented consumer audience*” has been added.

In the consumption segment *Cameras and video cameras*, the item *Digital cameras* has been extended adding two new products, called “*Mirrorless cameras*” and “*Bridge cameras*”.

Finally, in the segment *Games of chance*, within the item *Forecast competitions*, in addition to traditional lotteries, national toto and sport games, “*Instant lotteries*”, “*Sporting bets*” and “*Horseracing games*” have been included.

Other revisions

With reference to further basket revisions which have entailed changes of already-existing representative items, continuing on methodological innovations adopted in 2011, in accordance with EU Regulation no 330/2009, operations aimed to improve seasonality treatment have been numerous. For example, within division *Clothing and footwear*, some items have been split into *winter* and *summer* and other ones have defined as *in season* or *out of season*.

Other revisions take cue from the particular nature of the good or the service. For instance, in the division *Transport*, the item *Car parking* has been divided into “*Public*” e “*Private*” products.

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

The estimation of 2012 weighting structure of consumer price indices are affected by the revision of National Accounts data, which results have been released recently¹. The revision of NA data

¹ See press release “National accounts according the new classification of economics activities – Year 2000-2010”, 19th October 2011 (<http://www.istat.it/en/archive/43862>).

can have involved changes, for some COICOP aggregation weights, stronger than those registered in the previous annual base updating.

The Table 1 shows the weighting structures by division of NIC and HICP indices and their differences. By ordering the divisions according to their relative weight, the two indices, with exception of the division Health, show relatively small differences. For both indices the divisions that have comparatively higher weight are those of *Food and non-alcoholic beverages* and *Transport*, with weights ranging between 15.2% and 16.9%.

In the case of the NIC index, the divisions with highest relative weight are *Food and non-alcoholic beverage* (16.0%), *Transport* (15.2%), *Restaurant and hotels* (10.8%) and *Housing, water, electricity, gas and other fuels* (10.4%)².

The differences between the weighting structures of the NIC and HICP indices are largely ascribable to the different definition of the economic aggregate of reference for the three indices. This has particularly significant implications for determining the weight of the division Health services and expenditure, and in particular the weight of pharmaceutical products. The NIC and FOI indices include expenditure by public administration on the consumption of pharmaceutical products on the part of households, which is in contrast excluded from the calculation of the HICP. As a result, the weight of the division *Health services and expenditure* in the basket of the harmonised index of consumer prices (3.7%) is significantly lower than the weight calculated for the domestic indices.

TABLE 1. WEIGHTS USED FOR CALCULATING CONSUMER PRICE INDICES
2012, percentage values

Divisions	Weights	
	NIC	HICP
Food and non-alcoholic beverages	15.9786	16.9486
Alcoholic beverages, tobacco	3.1521	3.3369
Clothing and footwear	8.6363	9.6914
Housing, water, electricity, gas and other fuels	10.4366	11.0511
Furnishings, household equipment and routine household maintenance	7.9370	8.4242
Health	7.7286	3.6966
Transport	15.1985	16.1108
Communication	2.4796	2.6418
Recreation and culture	7.8762	6.3243
Education	1.1411	1.2063
Restaurants and hotels	10.8361	11.4575
Miscellaneous goods and services	8.5993	9.1105
ALL ITEMS	100.0000	100.0000

With regard to changes made between 2011 and 2012, in the weighting structure of the NIC index seven divisions have undergone an increase in their relative weight: *Miscellaneous goods and services*; *Housing, water, electricity, gas and other fuels*; *Recreation and culture*; *Alcoholic beverages and tobacco*; *Clothing and footwear*; *Education* and *Transport* (Table 2). In absolute terms, the largest increase regards the *Miscellaneous goods and services* division (+0.6210 percentage points), while the largest decreases concern the *Health* division (-0.5444 percentage points) and *Restaurants and hotels* (-0.4651 percentage points).

² It is pointed out that, in Italy, as in Europe, spending items in the division *Housing, water, electricity, gas and other fuels* exclude house purchase, as it is an investment and not a consumer item, while they consider rents, which regard 17.2% of Italian households (the remaining 82.8% of households own their homes, or occupy them as usufructuaries or free of charge).

TABLE 2. NIC INDEX: WEIGHTING STRUCTURE BY DIVISION
Percentage values

Divisions	2011	2012	Absolute difference
Food and non-alcoholic beverages	16.2227	15.9786	-0.2441
Alcoholic beverages, tobacco	2.9053	3.1521	0.2468
Clothing and footwear	8.4996	8.6363	0.1367
Housing, water, electricity, gas and other fuels	10.1104	10.4366	0.3262
Furnishings, household equipment and routine household maintenance	8.0610	7.9370	-0.1240
Health	8.2730	7.7286	-0.5444
Transport	15.1950	15.1985	0.0035
Communication	2.7294	2.4796	-0.2498
Recreation and culture	7.5905	7.8762	0.2857
Education	1.1336	1.1411	0.0075
Restaurants and hotels	11.3012	10.8361	-0.4651
Miscellaneous goods and services	7.9783	8.5993	0.6210
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 2012, with goods rising from 56.3% to 56.7% while services fell from 43.7% to 43.3% (Table 3).

TABLE 3. NIC INDEX: WEIGHTING STRUCTURE BY TYPE OF CONSUMPTION
Percentage values

Special aggregates	2011	2012	Absolute difference
Food including alcohol:	16.9057	16.8888	-0.0169
Processed food including alcohol	10.7385	10.4302	-0.3083
Unprocessed food	6.1672	6.4586	0.2914
Energy:	7.9111	9.0350	1.1239
Regulated energy products	3.1378	3.8542	0.7164
Non-regulated energy products	4.7733	5.1808	0.4075
Tobacco	2.2223	2.2419	0.0196
Other goods:	29.3023	28.5747	-0.7276
Durable goods	9.9460	9.3906	-0.5554
Non-durable goods	7.8445	7.6462	-0.1983
Semi-durable goods	11.5118	11.5379	0.0261
All goods	56.3414	56.7404	0.3990
Services related to housing	6.8043	6.7062	-0.0981
Services related to communication	2.2428	2.0310	-0.2118
Services related to recreation and personal care	16.6300	16.5911	-0.0389
Services related to transport	8.2805	8.1556	-0.1249
Miscellaneous services	9.7010	9.7757	0.0747
All services	43.6586	43.2596	-0.3990
ALL ITEMS	100.0000	100.0000	-
All items index excluding energy and unprocessed food (Core inflation)	85.9217	84.5064	-1.4153
All items index excluding energy	92.0889	90.9650	-1.1239

In the various components of the aggregate of goods it should point out in particular the increase in the weight of *Energy* from 7.9% to 9.0%, due to the increases both *Regulated energy products* and *Non-regulated energy products* (respectively, from 3.1% to 3.9% and from 4.8% to 5.2%). On the other hand, *Other goods* recorded a decrease, from 29.3% to 28.6%, as a result of decrease in *Durable good* and *Non-durable goods*. *Food* also recorded a decrease, although this was smaller (-0.0169 in absolute terms) and exclusively due to *Processed food*.

Concerning service aggregate, except for *Miscellaneous services*, all sectors recorded a decrease, particularly pronounced for *Services related to communication*.

The weight of *All items index excluding energy and unprocessed food* (Core inflation) has fallen (1.4 percentage points).

With regard to regulated products, both *Regulated goods* (from 5.9% to 6.7%) and *Regulated services* (from 5.2% to 6.5%) recorded an increase (Table 4).

TABLE 4. NIC INDEX: WEIGHTING STRUCTURE BY REGULATED AND NON-REGULATED PRODUCTS

Percentage values

Regulated and Non-regulated products	2011	2012	Absolute difference
Non-regulated goods	50.4335	50.0734	-0.3601
Regulated goods	5.9079	6.6670	0.7591
All goods	56.3414	56.7404	0.3990
Non-regulated services	38.5007	36.7151	-1.7856
Regulated services	5.1579	6.5445	1.3866
All services	43.6586	43.2596	-0.3990
ALL ITEMS	100.0000	100.0000	-

Finally, concerning products by frequency of purchases, the weight of *Low-frequency purchases* has fallen (one percentage point), whereas *High* and *Medium-frequency purchases* recorded a increase (respectively, four and six tenth of point) (Table 5).

TABLE 5. NIC INDEX: WEIGHTING STRUCTURE BY FREQUENCY PURCHASES

Percentage values

Frequency purchases	2011	2012	Absolute difference
High-frequency purchases (frequent out-of-pocket purchases)	38.9018	39.3220	0.4202
Medium-frequency purchases	42.2085	42.8344	0.6259
Low-frequency purchases	18.8897	17.8436	-1.0461
ALL ITEMS	100.0000	100.0000	-

Geographical basis and rate of coverage

In 2012 the geographical basis of the survey is made up of 84 municipalities (20 regional capitals and 64 provincial capitals). Compared to 2011, the municipality of Siena does not participate in the calculation of the index.

Overall, the coverage of the index, measured in terms of resident population in the provinces with capitals participating in the survey, is 86.3%. The participation of provincial capital municipalities is total for 10 regions (Piemonte, Valle D'Aosta, Liguria, Trentino Alto Adige, Veneto, Friuli Venezia Giulia, Emilia Romagna, Umbria, Campania and Basilicata), while it remains incomplete in the

others, in particular in Puglia (40.6%), Sardegna (53.7%) and Marche (65.2%).

At the macro-regional level, coverage is total in the North-East, 93.6% in the North-West, 80.9% in the Centre, 77.0% in the South and 74.4% in the Island regions.

Price survey methods

The data that contribute to the construction of the monthly consumer price indices are traditionally collected through two distinct surveys: the local survey, conducted by municipal statistics offices, under Istat supervision and coordination, and the central survey, carried out directly by Istat.

Local survey

In the 84 municipalities taking part in the consumer price survey in 2012 there are around 42,000 outlets where municipal statistics offices monitor the price of at least one product (including small retail businesses, large-scale retailers and local markets), as well as around 8,300 dwellings for observing rents.

Around 511,000 prices will be sent monthly to Istat by municipal statistics offices every month, more than in 2011.

6.5% of the current product references (420,000) derive from the annual update to municipal price collection plans: 1.2% is accounted for by new products, while the remaining 5.3% are products that were already included in last year's basket for which new references have been selected.

Central survey

In 2012 the percentage of products observed directly by Istat, calculated according to the weight assigned to each product within the NIC, is 22.8%. The division *Communications* 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 statistics offices.

Changes in the central price collection activities on the occasion of the 2012 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 *Combined passenger transport*, the survey of *Out of town combined passenger transport* has been extended and the number of routes is changed from 91 to 143. Within the same division, with regard to *Car transfer ownership*, the weighting system estimation has been improved and it is based now on the number of transfer registrations from "Business" to "Household" at provincial level.

With regard to division *Recreation and culture*, some characteristic of consumer electronics survey have been revised, in order to take account of recent technological innovations and of consumer preferences in these markets. In this context, a new survey of *E-book reader* has been carried out. This survey includes all the model offered on the Italian market by the major producers. The survey of *Video cameras* has been centralized and makes provision for the collection of the prices of four type of products, defined on the basis of recorded picture definition level (standard or HD) and of sensor characteristics. This new survey covers the whole range of models offered on the Italian market by the major producers. Finally, starting from January 2012, all the consumer electronics surveys include delivery charges, too.

Still within *Recreation and culture*, with reference to the product class *Books*, the new survey on *E-book download* has been implemented. This survey consists in the monthly price collection of the best selling e-books in the tables released by the major dealers on the domestic market ("best seller" approach).

Finally, with regard to *Package holidays*, the split of the already-existing item into the two items *Domestic package holidays* and *International package holidays*, has entailed a thorough revision of survey, with the introduction of a different stratification procedure for them. For *Domestic package holidays*, a more detailed stratification has been carried out according to the variables

wellness, art, mountain and sea: this has entailed an increase of number of packages monthly collected (from 30 to 110). On the other hand, for *International package holidays*, the survey has maintained the stratification based on the destination geographical area and a sample of more than 200 packages.

Changes in indices release

The HICP index release has been extended. This indicator is now published with a level of detail of the COICOP-HICP product classes, despite of the previous level of divisions. Therefore its publication corresponds to the publication carried out by Eurostat for the HICP of single countries of European Union and for the HICPs calculated for EU and EMU. Italian HICP indices are published in I.Stat, the warehouse of statistics produced by Istat, inside the theme Prices (<http://dati.istat.it/>).

With regard to I.Stat, the population process of all consumer price indices series released by Istat has been completed; therefore, the NIC and FOI indices series, calculated both at national level and territorial level, by all aggregations, further the HICP indices series mentioned above, are now available in I.Stat³.

Starting from data referred to January 2012, in order to consider user information demand and in the perspective of an extension of statistical information available on consumer prices, on the occasion of provisional data release, provisional indices by purchase frequency will be published.

Furthermore, in the next months, the publication of Constant tax HICP indices will be started. At the moment, this indicator is calculated and transmitted to Eurostat according a fixed in advance calendar.

³ In I.Stat, together with monthly indices, monthly rate of changes and annual rate of changes are published; furthermore, annual average indices, annual average rate of change and weights are available.