



HELLENIC STATISTICAL AUTHORITY

GENERAL DIRECTORATE OF STATISTICAL SURVEYS
Economic and Short-Term Indices Division
Retail Prices and Price Indices Section

**Information note on the
Updating of the Consumer Price Indices,
National Index (CPI) and Harmonised Index (HICP)**

Base period: December 2014

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Introduction

The Hellenic Statistical Authority (ELSTAT), in the context of implementing the chain linking method for the compilation of the Consumer Price Index (national consumer price index and harmonised index of consumer prices) carried out the annual update of the CPI in order to ensure its representativeness.

Therefore, during 2014 ELSTAT undertook a number of works aiming at updating the CPI & HICP; these actions were included in its annual statistical work programme 2014. To this end, an advisory Working Group for the update of the CPI was set up, comprising representatives of business organizations, labour unions and professional groups, representatives of several general government agencies, the academic and research community, the Bank of Greece, and Eurostat as well as a European Statistical System (ESS) expert. Furthermore, the ESS expert on price indices provided advice to ELSTAT on the works of updating the CPI and the HICP beyond the framework of the above Working Group.

More specifically, ELSTAT:

- implemented the new European classification of individual consumption by purpose, COICOP5;
- updated the CPI & HICP items, i.e., the basket of goods and services;
- updated the sample areas and the price collection outlets;
- increased the number of price collection cities by adding three new ones, namely Chania, Ermoupolis and Chios;
- updated the weights of the national index on the basis of the latest available data from the 2013 Households Budget Survey;
- updated the weights of the harmonised index on the basis of the latest available national accounts data for the year 2013, pursuant to Regulation (EC) 549/2013 on ESA 2010;
- improved the methodology for calculating the population weights by taking into account expenditure data.

The updated CPI & HICP depicts more accurately the changes in the general level of consumer prices.

1. The new classification of individual consumption by purpose at 5-digit level: COICOP5

The Classification of Individual Consumption according to Purpose (COICOP) is a reference classification published by the United Nations Statistics Division, which is used in National Accounts, Household Budget surveys (HBS), Price Statistics (HICP & CPI) and Purchasing Power Parities (PPP).

All statistical domains followed the classification in consistency with the UN version at 4 digits. Nevertheless, at the national level there was a need for more details for the purposes of the CPI/HICP the HBS and the PPP. Therefore, more detailed classifications were developed by national statistical institutes, but unfortunately not in a consistent way internationally, thus leading to discrepancies between the detailed classifications used in HICP, PPP and HBS, as well as among those used at national level for prices data collection. This compromised comparability, both across countries and across statistical domains.

For this reason, Eurostat started in 2010 a work for the harmonisation and revision of the Classification of Individual Consumption by Purpose (COICOP) at 5-digit level.

This work on COICOP was aimed at the following:

1. The development of one single classification for the European Statistical System (ESS). The single classification for all surveys improves the comparability of the results across different statistics.
2. The development of a more detailed classification. The harmonised European classification E-COICOP of 5 digits improves comparability at a more detailed level across all Member States.
3. The solution of a number of existing problems and the incorporation of recent developments in consumer markets. Since the introduction of COICOP in 1999, the products offered in consumer markets have significantly changed and expanded. Many new products must be given a place in the existing classification and it is essential to make a harmonised choice as regards their place in the classification.

As a result, the ESS now has a single harmonised classification COICOP at five-digit level, which by January 2016 should have been implemented in all statistical domains.

The structure of the classification has five levels:

- Level 1: All items index – Overall index
- Level 2: 12 Divisions – 2-digit codes
- Level 3: 47 Groups – 3-digit codes
- Level 4: 117 Classes – 4-digit codes
- Level 5: 303 Sub-classes – 5-digit codes

The new classification is fully matched with the hitherto followed classification at 4-digit level.

2. The CPI items - 'the household basket'

2.1. Selection of the CPI items

The purpose of the Consumer Price index is to measure the changes in the general price level of goods and services reflecting the consumption pattern of the average household, which is supposed to remain stable until the next update of the index. In practice, it is impossible to collect retail prices for all the varieties of goods and services purchased by the households, therefore, it is deemed necessary to select a sample of goods and services, which are representative of all goods and services, as regards price changes.

The fact that now, both the National Consumer Price Index (CPI) and the Harmonised Index of Consumer Prices (HICP), are compiled as chain indices with base period December of the previous

year, allows for the updating of the sample of products on an annual basis if this is deemed necessary on the basis of the changes in the consumption pattern of households and market conditions.

The composition of the "household basket", in other words the selection of the most representative consumer goods and services which are to be included in the index, is very important for monitoring the evolution of consumer prices every month. For this reason, an effort was made in order to include in the new index all the items (goods and services), which were considered to be important and representative of the average household consumption on the basis of the following: the results of the HBS; the surveys conducted in the market during the process of price collection; the proposals made in the context of the CPI Working Group and with the cooperation of the technical expert.

For each sub-group the necessary number of items was selected in order to ensure the representativeness of the individual index of the sub-group. More specifically, all the items in a sub-group were broken down into small categories of similar items and then for each category one or more items were selected, whose price changes reflect the price changes of all similar items in the category.

The representativeness criterion for the varieties of the items, according to which they were selected, is based on the most sold variety, in terms of volume rather than in value. Another selection criterion for the varieties of the items was also the possibility to observe their price changes in the course of time, as well as their price, which should be affordable to the average consumer.

The total number of consumer goods and services of the new Consumer Price Index amounts to 799 and they are further broken down into a greater number of varieties. In comparison with the previous CPI, seventy-two (72) new items were added, while fifty-seven (57) items which were no longer representative were deleted.

All the items, for which prices are collected, are defined by their specification, namely the particular characteristics which determine the quality, appearance and general commercial identity of the goods (such as brand, variety, weight, packaging, etc.) in order to avoid any price changes, which are due to differences in the specification. The detailed specification of an item is not uniform throughout the Country and may differ not only from one price collection city to another, but also from one store of the city to another, since it is determined on the basis of the economic conditions and the local consumer habits.

2.2. The new items of the ‘household basket’

S/N	COICOP5 DIVISION	COICOP5 SUBCLASSES	NEW ITEMS
1	01	01117	Oats
2	01	01118	Country style pastry
3	01	01121	Beef, minced (short plate & flank)
4	01	01124	Fresh chicken breast packed
5	01	01128	Chicken Schnitzel
6	01	01132	Frozen rockfish
7	01	01132	Frozen yellow fin sole fillets
8	01	01133	Fresh squids
9	01	01133	Fresh octopuses
10	01	01141	Milk, long life unskimmed
11	01	01142	Milk, long life, low fat

12	01	01146	Milk, sore
13	01	01145	Cheese, Parmesan
14	01	01145	Cheese, Cream
15	01	01171	Mushrooms
16	01	01171	Fresh vegetable salad, packed
17	01	01174	Potatoes chilled preserved
18	01	01181	Brown sugar
19	01	01184	Cereal Bars
20	01	01192	Oregon
21	01	01194	Cheese spread with red pepper
22	01	01211	Capsules coffee/espresso
23	01	01221	Spring water
24	01	01222	Orange juice, carbonated
25	01	01223	Fresh juice stored in fridge
26	02	02111	Tsipouro
27	02	02121	Sparkling wine
28	03	03121	Men's Hoodies
29	03	03121	Men's athletic socks
30	03	03122	Women's cotton socks
31	03	03123	Children swimsuit for boys
32	03	03123	Children swimsuit for girls
33	03	03211	Men sports shoes
34	03	03212	Women sports shoes
35	05	05112	Wooden garden table with chairs
36	05	05119	Highchair for babies
37	05	05202	Bed cover, cotton
38	05	05322	Coffee machine for capsules
39	05	05612	Wraps for food
40	05	05612	Non-stick baking paper
41	05	05612	Single use gloves
42	06	06139	Glucose test strips
43	06	06212	Consultation of gynaecologist,
44	06	06220	Tooth crown
45	07	07112	Second hand cars
46	07	07221	Diesel fuel
47	07	07223	Gas fuel
48	07	07243	Technical inspection of car (KTEO)
49	09	09131	Tablet
50	09	09150	Repair of PC
51	09	09230	Vessel berthing services
52	09	09341	Purchase of pet
53	09	09422	Archaeological sites tickets
54	09	09601	Package domestic holidays
55	09	09601	Package international holidays
56	11	11111	Food served, (lamp chops)
57	11	11111	Food served, (pizza)
58	11	11111	Food served (anchovy)
59	11	11111	Food served (squids)
60	11	11111	Mineral water, served
61	11	11111	Draught beer, served
62	11	11111	Glass of wine, served
63	11	11111	Bottled wine, served
64	11	11111	Cocktail, served
65	11	11112	Ice-cream, portion, packed
66	11	11112	Cheese pie, served

67	11	11112	Cream pie pastry (Bougatsa), served
68	11	11202	Camping fees
69	12	12121	Electric toothbrush
70	12	12132	Incontinence diapers
71	12	12132	Disinfectants for personal hygiene
72	12	12704	Passport issuing costs

2.3. The deleted items of the 'household basket'

S/N	GROUP	DELETED ITEMS	REASONS
1	0112	Frozen beef	Not representative
2	0112	Frozen lamp	Not representative
3	0112	Frozen poultry	Not representative
4	0112	Hamburgers/Meatballs	Price collection problem
5	0113	Frozen Pandora	Price collection problem
6	0113	Frozen Dentex	Price collection problem
7	0116	Roasted almond kernel	Reduction of group products
8	0117	Fresh peas	Not representative
9	0211	Aperitif	Not representative
10	0212	Wine, unbolted	Price collection problem
11	0311	Winter skirt fabric	Reduction of group products
12	0311	Summer skirt fabric	Reduction of group products
13	0312	Men's corduroy trousers	Reduction of group products
14	0312	Men's under vest made of wool and cotton	Not representative
15	0312	Men's woollen socks	Not representative
16	0312	Women's corsets	Not representative
17	0312	Children's corduroy trousers	Not representative
18	0313	Gloves	Reduction of group products
19	0313	Neck-cloth	Reduction of group products
20	0321	Men's shoes made of polyurethane	Not representative
21	0432	Services of locksmiths	Reduction of group products
22	0511	Metallic folding dival bed	Not representative
23	0511	Bathroom mirror with cabinet	Price collection problem
24	0511	Candlestick	Price collection problem
25	0520	Cotton blanket	Reduction of group products
26	0520	Duvet cover	Reduction of group products
27	0520	Pillowcases	Reduction of group products
28	0520	Awning	Not representative
29	0531	Gas cooker	Reduction of group products
30	0531	Rechargeable hand vacuum cleaner	Reduction of group products
31	0533	Repair of electric cooker	Reduction of group products
32	0540	Thermos flask	Not representative
33	0552	Front door lock	Reduction of group products
34	0561	Soap	Reduction of group products
35	0561	Water softener	Not representative
36	0561	Liquid cleaner for wooden floors	Not representative
37	0561	Cooker hood filters	Not representative
38	0611	Betadine	Included in medicines
39	0613	Blood glucose monitor	Free sale
40	0911	Car radio-CD player	Not representative
41	0911	Digital photo frame	Price collection problem
42	0913	Desktop PC	Not representative
43	0913	Printer	Reduction of group products
44	0913	Joystick	Reduction of group products
45	0913	Calculator	Not representative
46	0914	DVD unrecorded	Not representative
47	0914	CD unrecorded	Not representative

48	0915	Repair of colour TV	Not representative
49	0934	Dog house	Reduction of group products
50	0934	Birdcage	Reduction of group products
51	10X04	Fees of Supplementary courses for Gymnasium	Reduction of group products
52	1112	Orange juice in can served in canteen	Reduction of group products
53	1112	Croissant in canteens	Reduction of group products
54	1212	Electric razor	Reduction of group products
55	1231	Neck lace (faux bijoux)	Price collection problem
56	1232	Smoking pipe	Not representative
57	1270	Newspaper announcements	Not representative

3. CPI weights

3.1. The National Consumer Price Index

3.1.1. The Household Budget Survey (HBS)

The Household Budget Survey (HBS) is a statistical survey, which collects information from a representative sample of households, on the composition of households, their members' employment status, living conditions, as well as on their expenditure and income. Among others, the primary goal of this survey is the update of the Consumer Price Index.

From 2008 onwards, the HBS surveys are conducted annually, thus providing data, which allow for the calculation of more representative and updated weights of households' consumption expenditure, which are used to calculate the Consumer Price Index. Furthermore, the HBS collects data throughout the year in order to achieve the best estimate of the average household expenditure.

The size of the sample of the 2013 HBS amounted to 3,468 households (sampling fraction 0.08%), which was equally distributed during the whole year in order to select 4 equivalent independent samples corresponding to the four quarters of the year.

The expenditures of households on goods and services figure in the compiled tables as monthly averages of the total of households of each group, irrespective of the households' of one group having reported any expenditures for the corresponding goods and services or not.

3.1.2. Weights of the items

The weights of items in the new CPI are based on the results of the 2013 HBS, after having adjusted the expenditure data of this survey to the prices of December 2014 (which is the base month of the new CPI).

These weights refer to the average composition of monthly expenditure consumption of the total of the private households of the country, which was recorded during the conduct period of the HBS. More specifically, the weight of each group, sub-group and species (of goods and services) represents the share of the average household expenditure for this group, sub-group and species in the total average household expenditure.

The weights of the items on the basis of the results of the 2013 HBS- adjusted to December 2014 prices- are expressed in %, for the 12 main Divisions in the following table. For comparison reasons, the weights of the CPI of December 2014, on the basis of the 2012 HBS, are also presented in the same table.

COICOP5	GROUPS – DIVISIONS	2015 w(%)	2014 w(%)
011	Food	199,16	198,62
012	Non alcoholic beverages (not served)	11,31	10,34
01	Food and non-alcoholic beverages	210,47	208,96
021	Alcoholic beverages (not served)	12,14	11,25
022	Tobacco	32,66	29,69
02	Alcoholic beverages and tobacco	44,80	40,94
031	Articles of clothing	48,07	49,15
032	Footwear	14,74	15,28
03	Clothing and footwear	62,81	64,43
041	Rentals	33,80	33,00
043	Repair and maintenance of the dwelling	8,56	8,88
044	Miscellaneous services relating to the dwelling	28,86	26,08
045	Electricity, natural gas and other fuels	64,22	82,57
04	Housing	135,43	150,53
051	Furnishings and other floor coverings	6,94	7,50
052	Household textiles	8,31	8,12
053	Household appliances and repair	7,19	7,07
054	Glassware, tableware and utensils of domestic use	3,38	3,96
055	Tools and equipment for house and garden	2,44	2,34
056	Goods and services for routine household maintenance	29,95	29,67
05	Durable goods - household articles and services	58,21	58,66
061	Medicinal - pharmaceutical products - therapeutic appliances	29,23	22,99
062	Medical, dental and paramedical services	24,24	24,89
063	Hospital care	21,48	19,45
06	Health	74,95	67,33
071	Purchase of vehicles	25,31	25,54
072	Operation of personal transport equipment	80,91	86,81
073	Transport services	17,04	15,18
07	Transport	123,26	127,53
081	Postal services	0,49	0,41
082	Telephone and telefax equipment	0,29	0,23
083	Telephone services	42,22	40,95
08	Communication	43,00	41,59
091	Audiovisual and information processing equipment	8,28	7,60
092	Major durables for recreation and culture	3,60	2,93
093	Small recreational items - flowers – pets	8,29	8,01
094	Recreational services	11,49	11,27
095	Newspapers, books and stationery	9,92	9,05
096	Package holidays	3,02	3,14
09	Recreation and culture	44,59	42,00
101	Pre-primary and primary education	7,63	5,39
102	Secondary education	18,34	21,98
103	Post-secondary non-tertiary education	3,86	2,63
104	Tertiary education	2,88	2,24
10	Education	32,71	32,24
111	Restaurants - confectioneries - cafes – buffets	92,90	91,35
112	Accommodation services	5,67	7,17
11	Hotels - cafes – restaurants	98,58	98,52
121	Barber's - hair dresser's shops - appliances for personal care	34,41	31,13
123	Personal effects	4,61	5,32
124	Social protection services	1,73	1,94
125	Insurance	21,86	20,74
126	Financial services	1,53	1,14

127	Other services	7,04	7,01
12	Miscellaneous goods and services	71,19	67,27
	Total	1000,00	1000,00

The weights on the basis of the 2013 HBS (extrapolated to December 2014 prices) reflect a current pattern of the composition of the households' consumption expenditure.

3.2. The Harmonised Index of Consumer Prices (HICP)

Pursuant to Regulation (EC) 1114/2010, the HICP class weights are based on the consumption pattern as this is derived by the national accounts data. Detailed product weights are derived from the HBS.

Consequently, in order to calculate the weights of the HICP for year 2015, national accounts data of the year 2013 are used after their extrapolation to December 2014 prices. It is noted that the latest national accounts data for the year 2013 have been calculated in compliance with the Regulation on the European Systems of Accounts- ESA2010 (Regulation EC 549/2013).

The following table shows, for the 12 expenditure categories and the basic groups, in %, the weights for the year 2015 and the weights that applied for the year 2014.

COICOP	GROUPS - DIVISIONS	2015 w(%)	2014 w(%)
011	Food	196,83	193,98
012	Non alcoholic beverages (not served)	15,04	9,00
01	Food and non-alcoholic beverages	211,88	202,98
021	Alcoholic beverages (not served)	11,02	7,35
022	Tobacco	42,67	38,78
02	Alcoholic beverages and tobacco	53,69	46,12
031	Articles of clothing	30,69	35,26
032	Footwear	12,38	8,79
03	Clothing and footwear	43,07	44,05
041	Rentals	39,82	41,18
043	Repair and maintenance of the dwelling	3,73	18,48
044	Miscellaneous services relating to the dwelling	19,94	21,73
045	Electricity, natural gas and other fuels	47,84	77,61
04	Housing	111,33	159,00
051	Furnishings and other floor coverings	6,23	8,59
052	Household textiles	6,64	7,73
053	Household appliances and repair	4,37	3,96
054	Glassware, tableware and utensils of domestic use	3,66	5,70
055	Tools and equipment for house and garden	2,48	2,55
056	Goods and services for routine household maintenance	20,06	14,76
05	Durable goods - household articles and services	43,44	43,28
061	Medicinal - pharmaceutical products - therapeutic appliances	20,89	6,70
062	Medical, dental and paramedical services	17,32	58,86
063	Hospital care	15,51	11,53
06	Health	53,73	77,09
071	Purchase of vehicles	26,15	37,43
072	Operation of personal transport equipment	52,46	62,53
073	Transport services	56,38	35,79
07	Transport	134,99	135,75
081	Postal services	0,62	0,46

082	Telephone and telefax equipment	0,23	0,16
083	Telephone services	43,82	36,71
08	Communication	44,67	37,33
091	Audiovisual and information processing equipment	5,46	6,56
092	Major durables for recreation and culture	4,25	1,34
093	Small recreational items - flowers - pets	7,96	7,00
094	Recreational services	12,13	16,41
095	Newspapers, books and stationery	9,65	15,41
096	Package holidays	6,57	2,93
09	Recreation and culture	46,02	49,64
101	Pre-primary and primary education	5,94	4,82
102	Secondary education	15,00	19,64
103	Post-secondary non-tertiary education	2,95	2,35
104	Tertiary education	2,36	2,00
10	Education	26,25	28,81
111	Restaurants - confectioneries - cafes - buffets	128,37	115,53
112	Accommodation services	27,69	6,93
11	Hotels - cafes - restaurants	156,06	122,46
121	Barber's - hair dresser's shops - appliances for personal care	26,06	17,97
123	Personal effects	7,32	14,09
124	Social protection services	4,25	0,40
125	Insurance	15,96	9,38
126	Financial services	2,83	1,37
127	Other services	18,46	10,29
12	Miscellaneous goods and services	74,87	53,49
	Total	1000,00	1000,00

4. Geographical areas, price collection cities and cities weighting

4.1. The previous CPI

4.1.1. Geographical areas and price collection cities

The sample design of the CPI for the geographical areas covers all the regions of the country. In order to have a representative coverage of the 13 Regions (NUTS 2) of the country (as regards price collection) one or two cities are selected in each region, depending on the size and characteristics of their markets and the costs involved, with the exception of the region of Central Macedonia, where three cities are selected. Specifically, prices are collected in 24 cities whose markets are considered as representative centres of wider geographical areas.

These cities, by Region, are:

Region (NUTS 2)	Price collection cities
1. Anatoliki Makedonia, Thraki	Kavala, Komotini
2. Kentriki Makedonia	Thessaloniki, Serres, Edessa
3. Dytiki Makedonia	Kozani, Grevena
4. Ipeiros	Ioannina, Igoumenitsa
5. Thessalia	Larisa, Volos
6. Ionioi Nisoi	Kerkyra, Lefkada
7. Dytiki Ellas	Patra, Mesolongi

8. Sterea Ellas	Lamia, Amfissa
9. Attiki	Greater Athens area
10. Peloponnisos	Kalamata, Tripoli
11. Nisoi Voreiou Aigaiou	Mytilini
12. Nisoi Notiou Aigaiou	Rodos
13. Kriti	Irakleio, Agios Nikolaos

4.1.2. Population weights

The population weights of the price collection cities are calculated as percentage (%) share of the population of each city over the total population of Greece. It should be noted that for the calculation of the population weights, besides the population of each city, the population of the wider geographic area, which the city represents, is also taken into account.

In general, the population weights are used for the weighting of the individual indices (sub-indices) of the items for each price collection city (as expenditure data at this level of detail are not available), in order to calculate these sub-indices for the whole country.

For the (population) weighting of the sub-indices of some items of the Index (e.g. urban transports), where accurate data on the local consumption values are available, these data are used instead of the above mentioned population weights.

The population weights of the CPI are based on the data of the 2001 General Population and Housing Census. These weights, by price collection city, figure in the following table:

Price collection cities	Population weights (%)
1. Athens – Piraeus	40,64
2. Thessaloniki	12,74
3. Patra	5,81
4. Larisa	4,90
5. Irakleio	4,83
6. Kavala	3,23
7. Ioannina	2,83
8. Kalamata	2,55
9. Volos	2,45
10. Kozani	2,43
11. Komotini	2,40
12. Mytilini	1,90
13. Serres	1,85
14. Lamia	1,79
15. Kerkyra	1,75
16. Rodos	1,75
17. Tripoli	1,58
18. Edessa	1,44
19. Mesolongi	0,72
20. Agios Nikolaos	0,70
21. Lefkada	0,50
22. Amfissa	0,44
23. Igoumenitsa	0,42
24. Grevena	0,35
Total	100,00

4.2. The current update of the CPI

The aforementioned issues that were considered for the calculation of the CPI, i.e., the price collection cities and the geographical coefficients were also studied for the current update of CPI, and were examined both in collaboration with the technical expert and the working group for the CPI updating.

As regards price collection cities, the question of the relatively low participation of islands has been raised, because islands are visited by a larger number of tourists in comparison with other regions. As regards population weights, given the fact that they are calculated on the basis of population data, some reservations were expressed on whether population is the most appropriate variable for calculating the weighting of each city.

Therefore, it was considered appropriate to add cities located on islands in the CPI price collection cities, as well to use both population data and HBS data for the calculation of the expenditure weights by region.

4.2.1. Geographical regions and price collection cities

As regards geographical regions, the current division of the Country into 13 regions is applied.

As regards the selection of cities for price collection, taking into account both the cost of increasing the sample of cities and the existing computing system used to calculate the CPI, three island towns have been added, namely **Chania**, **Ermoupolis** and **Chios**. After the addition of these cities, the number of price collection cities now amounts to 27 cities.

The list of regions and price collection cities is as follows:

Region (NUTS 2)	Price collection cities
1. Anatoliki Makedonia, Thraki	Kavala, Komotini
2. Kentriki Makedonia	Thessaloniki, Serres, Edessa
3. Dytiki Makedonia	Kozani, Grevena
4. Ipeiros	Ioannina, Igoumenitsa
5. Thessalia	Larisa, Volos
6. Ionioi Nisoi	Kerkyra, Lefkada
7. Dytiki Ellas	Patra, Mesolongi
8. Sterea Ellas	Lamia, Amfissa
9. Attiki	Greater Athens area
10. Peloponnisos	Kalamata, Tripoli
11. Nisoi Voreiou Aigaiou	Mytilini, Chios
12. Nisoi Notiou Aigaiou	Rodos, Ermoupolis
13. Kriti	Irakleio, Agios Nikolaos, Chania

4.2.2. Weighting of cities on the basis of expenditure data and household population

4.2.2.1. Calculation of regional consumption expenditure

To calculate the consumption expenditure of households by region, the new population data as derived from the 2011 census and the regional Household Budget Survey (HBS) results for the years 2012 and 2013 were taken into account.

On the basis of the results of the HBS, i.e. the average monthly expenditure by expenditure category and per household in each of the 13 regions of the country and the number of households by region, as determined by an average of the HBS for the years 2012 and 2013, the annual expenditure for the total number of the households by region was calculated, i.e., extrapolating the HBS results on an annual basis for the total number of the households in every region.

The level of analysis, which has been adopted for the categories of expenditure, is the second level of the COICOP classification, i.e., 12 expenditure Divisions.

4.2.2.2. Calculation of consumption expenditure by price collection city and weights

In order to calculate the weights by price collection city, it is necessary to calculate the consumption expenditure of households by city.

For this reason, a similar approach was followed as for the previous CPI revisions of the population weights, with the difference that instead of calculating them on the basis of the resident population, they were calculated on the basis of the number of individual households, which is conceptually defined in the same way both in the HBS and the Population and Housing Census and concern the reference population of the CPI.

In particular, the number of households in each price collection city was considered as the number of households in the Regional Unit where the city belongs, because the city constitutes the economical centre of the Regional Unit.

In a later stage, the number of households of each region was allocated in the price collection cities on the basis of the number of households of each city. The percentage distribution of population of region on price collection cities was implemented on the expenditure that was calculated for every expenditure category of COICOP12 at the level of the region, as has been estimated using the HBS results. The weighting coefficient of each city, by expenditure category, is calculated as the expenditure in each city to the total expenditure for this category in the country.

The table below shows the weights calculated by expenditure category and price collection city.

Cities	COICOP 12 divisions of expenditure											
	01	02	03	04	05	06	07	08	09	10	11	12
Agios Nikolaos	0,75	0,72	0,68	0,58	0,72	0,75	0,79	0,80	0,50	0,96	0,60	0,62
Athens	41,59	38,96	40,57	42,40	44,30	40,70	41,22	42,16	46,99	43,26	41,43	38,36
Mesolongi	2,65	2,73	2,60	1,87	2,22	2,16	2,31	2,17	2,03	1,44	2,85	2,26
Amfissa	0,72	0,88	0,58	0,77	0,79	0,59	0,65	0,72	0,42	0,60	0,66	0,78
Volos	2,73	2,74	2,35	2,93	1,88	2,70	2,53	2,60	1,90	2,29	2,55	2,38
Grevena	0,35	0,29	0,34	0,42	0,28	0,29	0,36	0,41	0,20	0,31	0,32	0,32
Edessa	1,51	1,65	1,70	1,66	1,53	1,60	1,70	1,44	1,76	1,86	1,72	1,90
Igoumenitsa	0,53	0,44	0,50	0,52	0,55	0,46	0,46	0,54	0,42	0,42	0,63	0,57
Iraklio	2,93	2,78	2,64	2,26	2,81	2,90	3,05	3,12	1,92	3,73	2,34	2,41
Thessaloniki	12,70	13,93	14,32	13,96	12,86	13,44	14,32	12,16	14,81	15,65	14,48	16,00
Ioannina	2,11	1,75	1,96	2,05	2,17	1,82	1,84	2,11	1,66	1,64	2,48	2,24
Kavala	2,72	3,25	3,41	2,91	3,47	2,88	2,35	2,70	2,72	3,12	2,71	3,24
Kalamata	3,12	3,33	2,73	2,43	2,27	3,13	2,84	2,96	2,12	1,88	2,60	3,35
Kerkyra	0,96	0,93	0,64	0,87	1,00	1,08	0,82	1,40	0,66	0,48	0,79	1,14
Kozani	1,61	1,32	1,57	1,94	1,28	1,31	1,65	1,89	0,93	1,41	1,45	1,45
Komotini	2,41	2,88	3,02	2,58	3,08	2,55	2,09	2,40	2,41	2,77	2,40	2,87

Lamia	2,82	3,44	2,29	3,01	3,09	2,31	2,53	2,84	1,65	2,34	2,57	3,04
Larisa	3,86	3,87	3,32	4,13	2,65	3,81	3,57	3,67	2,68	3,23	3,60	3,36
Lefkada	0,22	0,21	0,15	0,20	0,23	0,25	0,19	0,32	0,15	0,11	0,18	0,26
Mytilini	1,19	0,81	1,36	1,02	1,09	1,09	1,15	1,28	1,22	1,02	1,06	1,13
Patra	3,99	4,11	3,92	2,82	3,35	3,26	3,48	3,27	3,05	2,17	4,30	3,40
Rodos	2,15	2,50	2,81	2,77	2,46	4,10	3,34	2,57	3,76	2,69	2,24	2,17
Serres	2,05	2,24	2,31	2,25	2,07	2,17	2,31	1,96	2,39	2,52	2,33	2,58
Ermoupolis	0,44	0,51	0,58	0,57	0,51	0,84	0,69	0,53	0,77	0,55	0,46	0,45
Tripoli	1,66	1,78	1,46	1,30	1,21	1,67	1,51	1,58	1,13	1,00	1,39	1,79
Chania	1,53	1,45	1,38	1,18	1,47	1,51	1,59	1,63	1,01	1,95	1,22	1,26
Chios	0,71	0,49	0,82	0,61	0,65	0,65	0,69	0,77	0,73	0,61	0,64	0,68
Total	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00

The 12 codes of expenditure Divisions in the COICOP classification are:

COICOP	12 divisions of the COICOP classification
01	Food and non-alcoholic beverages
02	Alcoholic beverages and tobacco
03	Clothing and footwear
04	Housing
05	Durable goods, household articles and services
06	Health
07	Transport
08	Communication
09	Recreation, cultural activities
10	Education
11	Hotels, cafes, restaurants
12	Miscellaneous goods and services