

Main features of the CPI, base 2016

The new base of the CPI updates the shopping basket and the weighting structure to adapt it to the household consumption patterns

The base 2016 provides a greater breakdown of the information, which will allow more detailed analysis of prices evolution

Next 15 February, the INE will publish the first Consumer Price Index (CPI) in base 2016. With the implementation of the new base, the objective is to improve the representative nature of this indicator via changes in the composition of the shopping basket and the update of the weighting structure.

In addition, the CPI base 2016 incorporates the new European consumption classification, known as ECOICOP (European Classification of Individual Consumption by Purpose). This classification provides a further breakdown of the expenditure sections in which the information normally disseminated is structured. For example, **the number of subclasses** (aggregations of good and services at the highest level of detail) **which was 126 in the base 2011 increases to 219 in the new base.**

As it is usual in base changes and in new operations, the INE presented the methodology for the CPI Base Change to the Permanent Commission of the High Council on Statistics, in its session held on 6 October 2016. In this sense, the INE expresses its appreciation for the collaboration and contributions in the process of assessment for this operation to the Royal Academy of Exact, Physical and Natural Sciences and to the Spanish Confederation of Business Organisations.

Changes in the shopping basket

One of the essential operations for the methodological design of the CPI is the revision of the shopping basket, the set of goods and services selected to carry out the monthly monitoring of prices.

The selection of items that are part of the shopping basket is made according to the expenditure of households in each one of them. The main source used to obtain the information on expenditure is the Household Budget Survey (HBS) that is addressed to households, and which provides detailed information on the expenditure on goods and services and its consumption structure.

Therefore, in this process of reviewing the basket it is about establishing a sample of goods and services representative of consumption, removing those that have lost their importance within the expenditure of households and incorporating others whose relevance has been increasing.

This procedure also serves to make adjustments in the basket, removing products with little weight in items that already include more representative products, and increasing or decreasing the number of prices to be collected for each product, according to their price variability and new weighting. This will gain in precision without losing representativeness.

The most significant changes in the configuration of the shopping basket base 2016 are **the incorporation of music and video on-line services, gambling or the single-serve coffee in the food products**. On the other hand, some **examples of articles which disappear in the basket are the brandy, the video camera or the recordable DVD**, among others.

As a result of these adjustments, the shopping basket of CPI base 2016 will now have **479 items**, as compared with the 489 items for the previous base.

Updating of the weightings

The ongoing adaptation of the CPI to changes in consumer behaviour also includes the permanent revision of its weighting structure. Each year, the weight and importance of the large aggregates comprising this indicator are updated, thus maintaining the current nature thereof.

In addition to the annual revision of the weightings for the large aggregates, every five years, the entire structure is updated for all breakdown levels. Therefore, the CPI base 2016 includes a **new weighting structure that more precisely represents household consumption patterns at this time**.

As already stated, the weighting structure for base 2016 has been prepared using the HBS as the main source of information. Moreover, information from other sources has also been used, such as the evolution of private consumption from the National Accounts, the evolution of prices from the CPI and information from other sources provided by different sectors.

The following table includes the weight of each of the 12 large groups, and their comparisons with the weights valid until the year 2016.

Group weightings (percent)

Group	2016	2017	Variation (%)
01. Food and non-alcoholic beverages	18.74	19.77	5.5
02. Alcoholic beverages and tobacco	2.77	3.02	9.1
03. Clothing and footwear	7.60	6.73	-11.4
04. Housing	12.51	13.30	6.4
05. Furnishings, household equipment and routine maintenance of the house	6.14	5.88	-4.3
06. Health	3.40	3.96	16.4
07. Transport	15.60	14.67	-5.9
08. Communication	3.44	3.60	4.5
09. Leisure and culture	7.00	8.52	21.8
10. Education	1.59	1.68	5.4
11. Restaurants, cafés and hotels.	11.60	12.12	4.5
12. Other goods and services	9.61	6.75	-29.8
TOTAL	100	100	:

Sample selection

As in the previous base, the prices will be collected in 177 municipalities (52 provincial capitals and 125 non-capital municipalities). Prices will be collected for the entire shopping basket in 97 of them, for all food products and part of the rest in 44, and for approximately half of the items in the shopping basket in 36.

Approximately 29,000 establishments will be part of the sample, to gather the **220,000 prices with which the CPI is calculated every month**.

This sample covers at least 30% of the population of the province, and 50% of the population of the Autonomous Communities. Moreover, the selection of municipalities has considered their geographical distribution within the province, as well as their size (31 of them have fewer than 50,000 inhabitants).

Conceptual changes in the consumption area

As previously indicated, the estimation of the expenditure incurred in each item of the shopping basket is carried out, mainly, from the HBS. Therefore, the weighting structure of the CPI is adapted to the concepts and definitions of this indicator.

However, this conceptual framework does not always conform to the definition of expenditure on final consumption of households established in the European Account system (EAS), which governs the National Accounts of all EU Member States. The objective of the HBS is to measure the level and evolution of the expenditure carried out by households in goods and services intended for consumption, irrespective of the monetary benefits that may be perceived as subsequent, the result of that expenditure (via indemnities or subsidies) and the sector with which the transaction was made (households or companies).

Thus, some of the estimates of expenditure from the HBS need to be adjusted to adapt the CPI to the conceptual requirements of the EAS. These adjustments entail changes in the structure of the CPI base 2016 as follows:

- **Gross expenditure vs. net expenditure.** The HBS includes the total expenditure made by households, irrespective of the possible monetary counterparts that it may have perceived (except for Health and Education, where expenditure refers to the actual effect, after subsidies). However, in accounting terms, the expenditure made must deduct the amounts received by the household, so that only the net expenditure of subsidies and counter benefits is considered.

This change affects **insurance** in the CPI (that include health insurance, housing insurance, vehicle insurance and funeral insurance). The expenditure used so far to estimate its weighting is the one that was really carried out by households, regardless of how they may have perceived any amount of compensation. From the CPI base 2016, and in order to comply with the conceptual framework of the EAS, the amount in monetary benefits is deducted from the gross expenditure.

- **Transactions** between agents belonging to the same economic sector. The HBS considers the expenses made in all transactions made by private consumers, regardless of the sector with whom the operation was carried out. The EAS affects in that the transactions considered in the definition must have occurred between the household sector and that of companies or other institutions. Thus, transactions between households should not be taken into account in the estimation of the expenditure.

The CPI items that must be adjusted due to this conceptual change is that of **used cars** since the expenditure from the HBS includes purchases made to companies and other households.

Treatment of seasonal items

The CPI considers seasonal items to be those goods or services that cease to be available for sale during certain periods throughout the year, and this situation is repeated cyclically. The items to which this definition refers are **fresh fruit** and **fresh vegetables**.

The fact that the item is not available on the market makes it impossible to follow the price thereof that had been collected for the calculation of the CPI. This makes it necessary to apply methods enabling continuity of the price series and calculating the indices in the time period in which the product is unavailable.

The new base has incorporated two changes relating to this type of item:

- **Revision of the basket of seasonal items.** Some fruits and vegetables have ceased to be seasonal, as they are now available on the market throughout the year. For this reason, they will receive the same treatment as most of the products in the shopping basket.
- **New methodological treatment.** A new methodology similar to that of the rest of items of the CPI shopping basket will apply to fresh fruits and fresh vegetables that continue to maintain a seasonality scheme. The main characteristics are the following:
 - o The absence of the price, by the fact that the product is out of season, will be estimated with the average variation in the prices of the rest of products that are available, proceeding in the same way as with the rest of the items of the shopping basket when there is a lack of a price.
 - o The weighting assigned to each seasonal item will be fixed throughout the year, and not variable from month to month as it has been until now.
 - o The index will be calculated with the prices of the month of December of the previous year, as reference.

This new treatment indicates a change with regard to the methodology applied in the base 2011, in which the aggregated indices for fruits and vegetables used weightings variable month to month and referenced prices to the same month of the previous year. This methodology provided a good estimate of the price evolution on an annual basis, although at the expense of the precision in the estimates of monthly variations.

Chained series

The changes introduced in the CPI have caused some of the elements involved in the computation of this indicator to differ from those used for base 2011.

In order that the results of the CPI are not affected by this fact, the INE will elaborate the corresponding chained series, so as to provide continuity for the information that has been published until now.

Annex I

Aggregated main weights

Weights of special groups (so much per hundred)

Special group	2016	2017	Variation (%)
Food			
Processed, beverages and tobacco	15.06	15.27	1.4
Unprocessed	6.45	7.52	16.6
With beverages and tobacco	21.51	22.79	6.0
Unprocessed and energy products	17.87	18.72	4.7
Industrial goods	38.36	35.96	-6.3
Durable	11.45	10.44	-8.8
Energy products	11.43	11.20	-2.0
Fuels and lubricants for personal transport equipment	8.14	7.68	-5.6
Without energy	35.08	32.45	-7.5
Excluding energy products	26.94	24.76	-8.1
Services	40.13	41.25	2.8
Excluding housing rental	37.65	38.46	2.2
Overall index			
Excluding food, beverages and tobacco	78.49	77.21	-1.6
Excluding housing rental	97.52	97.21	-0.3
Excluding energy products	88.57	88.80	0.3
Excluding energy and unprocessed food	82.13	81.28	-1.0
Excluding tobacco	98.03	97.83	-0.2

The detailed information regarding the new weightings is available on the INE website (<http://www.ine.es/en>).