# Greece

### A: Identification

Title of the CPI: National Consumer Price Index

Organisation responsible: Hellenic Statistical Authority (ELSTAT)

**Periodicity:** Monthly

Index reference period: 2009 = 100

Weights reference period: 2008 Household Budget Survey adjusted to the prices of 2009.

Main uses of CPI: Indexation of wages, pensions and/or social security payment, indexation of rents, contracts and/or other payments, main inflation indicator used for monetary policy, deflate household expenditures in national accounts, computation of purchasing power of households, macroeconomic modelling and other analytic uses.

## **B: CPI Coverage**

## Geographical Coverage

Weights: Nation-wide

Price collection: Nation-wide

**Population coverage:** Resident households of nationals.

**Population groups excluded:** Institutional households.

## Consumption expenditure excludes:

• Purchase of owner-occupied housing

## C: Concepts, definitions, classifications and weights

**Definition of the CPI and its objectives:** Consumer price index is the measure of change in the general level of prices for a given quantitave and qualitative composition of goods and services purchased by the contemporary household.

Classification: COICOP (Classification of Individual Consumption by Purpose).

Weights include value of consumption from own production: No

Sources of weights: Household expenditure surveys.

Frequency of weight updates: Every 3-5 years

Price updating of weight reference period to the index reference period: Weights are adjusted according to the price changes of the year 2009.

Weights for different population groups or regions: Weights for price collection cities are calculated. The population weights of the price collection cities are derived from the data of the general population census of the year 2001. These weights are calculated as percentage (%) contribution of the population of each price collection city and the greater area that the city represents to the total population of the country.

## D: Sample design

## Sampling methods:

Outlets: Judgmental sampling

Products: Judgmental sampling

If sample updates are irregular indicate when last updates were introduced: Samples are updated when revising the CPI.

Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples: Item selection: The goods and services included in the CPI basket are selected on the basis of both the HBS data and the results of a specific market survey adjusted to the prices changes. For each sub-group the necessary number of items was selected to ensure the representativeness of the individual index of sub-group.

Outlet selection: Prices are collected from retail sales outlets, enterprises providing services, street markets etc. Outlets which are considered representative of the branches of shops and where the households make their purchases are chosen in the 24 selected price collection cities.

Sample sizes: Prices are collected from 24 cities selected from 13 Regions of Greece, which correspond to the NUTS 2 level. The total number of outlets for all items included in the Index amounts to 5,000. The number of species of goods and services amounts to 800, which are broken down to a greater number of variations.

Criteria used for selecting an item variety in the outlet in case of loose specifications provided by the central office: All items for which prices are collected are defined by specific characteristics that is particular characteristics which determine the quality, the get up, and the identity in general.

### E: Data Collection

**Approximate number of localities, outlets and price observations:** Localities: 24 cities, Outlets: 5,000, Price observations: 56,100

Frequency with which prices are collected: The frequency of price collection varies depending on the nature of the products. Prices of fresh products (fruit and vegetables and

fish) and energy products (heating oil, petrol) are collected once a week. For the other products, prices are collected once a month.

**Reference period for data collection:** Weekly prices refer to Tuesday. Monthly prices are collected in a cyclical manner so as to refer to the whole month.

#### **Methods of Price Collection**

- Personal data collection

#### **Treatment of:**

**Discounts and sales prices**: Reduced prices of general offers and general discounts are collected. Sales prices are also included. Reduced prices, due to special offers or special discounts, which are applied for some categories of consumers (e.g. members of cooperatives) are not taken into account in the compilation of CPI.

**Missing or faulty prices**: The treatment of missing prices depends on the category of items, for which prices are collected. The treatment of missing prices for the items (which are not seasonal) depends on the duration of absence of the item in the outlet. If the time interval of its absence exceeds 2 months, then the item is replaced.

Period for allowing imputed missing prices: 2 months

Disappearance of a given type or quality from the market: When a specified item (variety of species) is no longer available in the market or has ceased to be important, as regards the consumption, because of the appearance of new varieties, then it is substituted by the item which has taken its place in the market. If the substitute item is comparable to the item it replaces, then it is tried to estimate whether the deviation of prices is due to differences in quality, weight, package, etc. and adjust the price accordingly, so that the adjusted price corresponds to the price of the new item, with quality level equivalent to that of the old item. However, if the substitute item is not comparable to the one it replaces, then the prices of the two items are linked, and a theoretical base price is calculated for the substitute item.

Quality differences: NSSG (National Statistical Service of Greece) uses implicit quality adjustment techniques (such as overlap, etc.), each time taking into account different parameters in the quality adjustment decision. Explicit methods are only used in the form of quantity judgment, expert judgment, etc. in certain cases. The demand for explicit quality adjustment techniques, such as option cost, hedonics, etc. should be explored in the long run in the scope of NSSG.

## Treatment of seasonal items and seasonality

Items that have a seasonal character and their treatment: For seasonality of fresh fruits and fresh vegetables, the method of monthly changing weights of the various species of these goods, by keeping the weights of sub-groups "Fresh fruit" and "Fresh vegetables" constant throughout the year, is applied. For seasonality of clothing and footwear, a new method is applied, starting from January 2011 that is consistent with the Regulation (EC) No 330/2009 (class confined seasonal weights method). According to this method, when some of these products are out of season they are excluded from the basket and their weights are zero.

Prices for seasonal items are collected as following: i) winter items: from October to April; ii) summer items: from May to September.

**Seasonal food items:** Seasonal food items are included in the CPI using fixed weights approach: the weights are kept constant over the year, while prices of out-of season products are estimated or imputed.

**Seasonal Clothing:** Class confined seasonal weights method. According to this method, when some of these products are out of season they are excluded from the basket and their weights are zero.

Method to impute the price of seasonal items: Prices are imputed using price development of in-season products.

## **Treatment of housing**

**Treatment of owner-occupied housing:** The owner occupied housing is not included.

Types of dwellings covered by the rent data: The rent prices are collected directly from households.

## F: Computation

Formula used for calculation of elementary indices: The ratio of geometric mean prices (Jevons index) (Chained form)

Formula to aggregate elementary indices to higher level indices: Aggregation of elementary indices into higher level indices is by the fixed base Laspeyre's type index given by

$$I^{t} = \sum_{i=1}^{k} R_{i}^{t} W_{i}, i=1, 2, ..., k.$$

where

 $I^t$  = The overall index of the current period (month) t.

 $R_i^t$  = The individual index (sub-index) of the species i (or group of similar species), for which the weight for the month exists.

 $W_i = \frac{p_i^{\theta} q_i^{\theta}}{\sum_{i=1}^k p_i^{\theta} q_i^{\theta}}$  = The weight (based on the HBS results) of the species *i*, where  $p_i^{\theta}$  and  $q_i^{\theta}$  are the price and quantity of the species *i*, in the base period 0 respectively.

Formula of aggregating regional/population group indices into national index: Population weights are calculated as percentages of the population of each price collection city in the total population of Greece. In addition to the population of each city the population of the wider geographic area that the city represents is also taken into account in the calculation of population weights. In general, the population weights are used for the weighting of the individual indices (sub-indices) of the items of each price collection city, in order to calculate these sub-indices for the whole country.

Seasonally adjusted indices: Data are not seasonally adjusted.

## **G:** Editing and validation procedures

Control procedures used to ensure the quality of data collected: The collected prices are checked as regards their correctness, in both the time of their collection and the time of their processing. Comparison between the current price quoted and the previous month respectively. Communication with respondents follows in case of outliers.

Control procedures used to ensure the quality of data processed: There are checks (automatic and manual) for the assessment of discrepancies in order to eliminate sources of errors.

## H: Documentation and dissemination

**Timeliness of dissemination of the CPI data:** CPI data is released in the first 10 days from the end of the reference month.

## Level of detailed CPI published

**Paper publication**: All items CPI, Division-level (12 Divisions)

Online: All items CPI, Division-level (12 Divisions)

#### **Documentation**

**Publications and websites where indices can be found**: Press Release for the CPI; Monthly: "Monthly Statistical Bulletin" available upon request; Annual: "The Concise Yearbook of Greece", the "Greece in Figures" and the "Statistical Yearbook of Greece" all available for a fee; Internet website: http://www.statistics.gr/

## Publications and websites where methodological information can be found:

Methodological notes can be found in the document "Information note, The Revised Consumer Price Index (Base year 2009=100.0)", available on http://www.statistics.gr/portal/page/portal/ESYE/PAGE-themes?p\_param=A0515&r\_param=DKT87&y\_param=MT&mytabs=0

## I: Other Information

Completed by ILO in 2013.