

# Sweden

## A: Identification

**Title of the CPI:** Consumer Price Index

**Organisation responsible:** Statistics Sweden

**Periodicity:** Monthly

**Index reference period:** 1980 = 100

**Weights reference period:** 2003 Calendar year.

**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 and computation of purchasing power of households.

## B: CPI Coverage

### Geographical Coverage

*Weights:* Nation-wide

*Price collection:* Nation-wide

**Population coverage:** Resident households of nationals, temporary visitors and institutional households.

### Consumption expenditure includes:

- Mortgage repayments;
- Mortgage interest

### Consumption expenditure excludes:

- Life insurance premiums

## C: Concepts, definitions, classifications and weights

**Definition of the CPI and its objectives:** The CPI shows the average change in prices of goods and services available for private consumption in the economic territory of Sweden.

**Classification:** COICOP (Classification of individual consumption by purpose) with 12 major groups and 37 subgroups (three-digit level).

**Sources of weights:** Household expenditure surveys, national accounts, data from the three major wholesalers (detailed data for food).

**Frequency of weight updates:** Annual

## **D: Sample design**

### **Sampling methods:**

*Outlets:* Sampling with probability proportional to size (PPS), judgmental sampling

*Products:* Sampling with probability proportional to size (PPS), judgmental sampling, cut-off sampling (the elements with the highest sales or value of other auxiliary variable are included into the sample), quota sampling (a priori fixing of the number of elements)

### **Frequency of sample updates:**

*Outlets:* Annual

*Products:* Continuous (on a rotating basis)

**Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples:** Outlet selection: There are a variety of methods for outlet selection depending on survey. In the survey for daily necessities (excluding fresh bread, fruit, vegetables and fish) and in the local price survey (fresh food, footwear, furniture household appliances and equipment and miscellaneous goods and services) prices are collected from outlets sampled by Pareto PPS from the Central Business Register. Outlets for collecting petrol prices are also chosen by PPS. For the surveys collected by the central staff judgmental methods are used in most cases for the outlet selection.

**Sample sizes:** In each outlet, from one up to as much as 500 prices are observed. In all some 25,000 prices in approximately 1000 outlets are observed in local price collection every month. Rent quotations are obtained through a quarterly housing survey of a sample of about 1,000 dwellings. In the surveys collected by the central staff, prices are observed in a few hundred outlets.

**Item selection:** There are a variety of sampling methods used in the Swedish CPI. The most used methods are purposive sampling and probability sampling. Other methods used are: cut-off sampling, quota sampling and complete coverage.

**Criteria used for selecting an item variety in the outlet in case of loose specifications provided by the central office:** For the local price collection the central staff provides general specifications to price collectors (e.g. man's overcoat) and collectors record detailed descriptions such as brand, size, fabric/material, etc. in their forms. For the central price collection the central staff also provides the detailed specifications.

## **E: Data Collection**

**Approximate number of localities, outlets and price observations:** Outlets: 1,000, Price observations: 25,000

**Frequency with which prices are collected:** Prices are collected on a monthly basis.

**Reference period for data collection:** Prices for alcoholic beverages, transport, fuel, communication, housing, electricity, water and other services related to dwellings, recreation, health and medical care, are collected on the 15th of each month. Prices of other items are collected on an optional day in the week other than the 15th of the month.

### **Methods of Price Collection**

- Personal data collection for 40% of items in the CPI (food, other daily items found in super markets, clothing and foot wear, furniture, household appliances, restaurants services and other personal goods and services )
- Mailed questionnaires for 60% of items in the CPI (for alcoholic beverages, transport, fuel, communication, housing, electricity, water and other services related to dwellings, recreation, health and medical care.)
- Telephone interviews for 60% of items in the CPI (for alcoholic beverages, transport, fuel, communication, housing, electricity, water and other services related to dwellings, recreation, health and medical care.)
- Official tariffs

### **Treatment of:**

**Discounts and sales prices:** Unconditional discount prices are reflected in price collection.

**Missing or faulty prices:** If a variety is temporarily not available the missing price is neglected or imputed by using the same price change as the other goods/services within the line of business in question and if there are no other goods/services within the same line of business the price change of the good/service in question, within all the lines of business where it occurs. If a variety is not available in the base period (December) and the price collector can find a variety that fits the description in subsequent months a base price is imputed by using the estimated change of other prices for the same item.

**Disappearance of a given type or quality from the market:** When a variety is no longer available a substitution is made and a quality evaluation is done. The new variety should fulfil the original variety description.

**Quality differences:** Quality adjustments for item differences when a forced substitution is introduced for a superseded item is made in different ways. For shoes, furniture, household machines, and so on, the price collectors evaluate the value of the differences from their own point of view as being consumers. For clothing a hedonic method is used. For cars a panel of expertise is consulted for the evaluation.

**Appearance of new items:** During the year the market and market changes for consumer products are followed, experts are consulted and new products are introduced and outdated products are removed.

### **Treatment of seasonal items and seasonality**

**Items that have a seasonal character and their treatment:** When seasonal items are not available a carry forward method is used, i.e. the same price as the last observation is used until the product is available again.

**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:** Seasonal clothing 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.

**Method to impute the price of seasonal items:** The method used to impute price development in out-of season periods is carrying forward the last observed price.

### **Treatment of housing**

**Treatment of owner-occupied housing:** For owner-occupied houses the index is a calculation based on the monthly cost development of each of the components of home ownership, namely interest, house insurance, water garbage collection, taxes on real estate, heating oil, electricity, repairs and depreciation.

## **F: Computation**

**Formula used for calculation of elementary indices:** Ratio of average standardized prices (it's a good approximation to the geometric mean of prices relative formula) (Chained form)

**Formula to aggregate elementary indices to higher level indices:** CPI is chain index aggregated according to Laspeyres-type formula.

**Seasonally adjusted indices:** Currently no seasonally adjusted data are published.

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

**Control procedures used to ensure the quality of data collected:** The validation checks are applied for different items depending on which price survey they are collected in but basically they follow the same pattern. The methods for validation procedures can mainly be divided into two kinds of surveys, namely: For prices collected by price collectors computer programs carry out the following checks: data consistency checks, check of the outlet and items codes when the price observation is missing, check of the outlet and item codes when there is a price, quantity control, check of regular prices, check of the quality adjustment (not for food and other daily necessities), and probability control of the quoted prices. For prices collected by the central staff; each member of the staff responsible for certain price collections, does the validation in the central price system. The checks are done while collecting the prices by phone or by contacting the respondents when the information is collected through written questionnaires. In the central price system the checking is done by immediately discussing the quoted prices when the price changes are extraordinary with the respondents and in some cases new prices are obtained and in other cases the price is accepted. Before the indices from all the systems are accepted the entire price statistics staff

meet together and scrutinize all the item indices and the final result to decide whether further checking is necessary. In some cases this final discussion leads to further checking.

**Control procedures used to ensure the quality of data processed:** The whole CPI production system is scrutinized every year in connection with the weight up date. The weights are properly discussed with various experts. Methodological changes are discussed in the committee for the consumer price index during the year and the committee decides whether any changes of principle should be carried out.

## **H: Documentation and dissemination**

**Timeliness of dissemination of the CPI data:** CPI data is disseminated within two weeks after the end of the reference month for all months except January. Due to the weight revisions, the results for January are released after approximately three weeks.

### **Level of detailed CPI published**

**Paper publication:** All items CPI, Division-level (12 Divisions), Group-level app. 40 groups

**Online:** All items CPI, Division-level (12 Divisions), Group-level app. 40 groups

### **Documentation**

**Publications and websites where indices can be found:** The monthly Statistiska Meddelanden (Statistical Reports) publishes indexes for 12 main groups and about 50 subgroups, The annual Statistiska meddelanden (Statistical Reports), available from Publication Services, Statistics Sweden; Internet website: <http://www.scb.se> for the data published in the press release, in Statistical reports and for access to Sweden's statistical databases.

**Publications and websites where methodological information can be found:** The annual Statistiska meddelanden (Statistical Reports) series PR 15 contain a methodological description. Documentation on methodology is available on the Statistics Sweden website <http://www.scb.se>.

## **I: Other Information**

Completed by ILO in 2013.