

Hong Kong Special Administrative Region, People's Republic of China

A: Identification

Title of the CPI: Consumer Price Index

Organisation responsible: Census and Statistics Department, HKSAR, PRC

Periodicity: Monthly

Price reference period: October 2009 – September 2010 = 100

Index reference period: October 2009 – September 2010 = 100

Weights reference period: October 2009 – September 2010

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, low income households, high income households and households with average monthly household expenditure lower than HK\$4,500 and higher than HK\$65,999 (approximately 10%).

Consumption expenditure includes:

- Foods produced for own final consumption;
- Other goods produced for own final consumption;
- Services produced for own final consumption;
- Food consumed away from home;
- Income in-kind receipts of goods;
- Income in-kind receipts of services;
- Housing maintenance, minor repairs;
- Major repairs, conversions and extensions to owner occupied housing;
- Purchase of gifts of goods and services given to others outside the household;

- 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);
- Occupational expenditures;
- Social transfers in-kind of goods and services from government and No-profit institutions serving households

Consumption expenditure excludes:

- In-kind goods received as gifts;
- In-kind services received as gifts;
- Purchase of owner-occupied housing;
- Mortgage repayments;
- Mortgage interest;
- Interest payments (excluding mortgage interest payments);
- Life insurance premiums;
- Gambling expenditure, gross of winnings;
- Investment-related expenditures (e.g. purchase of shares/stocks);
- Other business-related expenditures;
- Expenditures abroad

C: Concepts, definitions, classifications and weights

Definition of the CPI and its objectives: The CPI measures the relative change over time in the total cost of a specified basket of consumer goods and services generally purchased by households in Hong Kong. They reflect only price movements as the basket is fixed in terms of quantity and quality of the items it contains.

Definition of consumption expenditures: The CPI covers the “expenditure” of all households in Hong Kong, excluding only (i) marine population, (ii) households receiving public assistance, (iii) collective households such as those living in hospitals, prisons and homes for the aged, and (iv) households in the highest or lowest expenditure brackets which together accounted for some 10% of households. In compiling the expenditure weights, only expenditures on commodities and services (including receipts in kind from employers) purchased by households for final consumption are covered. Betting, income tax, endowment policy premiums, mortgage payments, investments and savings are excluded. For owner-occupiers, the rental equivalence approach is adopted. The estimated amount of rent which they would have to pay if their accommodation had been rented instead of owned are taken as their expenditure on the consumption of housing services.

Classification: COICOP (Classification of individual consumption by purpose) with 9 commodity/service sections, 94 groups and 241 sub-groups.

Weights include value of consumption from own production: Yes

Sources of weights: Household expenditure surveys, national accounts, various sources such as trade statistics and administrative statistics.

Frequency of weight updates: Every 3-5 years

Price updating of weight reference period to the index reference period: The reference period for expenditure weights is the same as that for the index, i.e. October 2009 – September 2010 for the latest round, there is therefore no need to price update weights.

Weights for different population groups or regions: The Census and Statistics Department compiles separate CPI series relating to households in different expenditure ranges i.e. i) CPI(A) relates to about 50% of households in Hong Kong, which are in the relatively low expenditure range; ii) CPI(B) relates to the next 30% of households, which are the medium expenditure range; iii) CPI(C) relates to the next 10% of households, which are in the relatively high expenditure range; and iv) Composite CPI relates to all of the above households taken together. It is compiled based on the aggregate expenditure pattern for reflecting overall consumer price inflation.

D: Sample design

Sampling methods:

Localities: Judgmental sampling

Outlets: Judgmental sampling

Products: Judgmental sampling

Frequency of sample updates:

Localities: Continuous (on a rotating basis)

Outlets: Continuous (on a rotating basis)

Products: Continuous (on a rotating basis)

Criteria used for determining the optimal sample sizes and the coverage of localities, outlets, items and variety samples: Optimal sample sizes are determined crudely according to their weights and degree of variability in price movements, except for items with limited number of retail outlets or service providers (e.g. public utilities and transport).

In general, a retail outlet or service provider has to fulfil the following criteria: i) Being a retail establishment; ii) Operating in a fixed location; iii) Being a large and well-known establishment with relatively high sales volume (retail sales figures as available from other surveys may be used as reference); iv) Being a representative outlet in a district or locating at the centre of that district (e.g. on main street or shopping arcades which are frequently patronized by households). For each item covered in the CPI basket, products are generally selected according to their weights and degree of variability in price movements. Price collectors are required to collect the prices of popular (in terms of sales)

varieties/brands/models in each retail outlet or service providers and record descriptions for continuous pricing. Such market information can be obtained from respondents in the retail outlet or service providers. Products chosen will be replaced when they are No longer popular in an outlet.

E: Data Collection

Approximate number of localities, outlets and price observations: Outlets: 4,000, Price observations: 47,000

Frequency with which prices are collected: Fresh food items – twice a week, supermarket items – weekly or monthly; meals bought away from home, clothing and footwear, durable and other goods, private housing rents, package tours, information and telecommunication services – monthly; cigarettes, hair dressing – bimonthly; educational related expenses – semi – annually or annually; private doctor, insurance – quarterly; public utilities such as electricity, gas, water and sewage, public transport fares – occasionally, i.e. when there are adjustments.

Reference period for data collection: Reference period for data collection refers to the reference month during data collection. For commodities and services where prices may fluctuate (e.g. fresh food items), prices are collected more frequently for deriving monthly averages.

Methods of Price Collection

- Personal data collection for fresh food, clothing, private housing rents and majority of goods and services.
- Mailed questionnaires for school fees and textbooks.
- Telephone interviews for telecommunication services, package tours, medical services, etc.
- Internet for electricity, gas and water.
- Official tariffs for public housing rents, public transportations, educational and medical services provided by the government.

Treatment of:

Discounts and sales prices: In addition to the normal prices, discounted/selling prices are also collected for the derivation of price change. Respondents are consulted about the discounts and sales profile (e.g. 50% of customers enjoyed the 20% discounts) in order to compute a weighted average.

Second hand purchases: Included for second-hand motor cars only (prices collected from various second hand car dealers monthly).

Period for allowing imputed missing prices: Normally, unless it is a seasonal item (e.g. fresh food, winter/summer clothing), a selected variety will be considered as permanently

unavailable when there is a missing price for two consecutive reference periods. The most popular item will be selected in the same or nearby retail outlet for replacement. If the newly selected item was already available in the preceding reference period, prices in both the current and preceding reference periods will be collected.

Disappearance of a given type or quality from the market: A new replacement will be sought in the same or nearby outlet. The most popular item will be selected in the same retail outlet for replacement. If the newly selected item was already available in the preceding reference period, prices in both the current and preceding reference periods will be collected.

Quality differences: Quality changes due to item replacements are mainly performed through splicing, i.e. collecting price information regarding the new item for both the current and preceding reference periods to facilitate the comparison of price in the current reference month.

Appearance of new items: Entirely new items will be included in each round of CPI rebasing exercise once every five years when the basket of commodities and service are reviewed by making reference to the results of the Household Expenditure Survey.

Treatment of seasonal items and seasonality

Items that have a seasonal character and their treatment: Clothing, Seasonal food (e.g. Chinese New Year, Mid-Autumn festival and etc.). The missing prices during off-season period are imputed by carrying forward the last observation.

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: Rental equivalence approach is adopted for owner occupied housing.

Types of dwellings covered by the rent data: Private housing: a sample survey is conducted monthly to collect rental information from households residing in private and subsidized housing. Public housing: data is obtained from administrative data and updated semi-annually.

F: Computation

Formula used for calculation of elementary indices: The ratio of arithmetic mean prices (Dutot index) (Direct form) and the ratio of geometric mean prices (Jevons index) (Direct form)

Formula to aggregate elementary indices to higher level indices: Base-weighted Laspeyres' type of CPI is used.

Formula of aggregating regional/population group indices into national index: The CPI(A), CPI(B) and CPI(C) at commodity/service item level (i.e. elementary indices) are weighted by respective share at the item level to form the corresponding Composite CPI at item level. Composite CPI at item level are then aggregated to sub-group, group, section and finally all-items levels by corresponding weights.

Monthly and annual average prices: To calculate the elementary aggregates for heterogeneous items (items such as clothing, furniture, electrical appliances, etc.), the geometric mean of price relatives (i.e. Jevons indices) of individual items is used because its resulting indices / price relatives are less affected by the heterogeneity among the set of quotations used. As for homogenous items (items such as fresh food items (e.g. salt-water fish and fresh vegetables), non-fresh food items (e.g. frozen steak, frozen chicken, red beans) and certain non-food items (e.g. motor fuel)), price quotations for the same item as collected from different outlets are pooled together to derive an average price for that reference month, and the price relative for that item is computed by comparing the average prices between two consecutive reference months.

Seasonally adjusted indices: X-12 ARIMA

Software used for calculating the CPI: Microsoft Visual FoxPro, SAS

G: Editing and validation procedures

Control procedures used to ensure the quality of data collected: i) Household Expenditure Survey: Regarding the Household Expenditure Survey, after recruiting the sampled households to participate in a given bi-weekly cycle, the interviewers would contact each participating households several times during the reference two-week period by telephoning and paying follow-up visits to them. During the follow-up visits, they collected the completed expenditure record sheets and performed on-the-spot checks to ensure the information was recorded properly and there were no inconsistencies or omissions in reporting. The telephone contacts and follow-up visits also enabled the interviewers to establish good relations with the sampled households so that the latter were less likely to drop out from the survey and more willing to provide the required information. In order to standardise the operational procedures and to ensure good quality of the survey data, all interviewers and office staff were required to follow the procedures as stipulated in their work manuals closely. Before the survey commenced, intensive training in the form of classroom lectures was given to all interviewers and coders with an aim to acquainting them with the concepts and definitions employed in the survey, the purposes and requirements of the survey and the operational procedures. Throughout the entire survey period, regular meetings were held with interviewers to enable them to exchange experience and to continuously train them on the survey requirements and techniques so that a high standard of fieldwork performance could be maintained. Meetings among the coders were also held from

time to time to discuss problems they encountered. ii) Consumer Price Index: An elaborate fieldwork quality control system is established to ensure the quality of data collected. Field supervisors sample check and verify the data collected by enumerators, and pay supervisory visits to ensure that the practices in data collection are correct. Key fieldwork control statistics are compiled and reviewed on a monthly basis. Moreover, detailed instructions and coding manual are available to ensure coherence in data collection and coding by the enumerators.

Control procedures used to ensure the quality of data processed: i) Household Expenditure Survey: A computer-aided coding system, which integrated data processing procedures including editing, coding, data input and validation checks into one system, was adopted. Using the system, coders performed data editing, coding and input simultaneously. Immediate checks were performed by the computer system to ensure data accuracy. This ensured the data quality and accuracy as well as operational efficiency. Relevant data available from other sources (such as trade statistics; estimates of Gross Domestic Product and its components; results of other surveys and administrative statistics compiled by other government departments) were also used to check against the results of HES in order to assess the reliability of survey data. ii) Consumer Price Index: To further safeguard the quality of the collected data, data collected are subject to manual and computer editing processes through checking a set of self-defined validation rules. For example, price quotations and item indices with significant movements are flagged by the computer system for manual checking. Besides, price data which deviates largely from those of similar outlets are verified with respondents and relevant explanatory remarks are obtained during field visits for reference by indoor editing officers.

H: Documentation and dissemination

Timeliness of dissemination of the CPI data: CPI data is disseminated 23 days after the end of the reference month, at latest.

Level of detailed CPI published

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

Separate indices published for specific population groups: CPI (A), CPI (B) and CPI(C)

Type of products for which average prices are calculated and disseminated: 22 selected food items

Documentation

Publications and websites where indices can be found: Monthly Report the “Consumer Price Index” available at http://www.censtatd.gov.hk/products_and_services/products/publications/statistical_report/prices_household_expenditure/index.jsp

Publications and websites where methodological information can be found: Appendix 5 of Annual Report on the Consumer Price Index 2011 gives a brief methodological information on how the CPI is compiled. It is available at

http://www.censtatd.gov.hk/products_and_services/products/publications/statistical_report/prices_household_expenditure/index.jsp

I: Other Information

Reported by the country in 2012.