

INSTITUTO NACIONAL DE ESTADÍSTICA



# **Consumer Price Index. Base 2006**

## **Methodology**

Madrid,  
General Department for Statistics on Prices and  
Household Budgets

# Index

---

## 1. Introduction

---

## 2. Definition

---

## 3. Coverage

---

### 3.1.- Reference periods

---

#### 3.1.1.- Index reference period (Base period)

---

#### 3.1.2.- Price reference period

---

#### 3.1.3.- Weight reference period

---

### 3.2.- Population coverage

---

### 3.3.- Geographic coverage

---

### 3.4.- Coverage of goods and services

---

#### 3.4.1.- Basket of goods and services

---

### 3.5.- Functional breakdown

---

### 3.6.- Geographical breakdown

---

## 4. Sample design

---

### 4.1.- Selection of municipalities

---

### 4.2.- Selection of shopping areas and outlets

---

### 4.3.- Selection of items

---

#### 4.3.1- Specification of items

---

### 4.4.- Number of observations

---

## 5. General calculation method

---

### 5.1.- Elementary indices

---

### 5.2.- Weights

---

---

5.3.- Aggregate indices

---

5.4.- Calculation of changes

---

5.4.1.- Monthly changes

---

5.4.2.- Changes over the previous December

---

5.4.3.- Annual changes

---

5.5.- Calculation of contributions

---

5.5.1.- Monthly contributions

---

5.5.2.- Contributions over the previous December

---

## **6. Types of items**

---

6.1.- Criteria for the classification of items

---

6.2.- Seasonal items

---

6.2.1.- Definition

---

6.2.2.- Methodology

---

6.2.3.- Calculation of indices

---

6.3.- Provincially collected items with tariff prices

---

6.4.- Rentals for housing

---

6.5.- Centrally collected items

---

## **7. Price collection**

---

7.1.- Frequency and price collection periods

---

7.2.- Price reductions

---

7.2.1.- Criteria and types of price reductions

---

7.3.- Fieldwork organization

---

---

## **8. Data processing**

---

8.1.- Data sending

---

8.2.- Edition and validation of prices

---

8.3.- Quality changes

---

8.3.1. - Definition

---

8.3.2. - Quality adjustment methods

---

## **9. Linked series**

---

### **Annexes**

---

Annex I. Calculation of Aggregate Indices

---

Annex II. Historical Development

---

Annex III. Content of the CPI Subclasses, Base 2006

---

# 1. Introduction

The operation of the change in the Consumer Price Index (CPI) System mainly consists of revising and updating each of its components, and determining the best options for achieving a representative and precise indicator that adapts to economic trends.

Until the entry into force of base 2001, the CPI based its calculation on what is called a fixed-base system, whose main characteristic is that, both the composition of the shopping basket and its weightings are unaltered for the entire time that the base is used. The changes in the base were carried out every eight or nine years, because such was the periodicity of the Basic Household Budget Survey (BHBS), the source used for the preparation of the weightings and of the shopping basket. Due to this, the only way to be able to collect the changes in consumer behaviour and for the CPI to adapt to these trends, was to wait until the following change in base. Evidently, in some cases, the time period was excessively long.

Beginning in 1997, the two household budget surveys that had coexisted (one continuous and quarterly, and another, carried out every eight or nine year) were substituted by a single, quarterly one, which provided information that was closer to the basic survey, as per the breakdown level. This survey, called the Household Budget Continuous Survey (HBCS), provided the information necessary for the updating of the weightings, as well as the renewal of the composition of the shopping basket in the base change of CPI 2001. In addition, it made possible the permanent updating of said weightings and the revision of the shopping basket, which was an improvement on the changes of the CPI System.

Thus, with the CPI, base 2001, a new Calculation system began, whose most important characteristics are its dynamism and its contemporary nature. It is a more current CPI, given that it permanently revises its methodological system, for the purpose of improving it. To this end, direct contact is established with the different academic forums and national and international producing bodies.

It is also, however, a more dynamic CPI than its predecessors in that it annual revises the weightings for certain functional breakdown levels, and includes, in the shortest time possible, any change detected in the market components, be it the appearance of new products, changes in the consumption structure or in the sample of municipalities or establishments. In additions, it establishes the base changes every five years, carrying out a complete revision of the methodology and the sample and the updating of weightings at all breakdown levels.

As a result of this new scheme of functioning, in January 2007, the Consumer Price Index system entered into force, with reference base in the year 2006. This System substitutes for the CPI, which with base 2001, was in force until December 2006.

The CPI, base 2006, maintains the main characteristics of the CPI, base 2001, and as with the earlier version, will annual review the weightings for a certain functional breakdown level. To carry out this updating, it will use the information provided by new Household Budget Survey (HBS) 2006, which since the year 2006 has substituted for HBCS-97, and whose main characteristic is its annual periodicity. Likewise, the information provided by this new survey will also be used in the base changes after the year 2008.

In 1999, the CPI Working Group was created, at the heart of the High Council on Statistics, comprised of representatives from the Ministry of Economy and Tax, Bank of Spain, consumer associations, universities, trade unions, OECD, Chambers of Commerce, among others. The Group meets periodically for the purpose of the INE informing on the most relevant aspects in the preparation of the new price systems and in the annual updates. The CPI, base 2006, counts with the assistance of the Working Group, which guarantees the ample support of the main economic agents.

In addition, the methodology of the new System was analysed by the High Council on Statistics, and was the object of study by the Permanent Commission of said Council until it was approved in the Plenary of the High Council on Statistics.

The main characteristics of the Consumer Price Index, base 2006, are presented in this methodology.

---

The INE would like to express its gratitude for the interest shown by all those bodies and professionals who have participated in the different working groups that were formed for the change in the CPI System, and likewise thanks the cooperation of all those informants who provided the data necessary to compile the CPI within the established terms.

## 2. Definition

The Consumer Price Index, published monthly, has the objective of measuring the evolution of the price levels of consumer goods and services acquired by the households resident in Spain.

System Base 2006 uses the definition of consumption expenditure of the HBS: "*consumption expenditure is the monetary flow that the household and each of its members spend on the payment of certain goods and services, aimed at the household itself or to be transferred free of charge to other households or institutions*".

It has, therefore, eliminated from the CPI consumption field the consumption categories defined in the HBS such as the value of the goods received in kind, within the concept of self-consumption, self-supply, salary in kind, free or subsidised food and rent of the dwelling in which the household resides, when the household is the owner of the same or has it granted free of charge or at a low price by other households or institutions.

Also suppressed were some taxes not considered to be consumption from the point of view of the HBS, and other expenses such as those spent on lotteries and gambling. This definition of consumption expenditure is in agreement with the criteria used by the European System of Accounts (ESA-95).

The different consumer goods and services are classified in the HBCS in accordance with the harmonised COICOP (Classification of Individual Consumption by Purpose) classification.

The precision with which this short-term indicator measures the evolution of price level depends on two qualities that every CPI must have: representation and temporal comparability.

The degree of representation of the CPI is determined by the adaptation of this indicator to the economic reality of the moment; thus, the change calculated from the CPI will more closely approximate the evolution of the whole of the prices of the economy, the more the elements selected for measurement adapt to the behavioural trends of consumers. In order to achieve this, the items selected to form part of the shopping basket must be the most frequently consumed by most of the population, the establishments from the sample must be the most visited, and the relative importance of each item in the shopping basket must answer to household consumption trends. The better the selection of these elements, the more representative the indicator will be.

On the other hand, the CPI is an indicator that only makes sense when temporal comparisons are established; in fact, an index number barely has any meaning if a comparison is not established with indices from other periods, to obtain the corresponding changes (this could be one month, one year, or any other period of time). To this end, the other quality that may be attributed to a CPI is temporal comparability, that is, the need for the elements defined by the CPI to remain stable over time, except, logically, the prices collected monthly. This makes it possible for any variation in the CPI to be due only to changes in the prices of the selected items, and not to any change in the methodological content of this indicator.

The applications of the CPI are numerous and of great importance in the economic, legal and social areas. Worth noting among these is its use as a measurement of

inflation. It is also applied in the revision of real estate rental contracts, as a reference in wage negotiation, in the establishment of pensions, in the updating of insurance premiums and other types of contract, and as a deflator in the National Accounts.



## 3. Coverage

---

### 3.1 Reference periods

---

#### 3.1.1 INDEX REFERENCE PERIOD (BASE PERIOD)

The base period, or reference period, of the index is that for which all indices are made equal to 100. This is normally an annual period. In the new System, the arithmetic average of the twelve monthly indices published from the year 2006, in base 2001, are made equal to 100, and therefore, the reference period of the index is the year 2006, in other words, it is CPI base 2006. This means to say that all indices published will refer to this year.

---

#### 3.1.2 PRICE REFERENCE PERIOD

This is the period with whose prices the current prices are compared, that is to say, the period chosen for the calculation of the elementary indices.

With the calculation formula used for CPI base 2006 - linked Laspeyres - the reference period of the prices varies each year, and is the month of December of the year immediately prior to the year considered.

---

#### 3.1.3 WEIGHT REFERENCE PERIOD

The reference period of the weightings is that to which the weightings serving as the structure of the System refer.

For the year 2007, the calculation of the weightings of the current System has been performed with the data from the HBCS, which provides basic information on the expenses of families on consumer goods and services, corresponding to the period between the first quarter of 2004 and the fourth quarter of 2005, granting more importance to the information corresponding to the four quarters that are closest at the moment that the update is carried out.

In addition, to correct the lag produced between this reference period of the weightings and the reference period of the index (December of the year 2006), the weightings have been updated, using information on price and quantity evolution, from the CPI and other sources.

Thus, the reference period of the weightings is December 2006, during the first year. And December of each year in subsequent years, given that the weightings will be updated annually, using the annual information of the HBS, and information from other sources, such as the evolution of private consumption from the National Accounts, the evolution of CPI prices and the information provided by sources on the supply of the different sectors.

This annual revision of weightings will be performed for certain geographical and functional breakdown levels, using the information available closest to the moment of the revision.

In addition, every five years, a base change will be carried out, in which the weightings will be updated for all functional and geographical breakdown levels.

---

### **3.2 Population coverage**

The population of the index or reference stratum is the population group whose consumption expenditure structure serves as the basis for the selection of representative items and the calculation of the weightings of the same.

In CPI base 2006, the reference stratum includes all of the population resident in family dwellings in Spain; it therefore excludes the expenses of persons resident in group households or institutions (convents, retirement homes, prisons, etc.) and the expenses of non-residents.

---

### **3.3 Geographic coverage**

The geographical scope of the research is comprise of the whole of Spain.

---

### **3.4 Coverage of goods and services**

The group of goods and services that households from the reference stratum use for consumption; it therefore does not consider expenses on investment goods, self-consumption and self-supply, rent, or expenses subsidised by the public administrations. Also excluded from the consumption field are some taxes not considered to be consumption from the point of view of the HBS, and other expenses, such as those used for lotteries and gambling.

In the HBS, the goods and services have been classified according to the COICOP international consumption classification. Each consumption division of the HBS is represented by one or more items in the CPI, in such a way that the evolution of the prices of these items represents the evolution of all of the elements comprising said division.

---

#### **3..4.1 BASKET OF GOODS AND SERVICES**

The group of goods and services selected in the CPI, whose price evolution represents the evolution of all those that comprise the COICOP division to which they belong.

The selection of items comprising the shopping basket has been performed based on CPI base 2001, and data from HBCS 2004-2005. The criterion to determine which divisions should be included is the same as that used for base 2001: the CPI has taken into account all those divisions that exceed 0.3 per thousand of total expenditure.

Once the expenditure divisions to be represented in the index were determined, the items comprising the base 2001 shopping basket were revised, increasing, decreasing or maintaining the items from each division, depending on the weighting of it, and the variability of the prices of said items.

Thus, the total number of items comprising the shopping basket of CPI base 2006 is 491.

For each of the items, a description or specification is prepared, for the purpose of facilitating its identification on the part of the surveyor, and permitting the correct collection of the prices. These specifications bear in mind the particularities of each region.

### 3.5 Functional breakdown

CPI base 2006 adapts completely to the COICOP international consumption classification. The items in the shopping basket are aggregated in subclasses, these in classes, subsequently in subgroups, and finally, the subgroups in groups.

The functional structure of the CPI consists of 12 groups, 37 subgroups, 79 classes and 126 subclasses. In addition, the 57 headings and 28 special groups existing in CPI base 2001 are maintained.

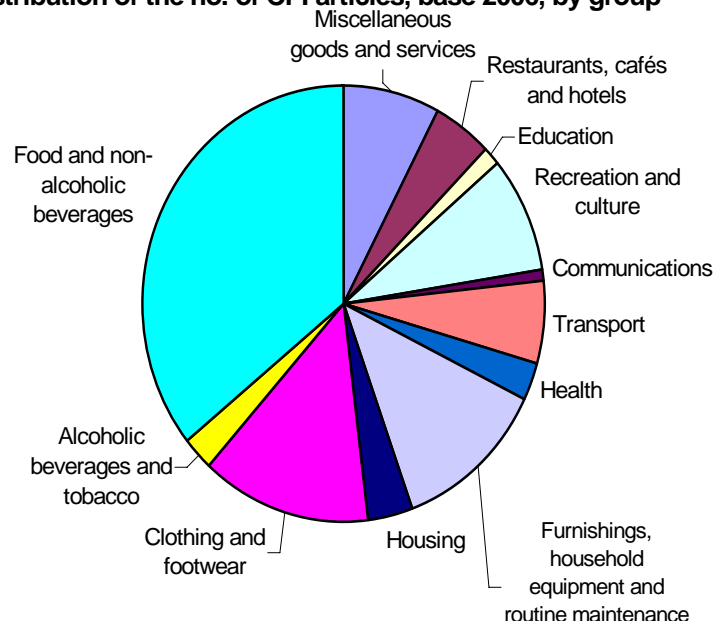
The following table establishes the comparison between the number of aggregations in bases 2001 and 2006:

	<b>Base 2001</b>	<b>Base 2006</b>
Groups	12	12
Subgroups	37	37
Classes	80	79
Subclasses	117	126
Headings	57	57
Special Groups	28	28

The items are distributed in the large groups from CPI 2006, in the following way:

<b>Number of items, IPC Base 2006</b>	
<b>Groups</b>	<b>Number of items</b>
1 Food and non-alcoholic beverages	176
2 Alcoholic beverages and tobacco	12
3 Clothing and footwear	67
4 Housing	18
5 Furnishings, household equipment and routine maintenance of the house	60
6 Health	13
7 Transport	31
8 Communications	3
9 Recreation and culture	43
10 Education	7
11 Restaurants, cafés and hotels	23
12 Miscellaneous goods and services	38
<b>Total</b>	<b>491</b>

### Distribution of the no. of CPI articles, base 2006, by group



### 3.6 Geographical breakdown

CPI base 2006 publishes the indices for the different geographical and functional breakdown levels that were published in CPI base 2001.

The following table collects the breakdown for which data are published monthly.

INDEX	National	Autonomous Community	Province
Overall	X	X	X
Groups	X	X	X
Subgroups	X	X	X
Classes	X		
Subclasses	X		
Headings	X	X	
Special Groups	X	X	

## 4. Sample design

As is most European Union (EU) countries, the sample design of the prices that intervene in the calculation of the CPI is intentional, and therefore it is a non-probabilistic design, given the characteristics of the target population of the study.

To obtain significant indicators at all functional and geographical breakdown levels from which the CPI is published, a sample selection process has been structured in three large sections, each of which has the objective of selecting the different components of the same. These are as follows:

- Selection of municipalities.
- Selection of commercial areas and establishments.
- Selection of items.

---

### 4.1 Selection of municipalities

The selection of the municipalities that are a part of the new CPI System has been carried out, also bearing in mind not only demographic criteria, as in previous bases, but also geographical representation. The official population data that have been used to make the selection of municipalities are those obtained from the revision of the Municipal Register of Inhabitants at 1 January 2003.

We have begun with the demographic criteria used in CPI base 2001, introducing some additional criteria, for the purpose of obtaining representative indicators for each geographical and functional breakdown level.

In base 2001, the geographical coverage criterion was mainly based on the population of the group of selected municipalities. In this way, the municipalities selected should have covered 30% of the population of the province, and 50% of the population of the Autonomous Community. With this criterion, the municipalities were selected by size, until the requirement was fulfilled, without considering the geographical distribution of the same within the province. In addition, the sample of municipalities where the collection of prices of *Food* items was carried out was always larger than for the rest of the items.

For base 2006, this base criterion has been maintained, but completed in the following way:

- **geographical representation:** it is important for the municipalities in the sample to be distributed throughout the entire province, avoiding a concentration in certain population centres.
- **population representation:** particular emphasis has been made on the representation of the small municipalities; until now, given that the selection criterion was exclusively population-based, excluded from the sample was part of the population resident in smaller-sized municipalities.
- **representation of the shopping basket:** all of the municipalities should have items from all of the groups; for this, a reduced shopping basket has been prepared, from the total shopping basket, in which basic consumption items have been included. With this, the representation of the CPI has increased considerably.

Thus, the sample of municipalities obtained with the aforementioned criteria consists of 177 (the 52 provincial capitals and 125 non-capital municipalities), as compared with the 141 municipalities from Base 2001.

In 97 of these 177 municipalities, prices are collected in the entire shopping basket of items, in 44 of them, prices are collected in the *Food* shopping basket, and part of the rest of the shopping basket, and in the 36 remaining municipalities, prices are collected from a reduced part of the shopping basket (comprised of 48% of the items). These last mentioned municipalities are the new municipalities that have become a part of CPI base 2006.

Therefore, in base 2006, the population representation and diversification have improved, given that, of the 36 new municipalities, 31 have fewer than 50,000 inhabitants; the coverage of goods and services has also improved, since in all of the municipalities, prices are collected from all of the consumption groups.

It is important to highlight that, in practice, population percentages higher than those indicated are covered, granted that some establishments included in the sample, such as hypermarkets, shopping centres, repair workshops or furniture stores, are found outside of the municipalities or in bordering municipalities, due to which the real population represented in the index is larger than the theoretical population.

---

## 4.2 Selection of shopping areas and outlets

For the selection of the number of establishments, CPI base 2006 has used as its starting point the sample from CPI base 2001, and has studied the existing network of establishments available in each province, paying special attention to the different types and characteristics of said establishments. In addition, always borne in mind has been the representation of commercial reality and the evolution of the prices in all areas.

We must note the important role that the provincial delegations of the INE have played in this work.

As an overall criterion, the number of establishments that, on a monthly basis, inform on the prices of an item, is calculated depending on the weighting of the item in the index, and on the variability of its prices: the higher the weighting and/or variability of prices, the higher the number of establishments should be selected.

Likewise, for the calculation of the number of establishments, a minimum number was established for each item in each province, depending on the type of item and the type of collection of said item.

For the selection of the types of establishment, we have borne in mind the distribution of sales percentages by type of establishment (hypermarkets, supermarkets, markets and specialised stores), depending on each item. To this end, we counted on information from several sources, among these being the Trade Survey (INE) and the Ministry of Agriculture, Fishing and Food.

Special attention was paid to the shopping centres, hypermarkets and supermarkets, given their importance in terms of sales volume, even if this aspect was already collected in CPI base 2001. In many cases, the situation in said centres, as well as the presence of markets, conditions the creation of "commercial zones", which are explicitly defined, in each municipality of the sample, for perishable food items (meats, fish, fresh fruits and vegetables), and implicitly so for the rest of the items.

In the definition of the commercial zones, we begin with the hypothesis that the population that purchases in said commercial zone has homogeneous behaviour and habits as regards consumption. These commercial zones have been delimited with the aid of the provincial delegations.

For the perishable food items, three types of commercial areas were defined, based on the size of the municipality and the number of establishments susceptible of being selected for the different types of items considered.

In addition, these items were classified in two large groups, considering the variability of the prices that they present and the weight that they have in the shopping basket.

This classification determines the number of establishments in which prices are collected, according to the type of commercial zone and the type of item in question.

For the rest of the items, although the strict delimiting has not been carried out of the commercial zones, the selection of establishments is made, fulfilling the objective of representation: the sample of establishments must represent, with the evolution of the prices of the items sold therein, all of the establishments of the town.

Based on the aforementioned premises, the personnel of the provincial delegations of the INE has carried out the selection of the informant establishments, so as to comply with the following basic norms:

- The sample must represent all of the commercial zones and the different types of existing establishments.
- The establishments must have the most frequent and massive flow of public in the town, and/or the greatest sales volume.
- The establishments must be representative of all types of items for which information is collected.
- In each establishment, no more than one price may be collected for the same item on the same day.
- An establishment may not concentrate an important number of observations of prices of different items. The objective of this price policy is to try to avoid one single establishment from conditioning the evolution of the index.
- Excluded from the sample are those establishments with access restricted to a sector of the population, such as cooperatives, company stores or similar

establishments. Itinerant street vending and door-to-door sales are not considered either.

- The establishments selected must offer sufficient guarantees of continuity in the sale of items for which prices are collected, given that this sample remains fixed over time, except in the case of closing, change of activity, loss of representation as regards consumption, or no longer selling the item for which prices were collected. In these cases, the establishment will be substituted by another that fulfils the requirements necessary to belong to the sample.

All of these criteria are dependent on other aspects, such as collection costs, willingness of the informant to cooperate and reliability of the data supplied. However, Law 4/1990 establishes the obligation of facilitating the data necessary for the compilation of these Statistics.

In CPI base 2006, approximately 33,000 establishments with these characteristics have been selected, distributed throughout the country.

---

### 4.3 Selection of items

To select the items that are representative of the expenditure divisions of the HBCS, different bodies, business associations, manufacturers, traders and establishments were consulted, which provided information on those items that best represented the different divisions, in accordance with the following selection criteria:

- The evolution of the prices of the items selected must be similar to that of the rest of the items of the division that they represent.
- The items must be habitually consumed by the population.
- They must have prices that are easily observable.
- They must offer reasonable guarantees of permanence on the market.

Thus, in CPI base 2006, the shopping basket is comprised of 491 items, as compared with the 484 with which CPI base 2001 was compiled. We have eliminated items whose consumption or representation had decreased, such as fabric for clothing or the repair of certain household appliances, and included new items such as those related to diet and children's products and new services related to health, among others.

---

#### 4.3.1 SPECIFICATION OF ITEMS

Once the items are selected, it is necessary to determine the specifications that define them. The preparation of these specifications allows for comparison over time of equal or equivalent-quality items, for the purpose of measuring real variations of prices and not those caused by a different quality of the items. As a result, for each item, the determining factors of its prices must be specified, among which we find, for example: unit of measurement, type of packaging, size, composition, shape or dimensions.



For the items from groups 1 and 2, we also determine the theoretical collection unit (litre, kilo, etc.), depending on the most generalised consumption unit for each type of item.

In order to determine the characteristics of each item and determine the specifications, we also obtained information from numerous bodies, professional associations and companies; in this way, it was possible to compile some general specifications that subsequently were adapted, in each province, to the specific products selected in each establishment. Thus, when the information collection is carried out on the part of the agents, the items are identified in a detailed manner.

The specifications of each item remain fixed over time, so long as they remain representative of the consumption of the zone, and are therefore modified, when the item ceases to be sold, or ceases to be representative of the consumption of a town.

On the occasions in which it is necessary to make a change of product, the provincial delegations must indicate the detailed specification of the new product selected as the substitute for the former product; this will allow for the calculation of a linking coefficient that ensures variations in the index that are exclusively caused by price variations and not by changes in the characteristics of the item.

#### 4.4 Number of observations

As previously stated, the number of observations used for the calculation of the index depends on the type of item in question, as well as on the establishments that have been selected in each of the provinces.

Sections 6 and 7 on "Types of item" and "Price collection" indicate the frequency of price collection that determines, finally, the size of the sample of prices that are collected on a monthly basis.

The number of prices processed monthly has increased as compared with CPI base 2001, going from 200,000 to approximately 220,000 prices.

The following chart reflects the changes that have been produced in the sample of CPI base 2006 as compared with CPI base 2001.

<b>Number</b>	<b>CPI Base 2001</b>	<b>CPI Base 2006</b>
Municipalities	141	177
Commercial zones	307	345
Establishments	30,000	33,000
Items	484	491
Observations	200,000	220,000

## 5. General calculation method

The formula used to calculate the indices of CPI base 2006, is the linked Laspeyres formula, which was first used in CPI base 2001.

The overall index corresponding to month  $m$  of year  $t$  is mathematically expressed as follows:

$${}_0 I_{LE}^t = \prod_{k=1}^t \frac{\sum_i p_i^k q_i^{k-1}}{\sum_i p_i^{k-1} q_i^{k-1}}$$

Similarly, it can be expressed as:

$${}_0 I_{LE}^t = \prod_{k=1}^t \frac{\sum_i \frac{p_i^k}{p_i^{k-1}} p_i^{k-1} q_i^{k-1}}{\sum_i p_i^{k-1} q_i^{k-1}} = \prod_{k=1}^t \sum_i I_i^k W_i^{k-1}$$

where:

$${}_{k-1} I_i^k = \frac{p_i^k}{p_i^{k-1}} \quad \text{and} \quad W_i^{k-1} = \frac{p_i^{k-1} q_i^{k-1}}{\sum_i p_i^{k-1} q_i^{k-1}}$$

As may be observed, a linked index establishes comparisons between the current period ( $t$ ) and the base period ( $0$ ), but considering the intermediate situations ( $k$ ).

In CPI base 2006, the intermediate situations considered correspond to the months of December of every year. Thus, the index in base 2006 for month  $m$  of year  $t$ , is obtained as the product of indices as follows:

$$\begin{aligned} {}_{06} I_G^{mt} &= {}_{06} I_G^{dic(t-1)} \times \left( \frac{{}_{dic(t-1)} I_G^{mt}}{100} \right) = \\ &= {}_{06} I_G^{dic06} \times \left( \frac{{}_{dic06} I_G^{dic07}}{100} \right) \times \dots \times \left( \frac{{}_{dic(t-2)} I_G^{dic(t-1)}}{100} \right) \times \left( \frac{{}_{dic(t-1)} I_G^{mt}}{100} \right) \end{aligned}$$

where:

${}_{06} I_G^{mt}$  is the overall index, in base 2006, of month  $m$  of year  $t$ .

${}_{dic(t-1)} I_G^{mt}$  is the overall index, referring to December of year  $(t-1)$ , of month  $m$  of year  $t$ .

The main inconvenience of linked indices is the lack of additivity. This makes it impossible to obtain the index of any aggregate as the weighted average of the indices

of the aggregates that comprise it. Thus, for example, the overall index cannot be calculated as the weighted average of all of the indices of the twelve groups.

## 5.1 Elementary indices

The basic aggregate is the consumption component with the lowest aggregation level for which indices are obtained, and in whose calculation weightings do not intervene; the indices of these aggregates are called elementary indices. The Spanish CPI calculates a elementary index for each item of the shopping basket in each of the provinces, and therefore, the basic aggregate is the item-province.

Basic aggregate index  $i$  is obtained as the quotient of the average price of said basic aggregate in the current period and the average price in the reference period of the prices, that is, December of the previous year:

$${}_{dic(t-1)}I_i^{mt} = \frac{\bar{P}_i^{mt}}{\bar{P}_i^{dic(t-1)}} \times 100$$

where:

${}_{dic(t-1)}I_i^{mt}$  is the index, referring to December of year  $(t-1)$ , of basic aggregate  $i$ , in month  $m$  of year  $t$ .

$\bar{P}_i^{mt}$  is the average price of basic aggregate  $i$ , in month  $m$  of year  $t$ .

$\bar{P}_i^{dic(t-1)}$  is the average price of basic aggregate  $i$ , in December of year  $(t-1)$ .

Likewise, the average price of aggregate  $i$ , in period  $(m,t)$ ,  $\bar{P}_i^{mt}$ , is the simple geometric average of the prices collected in said period:

$$\bar{P}_i^{mt} = n_i^{mt} \sqrt[n_i^{mt}]{\prod_{j=1}^{n_i^{mt}} P_{i,j}^{mt}} \quad (1)$$

where:

$P_{i,j}^{mt}$  is the price of basic aggregate  $i$  collected in establishment  $j$ , in period  $(m,t)$ .

$n_i^{mt}$  is the number of prices processed of basic aggregate  $i$ , in period  $(m,t)$ .

The geometric average grants the same importance to the variations of all prices, regardless of their level.

## 5.2 Weights

The weightings that intervene in the calculation of the aggregate indices come from the HBS. This survey provides estimates on consumption products made by the households resident in family dwellings in Spain.

The consumption classification that the HBS uses (COICOP) consists of a series of expenditure divisions, most of which include goods and services included in the consumption field of the CPI.

For the calculation of the weightings of the items comprising the shopping basket of CPI base 2006, the breakdown of these divisions has been necessary to obtain more detailed information. To this end, we have counted on the collaboration of different bodies, associations, manufacturers and traders.

The data used in the calculation of the weightings, used during the year 2007, are those corresponding to the years 2004 and 2005. To obtain total expenditure, a weighted arithmetic average was calculated of the annual structures, in which the second year is assigned a greater weight than the first year, due to being closer to the moment of the updating.

Likewise, to correct the lag that is produced between this weightings reference period and the reference period of the prices (December of the year 2006), the weightings were updated via the use of information on the evolution of prices and quantities, from the CPI and from other sources. In this way, the reference period of the weightings, used during the year 2007, is December 2006.

The weightings for each item represent the relation between the expenditure on the divisions represented by said item and the total expenditure on all divisions covered by the index:

$$W_i = \frac{\text{expenditure made on divisions represented by item } i}{\text{total expenditure}}$$

These weightings are different in each of the geographical aggregations (provinces, Autonomous Communities, and the nation as a whole), and from them, the weightings of the different functional aggregations are obtained. Thus, the weighting of functional aggregate  $A$  is obtained as the sum of the weightings of the items that comprise said aggregation:

$$W_A = \sum_{i \in A} W_i$$

The annual weightings updates, which will be carried out in CPI base 2006, will be done with the latest available information from the new HBS.

### 5.3 Aggregate indices

As previously mentioned, the elementary indices refer to December of the immediately previous year. In turn, the weightings used for the calculation of the aggregations also refer to December of the previous year, thereby maintaining coherence with the reference prices.

The calculation of the aggregate indices is described below.

#### Functional aggregations within a province

The index, referring to December of the previous year, of any functional aggregation  $A$  in province  $p$ , is obtained as the aggregation of the elementary indices of the items belonging to said aggregation with the weightings applicable in year  $t$ .

Its mathematical expression is as follows:

$${}_{dic(t-1)}I_{A,p}^{mt} = \sum_{i \in A} {}_{dic(t-1)}I_{i,p}^{mt} \times {}_{dic(t-1)}W_{i,p}$$

where:

${}_{dic(t-1)}I_{i,p}^{mt}$  is the index, referring to December of year  $t-1$ , of item  $i$  in province  $p$ , in month  $m$  of year  $t$ ,

${}_{dic(t-1)}W_{i,p}$  is the weighting (so much per one), referring to December of year ( $t-1$ ), of item  $i$  in province  $p$ , within Aggregation  $A$ , that is:

$${}_{dec(y-1)}W_{i,p} = \frac{\text{expenditure made on item } i \text{ within province } p}{\text{expenditure made on functional aggregation } A \text{ within province } p}$$

Once the aggregate indices are calculated as detailed above, it is necessary to link them. These indices are those which are finally disseminated and provide continuity for the series published in base 2006.

For any functional aggregation  $A$ , the index in base 2006 in province  $p$  is calculated as follows:

$${}_{06}I_{A,p}^{mt} = {}_{06}I_{A,p}^{dic(t-1)} \times \left( \frac{{}_{dic(t-1)}I_{A,p}^{mt}}{100} \right)$$

#### Geographical aggregations of a functional aggregation

In the same way as the previous case, the calculation of the index of a geographical aggregation  $R$  greater than the province, for a specific functional grouping  $A$  is calculated as follows:

$${}^{dic(t-1)}I_{A,R}^{mt} = \sum_{p \in R} {}^{dic(t-1)}I_{A,p}^{mt} \times {}^{dic(t-1)}W_{A,p}$$

where:

${}^{dic(t-1)}I_{A,p}^{mt}$  is the index, referring to December of year  $(t-1)$ , of functional aggregation  $A$  in province  $p$ , in month  $m$  of year  $t$ .

${}^{dic(t-1)}W_{A,p}$  is the weighting (so much per one), referring to December of year  $(t-1)$ , of functional grouping  $A$  in province  $p$ , that is,

$${}^{dec(y-1)}W_{A,p} = \frac{\text{expenditure made on functional aggregation } A \text{ within province } p}{\text{expenditure made on functional aggregation } A \text{ within geographic aggregation } R}$$

As with the functional aggregations, once the aggregate indices are calculated, it is necessary to link them.

For any functional aggregation  $A$ , the linked index, in base 2006, in region  $R$ , in month  $m$  of year  $t$ , is:

$${}_{06}I_{A,R}^{mt} = {}_{06}I_{A,R}^{dic(t-1)} \times \left( \frac{{}^{dic(t-1)}I_{A,R}^{mt}}{100} \right)$$

## 5.4 Calculation of changes

### 5.4.1 MONTHLY CHANGES

The monthly change of an index in period  $(m, t)$  is calculated as the quotient between the index from the current month  $m$  and the index from the previous month  $(m-1)$ , according to the following formula:

$$V^{mt/(m-1)t} = \left( \frac{{}_{06}I^{mt}}{{}_{06}I^{(m-1)t}} - 1 \right) \times 100 = \left( \frac{{}^{dic(t-1)}I^{mt}}{{}^{dic(t-1)}I^{(m-1)t}} - 1 \right) \times 100$$

where:

$V^{mt/(m-1)t}$  is the monthly change, in month  $m$  of year  $t$ .

${}_{06}I^{mt}$  is the index, in base 2006, in month  $m$  of year  $t$ .

${}_{dic(t-1)}I^{mt}$  is the index, referring to December of the previous year, in month  $m$  of year  $t$ .

In other words, the monthly changes can be calculated with the published indices, in base 2006, or with the unlinked indices (referring to December of the previous year).

---

#### 5.4.2 CHANGES OVER THE PREVIOUS DECEMBER

The change over the last December (year-to-date) is calculated as the quotient between the index from the current month and the index from December of the previous year:

$$V^{mt/dic(t-1)} = \left( \frac{{}_{06}I^{mt}}{{}_{06}I^{dic(t-1)}} - 1 \right) \times 100 = \left( \frac{{}_{dic(t-1)}I^{mt}}{{}_{dic(t-1)}I^{dic(t-1)}} - 1 \right) \times 100 = \left( \frac{{}_{dic(t-1)}I^{mt}}{100} - 1 \right) \times 100$$

where:

$V^{mt/dic(t-1)}$  is the change over last December, in month  $m$  of year  $t$ .

${}_{06}I^{mt}$  is the index, in base 2006, in month  $m$  of year  $t$ .

${}_{dic(t-1)}I^{mt}$  is the index, referring to December of the previous year, in month  $m$  of year  $t$ .

That is to say, the changes over last December can be calculated with the published indices, in base 2006, or with the unlinked indices (referring to December of the previous year).

---

#### 5.4.3 ANNUAL CHANGES

The annual change is calculated as the quotient between the indices published in the current month and from the same month of the previous year, both in base 2006:

$$V^{mt/m(t-1)} = \left( \frac{{}_{06}I^{mt}}{{}_{06}I^{m(t-1)}} - 1 \right) \times 100$$

where:

$V^{mt/m(t-1)}$  is the annual change, in month  $m$  of year  $t$ .

${}_{06}I^{mt}$  is the index, in base 2006, in month  $m$  of year  $t$ .

In the case of annual changes, these cannot be calculated with the indices referring to December of the previous year, as occurs with the monthly and 'over last December' changes.

---

## 5.5 Calculation of contributions

---

### 5.5.1 MONTHLY CONTRIBUTIONS

The contribution of a monthly change of an item or group of items in the overall index is defined as the part of the monthly change of the overall index that corresponds to said item or group of items. Therefore, the sum of the monthly contributions of all of the items in the shopping basket is equal to the monthly change of the overall index.

In other words, the contribution that the monthly price change of an item or group of items has in the monthly change of the overall index, is the change that this index would have experienced if all of the prices of the rest of the items had remained stable that month.

The formula of the monthly contribution of a specific item (or functional aggregate)  $i$ , in month  $m$  of year  $t$ , is as follows:

$$R_i^{m/(m-1)t} = \frac{{}_{dic(t-1)}I_i^{mt} - {}_{dic(t-1)}I_i^{(m-1)t}}{{}_{dic(t-1)}I_G^{(m-1)t}} \times {}_{dic(t-1)}W_i \times 100$$

where:

${}_{dic(t-1)}I_i^{mt}$  is the index, referring to December of year  $(t-1)$ , of item  $i$ , in month  $m$  of year  $t$ .

${}_{dic(t-1)}I_G^{(m-1)t}$  is the overall index, referring to December of year  $(t-1)$ , in month  $(m-1)$  of year  $t$ .

${}_{dic(t-1)}W_i$  is the weighting, referring to December of year  $(t-1)$ , of item  $i$ , so much per one.

Developing the previous formula, we obtain an alternative way of calculating the contributions through the changes:



$$\begin{aligned}
R_i^{mt/(m-1)t} &= \frac{dic(t-1) I_i^{mt} - dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_G^{(m-1)t}} \times \frac{W_i}{dic(t-1)} \times 100 = \\
&= \frac{dic(t-1) I_i^{mt} - dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_G^{(m-1)t}} \times \frac{dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_i^{(m-1)t}} \times \frac{W_i}{dic(t-1)} \times 100 = \\
&= \frac{dic(t-1) I_i^{mt} - dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_i^{(m-1)t}} \times 100 \times \frac{W_i}{dic(t-1)} \times \frac{dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_G^{(m-1)t}} \\
&= V_i^{mt/(m-1)t} \times \frac{W_i}{dic(t-1)} \times \frac{dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_G^{(m-1)t}}
\end{aligned}$$

Therefore, the monthly contribution of an item called I, is the product of its monthly change (  $V_i^{m,t/(m-1)t}$  ) by its weighting (  $\frac{W_i}{dic(t-1)}$  ) and by the quotient between the index of the item and the overall index of the previous month (  $\frac{dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_G^{(m-1)t}}$  ).

As previously mentioned, the sum of the monthly contributions of all of the items that comprise the shopping basket of the CPI is equal to the monthly change of the overall index. This is demonstrated as follows:

$$\begin{aligned}
\sum_i R_i^{mt/(m-1)t} &= \sum_i \frac{dic(t-1) I_i^{mt} - dic(t-1) I_i^{(m-1)t}}{dic(t-1) I_G^{(m-1)t}} \times \frac{W_i}{dic(t-1)} \times 100 = \\
&= \frac{\left( \sum_i dic(t-1) I_i^{mt} \times \frac{W_i}{dic(t-1)} - \sum_i dic(t-1) I_i^{(m-1)t} \times \frac{W_i}{dic(t-1)} \right)}{dic(t-1) I_G^{(m-1)t}} \times 100 = \\
&= \frac{dic(t-1) I_G^{mt} - dic(t-1) I_G^{(m-1)t}}{dic(t-1) I_G^{(m-1)t}} \times 100 = V_G^{mt/(m-1)t}
\end{aligned}$$

### 5.5.2 CONTRIBUTIONS OVER THE PREVIOUS DECEMBER

The contribution of the change for the year-to-date (or contribution over the previous December) of an item or group of items in the overall index, represents the entire change that the overall index would experience if the rest of the items were not to

experience any price changes for the year-to-date. In other words, it is the part of the change over the previous December that is due to said item of group of items.

The formula of the specific contribution over the previous December (or functional aggregate)  $i$  in month  $m$  of year  $t$  is as follows:

$$\begin{aligned}
 R_i^{mt/dic(t-1)} &= \frac{dic(t-1) I_i^{mt} - dic(t-1) I_i^{dic(t-1)}}{dic(t-1) I_G^{dic(t-1)}} \times_{dic(t-1)} W_i \times 100 = \\
 &= \frac{dic(t-1) I_i^{mt} - 100}{100} \times_{dic(t-1)} W_i \times 100 = \left( dic(t-1) I_i^{mt} - 100 \right) \times_{dic(t-1)} W_i
 \end{aligned}$$

where:

$dic(t-1) I_i^{mt}$  is the index, referring to December of year  $(t-1)$ , of item  $i$ , in month  $m$  of year  $t$ .

$dic(t-1) W_i$  is the weighting, referring to December of year  $(t-1)$ , of item  $i$ , so much per one.

Using the alternative formula for calculating contributions developed in the previous section, we obtain that the contribution over the previous December is equal to the product of the change over the previous December by the weighting:

$$\begin{aligned}
 R_i^{mt/dic(t-1)} &= \frac{dic(t-1) I_i^{mt} - dic(t-1) I_i^{dic(t-1)}}{dic(t-1) I_G^{dic(t-1)}} \times_{dic(t-1)} W_i \times 100 = \\
 &= V_i^{mt/dic(t-1)} \times_{dic(t-1)} W_i \times \frac{dic(t-1) I_i^{dic(t-1)}}{dic(t-1) I_G^{dic(t-1)}} = \\
 &= V_i^{mt/dic(t-1)} \times_{dic(t-1)} W_i \times \frac{100}{100} = V_i^{mt/dic(t-1)} \times_{dic(t-1)} W_i
 \end{aligned}$$

In the case of the contributions over the previous December, we also verify that the sum of them is equal to the change over the previous December, developing the same steps as in the previous section.

## 6. Types of items

### 6.1 Criteria for the classification of items

The operations included in the calculation process of the CPI, from the collection of prices to the calculation of the indices, are different, depending on the particularities of each item of the shopping basket.

Thus, the periodicity of the price collection varies according to the frequency with which the prices of the items are modified. The means of collecting them also differ, depending on the geographical homogeneity of the prices and of the availability of the same. Lastly, according to the characteristics of each item, the method of calculation of the indices is different.

The following table shows the different types of item, according to the criteria used in their classification:

Criteria	Types of item
Periodicity in the collection of prices	groups 1 and 2 → monthly <ul style="list-style-type: none"> <li>perishable               <ul style="list-style-type: none"> <li>seasonal</li> <li>not seasonal</li> </ul> </li> <li>non-perishable</li> </ul>
	groups 3 to 12 <ul style="list-style-type: none"> <li>monthly</li> <li>quarterly               <ul style="list-style-type: none"> <li>quarterly for sales</li> </ul> </li> </ul>
Place of collection and recording of prices	<ul style="list-style-type: none"> <li>provinces</li> <li>Central services</li> </ul>
Calculation method of elementary indices	<ul style="list-style-type: none"> <li>seasonal</li> <li>which are centrally collected</li> <li>of provincial collection with set price</li> <li>housing rental</li> <li>without special treatment</li> </ul>

## **Periodicity of price collection**

According to the periodicity and frequency of the price collection, a first way of classifying the items is established. Thus, two types of item are considered: monthly and quarterly items.

### Monthly collected items

The prices of the monthly items are observed every month in all of the establishments of the sample, via personal visit, in most of the cases.

In general, each establishment is visited once a month, except those in which the prices of perishable items are collected, which, due to the higher frequency with which their prices vary, the interviewer visits twice or three times a month, depending on the municipality. Unprocessed fresh food products are included in this category, and suffer periodical fluctuations in their prices, as well as constant changes in quality. Among these are the seasonal items (fresh fruits and vegetables), some of which are only sold during certain months of the year; for these items, the price collection is carried out only in the months that they are available.

Within the monthly collected items, worth noting are the seasonal items, which are those whose consumption takes place only some months of the year, since the rest of the year, they are not for sale. In the CPI, clothing and footwear items are considered to be seasonal, as they have two defined seasons (spring-summer and autumn-winter). The price collection of these items is carried out once a month during the season in which they are sold; and the price treatment carried out the months that the item disappears is the repetition of the last price collected.

### Quarterly collected items

The quarterly items are those whose prices have a very stable behaviour, that is to say, they usually do not experience many price variations over time (home appliances, furniture, repair services, etc.). A quarterly collection allows for increasing the number of prices collected with the same cost.

The processing of these prices consists of dividing the sample of selected establishments into three sub-samples, in such a way that, each month, the establishments of only one of them are visited, and the last price collected in the establishments of the other two sub-samples is repeated. This achieves that, every month, there are establishments that inform on the prices of these items. In addition, in the case that more than half of the prices collected in a month vary, the following month, information will be requested in all of the establishments.

With the inclusion of discounted prices, beginning in January 2002, a new category of items from within the quarterly items was established: the quarterly sales items. These are the items that, despite fulfilling the requirement of price stability common to quarterly items, show significant fluctuations in typical sales periods (household appliances, furniture, bed linens, etc.). For this reason, the price collection during the sales months is carried out visiting all of the establishments in the sample, and not only those of the sub-sample corresponding to that month.

## **Place of price collection and recording**

Bearing in mind the place where the prices are collected and recorded, we can distinguish between provincially and centrally collected items.

The prices of the former are collected in each province, via personal visit, through telephone or fax, or through the official bulletins of the Autonomous Communities or provinces, and are recorded in the provincial delegations.

On the other hand, the monitoring of the prices of the centrally-collected items is carried out from the Central Services of the INE. Included as part of this type of item are those goods and services that have one or several of the following characteristics:

- their prices are the same in a broad geographical area,
- their prices are subject to rates published in the BOE,
- there are few companies that sell the item,
- a perfectly defined directory of informants is available,
- they are items with habitual changes in quality (such as technological items), which makes it difficult to perform quality adjustments; upon collected them in a centralised way, the processing of these adjustments is homogenised.

## **Calculation method of the elementary indices**

Regarding the calculation method, there are certain groups of items whose elementary indices are obtained differently than the general formula described in section 5.1.

According to the general calculation formula, the elementary index of any item of the shopping basket is obtained as the simple average of the prices collected, without considering any type of weighting. The exception to this general norm is constituted by the calculation formula of the centrally-collected items and the fixed-price items; in both cases, the elementary index is calculated, bearing in mind a group of varieties or modalities that are representative of the item, adequately weighting by the expenditure made on each one of them.

In CPI base 2006, the weighting of each modality is obtained from the expenditure made by consumers. In this way, we maintain coherence with the general weighting structure of the shopping basket.

Another group of items which, due to its characteristics, receives special treatment, are the seasonal items. Because of the periodical oscillations in prices and quantities, the indices of fresh fruits and vegetables are calculated in a differently manner, based on mobile averages, which considering the production and sales calendars of the same.

Finally, and due to the special characteristics of the market, housing rental also receives a differentiated treatment of the general CPI formula.

The following sections describe these special calculation methods in detail:

---

## 6.2 Seasonal items

---

### 6.2.1 DEFINITION

Seasonal items are those that suffer periodical fluctuations, in both prices and quantities consumed over the year, even disappearing from the marked during some period of time. Because of this, the weightings of these items, as compared to the rest, vary monthly, being equal to zero for the months of the year in which there is no consumption of them or it is minimal.

Seasonal items are included in the index of most countries. However, there are not notable differences in the processing methods, as well as in the cataloguing criteria of certain items as seasonal. The products that present, in all countries, a higher seasonal profile, are fresh fruits and vegetables, although they also include fresh fish, certain meats, soft drinks, ice cream, clothing and footwear items, plants, flowers and sporting goods.

CPI base 2006 considers, as in the case of base 2001, two groups of seasonal items: *Fresh fruit* and *Fresh vegetables*, represented in two subclasses in the CPI classification. However, in comparison with CPI base 2001, the composition and the weightings of the elements of these subclasses have varied.

---

### 6.2.2 METHODOLOGY

The calculation method of the index for these subclasses is the same as in CPI base 2001. This calculation is carried out in three stages, in each of which a different type of index is obtained: elementary indices for each seasonal item; direct and mobile indices for each seasonal subclass.

#### 1st Stage. Calculation of the Elementary indices

Firstly, the **elementary indices** are obtained from each of the seasonal items that are a part of the CPI shopping basket in the month in progress, for each province. These indices are calculated as the quotient of the average price of the current month by the average price of the same month from the previous year, multiplied by 100. The average prices, as with the rest of the items of the shopping basket, are obtained by applying the geometric average.

The elementary index of the seasonal item  $i$  in month  $m$  of year  $t$  is obtained as follows:

$$I_i^{mt} = \frac{\bar{P}_i^{mt}}{P_i^{m(t-1)}} \times 100$$

where:

$\bar{P}_i^{mt}$  is the average price, of item  $i$ , in month  $m$  of year  $t$ .

## 2nd Stage. Calculation of the Direct indices

From the elementary indices by item, we obtain the **direct indices** of each subclass. The means of obtaining them is via the weighted sum of the elementary indices of the items that comprise each subclass for the month in progress (with the weightings corresponding to that month).

The calculation of the direct index of subclass  $S$  in month  $m$  of year  $t$  is carried out as follows:

$$ID_S^{mt} = \sum_{i \in S} I_i^{mt} \times W_{i/S}^m$$

where:

$I_i^{m,t}$  is the elementary index, of item  $i$ , in month  $m$  of year  $t$ .

$W_{i/S}^m$  is the weighting of item  $i$  regarding subclass  $S$ , in month  $m$ .

As may be observed, in this stage, indices are calculated by seasonal subclass, and not by item. Likewise, some weightings are used,  $W_{i/S}^m$  which represent the expenditure made on each item  $i$ , during month  $m$  of year  $(t-1)$ , as compared with the total expenditure made during the same period on all items comprising subclass  $S$ , so much per one. For each month, the sum of the weightings of the items included in subclass  $S$  is equal to 1:

$$W_{i/S}^m = \frac{G_i^m}{\sum_{i \in S} G_i^m} \quad \text{with} \quad \sum_{i \in S} W_{i/S}^m = 1, \quad \text{where:}$$

$G_i^m$  is the expenditure made, on item  $i$ , during month  $m$ .

The weightings structure  $\{W_{i/S}^m\}_{i \in S}$  is different for each month of the year and for each province.

## 3rd Stage. Calculation of the Mobile indices

Lastly, we calculate the **mobile indices** by seasonal subclass, which are those used to obtain more aggregated indices (on both a functional and a geographical level). These mobile indices are calculated as the weighted arithmetic average of the direct indices of the month in progress and of the 11 previous months, in such a way that they are always the averages of the indices of an entire year.

The calculation of the mobile index of a subclass S, in month  $m$  of year  $t$ , is the following:

$$IM_S^{mt} = \sum_{j=m-11}^m ID_S^{jt} \times W_S^j$$

On using linked indices, the direct indices that correspond to months of the previous year are considered equal to one hundred, and thus, the previous formula is expressed as follows:

$$IM_S^{mt} = 100 \times \sum_{j=m-11}^{dic} W_S^j + \sum_{j=ene}^m ID_S^{jt} \times W_S^j$$

where:

$ID_S^{jt}$  is the direct index of subclass S, in month  $j$  of year  $t$ .

$W_S^j$  is the weighting of subclass S, in month  $j$ .

The weightings  $\left\{ W_S^j \right\}_{j=1,2,\dots,12} = \left\{ \sum_{i \in S} W_i^j \right\}_{j=1,2,\dots,12}$  used in this stage represent the

expenditure made during month  $j$  of subclass S, as compared with the total annual expenditure made on said subclass, so much per one, that is to say:

$$W_S^j = \frac{G_S^j}{\sum_{j=1}^{12} G_S^j} \quad \text{with} \quad \sum_{j=1}^{12} W_S^j = 1$$

where:

$G_S^j$  is the expenditure made, in subclass S, during month  $j$ .

These weightings, as with the previous weightings, are different for each province.

### 6.2.3 CALCULATION OF INDICES

The calculation of indices is carried out following the three steps previously described. In the first step, to obtain the elementary index of a seasonal item, its average price in the month in progress is divided by the average price in the same month of the previous year. In the second step, we aggregate the indices of the items that comprise the subclass in that month, and in the third step, the mobile index is calculated, as the average of the direct index of the month in progress and the eleven previous months.



In order to obtain the mobile indices of Autonomous Communities or for the nation as a whole, weighted averages are calculated of the provincial mobile indices, following the same method that was described in the general case of items, that is, applying the weightings corresponding to each geographical breakdown.

The mobile indices, calculated as described, are not published, as this would imply a break in the series each December. It is therefore necessary to link said indices.

### Linked indices

The mobile index of a seasonal subclass is equivalent to the elementary index of any non-seasonal item (indices referring to December of the previous year):  $IM_S^{mt} = {}_{dic(t-1)}I_S^{mt}$ . Thus, by similarity, the linked index of seasonal subclass  $S$ , in month  $m$  of year  $t$ , is equal to the index published of the subclass in December of year  $(t-1)$  by the unlinked index (mobile index) of period  $(m,t)$  by 100:

$${}_{06}I_S^{mt} = {}_{06}I_S^{dic(t-1)} \times \frac{IM_S^{mt}}{100}$$

---

## 6.3 Provincially collected items with a tariff prices

The provincially collected items with a prepared price are those whose prices are made up of different concepts (rates, quotas, consumption brackets, etc.), and likewise, information is available on both their prices and their weightings.

Among the provincially-collected items with a prepared price, we find, among others: water, waste collection service, city transport and education.

### Calculation method

The final price of these items is obtained as the average of the different concepts weighted depending on the expenditure made on each one of them. The weightings that intervene in the calculation of the final price of these items is updated each year.

The variations in prices are reflected in the month in which they are produced, so long as the information is available on time.

## 6.4 Rentals for housing

The housing rental index is obtained from a sample of dwellings distributed throughout the national territory. The sample is selected and updated from a survey that is carried out periodically within the Economically Active Population Survey (EAPS).

The design of the sample is based on a simple random sampling, with the sampling unit being the rented dwelling, for each of the provinces.

The size of the sample selected is geographically distributed, bearing in mind, within each province, the number of dwellings available, the expenditure by families on rent, and the average rent of the aforementioned dwellings.

The prices of each dwelling are collected once each quarter, obtaining the information from the tenants themselves. To this end, the sample is divided into three sub-samples, one for each month of the quarter.

### Calculation method

The calculation of the final price that is introduced in the basic housing rental index is carried out in the following manner:

An average price is calculated of rented dwellings in each province, in the same way as for any other quarterly-collected item, that is, the calculation of the month in progress includes the rental prices of the dwellings of the sub-sample corresponding to the month in progress and those of the sub-samples of the two previous months.

To the average price thus calculated, we apply the change existing between the rents of the common dwellings in the current quarter (months  $m$ ,  $m-1$ ,  $m-2$ ) and the previous quarter (months  $m-1$ ,  $m-2$ , and  $m-3$ ). The formula is as follows:

$$V_{m/m-1} = \left( \frac{\sum_{i \text{ comunes } (m,m-3)} p_i^m + \sum_{i=1}^{N_{m-1}} p_i^{m-1} + \sum_{i=1}^{N_{m-2}} p_i^{m-2}}{\sum_{i \text{ comunes } (m,m-3)} p_i^{m-3} + \sum_{i=1}^{N_{m-1}} p_i^{m-1} + \sum_{i=1}^{N_{m-2}} p_i^{m-2}} - 1 \right) \times 100$$

where:

$p_i^m$  is the rental price of the dwelling  $i$ , in month  $m$ .

$N_m$  is the number of dwellings in the sub-sample of month  $m$ .

---

## 6.5 Centrally collected items

Centralised collection items not only have a special calculation method, but in addition, as mentioned previously, the type of collection is different to that of the rest of the items in the shopping basket.

### Information collection

The obtaining of information and monitoring of the centralised collection items are carried out in the Central Services of the INE, rather than in the provincial delegations.

For this type of item, a provincial collection is not necessary because, in general, there are few companies that sell them and/or there is a perfectly defined directory of informant companies, or the different rates are published in official gazettes.

In addition, for most of the items, although the collection is centralised, if the prices differ between provinces, they are collected in all of them. On the other hand, when the companies that sell the items are the same, it is convenient to request the information of them once, from the Central Services of the INE.

For each item, a sample of the most representative varieties is compiled (brands, models, consumption brackets, etc.) and of the informant units.

The selection of the informant units is made depending on their market quota, whereas the election of the representative varieties of the item is made depending on the expenditure on each one of them.

The information that is used for the calculation of the price of these items is one of two types:

- Information regarding consumption: necessary for calculating the weightings of each company of the sample (market quota), as well as the weightings of each one of the modalities of the item. In order to keep the CPI updated, the weightings are revised once a year.
- Information regarding prices or rates of each of the modalities and/or of each one of the concepts that are a part of the final price of the item. It is collected monthly.

Price changes are reflected in the month during which they have taken place, and in the case of prices that change from a specific day of the month, an average weighted prices is calculated by the number of days during which the price has been in force.

Centralised collection items are, among others, tobacco, electric energy, medications, vehicles, air and railway transport, fuels and lubricants, telephone services and package holidays.

### **Calculation method**

All those concepts and modalities determining the price of these items intervene in the calculation of said price.

Thus, for items such as tobacco, vehicles and medications, the different brands are considered; for others, such as electrical energy and telephone services, the different consumption brackets, schedules, fixed quotas, etc. are considered. And in all of them, the final price is calculated as the average of the prices of each one of these concepts or varieties, weighted by its degree of importance. These weightings are calculated from the expenditure made on each one of the varieties.

## 7. Price collection

The price collection of the items is carried out both in provinces and in Central Services, via personal visit of INE agents to the establishments on the corresponding dates, with the exception of some of them for which, due to their special characteristics, the information collection is carried out by telephone, fax, electronic mail, catalogue or Internet.

The collection is carried out via a questionnaire generated automatically for each establishment, in which the interviewer notes down the prices and incidences regarding the items that appear in the same. Each establishment is visited by a single interviewer, except the hypermarkets and department stores.

The prices collected are effective sales prices to the public with cash payment.

CPI base 2006 does not collect prices corresponding to defective merchandise, liquidations or sales, as with CPI base 2001. However, it does collect prices of discounted and clearance sales items.

---

### 7.1 Frequency and price collection periods

In general, the price collection period approximately covers from day 1 to day 22 of each month, both inclusive. However, for the centralised collection items, this period is extended, whenever possible, to the end of the corresponding month.

The price collection of one same item in the different informant establishments, has been distributed throughout this period in order to collect the largest number possible of price fluctuations. Every month, the selected establishments are visited on approximately the same day; the objective with this is for the change reflected by the index to correspond to a monthly change.

As perishable items are subject to important price fluctuations, their prices are collected three times over the month in each of the establishments selected in all provincial capitals, maintaining a distance of at least seven days between the three visits to the establishment. In the rest of the municipalities, the prices of these items are collected twice in each one of the establishments that belong to the sample.

For the rest of the items, each establishment is visited only once a month, with the exception of the quarterly items, for which the price collection in each establishment is carried out once every three months.

---

### 7.2 Price reductions

CPI base 2006 collects the prices that have suffered reductions due to reasons such as sales and promotions, as well as those whose discounts are due to official sales periods. This affects most of the divisions that comprise the CPI, although discounts due to sales are produced more drastically in the divisions of *Clothing and footwear* and *Furnishings, household equipment and routine maintenance of the house*, where they are more habitual.

---

### 7.2.1 CRITERIA AND TYPES OF PRICE REDUCTIONS

The criteria, followed in base 2006, for the collection of prices with a discount, are the following:

- that the discount is taken on items that are expected to be available again at their habitual prices, that is, not dealing with discounts due to liquidations or clearance sales;
- that the discount is taken on items that can be acquired by all consumers, and not by only a part of them (for example, discounts taken due to establishment loyalty cards or due to fulfilling certain conditions);
- and that these discounts are effective at the time of purchase (for example, they do not consider refunds after purchase).

Therefore, they collect discounts due to:

- Seasonal sales (official sales periods regulated by the *Retail Trade Planning Law*).
- Sales of any type (so long as they are not liquidations or clearance sales).

---

## 7.3 Fieldwork organization

The collection of most of the information is the responsibility of the personnel assigned to the survey in each one of the 52 provincial delegations of the INE: a team of interviewers-surveyors, interview inspectors, a survey inspector and, to head each delegation, a provincial delegate with the final responsibility of the information collection in each province.

The technical responsibility corresponds to the survey inspector. S/he is in charge of organising and distributing the work, analysing the price series, planning the inspection visits and, in general, solving the problems that arise during the price collection. For this purpose, s/he has the help of the interviewer inspectors, who must accompany the new interviewers on their first visits, check the suitability and representation of the items and establishments, advise them on the correct way of carrying out the price collection, and control and inspect the work done by the interviewers in their her/his charge.

Finally, the interviewer or surveyor has the objectives of collecting the prices, checking that they comply with the specifications of the items selected, propose the substitution of the items and establishments that are not considered suitable, and transmit to the interviewer inspector all those incidences that occur.

In order to control the quality of the information collected, there is a plan of inspection visits to informant establishments.

In the delegations, the inspection work corresponds to the interviewer inspector, and to the survey inspector. As a basic criterion, they should visit every establishment that is

providing information for the first time, as well as those that the interviewer has found to be unwilling to cooperate.

In the visits to establishments, the suitability and representation of the same are determined, whether the items from which the prices are collected comply with the specifications, and whether those prices are correct. They also check the degree of cooperation of the informants, and whether the visits of the interviewer are made in the adequate manner and on the established dates.

Likewise, there is another systematic inspection established by the Central Services of the INE, which requires the monthly inspection of a certain percentage of the establishments. The survey inspector must send a report regarding said inspection in which s/he indicates the establishments, items and interviewers inspected, as well as the discrepancies observed.

Visits are also made to the delegations by the technicians of the Central Services, from the CPI Area, responsible for the control of the prices collected in the delegations, in which they check the suitability of the sample selected, the mechanism of the work carried out monthly. Likewise, during these visits, all of the issues raised by the working team of the delegation are resolved and all of the changes considered pertinent for improving the quality of the survey are proposed.

Finally, worth noting is that repeated interviews are carried out continuously via moving agents from the Central Services, to check the quality of the data obtained.

## 8. Data processing

---

### 8.1 Data sending

As previously mentioned, the direct collection of prices of the items that comprise the shopping basket in the corresponding establishments is carried out via a questionnaire, in which the interviewer notes down the prices and incidences related to the items that appear in the same.

Once the questionnaire are filtered by the interviewer, the recording of the data is begun.

After each stage of recording of questionnaires, computer applications are used to detect possible errors.

The interviewer inspector is responsible for checking the atypical prices before proceeding to the following stage of the process. This system allows for detecting any error in the data collection, and solving the problem without much time elapsing from the moment of the information collection.

The last stage, prior to sending the information to the Central Services, is the analysis of the price series by the survey inspector.

Having completed the previous stages, the monthly information is sent to the Central Services on the foreseen dates, in such a way that the preparation of the index is carried out in the shortest period of time possible, to allow for publishing the indicator on the established date.

At the Central Services, the data sent by the provinces and the prices prepared by said services are processed together.

The total number of prices processed monthly, which is approximately 220,000, is analysed in the Central Services, requiring, as necessary, confirmation by the delegations on atypical changes. Once the prices are filtered and analysed, the indices are obtained and their corresponding changes, which are published during the first quarter of the month following that to which said data refer.

---

### 8.2 Edition and validation of prices

As mentioned in the previous section, in the Central Services of the INE, all of the prices collected monthly are received, filtered and analysed.

In general, all changes greater than 10% or lower than -10% are reviewed, for *Food* items, and those greater than 5% and those negative changes, for the rest of the items.

In addition, the processing of the lack of price is also carried out, that is, the price is estimated for those items that were not available at the time of the visit to the establishment.



The estimation method of the lack of price is the same as that used in base 2001, and consists of applying the average change of the rest of the prices collected for the same item in the remaining establishments of the province.

This price estimation process is especially relevant in the case of perishable items, in which the price of the item is collected, in the same establishments, several times over the month.

---

## 8.3 Quality changes

One very relevant aspect in any CPI is the adjustment that must be made to the prices when there is a change in the variety of the item or in the establishment, since the objective of the CPI is to collect the evolution of the prices of the same products over time, without this being influenced by said factors. These adjustments are known as adjustments due to a change in quality.

Changes in quality are a problem that all countries must deal with, and that, in recent years, have been accentuated by the rapid technical progress that some items have experienced. For this reason, it is one of the issues that Eurostat takes care of, with the highest priority, in the area of the harmonisation of the CPI in the EU countries.

In the preparation of the Spanish CPI, in the different bases, there have been various procedures used for the estimation of the changes in quality. The choice of these methods has been determined by the availability of information at any given moment, and by the type of item in question.

---

### 8.3.1 DEFINITION

An adjustment due to a change in quality is necessary when an item (product, variety or modality), whose price is a part of the calculation of the CPI, is substituted by another, and at that moment it is necessary to determine which part of the price difference between the substitute item and the substituted item is due to a different quality between them.

The substitutions of the items may be due to several reasons:

- the item ceases to be representative, and another more representative item appears in the market;
- the item disappears from the market;
- the establishment where the price of the item is collected ceases to be representative, closes or changes its economic activity.

Whenever an establishment of the sample ceases to be representative, it must be substituted by another. A good selection of establishments, with an important sales volume and/or flow of clients, implies that the items that the establishment has are

the most representative, and that on being demanded by the clientele, when they disappear, they will be substituted by others of a similar quality.

Changes in quality are produced when the specifications of the representative items change, and this leads to a difference in utility for the consumer.

The specifications of each of the items that comprise the shopping basket remain fixed over time, as they define the most representative variety of consumption for the zone, but should be substituted when said variety ceases to be sold or is no longer representative in the establishment.

In overall terms, the substitute product must be of a similar quality to that of the substituted product, but when, for some reason, the quality between the two items is different (different variety, different brand, etc.), the provincial delegations so report to the Central Services, indicating all of the characteristics of the new variety and its price in the current period, and if possible, in the previous period, as well as an adjustment coefficient that guarantees changes in the index motivated exclusively by price changes.

However, there is not always an overlap period between the items, nor is the identity given between one model and that which substitutes for it. It is therefore necessary to estimate which part of this price difference is due to technical improvements, changes in material, etc. and which part is pure price change.

In order to carry out these estimations, we study the specifications of the substitute and substituted items, analysing differences and analogies, and bearing in mind the opinions of the experts on the evolution of prices and costs, relating the changes in prices and qualities.

The ideal situation to estimate the changes in quality is that in which sufficient information is available on the characteristics that determine the price of an item on the market (brand, technical characteristics, place of purchase, etc.).

For many items, it is very difficult to acquire the information necessary, and even if said information is available, its use can be complicated.

---

### 8.3.2 QUALITY ADJUSTMENT METHODS

The quality adjustment methods that are the most habitually used in CPI base 2006, are the following:

a) Total quality adjustment.

Part of the assumption that the difference between the price of the substituted item and that of the substitute item is completely motivated by the difference in quality between the two, or that the items are so different that they cannot be compared. It is believed, then, that the difference in price between both items is solely due to the different quality of the same, and therefore, the index will not reflect price changes. This adjustment assumes that, in the case of following the sale of the substituted item, its price would not have changed.

b) Adjustment due to identical quality.

This is based on the idea that the substitute item has the same quality as the substituted item, that is, that the existing price difference between the two is due to a real change in price. This adjustment assumes that, in the case of following the sale of the substituted item, its price would have been the same as that of the substitute item.

c) Other adjustments.

This section includes all those adjustments for which the value of the difference in quality between one item and its substitute is estimated. The most customary practices are:

- Prices of the options:

Discounted from the price of the substitute item is the sale price of the specific characteristics that the previous item did not have, but that may be acquired as an option.

- Production costs:

The producer supplies information regarding how much it costs to produce an extra characteristic, and this is discounted from the price of the substitute item that possesses that extra characteristic.

- Imputation prices:

The change of the average price of an aggregate higher than that to which the item belongs is imputed.

- Information provided by experts:

Experts or specialists on the item are asked which amount of the difference between the prices of the items (substitute and substituted) is due to the difference in quality between them.

- Overlap prices:

The value of the difference in quality between the substituted and substitute items is the difference in price between them during the overlap period, that is, in the period in which both items are for sale.

- Hedonic regression methods:

This method is based on the hypothesis that the price of an item can be expressed depending on a group of characteristics, through a regression model (linear or non-linear).

In the case of a linear model, the price of an item  $j$ , would be:

$$P_j = a_0 + \sum_{i=1}^N a_i \cdot x_{ij} + u_j$$

where:

$i = 1, 2, \dots, N$	the number of explicative variables,
$a_0$	the independent term,
$x_i$	the explicative variables (characteristics of the item),
$a_i$	the regression coefficients,
$u_j$	the distortions $\square N(0, \sigma^2)$ .

The estimation of the model provides the regression coefficients, and allows for determining which part of the change in the price of the item is due to the change in quality, and therefore, which part is a pure change in price.

There are several ways of calculating a hedonic price index according to the form of the function and the variables selected for the model.

In order to carry out the adjustment of the regression model, a large number of observations are necessary, including most of the specific characteristics of each observation. Likewise, a very specialised knowledge of the product is necessary.

From among all of the previously described methods, the Spanish CPI mainly uses the "price overlap" and "information provided by experts" methods.

The following indicates more concretely the processing that changes in quality receive, depending on the type of item in question.

### Food items

The problem with the changes in quality in perishable items (meats, fish, fruits, vegetables and eggs), is much more difficult to measure, given that the quality normally has an important subjective component.

Very important for these items are the annotations that accompany the prices that the agents collect to determine whether or not there is a change in quality, as well as the evolution of the rest of the prices of the same item in other establishments in the municipality.

For non-perishable items, an important aspect are the corrector coefficients due to changes in unit. The theoretical unit is that of habitual consumption and generalised in all of the commercial zones and in all of the provinces. In order to determine it, information from the manufacturers and traders is used. Thus, when a real unit from which prices are collected is different from the theoretical unit to which said prices must refer, an adjustments coefficient must be calculated:

$$k_U = \frac{\text{unidad teórica}}{\text{unidad real}}$$

For non-perishable items, the most habitual changes in item are motivated by a change in brand (whether in the same establishment or on changing establishment).

### **Centralised collection items**

Centralised collection items present characteristics that are different from the rest of the CPI items, which facilitates adjustments to changes in quality.

The prices of these items are collected from the Central Services, and the price is usually calculated via the design of representative samples by modalities, with global information obtained from the different informants. Therefore, normally, the information necessary is obtained directly from the companies that supply the service or the regulating body.

The problems with changes in quality of these items are usually: the appearance of new modalities, new regulatory provisions, changes in prices due to slips in the hours of application of each price, etc.

The methods that are most used to solve the discontinuities in the evolution of the prices are based on the information provided by the experts, the overlap prices and the prices of the options.

The annual renewal of samples and internal modality weightings of these items causes a reduction in the number of quality adjustments.

### **Rest of items**

Among the rest of the items that comprise the shopping basket, the following adjustments are worth noting:

- For most of the items from the *Clothing and footwear* group, the changes in quality are carried out periodically, twice a year, coinciding with the changes in season. Two situations may occur:
  - The item disappears and is substituted by another that already existed the previous season. In this case, the adjustment is made by the price overlap method.

- The item disappears and is substituted by a new item that did not exist the previous season. In this case, several methods are used:
  - experts are consulted;
  - we seek the change of other items of the same type that already existed the previous season;
  - we impute the average change, from that season, the aggregation to which it belongs;
  - an adjustment due to identical quality is applied when the substitute item belongs to the same "quality bracket" as the substituted item.
- In the case of furniture, when the model for which the price is being collected disappears, it is substituted by another similar model. In this case, information is usually available on the features of the substitute and substituted items; if they did not coincide, it would be necessary to revert to the information provided by the experts.
- The substitution in items such as household appliances, video and audio equipment is made when models appear in the market with new technologies that will substitute for the former models, given that it is possible for these items to begin to lower their prices. The moment at which the substitution is produced is of vital importance, and should be paid special attention, because otherwise, a delay in the substitution could lead to infra-estimating the evolution of the prices of these items.
- For drugstore items, there is a constant modification of the formats that these products present. When this occurs, adjustments are made, depending on the "utility" of the packaging.
- For catering items, most of the changes in quality are due to the change in the establishment. In this situation, it is almost always possible to use the price overlap method.
- For some items, hedonic regression models are applied:

Since the year 2004, hedonic regression has been used in the CPI as the method for making quality adjustments for some items that, due to their characteristics and availability of information, allow for developing a method of this type. Thus, the first models designed were dedicated to washing machines and televisions.

### ***Washing machines***

One of the peculiarities of this method is the large volume of information that it required for its correct application. To this end, the previous work consists of the collection of the information necessary to be able to adjust the model.

In the case of washing machines, information was obtained from more than 200 models and 20 variables (characteristics) from each one of them. The collection of this information was carried out via the Internet, since the sample of washing machines habitually used in the CPI did not have the detail necessary to obtain a regression model.

From among the models tested, the best results were found in a semi-logarithmic model (price logarithm), in which the following explicative variables were worth noting: revolutions per minute, brand, top loading and digital display; and that had an adjusted  $R^2$  of 0.90.

Likewise, the regression model is updated annual, to adapt to the changes that are produced in the market and in consumer habits. For this, each year, precise information is collected again regarding prices and technical characteristics of different washing machine models. With this information, several regression models are again adjusted, and the most adequate is selected, which is compared with the current model, allowing for evaluation the stability of the same. The annual adaptations to the market characteristics have motivated some changes in the variables that comprise the model, as well as in the associated coefficients.

The model in force during the year 2007 was compiled with information from more than 800 observations and nearly 20 variables. The new variables, introduced in this latest revision, has been the efficiency of the wash and the spin cycle.

The number of parameters of this model reaches 21 and the adjusted  $R^2$  remains at values near 0.87.

Since its incorporation, the hedonic regression has been applied satisfactorily to carry out quality adjustments each time that changes are produced in any of the characteristics of the washing machines included in the sample of any province.

### ***Televisions***

The other item in the shopping basket for which quality adjustments are made via hedonic regression models is the television.

The collection of the sample observations was also carried out via the Internet, and information was obtained from some 250 observations, with more than 20 variables each.

From among the different adjusted models, the best results corresponded to a semi-logarithmic model (price logarithm), with the following explicative variables: inches, brand, panoramic, flat-screen and image frequency.

This model, with an adjusted  $R^2$  of 0.92, was applied satisfactorily from the first year on, each time that changes occurred in the televisions selected in the sample of any provincial delegation.

As with the washing machines, the model is updated annual, collection information again on the Internet, and is applied during the following year to resolve the quality adjustments that the changes in this item require, in any province. In the case of the televisions, the changes are especially relevant, since technological advances are continually being produced in the market, among which, worth noting is the appearance of LCD (*Liquid Crystal Display*) and plasma technologies.

The model in force during the year 2007 used information from more than 2000 observations for its compilation, with more than 20 variables for each observation. Likewise, the model has included new variables related to plasma and LCD televisions, such as screen resolution (no. of pixels), hard drive capacity, card reader, DTT (Digital Terrestrial Television) synthesiser and DVI (Digital Video Interface), among others.

The number of parameters of this model reaches 21 and the adjusted  $R^2$  remains at values near 0.90.

#### Effects of the application of hedonic regression models on the Spanish CPI

As a result of the application of the hedonic regression models to two items of the shopping basket of the Spanish CPI, the following improvements have been observed, in the quality adjustments of these items:

- pure quality adjustments have been reduced,
- the quality adjustment criteria have been unified between the different provincial delegations,
- the field collection of the characteristics of these items has been facilitated, given that the variables to be collected have been typed.

For this reason, the application of this quality adjustment method will continue to be developed in the future, as the available resources and information so allow.



## 9. Linked series

Until CPI base 2006, in the changes in the Consumer Price Index system, a break took place in the continuity of the series. The updating of weightings, the composition of the new shopping basket, and especially, the methodological changes, made the new series different from the old series. These differences, from a theoretical point of view, were unavoidable. However, the need to have continuous series available on the part of the users, made it necessary to have the calculation of some linking coefficients that linked the series published in the old base with the series in the new base.

Nonetheless, for new CPI base 2006, because it is a linked index, it has not been necessary to calculate any linking coefficient, since the calculation method of the linking allows for performing changes in weightings, sample and methodology every December, and linking the indices obtained with the new calculations, with the series that had been published, calculated with the old sample, weightings and methodology.

Thus, in CPI base 2006, the only change has been in the reference period of the indices or the base period, which went from the year 2001 to the year 2006. To this end, a re-scale coefficient has been calculated, and which has converted the indices published in base 2001, from January 2002 to December 2006, into indices in base 2006.

This coefficient is that which makes the simple arithmetic average of indices published in the year 2006, in base 2001, equal to 100:

$$\begin{aligned} \frac{1}{12} \sum_{m=1}^{12} {}_{01}I^{m06} \times C_{re-escala} &= 100 \Rightarrow \\ \Rightarrow C_{re-escala} &= \frac{100}{\frac{1}{12} \sum_{m=1}^{12} {}_{01}I^{m06}} \end{aligned}$$

By multiplying the series published in base 2001 by this re-scale coefficient, we obtain a series of indices in base 2006, which preserves the changes published, and with which the new indices in base 2006 have been linked, calculated as of January 2007.

# Annex I. Calculation of Aggregate Indices

With the calculation formula of CPI base 2006 (Laspeyres linked), the indices referring to December of year  $(t-1)$  start with a value equal to 100 in December of said year. In order to grant continuity to the published CPI series, the "publishable" or linked indices must be calculated.

The index published in month  $m$  of year  $t$ , in base 2006, is obtained by multiplying the index from December of year  $(t-1)$ , in base 2006, by the index from month  $m$  of year  $t$  referring to December of year  $(t-1)$ , divided by 100:

$${}_{06}I^{mt} = {}_{06}I^{dic(t-1)} \times \frac{dic(t-1)I^{mt}}{100}$$

These indices are not additive, that is, using published indices, we cannot calculate the indices of the functional or geographical aggregations. These aggregations are calculated using the indices referring to December of the previous year (unpublished), which are additive.

The following describes the steps to follow in order to obtain the index in base 2006 of an aggregate  $A$ , from the published indices, in base 2006, of its components  $A1$  and  $A2$ :

1. Indices must be obtained referring to December of the previous year, for each component  $A1$  and  $A2$ . This is carried out by dividing the index published from month  $m$  of year  $t$ , by the index published from December of the previous year:

$${}_{dic(t-1)}I_i^{mt} = \frac{{}_{06}I_i^{mt}}{{}_{06}I_i^{dic(t-1)}} \times 100 \quad i = 1, 2$$

2. The indices obtained in the previous step are aggregated, using the weightings in force during the reference period of the index  $(m, t)$ . With this, we obtain the index of the aggregate  $A$ , referring to December of year  $(t-1)$ :

$${}_{dic(t-1)}I_A^{mt} = \frac{dic(t-1)I_1^{mt} \times dic(t-1)W_1 + dic(t-1)I_2^{mt} \times dic(t-1)W_2}{dic(t-1)W_1 + dic(t-1)W_2}$$

3. The index in base 2006 of aggregate  $A$  is calculated as the product of the index published in December of the previous year, and the quotient between the aggregate index obtained in step two and 100:

$${}_{06}I_A^{mt} = {}_{06}I_A^{dic(t-1)} \times \frac{dic(t-1)I_A^{mt}}{100}$$

# Annex II: Historical Development

The INE established the first Cost of Living Indices System in the year 1939. Before the year 1936, some series of simple indices and average prices were published, which later served to establish this first System. Beginning in July 1938, the National Statistics Service began to compile cost of living indices for some provincial capitals. With the gradual extension to all provincial capitals, the grouping of simple indices into five consumption groups, and a readjustment of the weightings, the Cost of Living Indices System was implanted in 1939, with base July 1936.

Since then, there have been eight systems, including the current system, of Consumer Price Indices, known as Cost of Living Indices until the implementation of Base 1976, whose base periods have been: July of 1936, 1958, 1968, 1976, 1983, 1992, 2001 and 2006.

The following briefly summarises the main characteristics of these Systems:

## Systems of Indices

Base	Time in force
1936 (July)	July 1939 – December 1960
1958	January 1961 – December 1968
1968	January 1969 – December 1976
1976	January 1977 – July 1985
1983	August 1985 - December 1992
1992	January 1993 – December 2001
2001	January 2002 – December 2006
2006	January 2007

## Reference stratum

Base	Reference stratum
1936 (July)	- Middle-class families comprised of four or five persons with a monthly income of approximately 600 pesetas from 1939.
1958	- Households whose main breadwinner is active, with annual income less than 80,000 pesetas from March 1958.
1968	- Households with more than one member, whose main breadwinner is active, with annual income between 21,600 and 120,000 pesetas from 1968.
1976	- Households with more than one member, whose main breadwinner is active, with annual income between 81,000 and 720,000 pesetas from 1973-1974.
1983	- Households with more than one member (active and inactive), with income between 322,575 and 2,000,000 pesetas from 1980-1981.
1992	- All households resident in Spain.
2001	- All households resident in Spain.
2006	- All households resident in Spain.

## Survey used to obtain the weightings

Base	Survey
1936 (July)	- The weightings were established from some studies on household accounts carried out in 1940.
1958	- Household Account Survey, referring to March 1958, aimed at 4,192 families belonging to the reference stratum.
1968	-- Household Budget Survey carried out from March 1964 to March 1965, interviewing 20,000 families. In order to study the evolution of the consumption structure until December 1968, the year taken as a base, a series of surveys were conducted with fewer than 4,800 households per year.
1976	- Household Budget Survey for the period from July 1973 and July 1974, aimed at 24,000 households.
1983	- Household Budget Survey for the period between 1 April 1980 and 31 March 1981, in which 24,000 households were interviewed.
1992	- Household Budget Survey, carried out from 1 April 1990 to 31 March 1991. Information was requested from 21,000 households.
2001	- Household Budget Continuous Survey, corresponding to the 8 quarters from the 2nd quarter of 1999 to the 1st quarter of 2001. 8,064 households were interviewed each quarter. For the annual updates, the latest data available from the survey was used each year.
2006	- Household Budget Continuous Survey, corresponding to the 8 quarters from the 1 <sup>st</sup> quarter of 2004 to the 4th quarter of 2005. 8,064 households were interviewed each quarter. For the annual updates, the latest data available from the Household Budget Survey (in force since 2006) is used each year.

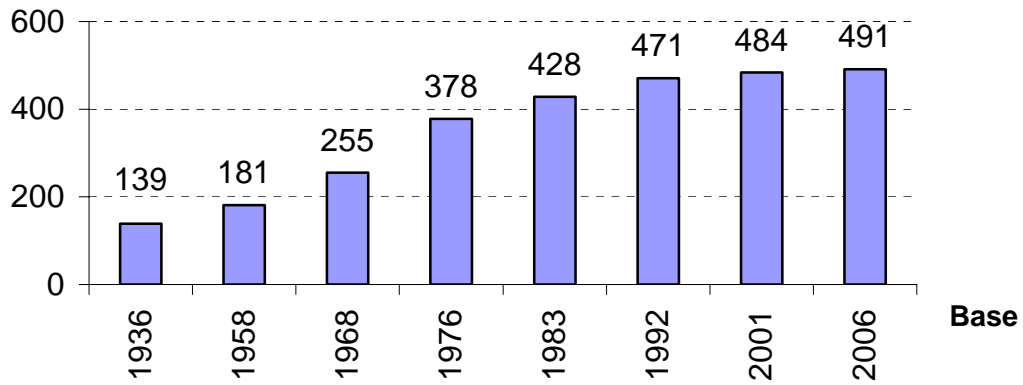
## Geographical breakdown

Base	Indices
1936 (July)	- Indices were calculated for each provincial capital, as well as an index for the group of capitals.
1958	- Indices were calculated for each provincial capital, Ceuta, Melilla, the nation as a whole, the group of capitals, and the group of non-capital municipalities.
1968	- Indices were established for the following groups: each of the provincial capitals, Ceuta and Melilla; the national urban whole, comprised of all those components from the previous section, plus the municipalities not included therein and which had more than 50,000 inhabitants; the national non-urban whole, comprised of the remaining municipalities, and the total national whole.
1976	- Indices were compiled for the total national wholes, urban and non-urban, provincial capitals, Ceuta, Melilla and regional groupings (beginning in 1978, said groupings were the equivalent of the current Autonomous Communities and of the group comprised of Ceuta and Melilla).
1983	- Indices were obtained for the total national wholes, urban and non-urban, provincial capitals, Ceuta, Melilla, Autonomous Communities and the whole comprised of Ceuta and Melilla.
1992	- Indices were calculated for the total national whole, provinces, Autonomous Communities and the grouping comprised of Ceuta and Melilla.
2001	- In this base, the same indices were prepared as in Base 1992.
2006	- Indices are obtained for the national whole, the 17 Autonomous Communities and the 52 provinces.

## Shopping basket

Base	Number of items
1936 (July)	Different in each provincial capital, varying between 95 and 139 items.
1958	181 items.
1968	255 items.
1976	378 items.
1983	428 items.
1992	471 items.
2001	484 items.
2006	491 items.

## Nº artículos



## Calculation formula

---

In the base from July 1936, the Lowe formula was used to calculate the indices of the provincial capitals; the index for the whole of the capitals was obtained as the arithmetic average of these indices, weighted by the population of each capital.

In all of the following bases, the Laspayres formula was used, with a fixed base, for the calculation of the indices.

Beginning with base 2001, the linked Laspeyres formula was introduced for the calculation of the indices.

## Consumption groups and weightings by group

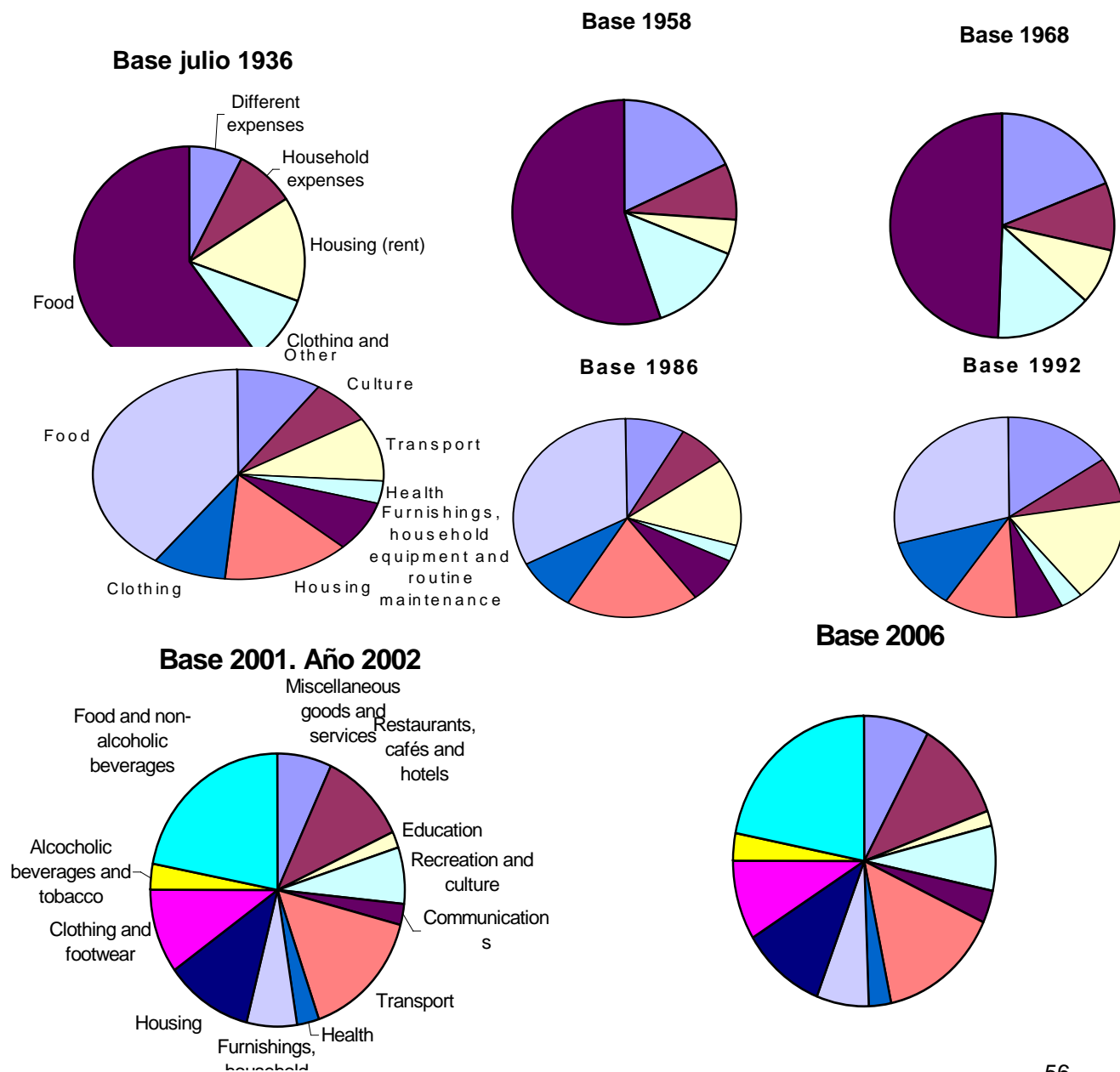
Groups	Weightings	Groups	Weightings
<b>Base July 1936</b>		<b>Base 1992</b>	
Food	601.0	Food	293.61
Clothing and footwear	94.0	Clothing	114.79
Rentals for housing	146.0	Housing	102.80
Household expenses	85.0	Furnishings, household equipment and routine maintenance of the house	66.84
Other expenses	74.0	Health	31.26
<b>TOTAL</b>	<b>1,000.0</b>	Transport	165.42
<b>Base 1958</b>		Culture	72.67
Food	553.0	Other	152.61
Clothing and footwear	136.0	<b>TOTAL</b>	<b>1,000.00</b>
Rentals for housing	49.6	<b>Base 2001</b>	
Household expenses	82.1	<b>Year 2002</b>	
Other expenses	179.3	Food and non-alcoholic beverages	218.630
<b>TOTAL</b>	<b>1,000.0</b>	Alcoholic beverages and tobacco	32.170
<b>Base 1968</b>		Clothing and footwear	99.280
Food	493.9	Housing	110.260
Clothing and footwear	139.4	Furnishings, household equipment and routine maintenance of the house	63.571
Rentals for housing	79.5	Health	28.062
Household expenses	98.9	Transport	155.760
Other expenses	188.3	Communications	25.729
<b>TOTAL</b>	<b>1,000.0</b>	Recreation and culture	67.263
<b>Base 1976</b>		Education	17.444
Food	405.20	Restaurants, cafés and hotels	112.708
Clothing	81.71	Miscellaneous goods and services	69.124
Housing	140.01	<b>TOTAL</b>	<b>1,000.000</b>
Furnishings, household equipment and routine maintenance of the house	77.51	<b>Base 2006</b>	
Health	33.74	<b>Year 2007</b>	
Transport	97.44	Food and non-alcoholic beverages	220.556
Culture	69.44	Alcoholic beverages and tobacco	28.229
Other	94.95	Clothing and footwear	90.280
<b>TOTAL</b>	<b>1,000.00</b>	Housing	103.607
<b>Base 1983</b>		Furnishings, household equipment and routine maintenance of the house	61.520
Food	330.27	Health	28.259
Clothing	87.39	Transport	148.879
Housing	185.65	Communications	35.845
Furnishings, household	74.15	Recreation and culture	71.089
		Education	16.027
		Restaurants, cafés and hotels	115.477
		Miscellaneous goods and services	80.230
		<b>TOTAL</b>	<b>1,000.000</b>

equipment and routine maintenance of the house	
Health	23.93
Transport	143.81
Culture	69.60
Other	85.20
<b>TOTAL</b>	<b>1,000.00</b>

As may be observed, until the base 1976 system, five groups were considered, which increased to eight beginning with said system.

Although the number and denomination of the groups may be equal between the two systems, the inclusion of certain items in the different groups has varied over the different bases, which prevents us from making exact comparisons between the weightings structures corresponding to each one of them.

Nonetheless, the following graphs show the evolution of the weightings:





# Annex III. Content of the CPI Subclasses, Base 2006

Group	01	FOOD AND NON-ALCOHOLIC BEVERAGES
Subgroup	011	FOOD
Class	Subclass	Description and content
<b>0111</b>		<b>Bread and cereals</b>
	01111	Rice All types of rice, short grain and long grain; polished or broken rice without other transformation; precooked rice; rice prepared with meat, fish, seafood or vegetables.
	01112	Bread All types of wheat, rye, corn bread or any other cereal, rolled or not. Includes sliced bread, wholemeal breads and special breads, such as grilled or toasted breads, diet breads, breadsticks, etc.
	01113	Pasta products Fine noodles and other pastas for soup (letters, stars, shells, etc.); macaroni, spaghetti, fettuccini, linguini and the like. Fresh pasta and frozen pasta for filling; pasta with meat, fish, seafood, cheese or vegetables: cannelloni, ravioli, tortellini, etc.
	01114	Bakery and pastry cook products María-type biscuits and other sweet or savoury biscuits, by weight or packaged. Cakes, madeleines, croissants, palmiers, biscuits to take with tea, and other snack cake products. Cakes, tarts, egg yolks and other pastry products (except chocolates). Fried dough, such as churros and "porras"; complete pizzas, fresh and frozen.
	01115	Flours and cereal preparations Wheat flour, barley, oats, rye and other cereals. Whole-grain cereals; cereal preparations (oatmeal, corn flakes, etc.). Dough for preparing bakery and pastry products (puff pastry, pizza dough, dough for turnovers and empanadas, etc.).
<b>0112</b>		<b>Meat</b>
	01121	Bovine meat Meat from cows, young bulls, oxen, bulls, veal and yearling cattle; fresh, refrigerated or frozen.
	01122	Swine meat Meat from pigs or suckling pigs; fresh, refrigerated or frozen.
	01123	Sheep meat Meat from lambs, sheep, goats, suckling kids and yearling lambs; fresh, refrigerated or frozen.
	01124	Poultry meat Meat from chickens, hens, turkeys, geese, ducks, capons, pigeons, partridges, etc.; fresh, refrigerated or frozen.
	01125	Cold meat Serrano ham, chorizo sausage, salt-cured beef, cured pork loin, salami, "morcón" sausage and other cured cold meats. Bacon, black pudding, pig fat, glazed pork tenderloin and other cold meat products that require cooking. All types of sausage (except fresh); foie-gras and pates (except fish). Ham, turkey, chopped meat, bologna, head cheese, "lacón", chicken with truffles and other cold cuts.
	01126	Meat preparations Fresh sausage; meat pies, pastries, empanadas, and turnovers; croquettes with meat or ham; chicken Villarroy. Meat concentrates, bouillons and aspics. Meat preserves, tinned or hermetically-sealed products based on meat, such as stewed quail or partridge, prepared tripe, etc. Prepared dishes based on meat packaged ingredients based on meat for the preparation of paellas, chickpea and meat stews, bean stews, etc.
	01127	Edible meat offal and other meat Hare, rabbit, venison, boar, pheasant and other fresh and frozen meats. Offal products: livers, gizzards, kidneys, brains, testicles, etc.; trimmings: tails, lips, heads, etc.

Class	Subclass	Description and content
<b>0113</b>	<b>Fish and seafood</b>	
	01131	<b>Fresh fish</b> Saltwater or freshwater fish, fresh or refrigerated: hake, whiting, tuna, anchovies, eel, young eels, young cod, cod, red bream, albacore tune, fresh anchovies, mackerel, conger eel, gilthead bream, louvar, roosterfish, horse mackerel, sole, sea bass, grouper, Ray's bream, swordfish, monkfish, turbot, salmon, sama, sardines, trout, etc. It also includes fresh or refrigerated fish eggs.
	01132	<b>Frozen fish</b> Saltwater or freshwater fish, frozen: hake, whiting, tuna, anchovies, eel, young eels, young cod, cod, red bream, albacore tune, fresh anchovies, mackerel, conger eel, gilthead bream, louvar, roosterfish, horse mackerel, sole, sea bass, grouper, Ray's bream, swordfish, monkfish, turbot, salmon, sama, sardines, trout, etc. It also includes frozen fish eggs.
	01133	<b>Seafood</b> Calamari, baby squid, squid, flying fish, cuttlefish, cuttlefish, octopus, baby clams, clams, oysters, cockles, scallops, mussels, spider crabs, crabs, prawns, king prawns, crayfish, lobsters, red shrimp, clawed lobsters, common prawn, barnacles, etc., fresh, refrigerated and frozen.
	01134	<b>Canned fish and fish preparations</b> Cured or salt cod; other fish ("mojama", salmon, trout, anchovies, etc.) that are dried, salted, smoked or in brine. All types of tinned fish and seafood such as tuna, albacore, sardines, anchovies, mackerel, mussels, cockles, etc. Caviar, fish pates, cod liver, fish eggs, etc. Frozen fish preparations, by weight or packaged (battered squid rings, breaded hake fillets, etc.); fish with floury covering (turnovers, empanadas, croquettes, pastries). Dishes prepared with a fish base and packaged ingredients for paellas.
<b>0114</b>	<b>Milk, cheese and eggs</b>	
	01141	<b>Milk</b> Fresh, pasteurised or sterilised milk; whole, low-fat or non-fat. Powdered, sweetened condensed and evaporated milk. This excludes formula for babies, whether liquid or powdered.
	01142	<b>Other milk-based products</b> All types of yoghurt (solid or liquid): flavoured, with fruit, sugared, etc.; products based on fermented milk (rennet, kefir, etc.). All types of milk-based desserts and drinks: puddings, flans, milkshakes, etc.
	01143	<b>Cheese</b> Cured, semi-cured and milk cheese from any type of milk or mixtures of different types of milk. Fresh cheese, Burgos-style cheese, Villalón, etc. All types of cheese in portions and for spreading, small cheeses and slices. This includes cream cheese desserts, grated cheese and the like.
01144	<b>Eggs</b> Hens' eggs and eggs from other birds. Liquid, dried or frozen egg yolks; powdered eggs for food and other egg substitutes. Prepared Spanish omelettes.	
<b>0115</b>	<b>Oils and fats</b>	
	01151	<b>Butter and margarine</b> All types of butter and margarine (including those with added milk, chocolate, etc.), vegetable shortening and other pure or mixed vegetable fats for food.
	01152	<b>Edible oils</b> All types of oil for food: olive, orujo, sunflower, soy, corn, peanut, mal, almond, coconut, etc.

Class	Subclass	Description and content
<b>0116</b>		<b>Fruit</b>
	01161	<b>Fresh fruit</b> Oranges, tangerine, clementines, lemons, grapefruits and other citrus fruits; bananas; apples; pears; peaches, cling peaches, apricots, plums, flat peaches, avocados, cherries, picota cherries, persimmons and other fruits with stones; wild strawberries, strawberries, raspberries, blackberries, currants, grapes, blueberries and other berries; melons, watermelons, kiwis, pineapples, coconuts, custard apples and other tropical fruits.
	01162	<b>Canned and dried fruit</b> Packages or by-weight olives, whole or pitted, filled or not. Almonds, peanuts, hazelnuts, raisins and prunes, dried apricots, sunflower seeds, dried figs, chestnuts, pine nuts and other non-candied fruits and nuts. Frozen and preserved fruits (natural or in syrup): pineapple, pear, apple, strawberry, plum, raspberry, peach, etc., whole or cut; fruit salad; fruits prepared in other ways. This excludes marmalades, jams, compotes and fruit gelatines; and fruit-based products prepared for babies.
<b>0117</b>		<b>Vegetables</b>
	01171	<b>Fresh vegetables</b> All types of fresh legumes and vegetables: lettuce, escarole, endive, chard, turnip tops, scallions, celery, artichokes, Swiss chard, spinach, parsley, watercress, broccoli, cauliflower, cabbage, red cabbage, Brussels sprouts, green beans, peas, lima beans, cucumber, aubergine, courgette, onion, spring onions, carrots, beets, radishes, turnips, leeks, asparagus, and all types of wild mushroom, milk cap mushrooms, mushrooms, etc.
	01172	<b>Dried vegetables</b> Beans (dried beans, white beans, butter beans, etc.), chickpeas, lentils, dried peas, lupins, dried and powdered onion, capers, dried peppers and other dried, dehydrated, evaporated, ground or crushed vegetables.
	01173	<b>Frozen and canned vegetables</b> Frozen vegetables, whether cooked or not. Tomatoes, peppers, red cabbage, chickpeas, spinach, wild mushrooms, carrots, mushrooms, etc. all either natural or canned. Prepared dishes based on vegetables for direct consumption (potato salad, vegetable medley, etc.); pickles (aubergines, onions, cucumbers, beets, etc. in vinegar). This excludes products for babies that are prepared solely with vegetables or legumes.
	01174	<b>Fresh potatoes and potatoes preparations</b> Fresh or little-processed potatoes (peeled and cut, precooked, frozen, canned, etc.). Tapioca, yams, sweet potatoes and other fresh, preserved, precooked, frozen, canned, etc. starchy roots. French fried potatoes, mashed potatoes, and products derived from potatoes.
<b>0118</b>		<b>Sugar, jam and chocolate</b>
	01181	<b>Sugar</b> Refined sugar, brown sugar, icing sugar, etc., obtained from sugar cane and from beets; artificial sugar substitutes.
	01182	<b>Chocolate and jam</b> Bars of milk chocolate, chocolate for hot chocolate, baking chocolate, with oleaginous fruits or cereal; bars of chocolate substitutes; chocolate truffles and chocolates; filled and unfilled chocolate bars. Jams, marmalades, compotes, gelatines, table jellies, quince jam, honey, chocolate creams, syrups, etc. Boiled sweets, gum and other sweets. All types of ice cream, ice cream bars and ice cream cakes. Nougats, marzipans, Christmas almond sweets and biscuits, etc.; sugared almonds, caramel-coated nuts, crystallised almonds and walnuts, crystallised fruits, etc.

Class	Subclass	Description and content
<b>0119</b>		<b>Babyfoods and other food products</b>
	01191	Other food products Vinegar; salt; mayonnaise, tomato sauce, ketchup, mustard, Tabasco and other sauces; garlic, peppercorns, cinnamon, paprika, saffron and other condiments. All types of soups and creams prepared with meat, fish, vegetables, legumes, fine noodles, etc., in any type of packaging; stocks. Preparations for desserts such as powders for puddings and flans.
	01192	Babyfoods All types of food for babies: liquid or powdered formula for babies, cereals for babies, food for babies prepared with a meat, fish, fruit, vegetable or legume, etc. base, baby foods that contain cocoa.
<b>Subgroup</b>	<b>12</b>	<b>NON-ALCOHOLIC BEVERAGES</b>
<b>0121</b>		<b>Coffee, cocoa and infusions</b>
	01211	Coffee, cocoa and infusions Natural, roasted, high roast or mixed coffee; ground or whole; normal or decaffeinated. Instant coffee, soluble coffee, coffee extracts, substitutes and essences. Sweetened or unsweetened cocoa and powdered chocolate. Tea, tilia, camomile, pennyroyal, peppermint, valerian and other infusions.
<b>0122</b>		<b>Mineral waters, soft drinks and juices</b>
	01221	Mineral waters, soft drinks and juices Still or sparkling mineral water; sodas, unflavoured fizzy waters and seltzer. Lemonades, colas, unflavoured fizzy waters, isotonic beverages, etc. Fruit juices, syrups and concentrates for the preparation of fruit-based beverages. This excludes beer, wine and non-alcoholic cider.
<b>Group</b>	<b>02</b>	<b>ALCOHOLIC BEVERAGES AND TOBACCO</b>
<b>Subgroup</b>	<b>021</b>	<b>ALCOHOLIC BEVERAGES</b>
<b>0211</b>		<b>Spirits</b>
	02111	Spirits Brandy, cognac, anise, rum, whisky, gin, vodka, local distilled spirit, vermouth and other spirits with or without alcohol.
<b>0212</b>		<b>Wine</b>
	02121	Wine All types of table wine: white, red, rosé, etc. Liqueurs such as Sherry or Malaga wine; dessert wines: Port wine, Madeira, etc. Cider, cava, champagne and other sparkling wines.
<b>0213</b>		<b>Beer</b>
	02131	Beer All types of beer, with or without alcohol.
<b>Subgroup</b>	<b>022</b>	<b>TOBACCO</b>
<b>0221</b>		<b>Tobacco</b>
	02211	Tobacco Cigarettes, cigars and small cigarettes, pipe tobacco, chewing tobacco and cigarette paper.

Class	Subclass	Description and content
<b>Group</b>	<b>03</b>	<b>CLOTHING AND FOOTWEAR</b>
Subgroup	031	CLOTHING
<b>0311</b>		<b>Garments</b>
	03111	Men outerwear Two or three-piece suits and suit jackets (jackets, blazers). Trousers and slacks. This includes jeans, Bermudas and shorts. Jumpers and the like (waistcoat, jackets, pullovers, etc.). Dress shirts, t-shirts, polo shirts, etc. Track suits, sweatpants and shirts, swimsuits, snowsuits and other sporting garments.
	03112	Men underwear Briefs, boxer shorts, undershirts, socks, pyjamas, robes and other underwear and loungewear.
	03113	Women outerwear Coats, three-quarter-length coats, jackets, anoraks, down jackets, raincoats and other coats and jackets. Cloth suits and jackets. Trousers, skirts and dresses. Jumpers and the like (waistcoat, jackets, pullovers, etc.). Dress shirts, t-shirts, blouses... Track suits; sweatpants, sporting skirts and t-shirts; swimsuits; snowsuits and other sporting garments.
	03114	Women underwear Bras, panties, bodysuits, suspenders, stockings, pantyhose, socks, nightshirts, pyjamas, robes and other underwear and loungewear.
	03115	Garments for children and babyclothes All types of garments for babies (ski masks, bodysuits, t-shirts, cloth nappies, v-necks, panties, christening robes, jackets, bed socks without applied soles, pyjamas, etc.). Coats, jackets, anoraks, raincoats, etc. Dresses, skirts and trousers of all types (jeans, Bermudas, leggings, etc.). Jumpers and the like (waistcoat, jackets, pullovers, etc.). All types of shirts, blouses, t-shirts, polo shirts, etc. T-shirts, briefs, boxers shorts, panties, bras, socks, tights and other underwear and loungewear. Track suits; sporting pants and t-shirts; swimsuits; snowsuits and other sporting garments.
<b>0312</b>		<b>Clothing accessories and repair of clothing</b>
	03121	Clothing accessories All types of fabric (cotton, wool, silk, synthetic fibres, mixes, etc.) used for the manufacture of clothing within the home. Buttons, zippers, throat and other haberdashery items. Handkerchiefs, scarves, shawls, gloves, belts, aprons, smocks, bibs, hats, caps and other textile accessories.
	03122	Cleaning and repair of clothing All types of repair, cleaning and rental of garments and clothing.

Class	Subclass	Description and content
<b>Subgroup</b>	<b>032</b>	<b>FOOTWEAR INCLUDING REPAIR</b>
<b>0321</b>		<b>Footwear</b>
	03211	Footwear for men All types of men's footwear: boots, shoes, trainers, sandals, flip-flops, etc. made of any material: leather, canvas, rubber, etc.
	03212	Footwear for women All types of women's footwear boots, shoes, trainers, sandals, flip-flops, etc. made of any material: leather, canvas, rubber, etc.
	03213	Footwear for children and babies Footwear for babies (except bed socks without applied soles and cloth shoes). All types of footwear for boys and girls: boots, shoes, trainers, sandals, flip-flops, etc. made of any material: leather, canvas, rubber, etc.
<b>0322</b>		<b>Repair of footwear</b>
	03221	Repair of footwear Repair of men's, women's and children's footwear.
<b>Group</b>	<b>04</b>	<b>HOUSING</b>
<b>Subgroup</b>	<b>041</b>	<b>RENTALS FOR HOUSING</b>
<b>0411</b>		<b>Rentals for housing</b>
		Rentals for housing Payments made by the tenant for the use of the furnished or unfurnished dwelling. Storage room and garage rentals for the dwelling. Excluded from the rental, whenever possible, are the payments of cold and hot water, electrical energy, city gas, natural gas, telephone, collective heating, waste collection, sewage fees and other fees and contributions of the dwelling. Excluded from the rental are vacation homes (homes rented for less than 1 month).
<b>Subgroup</b>	<b>042</b>	<b>MAINTENANCE AND REPAIR OF THE DWELLING</b>
<b>0421</b>		<b>Materials for the maintenance and repair of the dwelling</b>
	04211	Materials for the maintenance and repair of the dwelling This includes the materials for the current maintenance and repair of the dwelling when the household itself performs the repair. The type of materials may be: - Paint, paper and textile wall coverings. - Small plumbing items (pipes, etc.). - Floor coverings (sheets of parquet flooring, tiles, blocks, etc.); tiles and blocks for covering chimneys and walls, etc. - Glass, artistic glazed windows, windows, etc.; plaster, lime, cement, mortar, concrete, mastics; varnishes and glues. Doors, storm doors, iron gates and windows. This excludes materials for large alterations of the dwelling (investment).
<b>0422</b>		<b>Services for the maintenance and repair of the dwelling</b>
	04221	Services for the maintenance and repair of the dwelling Painting, paving, and floor and wall-covering services. Plumbing services (maintenance and repair of water and drain pipes, gas installations, heating installations, etc.). Glass working, carpentry, glazing services; parquet-shaving and varnishing work... Other services (brickwork for interior decorating, installation of blinds and sunshades, etc.). This excludes services for large alterations of the dwelling (investment).
<b>Subgroup</b>	<b>043</b>	<b>MISCELLANEOUS SERVICES RELATING TO THE DWELLING</b>
<b>0431</b>		<b>Water supply</b>
	04311	Water supply Expenditure on consumption and supply of cold water; water contract, counter rental and reading.

Class	Subclass	Description and content
<b>0432</b>		<b>Refuse collection, sewerage services and other services</b>
	04321	Refuse collection Payments for the collection and destruction of refuse and fees for refuse collection.
	04322	Sewerage services Sewerage fees; wastewater purification and treatment services; services of casting and cleaning cesspools and septic tanks.
	04323	Other services relating to the dwelling Community expenses: doormen, gardening, stairwell and lighting cleaning, maintenance of lifts, insurance for risks in the communal area of the building, etc.
Subgroup	044	<b>ELECTRICITY, GAS AND OTHER FUELS</b>
<b>0441</b>		<b>Electricity</b>
	04411	Electricity Expenses on electrical energy; expenses on the electrical contract, counter rental and reading, etc.
<b>0442</b>		<b>Gas</b>
	04421	Gas Expenses on city gas and natural gas; expenses on the gas contract; counter rental and reading, etc. Expenses on butane, propane, etc., as well as the counter rental and reading, bottles and containers for these gases.
<b>0443</b>		<b>Other fuels</b>
	04431	Other fuels Diesel fuel, fuel-oil, pure petroleum and other liquid fuels, as well as the expenses on the contract, rental and reading of counters. Expenses on charcoal, coke, charcoal chipboard, wood, wood charcoal, peat and other solid fuels.
<b>GROUP</b>	<b>05</b>	<b>FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE MAINTENANCE OF THE HOUSE</b>
Subgroup	051	<b>FURNITURE AND FURNISHINGS</b>
<b>0511</b>		<b>Furniture and furnishings</b>
	05111	Furniture All types of tables and chairs, made of wood or other materials (for the living room, kitchen, terrace, garden, etc.). Three-sear sofas, whether modular or not; couches, armchairs, sofa-beds, etc. Bookcases of all types, sideboards, console tables, cocktail cabinets, desks, china cabinets and other furniture for the living room, dining room, sitting room, hall and office. Beds, trundle beds, bunk beds, mattress supports, etc. Wardrobes, chests of drawers, dressing tables, bedside tables and other furniture for the bedroom. Cribs, beds, play yards, high chairs, playpens and other special furniture for babies. Cabinets for bathrooms and the kitchen.
	05112	Other household equipment Lamps of all types (floor, hanging, table, wall, etc., whether halogen or not). Art objects and decoration. Rugs of all types and weaves, carpets, cork, parquet coverings, adhesive tiles, etc., as well as the placement of these materials.
Subgroup	052	<b>Household textiles</b>
<b>0521</b>		<b>Household textiles</b>
	05211	Household textiles Curtains, valances, cloth blinds, etc. ; mattresses, pillows, cushions, etc.; bed linen (sheets, blankets, duvets, bedspreads, etc.); table linens, tablecloths and napkins; towels of all types and sizes, bathrobes and other textiles for the home.

Class	Subclass	Description and content
<b>Subgroup</b>	<b>053</b>	<b>HOUSEHOLD APPLIANCES INCLUDING REPAIR</b>
<b>0531</b>		<b>Household appliances including repair</b>
	05311	Refrigerators, washing machines and dishwashers Refrigerators, with or without a freezer; freezers; washing machines, washer-dryers and tumble dryers; ironing machines and dishwashers of all types. This includes the installation of the same.
	05312	Cookers and ovens All types of cookers, whether electric, gas, mixed, wood-burning and coal, and all types of gas, electric small ovens; gas, electric or mixed hobs. This includes the installation of the same.
	05313	Air conditioners and heating appliances All types of appliances used to vary the room temperature, such as: braziers, stoves, boilers, radiators, solar panels, conditioners, coolers, fixed fans, etc. Water heaters and boilers; humidifiers, smoke extractor fans and purifiers, etc., as well as the installation of the same.
	05314	Other household appliances Cleaning appliances for rugs, floors and walls. All types of sewing and knitting machines. Blenders, juicers, electric coffee makers, irons for clothing and other small appliances.
	05315	Repair of household appliances Repair and accessories of household appliances.
<b>Subgroup</b>	<b>054</b>	<b>KITCHEN AND HOUSEHOLD UTENSILS</b>
<b>0541</b>		<b>Kitchen and household utensils</b>
	05411	Glassware, tableware and cutlery Complete dinner services as well as individual pieces (plates, soup bowls, platters, etc.) made of any material (glass, ceramic, porcelain, etc.). Complete sets of glasses, wine glasses, glasses, mugs, coffee sets and other objects in glass and crystal for utensils and decoration. Complete sets and individual pieces of cutlery in stainless steel, aluminium, nickel silver, silver and all types of metal.
	05412	Other kitchen and household utensils Pots and pans, pressure cookers, saucepans, casseroles, small saucepans, etc. in any material. All types of pan, non-electric coffee makers and other non-electric appliances for preparing and conditioning food.
<b>Subgroup</b>	<b>055</b>	<b>TOOLS AND EQUIPMENT FOR HOUSE AND GARDEN</b>
<b>0551</b>		<b>Tools and equipment for house and garden</b>
	05511	Tools and equipment for house and garden Power tools (drill, lawnmower, etc.) or hand tools (hammer, screwdriver, spanner, etc.) and non-electric accessories (locksmith items, pieces for radiators, bars and rails for curtains, etc.) for house and garden. All types of light bulbs and fluorescent bulbs for lighting, switches, electrical cords, bells, outlets, electric batteries and other electrical material used in the home.
<b>Subgroup</b>	<b>056</b>	<b>Goods and services for routine household maintenance</b>
<b>0561</b>		<b>Non-durable household goods</b>
	05611	Cleaning products for household Clothing detergents and softeners for hand washing or washing machines. Soaps for mopping or for the kitchen. Dishwashing detergents or polishes for hand washing or dishwashers. Bleaches and liquids used for household cleaning (window cleaning fluids, oven cleaners, etc. ). Waxes and varnishes for the floor and the furniture, shoe polish and tints for footwear, insecticides, spot removers, ammonia, air fresheners, etc.



Class	Subclass	Description and content
	05612	<b>Other non-durable household goods</b> Household items in paper and the like, such as tablecloths, napkins, plates and cups. Papers and cardboards for filters; vacuum cleaner bags; cellulose paper towels, aluminium foil or plastic wrap; bin bags, etc. Items for cleaning, such as: brooms, dustpans, mops, brushes for the home (clothing, footwear), dish towels, dust cloths, etc.
<b>0562</b>		<b>Domestic services and other household services</b>
	05621	<b>Domestic services and other household services</b> Remuneration in cash (except payments to Social Security) of the persons employed in the household (cooks, cleaning personnel, babysitters, chauffeurs, gardeners, secretaries, etc.). Work clothing of the home help. <u>Dry cleaning, laundromat, dry cleaner's and ironing of household items (except garments).</u>
<b>Group</b>	<b>06</b>	<b>HEALTH</b>
<b>Subgroup</b>	<b>061</b>	<b>MEDICAMENTS, OTHER PHARMACEUTICAL PRODUCTS AND THERAPEUTIC APPLIANCES AND EQUIPMENT</b>
<b>0611</b>		<b>Medicaments, other pharmaceutical products and therapeutic appliances and equipment</b>
	06111	<b>Medicaments and other pharmaceutical products</b> Medicines and medicinal preparations, serums, vaccines, vitamins, and minerals, cod and halibut liver oil, oral contraceptives. Clinical thermometers, bandages, surgical tape, gauzes and similar products; syringes, pharmacy first-aid kits and cabinets, hot water and ice bottles, medical hosiery products such as elastic stockings, knee and ankle support, whether knit or rubber. Alcohol, mercurchrome, hydrogen peroxide, sheath contraceptives, diaphragms, etc.
	06112	<b>Therapeutic appliances and equipment</b> Glasses and graduated lenses and contact lenses, hearing aid and other appliances to aid hearing, glass eyes, artificial limbs, orthopaedic braces, corsets and other orthopaedic appliances; orthopaedic footwear, trusses, surgical girdles, neck braces, appliances for medical massages, treatment lamps, wheelchairs with or without a motor, disabled cars, crutches, orthopaedic canes. This includes dental prostheses and false teeth, but not the cost of their placement, as well as the repair of appliances and therapeutic material.
<b>Subgroup</b>	<b>062</b>	<b>OUT-PATIENT MEDICAL, DENTAL AND PARAMEDICAL SERVICES</b>
<b>0621</b>		<b>Out-patient medical and paramedical services</b>
	06211	<b>Out-patient medical and paramedical services</b> General and special medical consultations, home visits, in the doctor's office, clinics, external consultations in the hospital, radiology, cardiology and ultrasound exams. X-rays, urograms, mammograms and all types of laboratory analysis, as well as x-rays in x-ray centres. Services rendered by medical assistants, doctors and nurses (taking blood pressure, etc.); midwives, podiatrists, acupuncturists, pedicures, physiotherapists, opticians, speech therapists, corrective exercise prescribed medically; expenses on the application of rehabilitation techniques; short wave; magnetoscope, thermal baths and talasotherapy. Alternative medicine.

Class	Subclass	Description and content
<b>0622</b>		<b>Dental services</b>
	06221	<b>Dental services</b> Dental extractions, orthodontics, fillings, periodontics, endodontics, bridges, plates, crowns, placement of dental prostheses, dental hygiene and other services rendered by dentists specialised in dental hygiene and dental assistants.
Subgroup	063	<b>HOSPITAL SERVICES</b>
<b>0631</b>		<b>Hospital services</b>
	06311	<b>Hospital services</b> Administration, accommodation, food and beverage; supervision and care by non-specialist personnel (health assistants), first aid and resuscitation, supply of medicine and other pharmaceutical products, supply of appliances and therapeutic equipment. General or specialist medical services (dialysis, radiotherapy, chemotherapy, IUD implantation), surgeons and dentists, medical analyses, medical auxiliary services, such as nurses, midwives, pedicures, opticians, physiotherapists, speech therapists, chiropractors, etc. Transfusions, dialysis, etc. Transport in hospital ambulances.
<b>Group</b>	<b>07</b>	<b>TRANSPORT</b>
Subgroup	071	<b>PURCHASE OF VEHICLES</b>
<b>0711</b>		<b>Motor cars</b>
	07111	<b>Motor cars</b> Motor cars, vans, all terrain vehicles, etc. used for the personal transport of member of the household. This includes expenditure on acquisition, registration, VAT, etc. of these vehicles.
<b>0712</b>		<b>Other vehicles</b>
	07121	<b>Other vehicles</b> Expenditure on acquisition, registration, VAT, etc. for all types of motorcycles and motorbikes, mopeds, sidecars, snowmobiles, etc. All types of bicycle.
Subgroup	072	<b>OPERATION OF PERSONAL TRANSPORT EQUIPMENT</b>
<b>0721</b>		<b>Spare parts and accessories for personal transport equipment</b>
	07211	<b>Spare parts and accessories for personal transport equipment</b> New or used tyres, spark plugs, shocks, batteries, belts, filters and other spare parts for vehicles directly acquired by the household. Specific products for the cleaning and maintenance of the vehicles, such as paints, covers, mats, ashtrays, hubcaps, safety bars, etc. All type of pieces for bicycles.
<b>0722</b>		<b>Fuels and lubricants for personal transport equipment</b>
	07221	<b>Fuels and lubricants for personal transport equipment</b> All types of gasoline, diesel fuel, fuels and mixes, etc. for all types of vehicle. Oils and lubricants (including additives), brake and transmission fluids, antifreeze, etc. acquired by the household.
<b>0723</b>		<b>Maintenance and repair of personal transport equipment</b>
	07231	<b>Maintenance and repair of personal transport equipment</b> Oil and filter change, wash, fine tuning, wheel alignment and other services relating to the maintenance and/or repair of the vehicles, carried out in car repair workshops or by mechanics. This includes the expenditure, both on materials and on labour. Towing service, Technical Vehicle Inspection and other revisions.

Class	Subclass	Description and content
<b>0724</b>		<b>Other services in respect of personal transport equipment</b>
	07241	Other services in respect of personal transport equipment Expenditure on parking, ORA card purchase, expenditure on parking meters and the like. Tolls on the freeway, in tunnels, bridges, etc. Driving school, fees for exams and those paid for the renewal of the driving licence and obtaining of the permit. Rental of garages when they are independent of the accommodation; rental of vehicles without a driver. Other expenses on services related to the automobile.
<b>SUBGROUP</b>	<b>073</b>	<b>TRANSPORT SERVICES</b>
<b>0731</b>		<b>Passenger transport by railway</b>
	07311	Passenger transport by railway Commuter and long-distance trains: payments of tickets, luggage, sleeper train services; vehicle transport. Underground and tram tickets and passes, when they may only be used for these types of transport.
<b>0732</b>		<b>Passenger transport by road</b>
	07321	Passenger transport by road Tickets for collective city bus, microbus and trolley-bus and bus passes used solely in this type of transport. Expenditure on city taxis. All types of school transport, whether city or inter-city. Inter-city bus and taxi: transport of passengers and luggage; car rental with a driver.
<b>0733</b>		<b>Passenger transport by air</b>
	07331	Passenger transport by air Air transport of passengers and luggage.
<b>0734</b>		<b>Other transport services</b>
	07341	Other transport services Transport of passengers, luggage, personal vehicles and accommodation services on boats, ferries, etc. Expenditure on other transport services, such as funicular, cable cars, gondola lifts, and left-luggage and luggage issuing. Expenditure on season tickets, when the tickets serve for more than one type of locomotion; travel card.
<b>Group</b>	<b>08</b>	<b>COMMUNICATIONS</b>
<b>Subgroup</b>	<b>081</b>	<b>COMMUNICATIONS</b>
<b>0811</b>		<b>Postal services</b>
	08111	Postal services Payments for the posting of letters, postcards or packages, rates for money orders, post office boxes, etc.; purchases of unused postage stamps, postage-paid postcards and aero-grams; posting of mail and packages through private transport services, messenger services.
<b>0812</b>		<b>Telephone equipment and services</b>
	08121	Telephone equipment Acquisition of telephones and mobile telephones, radiotelephones, faxes, answering machines and other accessories for telephones, as well as repairs.

Class	Subclass	Description and content
	08122	<p><b>Telephone services</b></p> <p>Telegram, telex, fax and similar services and rates for telegraph money orders.</p> <p>Expenditure on telephone calls in calling centres, telephone booths and other public telephones.</p> <p>Expenditure generated by the use of private telephones: expenses on calls, rental or installation of the telephone, expenses on contracting, changing ownership or domicile, etc.</p> <p>Connection quotas and expenses generated by the use of mobile telephones.</p> <p>Connection quotas for the Internet or for other communications networks.</p> <p>Installation of the DSL kit.</p>
<b>Group</b>	<b>09</b>	<b>RECREATION AND CULTURE</b>
<b>Subgroup</b>	<b>091</b>	<b>AUDIO-VISUAL, PHOTOGRAPHIC AND INFORMATION PROCESSING EQUIPMENT</b>
<b>0911</b>		<b>Equipment for the reception, recording and reproduction of sound and pictures</b>
	09111	<p>Equipment for the reception, recording and reproduction of sound and pictures</p> <p>Radio receptors, radio alarm clocks, transistors, radio cassette players, walkmans, emitting-receiving appliances, hobby radio appliances, etc.; record players, cassette players and recorders, CD players, high fidelity stereo systems and their components (synthesisers, amplifiers, loudspeakers, etc.); microphones, headphones, etc.</p> <p>Televisions, television antennae and satellite dishes.</p> <p>Videos and video recorders.</p>
<b>0912</b>		<b>Photographic and cinematographic equipment</b>
	09121	<p>Photographic and cinematographic equipment</p> <p>Conventional cameras, flashes, tripods, lenses, filters, developing equipment and other photography accessories.</p> <p>Fixed and mobile cameras with sound registers, video-cameras, film projectors and slides, screens, filters and light measures, viewers and other cinematographic accessories.</p>
<b>0913</b>		<b>Information processing equipment</b>
	09131	<p>Information processing equipment</p> <p>Personal computers, monitors, printers, scanners, modems, CD-ROMS and other computer accessories, software, calculators, typewriters and other machines for text processing.</p>
<b>0914</b>		<b>Recording media</b>
	09141	<p>Recording media</p> <p>Sound recording media (records, CDs, cassettes, etc.) and video (videotapes, DVDs, etc.) whether recorded or not.</p> <p>Diskettes and CDs for computers</p> <p>Plates and photo films without printing, cartridges and disks for photographic and cinematographic use, flash bulbs and photographic paper, chemical preparations for photographic use.</p>
<b>Subgroup</b>	<b>092</b>	<b>RECREATIONAL AND SPORTING ITEMS AND EQUIPMENT; GARDENS AND PETS</b>
<b>0921</b>		<b>Recreational and sporting items and equipment</b>
	09211	<p>Games and toys</p> <p>All types of toys: dolls, stuffed animals, cars, building blocks, puzzles, modelling clay, costumes, practical joke items, Christmas items, etc.</p> <p>Card games, playing cards and board games; chess sets and the like.</p> <p>Electronic games, videogames and computer games for the television.</p>
	09212	<p>Major durables for indoor and outdoor sporting</p> <p>Caravans, airplanes, ultra-light airplanes, etc.</p> <p>Boats, non-inflatable boats, windsurf boards, canoes, etc.</p> <p>Scuba diving equipment, non-permanent swimming pools, etc.</p> <p>Gymnasium equipment and items.</p> <p>Musical instruments and their accessories.</p>

Class	Subclass	Description and content
	09213	<b>Other recreational and sporting items and equipment</b> Equipment for sports, gymnastics and physical education, such as balls, rackets, sticks, skates, weights, football or ski boots, underwater masks, ammunition for hunting and sport, fishing poles and equipment; beach equipment and outdoor games; camping equipment, etc.
<b>0922</b>		<b>Gardens and pets</b>
	09221	<b>Gardens, plants and flowers</b> Natural or artificial plants, flowers, shrubs, etc.; seeds, fertilizers, pots, etc. This includes shipping costs on flowers and plants.
	09222	<b>Pets and related products</b> Purchasing of pets. Food; veterinary, cleaning and beauty products for animals; collars, leashes, muzzles; dog houses, cages, aquariums and other items related to pets. All types of service for pets: veterinary, cleaning, hairdressing, accommodation, burial, etc.
<b>Subgroup</b>	<b>093</b>	<b>RECREATIONAL, SPORTING AND CULTURAL SERVICES</b>
<b>0931</b>		<b>Recreational and sporting services</b>
	09311	<b>Recreational and sporting services</b> Expenditure on sporting events (football stadiums, racetracks, racecourses, basketball or tennis courts, etc.), on amusement parks, fairs, guided visits, bowling alleys, recreational machines other than those for gaming, and chairlifts at ski slopes. Rental of equipment and accessories for sporting and free time. Group or individual classes of aerobics, dance, skiing, swimming, etc.
<b>0932</b>		<b>Cultural services</b>
	09321	<b>Cultural services</b> Expenditure on entry into the following events and/or places: - cinemas and theatres - operas, concerts, ballets, zarzuelas and other musical performances - circuses, light and sound performances, bullfights, etc. - museums, exhibitions, art galleries and monuments - national parks, zoos, botanical gardens, aquariums, natural reservations, etc. - libraries, newspaper archives, media libraries, etc. Television or radio quotas, in-house music, video club quotas, radio hobbyist licences and radio and television licences. Photographic services (developing, printing, enlargement, copying, photo portraits, etc.), musician and clown services for private entertainment. Rental of cultural goods, such as televisions, videos, computers, etc.
<b>Subgroup</b>	<b>094</b>	<b>NEWSPAPERS, BOOKS AND STATIONERY</b>
<b>0941</b>		<b>Books</b>
	09411	<b>Non-text books</b> Non-text books, atlases, dictionaries, encyclopaedias, colouring books, albums and bookbinding.
	09412	<b>Text books</b> Text books for infants, primary, secondary, post-secondary and university education, intermediate and higher degree professional training, etc. Text books for other teachings (including public exams).
<b>0942</b>		<b>Newspapers and periodicals</b>
	09421	<b>Newspapers and periodicals</b> All types of newspaper, magazine and other periodical publications.

Class	Subclass	Description and content
<b>0943</b>		<b>Stationery materials</b>
	09431	Stationery materials Posters, greeting cards and business cards, postcards, maps, calendars, etc. Notebooks, envelopes, organisers, ball point pens, liquid correctors, staplers and staples, paperclips, paper, drawing and painting materials, art and craft materials, etc.
Subgroup	095	PACKAGE HOLIDAYS
<b>0951</b>		<b>Package holidays</b>
	09511	Package holidays Holidays with travel, accommodation, food and tours, etc.; daytrips and package visits.
<b>Group</b>	<b>10</b>	<b>EDUCATION</b>
Subgroup	101	EDUCATION
<b>1011</b>		<b>Pre-primary education</b>
	10111	Pre-primary education Pre-primary and pre-school education.
<b>1012</b>		<b>Primary and secondary education</b>
	10121	Primary and lower-secondary education Primary and special equivalent education. Obligatory secondary and special equivalent education. This is comprised of 1st, 2nd, 3rd, 4th of ESO.
	10122	Upper-secondary education General secondary education. This is comprised of 1st and 2nd of Upper-secondary education. Professional training and secondary-level special equivalent education. This is comprised of intermediate training and specific professional training cycles. Secondary-level special regime education. This is comprised of plastic arts and design (intermediate level), music and dance education (intermediate level); intermediate-level voice, ceramics, conservation and restoration; applied arts and artistic professions; Official Language School.
<b>1013</b>		<b>Tertiary education</b>
	10131	Tertiary education University and equivalent education. Education received at one of the following levels: university diplomas, technical engineering and architecture degrees, bachelor's degrees, higher engineering and architecture degrees, higher military education, occupational therapy (medicine); tourism; commercial airline pilot; higher ecclesiastical studies and graduate courses and masters degrees, taught at public universities, doctorates, university degrees of three years or longer that are not graduate degrees (equivalent to official degrees). Tertiary Professional Training. It is comprised of the following courses: experimental professional training plan (professional modules III), specific upper-level professional training (GLSES), civil aviation (commercial airline pilot). Tertiary special regime education. It is comprised of the following courses: plastic arts and design (advanced level), music and dance education (advanced level), drama (GLSES), voice (advanced level), conservation and restoration of cultural goods.
<b>1014</b>		<b>Education not definable by level</b>
	10141	Education not definable by level Education programs for adults, leading to degrees from the educational system and not requiring any particular previous instruction. Masters not taught by universities. Languages in academies or with private tutors. Computer science in academies or with private tutors. Regular payments, enrolment and/or registration of all students of education comprised in the educational system as aid for the education received, both in educational centres and in academies or with private tutors. Public exam fees and preparation for public exams; typing, etc.

Class	Subclass	Description and content
<b>Group</b>	<b>11</b>	<b>RESTAURANTS, CAFÉS AND HOTELS</b>
Subgroup	111	RESTAURANTS, CAFÉS AND THE LIKE AND CANTEENS
<b>1111</b>		<b>Restaurants, cafés and the like and canteens</b>
	11111	Restaurants, cafés and the like Lunch and dinner in restaurants. Food services provided by bars, cafés and the like. Consumption in discotheques. Sale of prepared meals and catering services, prepared dishes to go (paellas, pizzas, roast chicken, etc.); ready-to-eat products supplied by vending machines (sandwiches, coffee, ice cream, soft drinks, etc.), products purchased at stands.
	11112	Canteens Catering service provided by companies and public offices for their employees, catering service for students at schools, primary schools, universities, etc.
Subgroup	112	ACCOMMODATION SERVICES
<b>1121</b>		<b>Accommodation services</b>
	11211	Accommodation services Accommodation services at hotels, motels, guesthouses, cheap hotels or inns, boarding houses, residences and hostels. Accommodation services on campsites. Rental of houses, flats and bungalows, so long as they are for less than one month per quarter. Holiday colonies, recreational centres and mountain services. Accommodation services in boarding schools, student residences, halls of residence, student hostels, etc.
<b>Group</b>	<b>12</b>	<b>MISCELLANEOUS GOODS AND SERVICES</b>
Subgroup	121	PERSONAL CARE
<b>1211</b>		<b>Services for personal care</b>
	12111	Services for personal care Hairdressing (haircut, wash, dye, permanent, highlights, etc.) and beauty services (hair-removal, manicure, pedicure, sauna, massage, tanning booths, etc.).
<b>1212</b>		<b>Items and products for personal care</b>
	12121	Items and products for personal care Appliances, items and products for personal care, whether long-lasting (hair dryers, electric shavers, electric hair-removers, etc.) or not (bath gels, toothpastes, colognes, shampoos, cosmetics, creams, paper facial tissues, nappies, toilet paper, etc.).
Subgroup	122	PERSONAL EFFECTS
<b>1221</b>		<b>Jewellery, clocks and watches</b>
	12211	Jewellery, clocks and watches Watches, earrings, necklaces, rings, wedding rings, bracelets, cufflinks and other jewellery and costume jewellery items. This includes their repair.
<b>1222</b>		<b>Other personal effects</b>
	12221	Other personal effects Travel items (suitcases, briefcases, travel bags, etc.), purses and personal use bags (handbags, portfolios, wallets, rucksacks, coin purses, shopping carts, etc.). All types of item for babies (except furniture): prams, hanging seats, suspenders, car seats, back or front carriers, pacifiers, bottle-warmers, sterilizers, etc. Items for smokers (lighters, pipes, filters for cigarette holders, etc.); personal items (sunglasses, canes, umbrellas, fans, key chains, etc.); funeral items (coffins, headstones, etc.).

Class	Subclass	Description and content
Subgroup	123	<b>SOCIAL PROTECTION SERVICES</b>
<b>1231</b>		<b>Social protection services</b>
	12311	Social protection services Expenditure on retirement homes, shelters, homes for the disabled, rehabilitation centres, etc. Home aid for the elderly and the disabled. Services to families as counselling, psychological orientation and the adoption of children. Expenditure on day care and nurseries.
Subgroup	124	<b>INSURANCE</b>
<b>1241</b>		<b>Insurance connected with the dwelling</b>
	12411	Insurance connected with the dwelling Payments of insurance for the dwelling, made both by owners and by tenants occupying the same, including fire, theft, water damage, etc.
<b>1242</b>		<b>Insurance connected with health</b>
	12421	Insurance connected with health Quotas paid on non-compulsory health insurance, paid directly to private health assistance bodies and all types of instalments or the like. School insurance.
<b>1243</b>		<b>Insurance connected with transport</b>
	12431	Insurance connected with transport Insurance related to personal transport on the vehicle and its occupants. This also includes travel and luggage insurance.
<b>1244</b>		<b>Other insurance</b>
	12441	Other insurance Burial insurance, civil responsibility insurance for damages caused to third parties or to their property, etc.
Subgroup	125	<b>Financial services n.e.c.</b>
<b>1251</b>		<b>Financial services n.e.c.</b>
	12511	Financial services n.e.c. Banking commissions, loan commissions, wealth management, brokerage expenses for the purchase of shares, payments for the use of credit cards, fees for consultancy or financial or tax advisors, etc.
Subgroup	126	<b>OTHER SERVICES N.E.C.</b>
<b>1261</b>		<b>Other services n.e.c.</b>
	12611	Other services n.e.c. Fees for legal services (barristers, solicitors, etc.), liberal profession services, expenditure on notary fees, agencies. Associations for parents of students. Expenses made in placement offices, photocopy expenses, issue of duplicates, validation of permits, funeral services, church and Court expenses, advertisements in newspapers, private detectives, marriage agencies, clothes vendor payments, parking attendants, payment to obtain documents, etc.



