

Ireland

A: Identification

Title of the CPI: Consumer Price Index

Organisation responsible: Central Statistics Office (CSO)

Periodicity: Monthly

Price reference period: December 2011 = 100

Index reference period: December 2011 = 100

Weights reference period:

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, resident households of foreigners in the country and temporary visitors.

Population groups excluded: Institutional households.

Consumption expenditure includes:

- Food consumed away from home;
- Mortgage interest;
- Housing maintenance, minor repairs;
- Second hand goods purchased (second hand cars only);
- Luxury goods;
- Financial services (including fees for financial advice, brokerage fees);
- Non-life insurance premiums (e.g. vehicle, housing, other property, medical), gross of claims;
- Licences and fees (e.g. driver's licence, hunting licence, vehicle registration)

Consumption expenditure excludes:

- Foods produced for own final consumption;
- Other goods produced for own final consumption;
- Services produced for own final consumption;
- Income in-kind receipts of goods;
- Income in-kind receipts of services;
- In-kind goods received as gifts;
- In-kind services received as gifts;
- Purchase of owner-occupied housing;
- Mortgage repayments;
- Major repairs, conversions and extensions to owner occupied housing;
- Purchase of gifts of goods and services given to others outside the household;
- Interest payments (excluding mortgage interest payments);
- Life insurance premiums;
- Gambling expenditure, gross of winnings;
- Investment-related expenditures (e.g. purchase of shares/stocks);
- Occupational expenditures;
- Other business-related expenditures;
- Social transfers in-kind of goods and services from government and No-profit institutions serving households;
- Expenditures abroad

C: Concepts, definitions, classifications and weights

Definition of the CPI and its objectives: The CPI is defined as an average measure of change in the prices of goods and services bought for the purpose of consumption by all private households in the country and by foreign tourists on holiday in Ireland. The CPI is the official measure of inflation in Ireland.

Definition of consumption expenditures: The CPI mostly measures the acquisition of goods and services, but there is one notable exception, namely mortgage interest where a payment approach is adopted.

Classification: CIOCOP adapted to the Needs of Harmonised Indices of Consumer Prices (2000) - COICOP/HICP 2000

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: The expenditure estimates were updated for price changes up to mid-December 2011 using the percentage changes between 2010 and mid-December 2011 in the prices of the individual item headings covered by the former index series.

Weights for different population groups or regions: The Household Budget Survey (HBS) provides average household expenditure by COICOP division (2-digit), group (3-digit), class (4-digit) and NUTS 3 region. The eight Nomenclature of Territorial Units for Statistics 3

(NUTS 3) regions were combined into five areas. Area weights, which are used in the compilation of the CPI, were calculated using HBS data on average household expenditure by NUTS 3 region and Quarterly national Household Survey (QNHS) estimates of population by NUTS 3 region.

D: Sample design

Sampling methods:

Localities: Judgmental sampling

Outlets: Judgmental sampling

Products: Judgmental sampling

Frequency of sample updates:

Localities: Every five years

Outlets: Every five years

Products: Every five years

Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples: Local price collection – Direct Pricing

Sampling of locations: purposive (or judgmental) sampling is applied, whereby Dublin and the regional cities (Cork, Limerick, Waterford and Galway) are automatically included in the sample while a sample of towns are selected with the constraining factor that each county in the State must be represented.

Sampling of retail outlets within locations: purposive (or judgmental) sampling is applied to select the sample of retail outlets within a location (i.e. retail outlets which are the most popular are chosen). As the CPI is intended to reflect only price change, the sample of retail outlets remains the same as long as possible during the life span of the series. However, when appropriate, new retail outlets or locations may be added, e.g. the Dundrum Shopping Centre was included in the sample at the time of its opening to ensure on-going representation.

Sampling of representative items within retail outlets: the sample of items in the CPI basket of goods and services is selected following extensive research. The following sources of information are used: HBS results, reports from price collectors on developments in retail outlets, market research, trade magazines, media reports and discussions with retailers, service providers and trade organisations.

Selection of products and varieties: for most goods, the selection of products and varieties within retail outlets is purposive (or judgmental). In each retail outlet, the price collectors choose one representative variety from all products matching the specification of each item to be priced in that retail outlet. To facilitate this, price collectors seek assistance from staff in the retail outlet. In practice, a wide variety of brands and products are sampled for each item

across the different pricing locations. This gives a better representation of the price movements of the item in question, than would be realised if a single narrowly defined identical variety were priced in all pricing locations.

Centralised price collection – Special Inquiries (postal, telephone, e-mail and internet price collection)

Sampling of service providers: purposive (or judgmental) sampling is applied to select representative service providers (e.g. those with the greatest market share).

Sampling of services: purposive (or judgmental) sampling is applied to select representative services with the assistance of the service provider. When canvassing initially takes place, each service provider is requested to identify representative service(s) that they provide to consumers to be priced for the CPI.

Sampling of locations: purposive (or judgmental) sampling is applied to select representative locations. In the case of some services, services providers are selected throughout the country (e.g. general practitioners, third level tuition). While in the case of other services, where national pricing exists (e.g. electricity, natural gas, health insurance) the service provider is a central source in one location.

Criteria used for selecting an item variety in the outlet in case of loose specifications provided by the central office: The CSO supplies general specifications to price collectors. Price collectors are free initially to select a brand and, in certain cases, size. In each retail outlet, the price collectors choose one representative item variety from all item varieties matching the specification of each item heading to be priced in that retail outlet. To facilitate this, price collectors can seek assistance from staff in the retail outlet. Once selected the same item variety with the same specifications is priced each month.

E: Data Collection

Approximate number of localities, outlets and price observations: Localities: 84, Outlets: 3,500, Price observations: 53,000

Frequency with which prices are collected: In general, prices for goods are collected by direct pricing operations (i.e. by price collectors from retail outlets) while prices for services are collected by “Special Inquiries” operations (i.e. by CPI headquarters staff from service providers). The general rule is that direct pricing operations are carried out on a monthly basis while “Special Inquiries” operation mainly collects prices on a quarterly basis, with prices for the remaining “Special Inquiries” collected monthly or annually as appropriate.

Reference period for data collection: The reference period for direct pricing operations is over a period of more than one week i.e. Monday prior to the second Tuesday of the reference month up to and including the third Tuesday of the reference month. The reference period for “Special Inquiries” is the second Tuesday of the reference month.

Methods of Price Collection

- Personal data collection for food and non-alcoholic beverages (bought in retail outlets and restaurants, cafes, fast food and take-away food outlets), alcoholic beverages (off-licence sales and alcohol consumed on licensed premises), tobacco, clothing, footwear, materials for the maintenance and repair of the dwelling, bottled gas, solid fuels, furniture and furnishings, carpets and other floor coverings, household textiles, household appliances, glassware, tableware and household utensils, tools and equipment for house and garden, non-durable household goods, medical products, motor cycles, bicycles, petrol, diesel, motor oil, telephone equipment, audio-visual, photographic and information processing equipment, major durables for indoor and outdoor recreation including musical instruments, other recreational items and equipment, gardens and pets, nightclubs, other cultural services, books, comics and magazines, miscellaneous printed matter and stationery and drawing materials, personal care products and services, personal effects n.e.c.

- Mailed questionnaires for rents, mortgage interest, other services relating to the dwelling n.e.c., repair of household appliances, prescribed drugs, therapeutic appliances and equipment, medical and paramedical services, dental services, hospital services, spare parts and accessories for personal transport equipment, maintenance and repair of personal transport equipment, other vehicle costs, rail fares, bus fares, combined passenger transport, other purchased transport services, repair of information processing equipment, veterinary and other services for pets, sports participation, club and society subscriptions, newspapers, education, canteens, social protection, insurance connected with the dwelling, health and transport, financial services, other services n.e.c.

- Scanner data for services, for the maintenance and repair of the dwelling, home heating oil, domestic services and household services.

- Internet for refuse collection, electricity, natural gas, motor tax, toll charges, driving test fees, driving licences, taxi fares, air fares, boat fares, postal services, telephone services, internet services, sports admittance, cinema, cultural admittance, television services and accommodation services.

Treatment of:

Discounts and sales prices: Discounts prices are recorded if the subsidies or discounts are available to all potential consumers (i.e. non-discriminatory). Sales prices are recorded if the sales price is a temporary reduction on goods likely to be available again at normal prices or end of season reductions.

Black market prices: Not collected.

Second hand purchases: Included for second-hand motor cars. Prices are obtained from the Car Sales Guide reproduced monthly by Motor Trade Publishers.

Missing or faulty prices: A matched basket approach is applied at all times. Recalculation of the elementary aggregate (i.e. area average price) for the previous month is done where necessary. If an item is missing in the current month, it is excluded from the elementary aggregate calculation for both the current and the previous month.

Disappearance of a given type or quality from the market: If an item variety becomes unavailable, then the price collector substitutes an alternative representative item variety in its

place. The price collector may seek assistance from staff in the retail outlet, if necessary. If a new item (replacement) is introduced, it is excluded from the index calculations until prices are available for two consecutive months, at which stage it is included for both of these months to maintain the matched basket approach.

Quality differences: When the quality of a substitute item variety is not comparable with the old item variety and an overlap price or direct quality adjustment data are not available, a bridged overlap quality adjustment technique is applied. Using this technique, no price comparison is made between the two item varieties when the replacement is brought into the index. The price change between the two observations is imputed as the average change for the other matched price observations for the specific item. For a price observation to be brought into the index, it must be available for two consecutive periods.

Appearance of new items: Newly significant goods and services are introduced at the sub-item level, i.e. item descriptions are maintained for a five-year period. Within an item, a newly significant good or service can be introduced at any point. These are identified by central research (e.g. trade magazines, discussions with service providers) and local research (CSO staff conduct research in retail outlets). In some cases where a completely new service is introduced (e.g. the introduction of the plastic bag level in 2001, household charge in 2012), the effect of this in weighing terms in the CPI can be estimated and it can be introduced. A systematic larger-scale updating of the basket of goods and services takes place every five years.

Treatment of seasonal items and seasonality

Treatment of housing

Treatment of owner-occupied housing: The purchase of a house is an investment in a capital asset, purchased over a long period of time that usually appreciates in value. It does not form part of consumption. House prices are excluded from the CPI. The CPI does, however, include the current costs of housing, such as mortgage interest costs. These costs reflect not only changes in interest rates but also the size of the average mortgage. Measurements of the latter takes into account the trend in house prices and as a result these price trends are taken into account, indirectly, in the index.

Types of dwellings covered by the rent data: Private rents – rents for apartments and houses are collected each month from a sample of letting agents throughout the country. Local authority rents – rents for apartments and houses are collected each quarter from a sample of local authorities throughout the country.

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 index at time t based on time 0 is a Laspeyres-type or fixed base weight index, being the price of the basket at a given time as a percentage of its price in the base reference period:

$$I_{t,0} = \left(\frac{\sum Q_0 P_c}{\sum Q_0 P_0} \right) \times 100$$

where:

Q_0 and P_0 are the quantity (fixed) and average price respectively, of an index item heading in the base (0) month;

P_c is the average price of the same index item heading in the current (c) month;

Σ represents summation over all index item headings.

A modified version of this formula is used for calculation purposes, namely:

$$I_{t,0} = \left(\frac{\sum (V_{c-1}) \frac{P_c}{P_{c-1}}}{\sum V_0} \right) \times 100$$

where:

V_0 and V_{c-1} are the expenditure value (weight) of an index item heading in the base (0) or previous (c-1) month;

P_c and P_{c-1} are the average price of the same index item heading in the current (c) and previous (c-1) month;

Σ represents summation over all index item headings.

Monthly and annual average prices: Each month, area average prices (AAPs) are calculated for the 506 directly priced items. For CPI purposes, the eight NUTS 3 regions are combined into five CPI pricing areas ((1) Dublin, (2) South West, (3) Border, Midland and West, (4) Mid-West and Mid-East and (5) South East). An AAP is calculated as the geometric mean of the prices within the given area. Each month, an AAP is calculated both for the current month and the previous month based only on matched price observations between the two periods. The next step is the calculation of a national average price (NAP) for each of the 506 directly priced items. This is the weighted average of the AAPs with a different weight applied to each area. Again, each month, a NAP for both the current and previous month is calculated based on matched price observations only.

Software used for calculating the CPI: SAS Business Intelligence (SAS BI)

G: Editing and validation procedures

Control procedures used to ensure the quality of data collected: Prices are collected with detailed product descriptions and indicators of sales, multiple offers etc. To check that price collections are carried out correctly, CPI personnel carry out monthly quality audits on individual local price collections. There are two types of quality audits. The first involves an auditor accompanying a price collector on a price collection. The second consists of audits, which take place no later than three days after the price collection (back check), where an auditor repeats the price collection to determine if the price collector has collected the correct prices. Multiple locations are visited each month and price collectors do not know in advance which locations will be chosen for the quality control checks.

Control procedures used to ensure the quality of data processed: The most important data check is price change. The price recorded is compared (i.e. validated) with the price for the same product/service from the same retail outlet/service provider in the previous month. Prices outside the relevant price range are re-checked by CPI staff to determine inclusion or exclusion for the purpose of the CPI compilation for that month. Once the price data is correct and complete, preliminary item indices are calculated using the prices, which passed the data checks, plus those that have been manually accepted. These preliminary item indices are in turn checked to ensure price changes have been correctly reflected in the calculations. Both micro- and macro-edits are applied, checking price ratios for individual items, elementary aggregates and higher levels of aggregation.

H: Documentation and dissemination

Timeliness of dissemination of the CPI data: CPI data is published nationally four weeks and two days following the second Tuesday of the reference month. The exception is the December data, which is published nationally five weeks and two days following the second Tuesday of the reference month.

Level of detailed CPI published

Paper publication: All items CPI, Division-level (12 Divisions), Group-level app. 40 groups, Class-level (100 classes), Basic Items

Online: All items CPI, Division-level (12 Divisions), Group-level app. 40 groups, Class-level (100 classes), Basic items, Average prices

Type of products for which average prices are calculated and disseminated: National average prices (NAPs) are calculated for 74 items e.g. food and non-alcoholic beverages, alcoholic beverages (off-licence sales and alcohol consumed on licensed premises), tobacco, petrol, diesel, cinema admission, nightclub admission and hairdressing services.

Documentation

Publications and websites where indices can be found: Consumer Price Index and Consumer Price Index detailed sub-indices are available at <http://www.cso.ie/en.r.eleasesandpublications/prices/>

Publications and websites where methodological information can be found: Consumer Price Index and Consumer Price Index Detailed Sub-Indices Consumer Price Index Introduction of Updated Series (Base: December 2011=100) <http://www.cso.ie/en/surveysandmethodology/prices/consumerpriceindex/>

I: Other Information

Reported by the country in 2012.