



الهيئة العامة للإحصاء
General Authority for Statistics

Methodology and Quality Report of Consumer Price Index

V- 3.2

Quality Management

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1. Contact

1.1.	Contact organization	General Authority for Statistics
1.2.	Contact organization unit	Price Statistics Department
1.3.	Contact person function	Director of Price Statistics Department
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1.5.	Contact email address	info@stats.gov.sa
1.6.	Contact phone number	199009

2. Methodology and Quality Update

2.1.	Methodology and Quality last update	12/05/2025

3. Statistical Presentation

3.1. Data description
The Consumer Price Index covers data related to consumer price index in the Kingdom of Saudi Arabia. **The Consumer Price Index is a survey conducted to collect data on the main characteristics as following:**

- Provide statistics on retail price fluctuations of goods and services in the consumer basket.
- Provide statistics on consumer price index across a time series of statistical data.
- Contribute to satisfying Vision 2030 objectives, as well as regional needs such as those set by the GGCC-STAT and international requirements set by the International Monetary Fund.

The data is further used to estimate:

- Indices and variation rates by category of expenditure, (for reference month).
- Indices by city and expenditure category, (for reference month).
- Annual variation rate by city and expenditure category, (for reference month).
- Monthly variation rate by city and expenditure category, (for reference month).
- Series of indices by expenditure category, from 2013.
- Series of variation rate for the same month of the previous year by expenditure category, from 2013- (%).
- Series of variation rate for the previous month by expenditure category, from 2013- (%).
- Series of indices by city, from 2013.
- Series of variation rate for the same month of the previous year by city, from 2013- (%).
- Series of variation rate from previous month by city, from 2013- (%).
- The annual average of the consumer price index is published at the end of each calendar year.

3.2. Classification system

The following classifications are applied in Consumer Price Index:

Classification of Individual Consumption by Purpose (COICOP):

Classification is defined as being an arranged set of related categories used for data collection according to similarity. It is the basis for collecting and publishing data in all statistical fields, such as (economic activity, products, expenditures, occupations, or health, ... etc.). It allows for classifying data and information through putting them into meaningful categories to produce useful statistics, considering that data collection requires precise and methodological arrangement in accordance with their common features so that the statistics can be reliable and comparable. The Consumer Price Index complies with international standards in their data collection and classification; as the Consumer Price Index relies upon the Classification of Individual Consumption by Purpose (COICOP).

This classification is used in the Consumer Price Index for classifying basket components based on their usage.

The classifications are available on the GASTAT's website: www.stats.gov.sa

3.3. Sector coverage

The Consumer Price Index covers the following main economic activities:

- Food products, beverages, tobacco, textiles.
- Retail.
- Restaurants and hotels.

3.4. Statistical concepts and definitions

Terminologies and concepts of Consumer Price Index:

- Index:

A rational number that measures variation in one or more phenomena. It is calculated by dividing its face value at the comparison period by its value at the base period.

- Consumer Price Index:

A consumer price index (CPI) is defined as a statistical measure of changes in the prices of a fixed market basket of goods and services.

- Goods and Services Basket:

The actual group of goods and services that household consumers spend on for living purposes.

- Household Income and Expenditure Survey:

The expenditure and income survey reflect the spending patterns of Saudi households on goods and services. The HIES results are also used to determine the relative distribution of expenditure on goods and services in order to use them in the production of the consumer price index. Household Expenditure: Is the amount spent by all household members during the reference period in exchange for goods, services (consumer and non-consumer), whether this expenditure relates to the household, such as: spending on food, housing, electricity, the acquisition of durable goods, or related to the spending of its members such as spending on clothing or personal items, etc.

- Relative Importance of Goods and Services:

The percentage of expenditure on certain goods or services compared to the total expenditure on goods and services inside the consumer basket.

- Points of Sale:

Establishments and units from which the prices of goods and services that are included in the goods and services basket, are collected. For example, retail shops such as grocery stores, clothing shops, and other kinds of shops like the ones that provide doctors' services, as well as rental units (apartment, villa, a floor of a villa, old house), and other service shops.

- Shadow Sample:

It is a set of backup points of sale which can be referred to when needed to replace one of the main points of sale when it becomes difficult to get the price from that point for any reason, whether because the shop is closed permanently or because certain goods are no longer available.

- Comparison Period Price:

It is the recorded price of a commodity or a service in the current period of time.

- Base Period Price:

It is the recorded price of a commodity or a service in a previous period of time with which the current price is compared.

- Consumer Price Index.

3.5. Statistical unit

The statistical unit of the Consumer Price Index is the retail prices of the goods, services, rental units within the consumer basket.

3.6. Statistical population

The statistical population consists of all goods, services, and rental housing units included in the basket of goods and services, as well as those covered by retail points of sale and service provision at retail prices, and the housing units previously identified in the research on retail points of sale and rental housing units in the research cities.

3.7. Reference area

The survey covers 16 cities: (Riyadh, Mecca, Jeddah, Taif, Medina, Buraidah, Dammam, Hofuf, Abha, Tabuk, Hail, Arar, Jizan, Najran, Al-Baha and Sakaka). These cities represent all thirteen administrative regions in the Kingdom of Saudi Arabia.

3.8. Time coverage

Data is available from 2013 to the current month of 2025.

3.9. Base period

The base year used for calculating the consumer price index is 2018.

4. Unit of measure

Some results are reported as a percentage (EX. Monthly percentage of change and annual percentage of change of the indices.

5. Reference period

References period to the variables or dataset as following:

The collected data is classified based on the Georgian month in which price data is collected. The pricing period lasts (4) weeks per month, which guarantees full temporal coverage throughout the month, and ensures commitment to a specific pricing cycle for each item (weekly, monthly, quarterly, and semi-annual).

6. Confidentiality

6.1. Confidentiality - policy

According to the Royal Decree No. 23 dated 07-12-1397, data must always be kept confidential, and must be used by GASTAT only for statistical purposes.

Therefore, the data are protected in the data servers of the Authority.

6.2. Confidentiality - data treatment

Data are displayed in appropriate tables to facilitate its summarization, comprehension, results extraction, comparison with other data and coming up with statistical connotations for the study community. It is also easier to check tables without the need to see the original questionnaire, which usually include data like names and addresses of individuals, names of data providers, which violates the confidentiality of statistical data.

"Anonymity of data" is one of the most important procedures. To keep data confidential, GASTAT removed personal information of individuals, households, or business entities in a way that does not allow the identification of the respondent either directly (by name, address, contact number, identity number etc.) or indirectly (by combining different - especially rare - characteristics of respondents: age, occupation, education etc.).

7. Release policy

7.1. Release calendar

The Consumer Price Index is included in the statistical calendar.

7.2. Release calendar access

Available on the: https://www.stats.gov.sa/statistical-calendar-releases

7.3. User access

One of GASTAT's objectives is to better meet its clients' needs, so it immediately provides them with the publication's results once the Consumer Price Index publication is published.

It also receives questions and inquiries from the clients about the Publication and its results through various communication channels, such as:

- GASTAT's official website: www.stats.gov.sa
- GASTAT's official e-mail address: info@stats.gov.sa
- Client Support's e-mail address: info@stats.gov.sa
- Official visits to GASTAT's official head office in Riyadh or one of its branches in Saudi Arabia.
- Official letters.
- Statistical telephone (199009).

8. Frequency of dissemination

- Monthly.
- The annual average of the CPI is published at the end of each calendar year.

9. Accessibility and clarity

9.1. News release

The announcements of each publication are available on release calendar as mentioned in 7.2. Release calendar access. The news release can be viewed on the website of GASTAT through the following link:

https://stats.gov.sa/news

9.2. Publications

GASTAT issues the Consumer Price Index's publications and reports on a regular basis within a pre-prepared publishing plan and installed on the GASTAT's website. GASTAT is keen to publish its publications in a manner that serves all users of different types, including publications in different formats that contain (publication tables, data graphs, indicators, Methodology and Quality Report, and used questionnaires) in both English and Arabic.

Results of Consumer Price Index are available at:

https://www.stats.gov.sa/statistics

9.3. On-line database

The data is published in the statistical database:

GASTAT (stats.gov.sa)

9.4. Micro-data access

Microdata are unit-level datasets derived from surveys, censuses, and administrative records. These datasets provide detailed insights into individuals, households, businesses, and geographic areas, supporting the development of statistical indicators and in-depth research.

The different types of microdata files to meet different information needs:

- Public use:

  It consists sets of records containing information on individual persons, households, or business entities anonymized in such a way that the respondent cannot be identified either directly (by name, address, contact number, identity number etc.) or indirectly (by combining different - especially rare - characteristics of respondents: age, occupation, education etc.).

- Scientific use:

  These files established based on specific methodology asked by data requester to extract the datasets with specific characteristics used for strategic studies and decision making as well scientific research purposes on individuals, households and enterprises with no direct identifiers, which have been subject to control methods to protect confidentiality.

Access to Scientific Use Files (SUF) is restricted to authorized researchers who comply with ethical and confidentiality standards. Representative samples of SUF can be obtained through GASTAT's secure platform, "Etaha," while more sensitive datasets are accessible only through secure physical lab environments managed by GASTAT.

9.5. Other

According to the international methodologies used in this regard, one of the requirements for calculating the index is the existence of relative importance (weights) for the components of the basket, and therefore the absence of indices for some components of the basket in some of the publication tables is due to the lack of relative importance in those cities and not a lack of data related to the published tables.

9.6. Documentation on methodology

The consumer price index framework is based on the consumer price index manual issued in 2004 by the International Monetary Fund in cooperation with the International Labor Organization, the European Statistical Office, the United Nations, and the World Bank, and the consumer price index manual issued in 2020 by the International Monetary Fund.

- The consumer price index manual issued in 2004 by the International Monetary Fund
- The consumer price index manual issued in 2020 by the International Monetary Fund

9.7. Quality documentation

Quality documentation covers documentation on methods and standards for assessing, measuring, and monitoring the quality of statistical process and output. It is based on standard quality criteria such as relevance, accuracy and reliability, timeliness and punctuality, accessibility and clarity, comparability, and coherence.

10. Quality management

10.1. Quality assurance

GASTAT declares that it considers the following principles: impartiality, user orientated, quality of processes and output, effectiveness of statistical processes, reducing the workload for respondents.

Quality controls and validation of data are actions carried out throughout the process in different stages **such as:** (the data input and data collection and other final controls).

10.2. Quality assessment

GASTAT performs all statistical activities according to a national model (Generic Statistical Business Process Model - GSBPM). According to the GSBPM, the final phase of statistical activities is overall evaluation using information gathered in each phase or sub-process. This information is used to prepare the evaluation report which outlines all the quality issues related to the specific statistical activity and serves as input for improvement actions.

11. Relevance

11.1. User needs

Internal GASTAT's users, who make use of Consumer Price Index data, include:

- National accounts.
- Tourism.
- Living conditions.

External users who make significant use of Consumer Price Index data include, but is not limited to:

- The governmental entities.
- Regional and International Organizations.
- Research institutions.
- Media.
- Individuals.

The disseminated key variables that mostly used by key users:

Ministry of Economy and Planning	Monthly and annual consumer price indices and percentages of change.
Saudi Central Bank	
Ministry of Finance	

11.2. User satisfaction

Not available.

11.3. Completeness

The Consumer Price Index data is based in its data on the field survey of the Consumer Price Index, a survey conducted by the General Authority for Statistics on a monthly basis and classified as (economic statistics) in which prices are collected through field visits to points of sale and the provision of services at retail prices in various administrative regions in the Kingdom of Saudi Arabia, as well as the completion of electronic questionnaires containing a number of goods and services, through which indicators related to the consumer price index are 14 provided. As for housing units, the prices of rental residential units are obtained from the record data, which is the data of the Ejar platform. And The data is complete at the end of each calendar month.

12. Accuracy and reliability

12.1. Overall accuracy

- The data collected is improved through the researchers, that have been selected according to a set of practical and objective criteria and training program related to the field of work.
- The electronic data collection form of the Consumer Price Index questionnaire includes Alert, prevention rules and correction rules during the data collection process in order to improve data quality.
- The data is checked with previous years to identify any significant changes in the data.
- The internal consistency of the data is checked before it is finalized.
- The links between variables are checked and coherence between different data series is confirmed.

13. Timeliness and punctuality

13.1. Timeliness

GASTAT uses the Special Data Dissemination Standard (SDDS) issued by the International Monetary Fund. According to this Standard, all statistics agencies are required to publish data on a Monthly basis, and with a delay of not more than six weeks (42 days) after the end of the reference period. If the data are from different source, they may be published in a different frequency.

13.2. Punctuality

Publication takes place in accordance with published release dates for the Consumer Price Index in the GASTAT webpage. The data are available at the expected time, as scheduled the release calendar, If the publication delayed the reasons would be provided.

14. Coherence and comparability

14.1. Comparability – geographical

Comparison of the results of the index is available at the international level, while at the local level it can be compared between survey cities.

14.2. Comparability - over time

The survey started in 1979 as monthly survey, Major changes in recent years:

- Base year 1988:

  The number of commodities included in the composition of the CPI was increased to (220) goods and services.

- Base year 1999:

  The new goods basket contained (406) goods and services.

- Base year 2007:

The basket contained (476) goods and services.

- Base year 2013:

The new basket of goods totaled (489) items, with data available from this year.

- Base year 2018:

The basket contained (490) goods and services.

14.3. Coherence- cross domain

Not applicable.

14.3.1. Coherence - sub annual and annual statistics

CPI data is subject to consistency and harmonization among publication periodicals.

14.3.2. Coherence- National Accounts

Not applicable.

14.4. Coherence - internal

Consumer Price Index estimates for a given reference period have full internal coherence, as they are all based on the same corpus of microdata, and they are calculated using the same estimation methods.

15. Resources used

Description	Total
Total staff (GASTAT's staff, researchers).	130
Number of unites surveyed.	15120
Total days of data collection period (end date – start date).	21
Average conducted interviewer per day (during data collection).	720

16. Data revision

16.1. Data revision - policy

Not applicable, only final results will be published.

16.2. Data revision - practice

Not applicable, only final results will be published.

17. Statistical processing

17.1. Source data

Data collection sources are diversified, with key sources including field visits to the sample for the Consumer Price Index survey, consisting of (points of sale and rented housing units), and the use of administrative records from the Ejar platform, covering the 16 cities mentioned earlier.

The main published variants of the survey data are:

- Consumer Price Indices by cities and expenditure categories.
- Consumer Price Indices and monthly percentage changes.
- Consumer Price Indices and annual percentage changes.

17.2. Frequency of data collection

Monthly.

17.3. Data collection

Data collection from survey:

The Consumer Price Index data collection is carried out through Computer-Assisted Personal Interviews (CAPI). And it is saved on the Authority's databases, after auditing and reviewing operations in accordance with approved statistical methods and recognized quality standards

and referring to the data source in the event of discovering errors, or if there are comments on the data.

17.4. Data validation

Data are reviewed and matched to ensure their accuracy and precision in a way that suits their nature with the aim of giving the presented statistics quality and accuracy.

The data of the publication's current year are compared with the data of the previous year to ensure their integrity and consistency in preparation for processing data and extracting and reviewing results.

In addition to the data processing and tabulation to check their accuracy, all the outputs are stored and uploaded to the database after being calculated by GASTAT to be reviewed and processed by specialists in Consumer Price Index through modern technologies and software designed for this purpose.

17.5. Data compilation

Data Coding:

In the Consumer Price Index, interviewers collect from respondents, a detailed description of each field. This information is then coded in-house by an automated process, which is reviewed by a small-dedicated team of coding experts using a series of consistency checks.

Data Editing:

Specialists of Price Statistics Department have processed and analyzed data in this stage, and this step was based on the following measures:

- Sort and arrange data in groups or different categories in a serial order.
- Summarize detailed data into main points or main data.
- Linking between many parts of data and make them connected.
- Process incomplete or missing data.
- Process illogical data.
- Converting data into statistically significant data.
- Organize, display, and interpret data.

Imputation (for Non-Response or Incomplete Data Sets):

In the event that there is no current price for any reason, the treatment is by calculating the monthly change of the geometric mean of the current month's prices compared to the geometric mean of the previous month's prices.

Applied statistical estimation:

GASTAT has relied on the formulas approved by the international standards in calculating Consumer Price Index indicators, as follows:

- Geometric Laspeyres Formula:

$$I_i^t = \prod \left(\frac{I^t}{I^{t-1}} \right)^{\left(\frac{w_i}{\sum w_i}\right)}$$

Where the details of the equation are defined as follows:

- **I:** It is the indicator at each level of classification.
- **t:** The period (month).
- **Exponent:** Is the weight of the item/total weights for each level.

17.6. Adjustment

Not applicable, only final results will be published.

18. Comment