

# Norway

## A: Identification

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

**Organisation responsible:** Statistics Norway

**Periodicity:** Monthly

**Index reference period:** 1998 = 100

**Weights reference period:** Average expenditure shares of the last 3 calendar years.

**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, macroeconomic modelling and other analytic uses.

## B: CPI Coverage

### Geographical Coverage

*Weights:* Nation-wide

*Price collection:* Nation-wide

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

## C: Concepts, definitions, classifications and weights

**Definition of the CPI and its objectives:** Consumer price index reflects changes in the cost of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.

**Classification:** COICOP (Classification of individual consumption by purpose) and classification by delivery sector.

**Sources of weights:** National accounts.

**Frequency of weight updates:** Annual

**Price updating of weight reference period to the index reference period:** Price adjustments of weights are not done, as annual weight changes are implemented.

**Weights for different population groups or regions:** Regional weights are computed.

## D: Sample design

## **Sampling methods:**

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

*Products:* Judgmental sampling, cut-off sampling (the elements with the highest sales or value of other auxiliary variable are included into the sample)

## **Frequency of sample updates:**

*Products:* Annual

**Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples:** A sample of about 810 goods and services is selected. The goods and services are selected based on information from the household budget survey, branch information and market research data. The prices are collected from a sample of outlets, households and municipalities.

**Outlet selection:** The outlets/ firms are selected from Statistics Norway's Business Register. The selection is made after stratifying the population by industry and region. The probability to be selected is proportional to the size of the turnover. One sixth of the outlets in the sample are replaced each year, which means that each outlet remains in the sample for six years.

**Sample sizes:** Each month approximately 330,000 price observations are obtained from a sample of about 2,500 outlets/ firms. The sample of households for the survey of rents amounts to 1,300 tenants.

## **E: Data Collection**

**Approximate number of localities, outlets and price observations:** Outlets: 2,500, Price observations: 330,000

**Frequency with which prices are collected:** Prices are collected monthly.

**Reference period for data collection:** Prices are collected on the 15th of each month.

### **Methods of Price Collection**

- Mailed questionnaires
- Telephone interviews for rent.
- Scanner data
- Internet for electricity and centrally priced products.
- Official tariffs
- CATI for rentals for tenants.

## Treatment of:

**Black market prices:** Illegal goods and services are excluded.

**Missing or faulty prices:** Missing prices are imputed. Different algorithms are used when estimating missing prices. One option is to impute the average price observed of the same product on either regional or national level. A second option is to impute a price based on changes in prices from previous month of the same product or a group of products either on regional or national level.

**Disappearance of a given type or quality from the market:** When a good or service goes out of the market, the outlets are instructed to find a replacement of similar quality and mark it in the questionnaire.

**Quality differences:** Information received from retail and service outlets are used to identify quality differences and imputation procedures are then used.

**Appearance of new items:** The sample of goods and services is updated once a year, including new products that gain market shares and replacing obsolete ones.

## Treatment of seasonal items and seasonality

**Items that have a seasonal character and their treatment:** Actual prices are used for seasonal items during seasons while an average price based on previous season is imputed for "out-of-season". The average price is kept fixed till the next season.

**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:** Owner occupied housing is included in the CPI as imputed rentals based on actual rentals paid by tenants.

## 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:** The aggregation from the representative item level to all- item index is based on the Laspeyre's formula. The

Norwegian CPI is a chained Laspeyre's price index with new sets of weights incorporated into the index each August.

**Formula of aggregating regional/population group indices into national index:** Regional weights are used to combine the regional indices into national indices for each commodity.

**Seasonally adjusted indices:** The all-item index is seasonally adjusted. The procedure for seasonal adjustment is X12ARIMA.

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

**Control procedures used to ensure the quality of data collected:** After checking the questionnaires manually, they are registered in an optical scanner. The prices are then put through tests that identify duplicates and observations with large price changes from the previous month. The price material are then sorted by item and region, and revised further.

## **H: Documentation and dissemination**

**Timeliness of dissemination of the CPI data:** CPI data is disseminated between 1 and 2 weeks after the end of the reference month (normally 10 days after 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:** New release: Consumer Price Index, available in Norwegian and in English; Internet: CPI data is published in the news release at: <http://www.ssb.no/kpi> (in Norwegian) and <http://www.ssb.no/en/kpi> (in English).

**Publications and websites where methodological information can be found:** A comprehensive description of the methodology and sources used to compile the CPI is published in Official Statistics of Norway series volume Konsumprisindeksen 1995-2000. The report is not translated to English.

## **I: Other Information**

Completed by ILO in 2013.