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# Consumer Price Index: Sources and Methods

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## **Preface**

The consumer price index (CPI) is one of South Africa's most closely watched economic indicators.

Stats SA collects the prices of a wide range of consumer goods and services to compile the country's monthly CPI. The weights (or relative importance) of these goods and services were updated at the beginning of 2022, using 2019 as the period for calculating the weights. This manual provides an explanation of the new weights, as well as a wealth of information on our CPI sources and methods.

Users can access a range of methodological information on the CPI going back to 2008 at the following page on the Stats SA website: [https://www.statssa.gov.za/?page\\_id=2528](https://www.statssa.gov.za/?page_id=2528) .

**Risenga Maluleke**  
**Statistician-General**

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## **1. Introduction to the South African consumer price index (CPI)**

### **1.1 Defining the CPI**

The CPI is a current social and economic indicator constructed to measure changes over time in the general level of prices of consumer goods and services that households acquire, use, or pay for. The index measures changes in consumer prices over time by measuring the cost of purchasing a fixed basket of consumer goods and services of constant quality and similar characteristics. The products in the basket are selected to be representative of households' expenditure during a specific year. Such an index is called a fixed-basket price index. Changes in the index reflect the effects of price changes on the cost of achieving a constant standard of living (i.e. level of utility or welfare).

### **1.2 The South African CPI**

#### **1.2.1 Uses of the South African CPI**

The South African CPI has three equally important objectives:

1. To measure inflation in the economy so that macroeconomic policy is based on comprehensive and up-to-date price information.
2. To measure changes in the cost of living of South African households to promote equity in measures taken to adjust wages, grants, service agreements and contracts.
3. To provide a deflator for consumer expenditure in the national accounts and other economic data, to compute volume (as opposed to nominal) estimates.

#### **1.2.2 History of the South African CPI**

The South African CPI originated in 1911, covering large urban areas only. Smaller urban areas were included from 1997. Prior to January 2006, all prices of goods and services were collected from the head office of Statistics South Africa (Stats SA) mainly using the post. A direct collection methodology, which entailed collecting prices of goods directly by visiting retail outlets, was piloted in July 2004. This direct collection methodology was rolled out region by region. Since 2006, the CPI has been compiled using the prices of goods from the direct collection methodology in the metropolitan (primary) areas and in the other urban (secondary) areas. Prices of services have continued to be collected centrally, now using email, the internet and telephone surveys.

### **1.3 Alignment with international best practice in CPI compilation**

#### **1.3.1 International expert groups**

In compiling the South African CPI, Stats SA largely follows the methodology guidelines in the *2020 Consumer Price Index Manual: Concepts and Methods* published jointly by the International Monetary Fund, International Labour Organization, Statistical Office of the European Union, United Nations Economic Commission for Europe, Organisation for Economic Co-operation and Development, and World Bank. We shall refer to this critical manual as the CPI Manual. It is the main reference for statistical offices for CPI concepts and definitions, it provides the theory and conceptual framework for the CPI, and it aims to give methodological and practical guidelines for the compilation of CPIs.

CPI Manual (copy to browser): <https://www.imf.org/en/Data/Statistics/cpi-manual>

The introduction of new and improved methodology comes as a result of technical and academic discussions of current methodology through a number of expert groups. The groups provide a forum for specialists to share their experiences, discuss research and methodology on crucial problems of measuring price change, and identify best practice. These groups include:

- The Ottawa Group, which was formed in 1994. This group is also known as the United Nations International Working Group on Price Indices. The group focuses on applied research in the area of CPIs. The group has played a key role in the theoretical and methodological development of price indices.
- ILO/UNECE joint meeting. The joint meeting includes the United Nations Economic Commission for Europe (UNECE) and the International Labour Organisation (ILO). Compilation issues are discussed including the collection, processing and dissemination of data as well as resource and organisational issues.

### **1.3.2 International participation**

#### **1.3.2.1 International comparison programme (ICP)**

The ICP is a global statistical initiative established in 1970 to produce internationally comparable purchasing power parity (PPP) estimates using price and expenditure data. PPPs facilitate cross-country comparisons of price levels, gross domestic product, and related economic aggregates in real terms and free of price and exchange rate distortions. The programme is globally managed by the World Bank and implemented regionally in Africa by the African Development Bank.

#### **1.3.2.2 Harmonised CPI (HCPI)**

The HCPI is compiled for members of the Southern African Development Community (SADC) by applying comparable methodologies to national CPIs. Stats SA calculates the monthly HCPI estimates for South Africa and provides the data to the SADC secretariat, which aggregates the information to compute the regional HCPI.

### **1.3.3 Adoption and use of methodology in line with international best practice**

Stats SA has committed itself to the adoption and use of methodology that is in line with international best practice and which is relevant and practicable in South African conditions. The sources and methods documents of other statistical agencies are used as reference material.

## **2. Classification of goods and services**

### **2.1 Background**

The South African CPI uses the 1999 version of the Classification of Individual Consumption by Purpose (COICOP) for goods and services. COICOP is the international standard for classifying household expenditure and is an integral part of the 2008 System of National Accounts. Goods and services are classified according to their intended use. In addition to the CPI, COICOP is used for household expenditure surveys and the household final consumption expenditure component of gross domestic product.

A new version of COICOP was approved by the United Nations Statistics Commission in 2018 and adopted by Stats SA in 2019. Stats SA expects to incorporate this version in the CPI with the next weights update.

### **2.2 Classification of Individual Consumption by Purpose (COICOP)**

The United Nations Statistical Division is the custodian of COICOP. The high-level COICOP categories are given below:

- 01 - Food and non-alcoholic beverages
- 02 - Alcoholic beverages and tobacco
- 03 - Clothing and footwear
- 04 - Housing, water, electricity, gas and other fuels
- 05 - Furnishings, household equipment and routine household maintenance
- 06 - Health
- 07 - Transport
- 08 - Communication
- 09 - Recreation and culture
- 10 - Education
- 11 - Restaurants and hotels
- 12 - Miscellaneous goods and services

#### **2.2.1 Individual consumption**

Individual consumption expenditures are those that are made for the benefit of individual persons or households. More specifically:

- All consumption expenditures by households are defined as individual. These are contained in COICOP categories 01 to 12.
- Illegal products such as prostitution and narcotics are excluded from the South African CPI.

#### **2.2.2 Structure of COICOP classification in the South African CPI**

The structure of COICOP is hierarchical and comprises six levels labelled according to the number of digits used to code products at each level, i.e. 2, 3, 4, 5, 8, and 12. Table 1 shows an example of a decomposition of the 2-digit level down to the 8-digit level.

**Table 1 – Example of COICOP hierarchy**

COICOP code	COICOP description	Indicator product code	Indicator product
<b>01.</b>	<b>Food and non-alcoholic beverages</b>		
<b>01.1.</b>	<b>Food</b>		
<b>01.1.1</b>	<b>Bread and cereals</b>		
01.1.1.1	Rice	01111001	Rice
01.1.1.2	Bread	01112001	Loaf of white bread
01.1.1.2	Bread	01112002	Loaf of brown bread
01.1.1.2	Bread	01112003	Sweet biscuits
01.1.1.2	Bread	01112004	Savoury biscuits
01.1.1.3	Pasta products	01113001	Spaghetti
01.1.1.3	Pasta products	01113002	Macaroni
01.1.1.3	Pasta products (excluding spaghetti and macaroni)	01113003	Pasta (excluding spaghetti and macaroni)
01.1.1.4	Pastry-cook products	01114001	Cake and tarts
01.1.1.6	Cake flour	01116001	Cake flour
01.1.1.6	Bread flour	01116002	Bread flour
01.1.1.6	Cold cereal	01116005	Cold cereal

The numbering system for the different classification levels has been simplified by naming the different levels according to the naming convention in Table 2 (see too the diagram in section 8.1.1).

**Table 2 – COICOP naming convention**

COICOP level	Name	Example
2-digit	Category	Food and non-alcoholic beverages
3-digit	Class	Food
4-digit	Group	Bread and cereals
5-digit	Product	Bread
8-digit	Indicator product	Loaf of white bread
12-digit	Sampled product	Albany 700g loaf of white bread

### 2.2.3 Product types

The CPI Manual (paragraph 2.201) states that “the distinction between nondurable goods and durable goods is based on whether the goods can be used only once or whether they can be used repeatedly or continuously over a period of more than one year. Semi-durable goods differ from durable goods in that their expected lifetime of use, though more than one year, is often significantly shorter and their purchasers’ value is substantially less.”

The categories of goods defined as **durables** in COICOP are listed below:

- furniture and furnishings;
- major household appliances whether or not electrical;
- major tools and equipment;
- vehicles;
- telephone and fax equipment;
- information processing equipment;
- musical instruments;
- equipment for the reception, recording and reproduction of sound and pictures;
- jewellery, clocks and watches.

The following goods are listed as **semi-durables**:

- clothing and footwear;
- household textiles;
- small electrical household appliances;
- glassware, tableware and household utensils;
- small tools and miscellaneous accessories;
- spare parts for vehicles;
- recording media;
- games, toys, hobbies;
- equipment for sport, camping, etc.;
- books;
- other personal effects.

The following goods are listed as **non-durables**:

- food and non-alcoholic beverages;
- alcoholic beverages and tobacco;
- materials for the maintenance and repair of the dwelling;
- electricity;
- non-durable household goods;
- pharmaceutical products;
- fuels and lubricants;
- gardens, plants and flowers;
- pets and related products;
- newspapers and periodicals;
- stationery and drawing materials;
- personal care products.

The following are listed as **services**:

- actual rentals paid by tenants;
- imputed rentals for owner-occupiers;
- services for the repair and maintenance of a dwelling (plumbers and electricians);
- water supply and other services relating to the dwelling n.e.c.;
- domestic services and household services;
- medical services;
- dental services;
- hospital services;
- maintenance and repair of personal transport equipment;
- other services in respect of personal transport equipment;
- transport services;
- postal services;
- telephone and telefax services;
- recreational and sporting services;
- cultural services;
- games of chance;
- package holidays;
- education;
- restaurants and hotels;
- accommodation services;
- social protection services;
- insurance;
- financial services n.e.c.;
- other services n.e.c.

Some COICOP classes contain both goods and services because it is difficult for practical reasons to break them down into goods and services. Such classes are usually classified as services when the service component is considered predominant, for example services for the maintenance and repair of the dwelling, which includes the cost of labour and materials.

#### **2.2.4 Mixed purpose goods and services**

There are some products whose intended use changes according to geographical location; hence COICOP may be adjusted to suit local conditions where necessary. Goods and services with multi-purpose use are allocated to a category that represents the dominant use, e.g. food consumed outside the home is shown under Restaurants and hotels and not in Food and non-alcoholic beverages. Some services may consist of a bundle of goods and services that serve mixed purposes. A purpose breakdown of each bundle is done in order to produce the most precise fit that is consistent with practical considerations of data availability. An example of mixed-use products is in-patient hospital fees that include payments for medical treatment, accommodation and catering.

### 3. CPI geography and analytical series

#### 3.1 Collection areas

The South African CPI uses prices collected from the following areas, representing all large urban areas, at least one smaller urban area, and a rural area in each province:

Province	Urban/Rural	Area
Western Cape	Urban	Cape Peninsula
		Paarl
	Rural	Rural areas Western Cape
Eastern Cape	Urban	Gqeberha (Port Elizabeth)
		East London
		Komani (Queenstown)
	Rural	Rural areas Eastern Cape
Northern Cape	Urban	Kimberley
		Kuruman
	Rural	Rural areas Northern Cape
Free State	Urban	Bloemfontein/Welkom
		Kroonstad
	Rural	Rural areas Free State
KwaZulu-Natal	Urban	Durban
		Pietermaritzburg
		Newcastle
	Rural	Rural areas KwaZulu-Natal
North West	Urban	Rustenburg/Klerksdorp
		Mafikeng
	Rural	Rural areas North West
Gauteng	Urban	Pretoria
		Johannesburg
		Ekurhuleni
		Krugersdorp
		Vereeniging
	Rural	Rural areas Gauteng
Mpumalanga	Urban	Mbombela/Emalahleni
		Ermelo
	Rural	Rural areas Mpumalanga
Limpopo	Urban	Polokwane
		Tzaneen
	Rural	Rural areas Limpopo

#### 3.2 Headline CPI and CPIs for other areas

A headline CPI is calculated for all urban areas. The annual rate of change in the headline CPI is used by the South African Reserve Bank for inflation targeting, and it is this rate that receives the most attention by users when it is published monthly by Stats SA. It is widely used in contracts and other personal and business affairs for adjusting monetary values over time.

Stats SA also publishes monthly CPIs for rural areas, the total country, and each province.

### 3.3 Analytical series

Month-on-month changes in the CPI are sometimes dominated by volatile items such as food and fuel. To assist users to monitor inflation of less volatile items, or underlying inflation, Stats SA publishes a range of analytical series, which are price indices with exclusions, e.g. CPI excluding food and non-alcoholic beverages, CPI excluding fuel and energy. Other analytical series provide a specific focus, e.g. CPI for durable goods, CPI for pensioners. These may be found in Table A of the monthly statistical release and are listed below.

- CPI excluding food and non-alcoholic beverages, fuel and energy
- Trimmed mean CPI [see below]
- CPI for all goods
- CPI for durable goods
- CPI for semi-durable goods
- CPI for non-durable goods
- CPI for services
- CPI for administered prices
- CPI excluding administered prices
- CPI for administered prices excluding fuel and paraffin
- CPI excluding food and non-alcoholic beverages
- CPI excluding fuel
- CPI excluding food and non-alcoholic beverages and fuel
- CPI excluding housing
- CPI excluding fuel and energy
- CPI excluding energy
- CPI excluding owners' equivalent rent
- CPI for pensioners [with weights derived from the expenditure of households with a pensioner as the head of household]
- CPI for total country
- CPI for rural areas
- CPI for each province
- CPI for each expenditure decile [high-income households have quite different expenditure levels and patterns compared with low-income households, which leads to differences in inflation rates between high- and low-expenditure households; Stats SA computes monthly price indices for expenditure deciles, with decile 1 (lowest expenditure) accounting for 0,48% of the CPI, and decile 10 (highest expenditure) accounting for 48,71% of the CPI].

The trimmed mean CPI is a measure of underlying inflation and is also based on exclusions, but instead of excluding specific items each month, it excludes different items depending on their measured monthly rate of change. The items that are excluded are those with the highest and lowest month-on-month percentage changes each month, where "lowest" refers to "most negative".

The basic idea of the trimmed mean is that each month the month-on-month changes that carry the strongest signal (as opposed to noise) regarding underlying inflation are those that lie in the middle of the distribution. By trimming (excluding) the noisy highest and lowest month-on-month changes from the data set each month, we are left with the middle of the distribution of month-on-month changes, and these can be used to compile a general (as opposed to specific) measure of underlying inflation, namely the trimmed mean. Details of how the trimmed mean is calculated are provided in section 8.1.2.

## 4. Weights of the CPI

### 4.1 Introduction

The weights of the CPI represent the proportions of consumption expenditure by households in a specific period. Each indicator product in the CPI has a weight attached to it which reflects its relative importance in the overall index. The impact that a price change in a good or service has on the overall index is therefore determined by the weight attached to it. The weighted average of changes in the price of specific products and services in the CPI provides the rate of inflation. Whereas the prices are updated on a monthly, quarterly or annual basis, the weights are updated periodically, at least every five years.

There are two types of weighting for the construction of an aggregated price index for a population on the basis of household expenditure survey (HES) results. These are called plutocratic and democratic.

Plutocratic weights reflect total expenditures of all reference households and the composition of the estimated aggregate values of the reference population. In this type of weighting, each household contributes to the weights an amount proportional to its expenditure. This is the method used to calculate the CPI weights.

Democratic weighting gives equal importance to all households by averaging consumption value proportions over the whole population instead of summing consumption values. Democratic weights reflect the expenditure of an average household.

In term of geographical coverage, all expenditure by residents outside the boundaries of the country is excluded. However, all expenditure by non-residents within the country is included; this is referred to as the domestic concept. If all expenditure made by residents outside the boundaries of the country is included, then the national concept would be applied. Stats SA has adopted the domestic concept for the scope of the CPI. This includes all expenditure by private households / consumers within the boundaries of South Africa irrespective of the place of normal residence of the consumer.

### 4.2 Need to update weights

The weights reference period is the time period to which the estimated weights relate. The chosen period should cover a seasonal cycle, typically 12 months, and should reflect economic conditions that are reasonably normal or stable. Any irregularities may need to be adjusted.

The accuracy of weights to represent current expenditure patterns decreases as the length of time increases from the weights reference period. However, the frequency of updating weights depends on the availability of the HES results.

The CPI manual lists the following sources for weights:

- Household expenditure survey (HES). The main requirements of HESs are that the survey should be representative of all private households in the country, should not exclude any particular group, and should include all types of consumption expenditures by households.
- National accounts. The household sector in the national accounts consists of all individual households and institutional households. National accounts expenditure estimates may be used to adjust the weights of products that are known to suffer from significant cases of under- or over-reporting during surveys.
- Retail sales. Retail trade statistics can provide supplementary data at product level. The main difficulty in using the data is that it usually contains information for groups that are outside the CPI reference population, e.g. expenditure by businesses.

- Scanner data. Cash register data sourced from retailers provides detailed expenditure values but requires classification.
- Population censuses. Population statistics may be used in the absence of any expenditure statistics as a basis for regional weights.

### 4.3 Deriving CPI weights

According to international standards, the weights and basket of the consumer price index (CPI) should be updated at least every five years. This is to ensure that changes in consumer expenditure are reflected in the weighted aggregates of the measure of inflation. The most recent weights and basket updates for the South African CPI were introduced in January 2022.

#### 4.3.1 Source data for updating the weights

The CPI Manual (paragraph 3.35) states that an HES is “the primary data source for deriving expenditure shares for the goods and services covered by the CPI.” This is because the survey is designed to be representative of the entire population with the ability to provide geographic and population group breakdowns. Importantly, the survey captures expenditure on all products in a particular period, providing for calculation of detailed expenditure proportions.

In South Africa, this survey formed part of an Income and Expenditure Survey (IES) or Living Conditions Survey (LCS). The LCS of 2014/15 formed the basis of the 2016 weights and basket update. Regrettably, no funding was provided for an expenditure survey between then and 2021. The update of the new weights (2019 weights) was based on a set of alternative data sources.

Changes in the breakdown of the household final consumption expenditure (HFCE) component of the national accounts between 2016/2017 and 2019 were the main source used to update the CPI weights. The changes are derived from the benchmarked national accounts estimates that were published in August 2021.

As a general framework, the 2008 System of National Accounts incorporates the concepts, classification and methods of the CPI. In a number of countries, national accounts estimates are used for updating CPI weights in conjunction with other expenditure data. The CPI Manual states that national accounts data may be used when the HES “is conducted too infrequently to ensure the reliability of the CPI or when the expenditure weights need to be updated more often than the periodicity of the [HES]” (paragraph 1.64). More specifically, national accounts “can be an alternative source for deriving CPI expenditure weights, if reliable estimates for HFCE are available. The practical advantage is that HFCE is updated every year, whereas an [HES] may only be conducted on a less frequent basis” (CPI Manual, paragraph 3.44).

While the national accounts do not provide the same level of product, geographic and demographic detail as an HES, they have the advantage of deriving expenditure estimates from a wide range of data sources.

To fill the gaps as far as possible, a range of additional data sources were employed including Stats SA survey data (e.g. Retail structural industry survey), administrative records, and company sales information. Where updated data were not available at detailed product or geographic level, the existing proportions were retained, with adjustments being made at higher-level aggregates.

The new weights were computed at the most detailed level by applying the appropriate growth rates from the HFCE components to the existing rand values in the CPI weights set. The new CPI expenditure values were summed through the classification structure. Because there is not a perfect match between the CPI and HFCE

list of products or their expenditure estimates, the CPI expenditure growth rates (for deriving the new weights) may differ from HFCE growth rates when computed at publication level.

Due to the national accounts providing expenditure values for the country as a whole, the CPI weights were first calculated at the level of total country. The values for headline CPI (all urban areas) were derived from the total country weights by retaining the existing ratios between them. The same approach was used to derive provincial CPI weights. Table 3 shows the 2016 and 2019 total country CPI weights and the differences between them. Although the weights are reported as percentages, they are calculated on the rand values of total expenditure.

**Table 3 – Comparison of 2016 and 2019 weights (total country)**

COICOP category	2016 <sup>1</sup>	2019 <sup>2</sup>	Difference
Food and non-alcoholic beverages	19,15	19,07	-0,08
Alcoholic beverages and tobacco	5,88	6,23	0,35
Clothing and footwear	4,04	3,82	-0,22
Housing and utilities	22,55	22,54	-0,01
Household contents, equipment, and maintenance	4,33	4,38	0,05
Health	1,26	1,33	0,07
Transport	14,72	14,74	0,02
Communication	2,62	2,42	-0,20
Recreation and entertainment	4,86	4,90	0,04
Education	2,34	2,44	0,10
Restaurants and hotels	3,41	3,49	0,08
Miscellaneous	14,84	14,64	-0,20

<sup>1</sup> Refers to December 2016.

<sup>2</sup> Refers to calendar 2019.

### 4.3.2 Weights reference period

As the weights remain fixed for a number of years, the CPI Manual (paragraph 3.36) recommends the use of weights that reflect a “normal” consumption period and which are unlikely to change much in the future. COVID-19 had a devastating impact on the economy, with its effects continuing into 2021, and this was a major factor in choosing 2019 as the reference period for the new weights. Price updating of the weights from 2019 to December 2021 (see section 4.3.3 regarding December 2021) was not done to avoid exaggerating the upward substitution bias inherent in a Laspeyres-type index as used in the South African CPI.

### 4.3.3 Index reference period

Re-referencing (or rebasing) the indices is important to limit the impact of historical inflation on current readings. It is good practice to re-reference the indices when updating weights, revising the basket, or introducing significant methodological or classification changes. All indices were re-referenced to 100 in December 2021. Re-referencing simply changes the level of the indices, and does not affect the rates of change previously published.

## 5. CPI basket of goods and services

### 5.1 Introduction

The basket is a list of specific goods and services which forms the sample for price collection in the CPI.

### 5.2 The basket of goods and services for the South African CPI

In January 2017, Stats SA published a public discussion document on the process and outcome of selecting a new CPI basket. Each province has its own basket. Every product that appears in at least one provincial basket is included in the national basket. Each basket item has a weight attached to it. These form the elementary indices of the CPI.

([http://www.statssa.gov.za/cpi/documents/Introduction\\_of\\_2016\\_CPI\\_weights\\_and\\_basket.pdf](http://www.statssa.gov.za/cpi/documents/Introduction_of_2016_CPI_weights_and_basket.pdf))

### 5.3 Selection criteria for the basket of goods and services

The CPI has a basket for each province. Determining basket composition at a disaggregated level improves the relevance of the CPI to the purchasing patterns at a local level. The baskets reflect the pattern of residence rather than the point at which purchases are made.

The objective of the basket selection process is to ensure that those goods and services which represent the greatest share of expenditure within a group are included in the index. Stats SA uses results from the HES together with additional data sources to select products and services for the basket. Scanner data from retail chains is particularly useful for items typically sold in retail stores.

The number of products in the basket increased to 415 from 404 in the previous (2016) edition. A total of 14 products entered the basket and two fell out. One product was split into two; in two cases, two products were combined into one; and one product was renamed. These changes are listed in Table 4 and Table 5 below. The details of the provincial baskets are provided in Annexure 1.

**Table 4 – Products entering the basket**

Category	Product
Food and non-alcoholic beverages	Samp
	Dairy fruit juice blends
	Jam
	Pureed baby food
	Cappuccino sachets
Alcoholic beverages	Gin
Household contents and services	Floor and wall tiles
	Fabric softener
Recreation and culture	Printer cartridges
	Printer paper
	Soundbar and speakers
Miscellaneous	Wipes
	Makeup (foundation)
	Razors

**Table 5 – Products leaving the basket**

<b>Category</b>	<b>Product</b>
Recreation and culture	DVD player
	Antenna and satellite dish

Other basket changes:

- Super and special maize meal combined into maize meal;
- Internet usage split between wireless (cellular) and wired (fibre, ADSL) forms of access;
- Energy saving and traditional lightbulbs combined into lightbulbs;
- Pre-recorded CDs renamed to include music subscription and streaming music.

## **6. Sampling and CPI operations**

### **6.1 Introduction**

This chapter explains the sampling and collection methodology for all indicator products. The prices for most products are collected either directly from outlets by fieldworkers, or by head office staff through websites, email and telephone interviews.

### **6.2 Sampling methodology**

The procedure used for price collection by a national statistical office in the production of the CPI is a sample survey. There are various methods of sampling, whether determined by probability or not. It is important for Stats SA to follow an internationally accepted practice when sampling occurs within the CPI. This section discusses the sampling method used by Stats SA.

South Africa has the following constraints in terms of sampling:

- No sampling frame for indicator products is available.
- Price collection must take place where there are price collectors.
- A probability sample with respect to the reference period is not a proper probability sample with respect to the current period.
- For the product dimension, numbers (sales in rand or units) are virtually impossible to obtain.

Any sampling method applied needs to maximise precision and minimise the cost of carrying out the survey. Regarding the constraints mentioned above, outlet selection is based on the convenience of locating indicator products, which are selected as follows:

- The item selected should be the most popular item in terms of brand and unit. Volume sellers are assumed to be the most popular items. In general, a volume seller is assumed to be the brand and unit with the most shelf space allocated to it.
- Special order items that are one-time, one-of-a-kind purchases are not eligible.
- The outlet should expect to continue selling the product.
- The item should be regular merchandise. An item is considered to be regular merchandise if the outlet normally sells the item.
- The item must be in good condition.

### **6.3 Field and head office collection**

Field-based collection entails the use of fieldworkers (price collectors) who visit sampled outlets and markets in order to record actual prices on the shop floor. The field collection is mostly used for commodities. The collection is carried out monthly.

Head office collection entails the use of staff based at Stats SA's head office mostly for the collection of prices for services. These collections are carried out by email, internet and telephonic survey. The history and nature of the frequency of changes in prices for specific types of products inform the decision on whether prices should be collected monthly, quarterly or annually. Additional information from respondents is also used to supplement the information for determining the frequency of collection. Prices that are not measured monthly are assumed to be unchanged in the months when they are not measured.

## **6.4 Auditing**

The International Organization for Standardization (ISO) defines an audit as: “A systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled” (ISO, 9000 – International standard describes fundamentals of quality management systems). The purpose of quality assurance audits is to ensure that CPI methodology is correctly applied by fieldworkers at outlets. The audit process allows the auditors to confirm if prices and products collected by the price collectors are correct and comply with standards. Audits are performed parallel to price collection. For the purpose of general coverage and to ascertain the general level of quality, all nine provinces are audited at least twice during a year.

## **6.5 Data editing**

Editing detects if there are any errors in the data, and if so they are investigated and corrected. The main objective of editing is to ensure that clean data is prepared for analysis. There are four stages in CPI editing:

- Validation: check if the correct codes were allocated during capturing and allocate missing unit codes;
- Logical edits: ensure that current and previous months’ data do not have contradictory values, e.g. compare current month brand name with the previous month;
- Range edits: identify whether the item value falls inside a determined acceptable range; and
- Unit status codes: check the correctness of all the allocated unit status codes.

## **6.6 Product maintenance**

The aim of product maintenance is to ensure there are enough prices for each product in each provincial basket. This process involves the substitution of items that are temporarily unavailable, out of season, or permanently unavailable. Outlets that are permanently closed or temporarily closed for two consecutive months are replaced.

## **6.7 Listing of indicator products and methods**

Annexure 2 provides a summary of all indicator products and relevant collection methodology information.

## **7. Special cases**

### **7.1 Housing**

#### **7.1.1 Introduction**

Essentially there are two types of arrangement that characterise the housing market. First, a dwelling may be occupied by the owner of the property, or, second, it may be rented out by a property owner to a tenant. Estimating the cost of housing should consider these two arrangements.

Defining actual rentals is straightforward. These are the amounts actually paid by tenants to property owners for the provision of accommodation. Typically, a tenant and property owner enter into a rental agreement valid for a particular period of time, for example one year. The measurement of actual rentals is expected to track the average changes of all rental agreements.

Owners' equivalent rent (OER) measures the value of the services yielded by the use of an owner-occupied dwelling over a period of time using the corresponding market rental value for the same type of dwelling for the same period of time. This appraisal is based on the opportunity cost incurred by owners by deciding to live in their own homes, rather than renting them out. In other words, owners who decide to live in their own homes pay a virtual rent (or OER) to themselves.

#### **7.1.2 Actual rentals for housing**

The sample of indicator products includes houses, townhouses and flats. Stats SA uses its own rental survey of letting agents. Fieldworkers (price collectors) visit letting agents in order to record rental prices of actual rented properties. The collection is carried out quarterly.

#### **7.1.3 Owners' equivalent rent (OER)**

Owner-occupier housing costs represent the largest single component of the CPI.

There are three approaches to measuring OER: Acquisitions, User cost, and Rental equivalence. The first two require data that are not easily available in South Africa. The third approach requires data on rentals of equivalent dwellings. Not only are these data available but they can be used with no significant risk of error.

The rental sector in South Africa adequately represents the owner-occupied component. Similar to actual rentals the indicator products are houses, townhouses and flats.

#### **7.1.4 Stats SA's rental survey**

Stats SA's quarterly rental survey tracks actual rental values for specific dwellings in each relevant geographic area. Actual rentals for a given dwelling are compared from one quarter to the next, enabling the calculation of quarterly price relatives for that dwelling for actual rent and OER.

The sample is drawn from real estate agents renting out privately-owned dwellings to the public in all CPI areas. The sample covers a wide geographic spread. Housing types should be selected to represent the formal property rental market. Accordingly, the housing types are houses, townhouses and flats.

Price collection happens monthly; however, prices for specific dwellings are only measure quarterly. The overall price change for rental dwelling is calculated quarterly. The changes in the index are reflected quarterly in the CPI publication.

## 7.2 Seasonal fruit

Seasonal fruit as a collective has one weight. The contents of the basket change as the seasons change. The list was determined on the basis of data sourced from fresh produce markets.

**Table 6 – Seasonal fruit basket**

Indicator product	Indicator product code	Basket months
Naartjies - fresh	01161003	Jun, Jul, Aug, Sep, Oct
Pears - fresh	01164001	Jun, Jul, Aug, Sep, Oct, Nov
Peaches - fresh	01165002	Jan, Feb, Oct, Nov, Dec
Plums - fresh	01165003	Jan, Feb, Mar, Apr
Avocados - fresh	01165004	Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
Nectarines - fresh	01165005	Jan, Feb, Dec
Grapes - fresh	01166001	Jan, Feb, Mar, Apr, May, Jun, Nov, Dec
Strawberries - fresh	01166002	May, Jun, Jul, Aug, Sep, Oct
Paw-Paw/Papayas - fresh	01167001	Apr, May, Jun, Jul, Sep, Oct, Nov
Pineapples - fresh	01167002	Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
Mangoes - fresh	01167003	Jan, Feb, Mar, Apr, Dec
Watermelon - fresh	01167004	Jan, Feb, Oct, Nov, Dec

Non-seasonal fruits in the basket (bananas and apples) have their own weight.

## 7.3 Used vehicles

To calculate an index for used vehicles, prices are collected from the TransUnion Auto Dealers' Guide. A sample of selected one- and two-year-old motor vehicles is used, and the sample is updated every year in January. A selected vehicle in the sample is then compared with a similar (model and age) vehicle over a twelve-month period and the year-on-year price ratio for this vehicle is established. The month-on-month price ratio is then derived from the calculated annual rate.

## 7.4 Games of chance

Games of chance are considered recreational consumption expenditure in the South African CPI and national accounts. This is consistent with COICOP. Internationally, many countries include games of chance in their CPI, and those that exclude it usually do so because of the difficulty in tracking comparable prices. Expenditure on gambling in South Africa amounts to more than one per cent of the current (2019) CPI weights. The expenditure value in the CPI weights and the national accounts is calculated on a net basis (total gambling revenue minus winnings).

An increase in the price of a lottery ticket should be seen in the context of any change in the possible winnings that players may receive. The change in the ticket price to be included in the CPI should be adjusted to account for any change in the winnings. For example, if the ticket price increases by 20%, and the potential winnings by 10%, then the effective price increase in the CPI would be 9,1%, calculated as  $1,2 \div 1,1 = 1,091$ . This

method is similar to that used for CPI calculation purposes when the quantity of a product changes and an adjustment must be made in the price.

The proportion of ticket revenues paid out to winners is determined by the payout ratio attached to each game. This ratio is agreed between the lottery operator and the National Lotteries Commission. Any change in price is therefore quality adjusted by the payout ratio. Any change in the payout ratio without a change in the ticket price is also considered a price change.

## **7.5 Books**

New books are published continually and each new book in the bestseller list remains there for only a limited time. This makes month-on-month price comparison of the same books difficult. Stats SA therefore measures the “Top Ten” bestselling books according to each retailer’s website. Every month the prices of the top ten books are collected, and the monthly averages of these are used to calculate price changes.

## 8. Index compilation

### 8.1 Index formulas

#### 8.1.1 Headline CPI

The CPI measures price changes by comparing the cost of a fixed basket of commodities over time. This basket is based on expenditures in a particular reference period.

The compilation of the South African CPI is based on prices in the current and previous survey periods. The survey periods are equal to a month. In the first stage of calculation, for each of the products (goods or services) for which prices are collected, an elementary index is calculated using the Jevons index number formula. The Jevons index is defined as the unweighted geometric mean of the price ratios, which is identical to the ratio of the unweighted geometric mean prices:

$$I_J^{0:t} = \prod \left( \frac{p_i^t}{p_i^0} \right)^{1/n} = \frac{\prod (p_i^t)^{1/n}}{\prod (p_i^0)^{1/n}}$$

The month-to-month price ratios are chained together monthly through successive multiplication, and as a result the Jevons index is transitive. Transitivity means that the chained monthly indices are identical to the corresponding direct indices.

The second stage of calculating the CPI does not involve individual prices or quantities. Instead, a higher-level index is calculated as a Young index in which the elementary price indices are averaged using a set of predetermined weights. The formula can be written as follows:

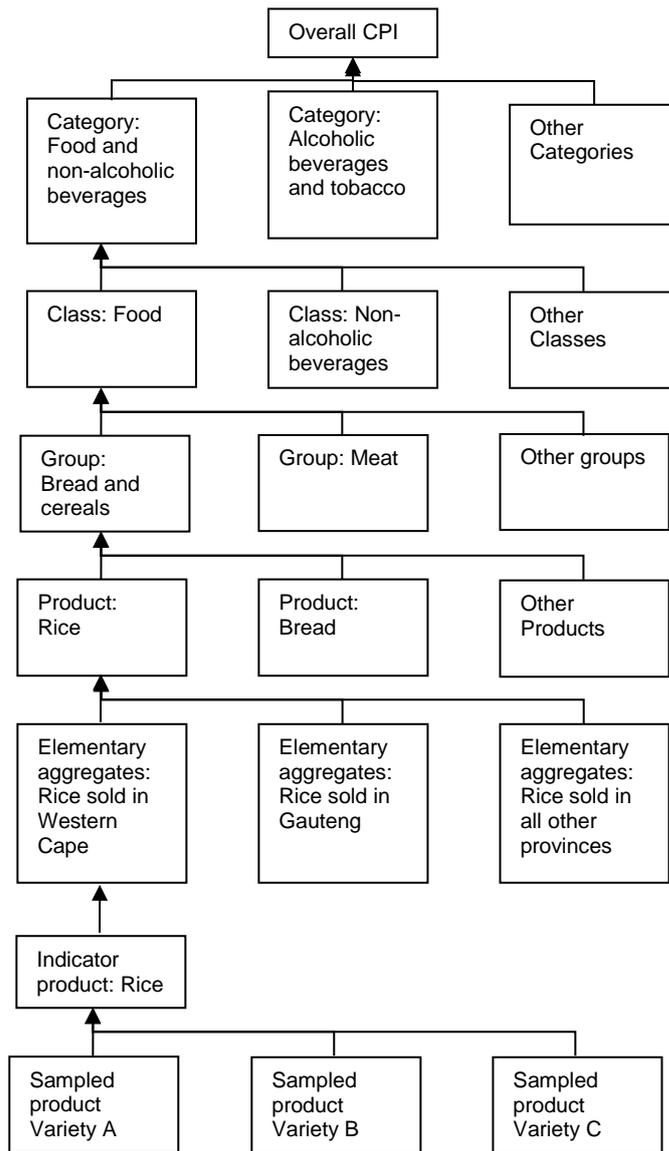
$$I^{0:t} = \sum w_i^b I_i^{0:t}, \sum w_i^b = 1$$

where  $I^{0:t}$  denotes the overall CPI, or any high-level index, from period 0 to t;  $w_i^b$  is the weight attached to each of the elementary price indices; and  $I_i^{0:t}$  is the corresponding elementary price index. The elementary indices are identified by the subscript  $i$ , whereas the higher-level index carries no subscript. The weights are derived in period  $b$ , which in practice has to precede period 0, the index reference period.

Note the following distinction between the weights and index reference periods:

- Weights reference period: the period covered by the expenditure statistics used to calculate the weights. Usually, the weights reference period is a year.
- Index reference period: the period in which the index is set to 100 (also referred to as the base period).

**Graphical example of the aggregation structure of the CP**



**Numerical example**

The following example shows the calculations applicable to “Instant coffee”.

**Table 7 – Calculating the price relative**

Product code	INSTANT COFFEE						
01211001							
Unique number	Respondent	Quantity	Unit	Previous price	Current price	Price relative	Geometric mean
xxxxxxx	Pick 'n Pay	1 tin	750g	61,99	61,99	1,00000	
yyyyyyy	Checkers	1 tin	250g	16,99	15,99	0,94114	
zzzzzzz	Woolworths	1 pouch	120g	19,99	21,99	1,10005	
wwwww	Corner café	1 tin	250g	18,79	18,79	1,00000	
							<b>1,00871</b>

**Table 8 – Creating the index**

<b>INSTANT COFFEE</b>				
<b>Product code</b>	<b>Previous index</b>	<b>Price relative</b>	<b>New index</b>	
01211001	139,2	1,00871	140,4	
<b>Product code</b>	<b>Description</b>	<b>New index</b>	<b>Weight in CPI</b>	<b>Weighted index</b>
01211001	Instant coffee	140,4	0,30	42,12
01211002	Ground coffee and coffee beans	142,5	0,04	5,70
01212001	Ceylon/black tea	141,3	0,19	26,85
01212002	Rooibos tea	139,8	0,10	13,98
01213001	Drinking chocolate	138,5	0,02	2,77
0121	Hot beverages		0,65	140,64 <sup>1</sup>
<b>Product code</b>	<b>Description</b>	<b>New index</b>	<b>Weight in CPI</b>	<b>Weighted index</b>
0121	Hot beverages	140,6	0,65	91,39
0122	Cold beverages	140,2	1,11	155,62
012	Non-alcoholic beverages		1,76	140,35
<b>Product code</b>	<b>Description</b>	<b>New index</b>	<b>Weight in CPI</b>	<b>Weighted index</b>
011	Food	150,3	15,48	2 326,64
012	Non-alcoholic beverages	140,4	1,76	247,10
01	Food and non-alcoholic beverages		17,24	149,28
<b>Product code</b>	<b>Description</b>	<b>New index</b>	<b>Weight in CPI</b>	<b>Weighted index</b>
01	Food and non-alcoholic beverages	149,3	17,24	2 573,93
02	Alcoholic beverages and tobacco	152,2	5,82	885,80
03	Clothing and footwear	165,4	3,83	633,48
04	Housing, water, electricity, gas and other fuels	174,9	24,62	4 306,04
05	Furnishings and household equipment	86,0	4,35	374,10
06	Health	122,8	1,4	171,92
07	Transport	146,1	14,28	2 086,31
08	Communication	115,1	2,63	302,71
09	Recreation and culture	138,2	5,16	713,11
10	Education	164,0	2,53	414,92
11	Restaurants and hotels	145,8	3,09	450,52
12	Miscellaneous goods and services	123,4	15,05	1 857,17
	CPI All Items (All urban areas)		<b>100</b>	<b>147,70</b>

<sup>1</sup>  $(42,12 + 5,7 + 26,85 + 13,98 + 2,77) / 0,65 = 140,64$

**Table 9 – Inflation rate**

	<b>Index (previous year, same month)</b>	<b>Index (previous month)</b>	<b>Index (current month)</b>	<b>Monthly percentage change</b>	<b>Annual percentage change (inflation rate)</b>
CPI All Items (All urban areas)	137,5	145,8	147,7	1,3	7,4

### 8.1.2 Core inflation and the trimmed mean

While month-on-month changes in the level of the headline all items index tend to be small, some of its components are volatile from time to time. There is considerable interest in the concept of underlying inflation, i.e. a measure of consumer inflation that is even more stable than the headline rate. Stats SA therefore publishes a range of other CPIs with specific exclusions, each of which can be used to analyse trends in inflation from a different perspective.

One measure of underlying inflation is the CPI excluding food & NAB<sup>1</sup>, fuel<sup>2</sup> and energy<sup>3</sup>. This is commonly known as core inflation. Food & NAB can be volatile during periods of adverse weather conditions, and fuel is volatile when there are large swings in the international oil price and the rand exchange rate. Historically, energy (electricity) prices have been subject to large changes (increases). In all these cases the volatility is aggravated by base effects. Other exclusion measures are: CPI excluding food and NAB, CPI excluding fuel, CPI excluding food and NAB and fuel, CPI excluding housing, CPI excluding fuel and energy, CPI excluding energy, and CPI excluding owners' equivalent rent.

Another measure of underlying inflation is the trimmed mean, which is described in section 3.3. The following steps show its calculation in detail.

#### Steps for Stats SA's calculation of the trimmed mean CPI

##### Step 1: percentage changes

Compute the monthly percentage change (r) for each elementary index. For items not collected monthly, a rolling average (depending on collection frequency) is calculated. For example, a rolling average for three months (current month and two previous months) is the changes of the last three months divided by three.

##### Trimmed mean step 1

Product description	Weight	Elementary index in period t-1	Elementary index in period t	Step 1
				Percentage change (r)
White bread	6,3	101,2	103,1	1,88
Maize	7,1	102,1	102,7	0,59
Stewing beef	7,2	104,8	105,8	0,95
Carrots	2,5	99,7	98,2	-1,50
Margarine	5,6	104,9	105,1	0,19
Fizzy drinks	1,6	103,1	101,2	-1,84
Beer	1,6	101,2	103,7	2,47
Pain killers	4,6	100,2	100,2	0,00
Sedan	4,8	103,5	103,9	0,39
Petrol	9,3	103,2	104,6	1,36
Cell phone airtime	11,2	99,7	99,8	0,10
Television	5,3	99,7	99,5	-0,20

<sup>1</sup> Food and non-alcoholic beverages (weight of 17,14% in headline CPI).

<sup>2</sup> Petrol and diesel (weight of 4,82% in headline CPI).

<sup>3</sup> Electricity (weight of 3,63% in headline CPI).

				<b>Step 1</b>
<b>Product description</b>	<b>Weight</b>	<b>Elementary index in period t-1</b>	<b>Elementary index in period t</b>	<b>Percentage change (r)</b>
Books	4,3	100,1	100,5	0,40
Primary school fees	4,5	103,4	103,4	0,00
Chicken meal	4,2	105,1	105,4	0,29
Hotel accommodation	7,2	103,1	103,1	0,00
Shampoo	2,9	99,2	101,2	2,02
Car insurance	2,7	104,3	106,3	1,92
Bank fees	5,6	101,2	102,0	0,79
Funeral services	1,5	100,0	99,8	-0,20
<b>Sum</b>	<b>100,0</b>			

**Step 2: sorting from lowest to highest** (steps 2 to 7 are shown in the table below)

Sort the elementary indices from the lowest to the highest percentage change (r).

**Step 3: cumulative weights**

Compute the cumulative weights, i.e. the cumulative sum of the weights after sorting.

**Step 4: exclusion of lowest and highest**

Exclude those elementary indices for which the cumulative weight is either less than 5% or greater than 95%.

**Step 5: adjusted weights**

- For the first lowest percentage change with a cumulative weight greater than or equal to 5%, reset its weight to the value of its cumulative weight less 5.
- For the first highest percentage change with a cumulative weight less than or equal to 95%, reset its weight to the value of 95 less its cumulative weight.
- 

**Step 6: contributions**

Compute the contributions of each elementary index to the percentage change in the trimmed mean, taking into account that the sum of the adjusted weights is not 100.

**Step 7: trimmed mean month-on-month inflation rate**

Compute the trimmed mean month-on-month inflation rate for the current month by summing the contributions, which is 0,454% in the example shown in the table.

**Trimmed mean steps 2 to 7**

				<b>Step 2</b>	<b>Step 3</b>	<b>Step 4</b>	<b>Step 5</b>	<b>Steps 6 and 7</b>
<b>Product description</b>	<b>Weight</b>	<b>Elementary index in period t-1</b>	<b>Elementary index in period t</b>	<b>Percentage change (r) sorted from lowest to highest</b>	<b>Cumulative weights (cw)</b>	<b>Percentage change (r) showing exclusions</b>	<b>Adjusted weight (aw)</b>	<b>Contribution (c) c = r x (aw / <math>\sum</math>aw)</b>
Fizzy drinks	1,6	103,1	101,2	-1,84	1,6	Exclude (cw < 5)		
Carrots	2,5	99,7	98,2	-1,50	4,1	Exclude (cw < 5)		
Television	5,3	99,7	99,5	-0,20	9,4	-0,20	4,4 *	-0,011
Funeral services	1,5	100,0	99,8	-0,20	10,9	-0,20	1,5	-0,004
Pain killers	4,6	100,2	100,2	0,00	15,5	0,00	4,6	0,000
Primary school fees	4,5	103,4	103,4	0,00	20	0,00	4,5	0,000
Hotel accommodation	7,2	103,1	103,1	0,00	27,2	0,00	7,2	0,000
Cell phone airtime	11,2	99,7	99,8	0,10	38,4	0,10	11,2	0,013
Margarine	5,6	104,9	105,1	0,19	44,0	0,19	5,6	0,013
Chicken meal	4,2	105,1	105,4	0,29	48,2	0,29	4,2	0,014
Sedan	4,8	103,5	103,9	0,39	53,0	0,39	4,8	0,022
Books	4,3	100,1	100,5	0,40	57,3	0,40	4,3	0,021
Maize	7,1	102,1	102,7	0,59	64,4	0,59	7,1	0,050
Bank fees	5,6	101,2	102,0	0,79	70,0	0,79	5,6	0,053
Stewing beef	7,2	104,8	105,8	0,95	77,2	0,95	7,2	0,082
Petrol	9,3	103,2	104,6	1,36	86,5	1,36	9,3	0,151
White bread	6,3	101,2	103,1	1,88	92,8	1,88	2,2 **	0,049
Car insurance	2,7	104,3	106,3	1,92	95,5	Exclude (cw > 95)		
Shampoo	2,9	99,2	101,2	2,02	98,4	Exclude (cw > 95)		
Beer	1,6	101,2	103,7	2,47	100,0	Exclude (cw > 95)		
<b>Sum</b>	<b>100</b>						<b>83,7</b>	<b>0,4540</b>

\*  $aw = cw - 5 = 9,4 - 5 = 4,4$

\*\*  $aw = 95 - cw = 95 - 92,8 = 2,2$

**Step 8: trimmed mean index**

Compute the trimmed mean index for the current month.

$$\text{Current index} = \text{previous index} \times [1 + (\text{monthly inflation rate} / 100)]$$

If the previous index was 102,4, then:

$$\text{Current index} = 102,4 \times [1 + (0,454 / 100)] = 102,4 \times 1,00454 = 102,9$$

**Step 9: trimmed mean annual inflation rate**

Compute the annual inflation rate for the trimmed mean index. This is the annual percentage change in the index.

$$\text{Annual inflation rate} = [(\text{current index} / \text{previous year index}) \times 100] - 100$$

If the previous year index was 98,1, then:

$$\text{Annual inflation rate for trimmed mean} = [(102,9 / 98,1) \times 100] - 100 = 4,9\%$$

## 8.2 Linking new index series to old index series

### 8.2.1 The need for linking

From time to time the weights for the elementary aggregates have to be revised to ensure that they reflect current expenditure patterns and consumer behaviour. The introduction of new weights is often a complex operation because it provides an opportunity to introduce new items, new samples, new data sources, new compilation practices, new elementary aggregates, new higher-level indices, and new classifications. These tasks are often undertaken simultaneously at the time of reweighting to minimise the overall disruption to the time series and any resulting inconvenience to users of the indices.

When new weights are introduced the new index based on the new weights is linked to the old index, thereby creating a continuous (or linked) index that is not distorted by the change in weights. The linked index formula allows weights to be updated and facilitates the introduction of new items and sub-indices as well as the removal of obsolete ones.

### 8.2.2 Features of a linked index

There are several important features of a linked index:

- In order to link the old and the new series, an overlapping period is needed in which the index has to be calculated using both the old and the new set of weights.
- The link period may be a month or a year, provided the weights and indices refer to the same period.
- Linking is intended to ensure that the individual indices on all levels show the correct development through time.
- Linking leads to non-additivity. When the index reference period is changed, and the index series prior to the link period is rescaled to the new index reference period, this previous series cannot be aggregated to higher-level indices by use of the new weights.

### 8.2.3 Method of linking and rebasing

There are different methods of linking indices. The method followed for the South African CPI is as follows. All indices are rebased so that December 2021 (for example) equals 100. All new product indices are set to 100 in December 2021. Since all elementary (lowest-level) indices equal 100 in December 2021, all aggregations using the new weights also equal 100 in December 2021. The index levels for January 2022 are calculated in the normal manner (the sum of lower-level indices multiplied by their weights). This ensures that all month-on-month percentage changes from December 2021 to January 2022 are driven by price changes and the relative importance of each price change as determined by the new weights.

Similarly, the CPI for February (and all subsequent months) is calculated in the normal way. This method satisfies the following criteria:

- The historical, published rates of change in the CPI are retained (although historical additivity is lost);
- The index reference period of the CPI is December 2021 = 100;
- All monthly changes in the CPI from January 2022 are a true reflection of the underlying price movements;
- All indices are calculated in the normal fashion and additivity through all aggregation levels is ensured.

Table 10 shows the respective indices that are used to calculate the month-on-month and year-on-year percentage changes for the first two months of 2022.

**Table 10 – Calculating monthly and annual percentage changes for the CPI**

	<b>January 2022</b>	<b>February 2022</b>
<b>Month-on-month</b>	$\frac{\text{Jan-22 (new weights)}}{\text{Dec-21 (rebased to 100)}}^1$	$\frac{\text{Feb-22 (new weights)}}{\text{Jan-22 (new weights)}}$
<b>Year-on-year</b>	$\frac{\text{Jan-22 (new weights)}}{\text{Jan-21 (old weights, rebased)}}$	$\frac{\text{Feb-22 (new weights)}}{\text{Feb-21 (old weights, rebased)}}$

<sup>1</sup> Dec-21 = 100 at all levels of aggregation (using new weights and old weights)

## **9. Imputations in the CPI**

### **9.1 Introduction**

Although the CPI is published every month, certain price observations are not available in each period. This may be due to the seasonal nature of the product, the fact that prices change only periodically (such as administrative prices, tariffs and fees), or the absence of the product from outlets for various reasons (e.g. items temporarily unavailable). In all of these cases, an imputation method should be used, whether at an aggregated level or a more disaggregated level. Failure to impute for missing prices may lead to a bias in the index.

### **9.2 Imputation methods**

Stats SA uses three main methods to impute movement in an index when there are no price observations available.

First, indices are kept constant when the prices are not due for collection in a particular month. For example, school fees change once a year and are collected and incorporated into the index in March each year.

Second, the change in the index of a higher-level aggregate is used to impute an elementary index when no prices were recorded for this product. For example, the change in the aggregate index for milk, eggs and cheese could be applied to the index for flavoured milk.

Third, an average price change is calculated for all observed varieties within the relevant indicator product that are matched to the previous month to calculate a change for an elementary index that has no data. For example if no prices are available for pianos in Tzaneen, the average price change for pianos in all other regions will be used.

## **10. Quality and quantity adjustments in the CPI**

### **10.1 Quality adjustments in the CPI**

The objective of the CPI is to measure pure price change over time, so ideally identical goods and services should be priced from one period to the next. This is called pricing to constant quality. However, in practice, new products appear on the market and replace older products. These new products have different attributes (or quality). For price index purposes it is necessary to measure these changes in quality, and to remove any change in price attributable purely to the change in quality from the change in the price.

Quality adjustment is the process of estimating what the market price of a replacement product would be if it had the characteristics of the product it replaces and with whose price it is to be compared. The process requires estimating the market value of any differences in the price-determining characteristics of the two products and adjusting the observed price of the replacement product.

The products for which prices are quality adjusted are motor vehicles, cell phones and TVs.

In line with international best practice, Stats SA uses a hedonic regression method for quality adjustments. The quality adjustment starts with a periodic assessment of which characteristics have an influence on the price. Parameter estimates are obtained from the hedonic model to adjust the price change used in index calculations in instances where the new item and old item differ in quality. The new price is then adjusted using these results. This allows the price series to be extended using the new item.

### **10.2 Quantity adjustments in the CPI**

A quantity adjustment is required when there is a change in quantity of an item from one period to the next. The quantity change may take the form of a change in the physical characteristics of the product that can easily be quantified, such as a change in weight, dimensions, purity, or chemical composition. For example, a tub of ice cream may change from 2 litres to 1,8 litres. Quantity adjustments are applied only to products with permanent quantity changes.

Quantity adjustments are applied in the South African CPI by scaling the price of the new product by the ratio of quantities.

## Abbreviations

COICOP	Classification of individual consumption by purpose
CPI	Consumer price index
CPI Manual	Consumer Price Index Manual: Concepts and Methods. 2020. International Monetary Fund et al.
DMRE	Department of Mineral Resources and Energy
HES	Household expenditure survey
HFCE	House final consumption expenditure
ICP	International Comparison Programme
IES	Income and Expenditure Survey
ILO	International Labour Organization
LCS	Living Conditions Survey
n.e.c.	Not elsewhere classified
OER	Owners' equivalent rent
PPP	Purchasing power parity
SADC	Southern African Development Community
SNA	System of National Accounts
Stats SA	Statistics South Africa
UNECE	United Nations Economic Commission for Europe

## Annexures

### Annexure 1 – CPI basket of goods and services

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
<b>01.</b>	<b>Food and non-alcoholic beverages</b>			19,07	17,14
<b>01.1.</b>	<b>Food</b>			17,11	15,30
<b>01.1.1</b>	<b>Bread and cereals</b>			3,88	3,16
01.1.1.1	01111001	Rice	All provinces	0,49	0,37
01.1.1.2	01112001	White bread	All provinces	0,46	0,44
01.1.1.2	01112002	Brown bread	All provinces	0,70	0,57
01.1.1.2	01112003	Sweet biscuits	All provinces	0,07	0,06
01.1.1.2	01112004	Savoury biscuits	WC, EC, NC, NW	0,01	0,01
01.1.1.2	01112005	Bread rolls	All provinces	0,04	0,05
01.1.1.2	01112301	Rusks	WC, EC, NC, FS, KZN, NW, GP, MP	0,02	0,02
01.1.1.3	01113001	Spaghetti	All provinces	0,04	0,05
01.1.1.3	01113002	Macaroni	All provinces	0,06	0,06
01.1.1.3	01113003	Other pasta	All provinces	0,04	0,05
01.1.1.3	01113004	Instant noodles	All provinces	0,06	0,06
01.1.1.4	01114001	Cakes and tarts	All provinces	0,19	0,19
01.1.1.4	01114002	Frozen pastry products (pizzas or pies)	All provinces	0,17	0,16
01.1.1.6	01116001	Cake flour	All provinces	0,15	0,10
01.1.1.6	01116002	Bread flour	WC, EC, NC, FS, KZN, NW, GP, LP	0,04	0,03
01.1.1.6	01116003	Maize meal	All provinces	1,15	0,76
01.1.1.6	01116005	Cold cereals	All provinces	0,11	0,11

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
01.1.1.6	01116010	Hot cereals (porridge including instant porridge)	All provinces	0,06	0,05
01.1.1.6	01116011	Ready-mix flour	WC, EC, NC, KZN, NW, GP, LP	0,01	0,01
01.1.1.6	01116012	Samp	All provinces	0,01	0,01
<b>01.1.2</b>	<b>Meat</b>			<b>5,70</b>	<b>5,42</b>
01.1.2.1	01121005	Beef - mince	All provinces	0,36	0,36
01.1.2.1	01121010	Beef - offal	All provinces	0,11	0,11
01.1.2.1	01121011	Beef - steak	All provinces	0,31	0,32
01.1.2.1	01121012	Beef - stewing beef/ brisket/ chuck	All provinces	0,63	0,63
01.1.2.2	01122099	Pork - combined	All provinces	0,16	0,17
01.1.2.3	01123099	Mutton and lamb - combined	All provinces	0,64	0,69
01.1.2.4	01124001	Whole chicken - fresh	All provinces	0,09	0,07
01.1.2.4	01124002	Chicken portions - fresh	All provinces	0,61	0,52
01.1.2.4	01124005	IQF chicken portions	All provinces	0,99	0,87
01.1.2.4	01124006	Chicken portions - frozen - Non-IQF	All provinces	0,51	0,44
01.1.2.4	01124007	Chicken giblets (neck, gizzard, hearts, etc.)	All provinces	0,21	0,19
01.1.2.5	01125004	Polony	All provinces	0,20	0,19
01.1.2.5	01125005	Ham	All provinces	0,05	0,05
01.1.2.5	01125006	Biltong	All provinces	0,06	0,06
01.1.2.5	01125007	Bacon	All provinces	0,05	0,06
01.1.2.5	01125009	Sausage	All provinces	0,68	0,66
01.1.2.6	01126002	Meat extract	All provinces	0,02	0,02
01.1.2.6	01126005	Corned beef	All provinces	0,02	0,01

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
<b>01.1.3</b>	<b>Fish</b>			0,47	0,40
01.1.3.1	01131001	Hake - frozen	All provinces	0,12	0,10
01.1.3.4	01134001	Fish fingers - frozen	All provinces	0,04	0,04
01.1.3.4	01134002	Tuna - tinned	WC, EC, NC, FS, KZN, NW, GP, MP	0,03	0,04
01.1.3.4	01134003	Fish - tinned (excluding tuna)	All provinces	0,28	0,22
<b>01.1.4</b>	<b>Milk, cheese and eggs</b>			2,65	2,53
01.1.4.1	01141001	Fresh full cream milk	All provinces	0,79	0,79
01.1.4.1	01141002	Long life full cream milk	All provinces	0,24	0,22
01.1.4.2	01142001	Low fat milk - fresh	All provinces	0,08	0,09
01.1.4.2	01142002	Low fat milk – long life	All provinces	0,04	0,04
01.1.4.3	01143001	Powdered milk	All provinces	0,07	0,05
01.1.4.3	01143002	Whiteners	All provinces	0,11	0,09
01.1.4.3	01143003	Condensed milk	WC, NC, FS, NW, LP	0,01	0,01
01.1.4.4	01144001	Plain yogurt	All provinces	0,03	0,03
01.1.4.4	01144002	Flavoured yogurt	All provinces	0,18	0,18
01.1.4.5	01145001	Cheddar cheese	All provinces	0,08	0,08
01.1.4.5	01145002	Gouda cheese	All provinces	0,09	0,09
01.1.4.5	01145003	Cheese spread	All provinces	0,02	0,04
01.1.4.5	01145004	Feta cheese	All provinces	0,10	0,11
01.1.4.6	01146001	Fresh cream	WC, NC, FS, KZN, NW, GP, LP	0,02	0,02
01.1.4.6	01146002	Sour milk/maas	All provinces	0,26	0,20
01.1.4.6	01146003	Prepared custard	All provinces	0,05	0,05
01.1.4.6	01146004	Amageu	All provinces	0,02	0,02
01.1.4.6	01146005	Flavoured milk	WC, EC, FS, GP, LP	0,02	0,02

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
01.1.4.7	01147001	Eggs	All provinces	0,44	0,40
<b>01.1.5</b>	<b>Oils and fats</b>			0,53	0,45
01.1.5.2	01152001	Margarine	All provinces	0,11	0,11
01.1.5.2	01152002	Brick margarine	All provinces	0,05	0,04
01.1.5.2	01152003	Peanut butter	All provinces	0,05	0,05
01.1.5.4	01154001	Edible oils (e.g. cooking oils)	All provinces	0,32	0,25
<b>01.1.6</b>	<b>Fruit</b>			0,34	0,33
01.1.6.2	01162001	Bananas - fresh	All provinces	0,09	0,09
01.1.6.3	01163001	Apples - fresh	All provinces	0,09	0,08
01.1.6.8	01168004	Peanuts	WC, EC, FS, KZN, NW, GP, MP, LP	0,02	0,02
01.1.6.7	01167099	Seasonal fruit	All provinces	0,14	0,14
<b>01.1.7</b>	<b>Vegetables</b>			1,47	1,27
01.1.7.1	01171001	Lettuce	All provinces	0,03	0,03
01.1.7.1	01171002	Spinach/ morogo - fresh	All provinces	0,03	0,02
01.1.7.2	01172001	Cabbage - fresh	All provinces	0,07	0,05
01.1.7.2	01172002	Cauliflower - fresh	WC, EC, KZN, GP	0,01	0,01
01.1.7.2	01172003	Broccoli - fresh	WC, EC, NC, KZN, GP	0,01	0,01
01.1.7.3	01173001	Tomatoes - fresh	All provinces	0,20	0,17
01.1.7.3	01173002	Pumpkin (butternut) - fresh	All provinces	0,04	0,04
01.1.7.3	01173003	Green/ red/ yellow pepper - fresh	All provinces	0,05	0,05
01.1.7.3	01173004	Vegetables (excluding peas and carrots) - frozen	All provinces	0,04	0,05
01.1.7.3	01173006	Cucumber - fresh	All provinces	0,02	0,01
01.1.7.4	01174001	Onions	All provinces	0,15	0,13
01.1.7.4	01174002	Carrots - fresh	All provinces	0,04	0,04

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
01.1.7.4	01174003	Beetroot	All provinces	0,02	0,02
01.1.7.4	01174005	Mushrooms	WC, EC, FS, KZN, NW, GP	0,02	0,01
01.1.7.5	01175002	Beans dried	All provinces	0,06	0,04
01.1.7.6	01176002	Baked beans in tomato sauce	All provinces	0,06	0,06
01.1.7.6	01176005	Prepared salads	WC, EC, NC, FS, GP, LP	0,01	0,01
01.1.7.6	01176006	Atchaar	NC, FS, KZN, NW, GP, MP, LP	0,02	0,02
01.1.7.6	01176007	Mixed vegetables - tinned	All provinces	0,02	0,01
01.1.7.7	01177001	Potatoes	All provinces	0,43	0,35
01.1.7.8	01178001	Sweet potatoes - fresh	WC, KZN, GP, MP, LP	0,01	0,01
01.1.7.8	01178002	Potato chips frozen	WC, EC, NC, FS, KZN, NW, GP, MP	0,02	0,02
01.1.7.8	01178003	Potato crisps	All provinces	0,08	0,08
01.1.7.8	01178004	Corn/maize chips	All provinces	0,03	0,03
<b>01.1.8</b>	<b>Sugar, jam, honey, chocolate and confectionary</b>			<b>0,73</b>	<b>0,58</b>
01.1.8.1	01181001	White sugar	All provinces	0,41	0,31
01.1.8.1	01181002	Brown sugar	All provinces	0,15	0,10
01.1.8.3	01183001	Chocolate slab	All provinces	0,03	0,03
01.1.8.3	01183002	Chocolate bar	All provinces	0,03	0,02
01.1.8.4	01184001	Sweets	All provinces	0,05	0,05
01.1.8.4	01184002	Chewing gum	All provinces	0,01	0,01
01.1.8.5	01185001	Ice cream	All provinces	0,03	0,03
<b>01.1.9</b>	<b>Food products not elsewhere classified</b>			<b>1,33</b>	<b>1,16</b>
01.1.9.1	01191001	Vinegar	All provinces	0,02	0,02
01.1.9.1	01191002	Chutney	All provinces	0,04	0,04
01.1.9.1	01191004	Tomato sauce	All provinces	0,11	0,10

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
01.1.9.1	01191005	Mayonnaise	All provinces	0,17	0,16
01.1.9.1	01191006	Salad dressing	WC, EC, FS, KZN, NW, GP, MP, LP	0,03	0,03
01.1.9.2	01192001	Salt	All provinces	0,04	0,03
01.1.9.2	01192002	Spice (excluding salt and curry powder)	All provinces	0,20	0,18
01.1.9.2	01192003	Curry powder	All provinces	0,04	0,04
01.1.9.3	01193001	Baby food - cereal	All provinces	0,07	0,06
01.1.9.3	01193003	Baby food - milk formula	All provinces	0,28	0,25
01.1.9.3	01193004	Instant yeast	All provinces	0,03	0,02
01.1.9.3	01193005	Baking powder	WC, NC, FS, KZN, NW, GP, MP, LP	0,02	0,01
01.1.9.3	01193006	Soup powder	All provinces	0,22	0,17
01.1.9.3	01193008	Baby food - pureed	All provinces	0,06	0,05
<b>01.2.</b>	<b>Non-alcoholic beverages</b>			1,97	1,84
<b>01.2.1</b>	<b>Coffee, tea and cocoa</b>			0,71	0,67
01.2.1.1	01211001	Instant coffee	All provinces	0,28	0,29
01.2.1.1	01211002	Ground coffee and coffee beans	All provinces	0,03	0,03
01.2.1.1	01211003	Cappuccino sachets	All provinces	0,03	0,03
01.2.1.2	01212001	Ceylon tea	All provinces	0,23	0,20
01.2.1.2	01212002	Rooibos tea	All provinces	0,12	0,10
01.2.1.3	01213001	Drinking chocolate	All provinces	0,02	0,02
<b>01.2.2</b>	<b>Mineral waters, soft drinks, fruit and vegetable juices</b>			1,26	1,17
01.2.2.1	01221001	Mineral water/ spring water (aerated and still)	All provinces	0,05	0,04
01.2.2.2	01222001	Fizzy drinks - can	All provinces	0,15	0,14
01.2.2.2	01222002	Fizzy drinks - bottle	All provinces	0,64	0,58

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
01.2.2.2	01222003	Other drinks excluding fizzy and fruit drinks	All provinces	0,05	0,05
01.2.2.3	01223001	Fruit juices	All provinces	0,21	0,21
01.2.2.3	01223002	Fruit juice concentrate	All provinces	0,09	0,08
01.2.2.3	01223003	Dairy blends/ mixtures	All provinces	0,07	0,07
<b>02.</b>	<b>Alcoholic beverages and tobacco</b>				
<b>02.1.</b>	<b>Alcoholic beverages</b>			4,28	4,29
<b>02.1.1</b>	<b>Spirits</b>			0,88	0,94
02.1.1.1	02111001	Spirits - brandy	All provinces	0,25	0,26
02.1.1.1	02111002	Spirits - whiskey	All provinces	0,40	0,43
02.1.1.1	02111003	Spirits - liqueur	All provinces	0,08	0,09
02.1.1.1	02111004	Spirits - vodka	All provinces	0,15	0,16
<b>02.1.2</b>	<b>Wine</b>			1,08	1,14
02.1.2.1	02121001	Wine from grapes or other fruit - red wine	All provinces	0,25	0,27
02.1.2.1	02121002	Wine from grapes or other fruit - white wine	All provinces	0,20	0,22
02.1.2.2	02122001	Spirit coolers (e.g. cider)	All provinces	0,54	0,55
02.1.2.2	02122002	Gin	All provinces	0,09	0,10
<b>02.1.3</b>	<b>Beer</b>			2,32	2,21
02.1.3.1	02131004	Beer	All provinces	2,32	2,21
<b>02.2.</b>	<b>Tobacco</b>			1,95	1,97
<b>02.2.1</b>	<b>Tobacco</b>			1,95	1,97
02.2.1.1	02211001	Cigarettes	All provinces	1,77	1,85
02.2.1.3	02213001	Tobacco	All provinces	0,18	0,12

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
<b>03.</b>	<b>Clothing and footwear</b>				
<b>03.1.</b>	<b>Clothing</b>			2,74	2,64
<b>03.1.2.1</b>	<b>Clothing for men</b>			0,98	0,97
03.1.2.1	03121002	Trousers (excl. jeans) - business	All provinces	0,07	0,07
03.1.2.1	03121003	Jeans	All provinces	0,26	0,26
03.1.2.1	03121004	Shirt - business	All provinces	0,06	0,06
03.1.2.1	03121005	Jacket	All provinces	0,06	0,05
03.1.2.1	03121007	Underpants	All provinces	0,17	0,17
03.1.2.1	03121008	Trousers (excl. jeans) - casual	All provinces	0,12	0,12
03.1.2.1	03121009	Shirt - casual	All provinces	0,07	0,07
03.1.2.1	03121010	Shorts	All provinces	0,08	0,08
03.1.2.1	03121011	Tops (incl. T-shirts)	All provinces	0,09	0,09
<b>03.1.2.2</b>	<b>Clothing for women</b>			0,95	0,94
03.1.2.2	03122001	Jacket	All provinces	0,07	0,06
03.1.2.2	03122005	Jeans	All provinces	0,15	0,15
03.1.2.2	03122006	Knitwear	All provinces	0,17	0,17
03.1.2.2	03122008	Bra	All provinces	0,14	0,14
03.1.2.2	03122009	Panty	All provinces	0,16	0,15
03.1.2.2	03122013	Dress	All provinces	0,06	0,07
03.1.2.2	03122014	Pants (excl. jeans) - business or casual	All provinces	0,08	0,08
03.1.2.2	03122015	Tops (incl. T-shirts)	All provinces	0,12	0,12
<b>03.1.2.3</b>	<b>Clothing for children</b>			0,81	0,73
03.1.2.3	03123001	Dress - girls (3 to 13 years)	All provinces	0,01	0,01
03.1.2.3	03123002	T-shirt - girls (3 to 13 years)	All provinces	0,05	0,04

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
03.1.2.3	03123003	Panty - girls (3 to 13 years)	All provinces	0,02	0,02
03.1.2.3	03123005	Shorts - boys (3 to 13 years)	All provinces	0,02	0,02
03.1.2.3	03123006	Shirt - boys (3 to 13 years)	All provinces	0,04	0,03
03.1.2.3	03123010	Baby-grow (0 to 2 years)	All provinces	0,04	0,04
03.1.2.3	03123013	Jacket - boys (3 to 13 years)	All provinces	0,06	0,06
03.1.2.3	03123014	Jacket - infants (0 to 2 years)	All provinces	0,02	0,02
03.1.2.3	03123015	Jeans - boys (3 to 13 years)	All provinces	0,05	0,04
03.1.2.3	03123016	Jeans - girls (3 to 13 years)	All provinces	0,03	0,02
03.1.2.3	03123017	Knitwear - girls (3 to 13 years)	All provinces	0,07	0,07
03.1.2.3	03123018	Pants (excl. jeans) - girls (3 to 13 years)	All provinces	0,05	0,05
03.1.2.3	03123019	Bottoms - infants (0 to 2 years)	All provinces	0,02	0,02
03.1.2.3	03123020	Infant sets (0 to 2 years)	All provinces	0,04	0,03
03.1.2.3	03123021	Skirts - girls (3 to 13 years)	All provinces	0,03	0,03
03.1.2.3	03123022	Sleepwear - infants	All provinces	0,03	0,02
03.1.2.3	03123023	Sleepwear - girls (3 to 13 years)	All provinces	0,02	0,02
03.1.2.3	03123024	Tops - infants (0 to 2 years)	WC, EC, NC, KZN, NW, MP, LP	0,00	0,00
03.1.2.3	03123025	Tops (excl. T-shirts) - girls (3 to 13 years)	All provinces	0,02	0,02
03.1.2.3	03123026	Trousers - boys (3 to 13 years)	All provinces	0,10	0,09
03.1.2.3	03123027	Tops (incl. T-shirt - boys (3 to 13 years)	All provinces	0,06	0,05
03.1.2.3	03123028	Underpants - boys (3 to 13 years)	All provinces	0,02	0,02
03.1.2.3	03123029	Vests - infants (0 to 2 years)	All provinces	0,01	0,01

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
<b>03.2.</b>	<b>Footwear</b>			1,08	1,01
<b>03.2.1.1</b>	<b>Footwear for men</b>			0,42	0,41
03.2.1.1	03211002	Sports shoes	All provinces	0,20	0,19
03.2.1.1	03211004	Sandals	All provinces	0,02	0,02
03.2.1.1	03211005	Shoes (excl. sports shoes and sandals)	All provinces	0,20	0,20
<b>03.2.1.2</b>	<b>Footwear for women</b>			0,33	0,32
03.2.1.2	03212001	Shoes (excl. sports shoes, slippers and sandals)	All provinces	0,22	0,22
03.2.1.2	03212002	Sandals	All provinces	0,04	0,03
03.2.1.2	03212003	Sports shoes	All provinces	0,06	0,06
03.2.1.2	03212004	Slippers	All provinces	0,01	0,01
<b>03.2.1.3</b>	<b>Footwear for children</b>			0,33	0,28
03.2.1.3	03213001	Shoes (excl. sports shoes, slippers and sandals) - girls (3 to 13 years)	All provinces	0,04	0,03
03.2.1.3	03213002	Sandals - girls (3 to 13 years)	All provinces	0,02	0,02
03.2.1.3	03213003	Sports shoes - girls (3 to 13 years)	All provinces	0,08	0,07
03.2.1.3	03213006	Sandals - boys (3 to 13 years)	All provinces	0,03	0,03
03.2.1.3	03213007	Sports shoes - boys (3 to 13 years)	All provinces	0,08	0,07
03.2.1.3	03213009	Infant shoes (0 to 2 years)	All provinces	0,03	0,02
03.2.1.3	03213010	Shoes (excl. sports shoes, slippers and sandals) - boys (3 to 13 years)	All provinces	0,05	0,04
<b>04.</b>	<b>Housing, water, electricity, gas and other fuels</b>				
<b>04.1.</b>	<b>Actual rentals for housing</b>			3,14	3,50
<b>04.1.1</b>	<b>Actual rentals paid by tenants</b>			3,14	3,50

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
04.1.1.1	04111001	Rent dwelling - house	All provinces	1,86	2,06
04.1.1.1	04111002	Rent dwelling - flat	All provinces	0,87	0,99
04.1.1.1	04111003	Rent dwelling - townhouse	All provinces	0,41	0,45
<b>04.2.</b>	<b>Imputed rentals for housing</b>			11,72	12,99
<b>04.2.1</b>	<b>Imputed rentals of owner-occupiers</b>			11,72	12,99
04.2.1.1	04211001	Owners' equivalent rent - house	All provinces	10,10	11,33
04.2.1.1	04211002	Owners' equivalent rent - flat	All provinces	0,40	0,45
04.2.1.1	04211003	Owners' equivalent rent - townhouse	All provinces	1,22	1,21
<b>04.3.</b>	<b>Maintenance and repair of the dwelling</b>			0,83	0,84
<b>04.3.1</b>	<b>Materials for the maintenance and repair of the dwelling</b>			0,53	0,51
04.3.1.1	04311003	Paint	All provinces	0,12	0,12
04.3.1.1	04311006	Plaster	All provinces	0,03	0,03
04.3.1.1	04311009	Bricks	All provinces	0,04	0,04
04.3.1.1	04311010	Cement	All provinces	0,21	0,19
04.3.1.1	04311011	Door and doorframe	All provinces	0,04	0,04
04.3.1.1	04311012	Branding	All provinces	0,04	0,04
04.3.1.1	04311012	Tiles	All provinces	0,05	0,05
<b>04.3.2</b>	<b>Services for the maintenance and repair of the dwelling</b>			0,30	0,33
04.3.2.1	04321001	Electricians	WC, FS, KZN, GP, MP, LP	0,21	0,24
04.3.2.1	04321002	Plumbers	WC, FS, KZN, GP, MP, LP	0,09	0,09
<b>04.4.</b>	<b>Water supply and miscellaneous services relating to the dwelling</b>			3,11	3,46
<b>04.4.1</b>	<b>Water supply</b>			1,12	1,23
04.4.1.1	04411001	Water	All provinces	1,12	1,23
<b>04.4.4</b>	<b>Other services relating to the dwelling not elsewhere classified</b>			1,99	2,22

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
04.4.4.1	04441001	Rate and taxes/ assessment rates	All provinces	1,24	1,39
04.4.4.1	04441002	Levies	All provinces	0,75	0,84
<b>04.5.</b>	<b>Electricity, gas and other fuels</b>			3,74	3,70
<b>04.5.1</b>	<b>Electricity</b>			3,66	3,63
04.5.1.1	04511001	Electricity	All provinces	3,66	3,63
<b>04.5.3</b>	<b>Gas</b>			0,08	0,07
04.5.3.1	04531001	Paraffin	All provinces	0,08	0,07
<b>05.</b>	<b>Furnishings, household equipment and routine maintenance of the house</b>				
<b>05.1.</b>	<b>Furniture and furnishings, carpets and other floor coverings</b>			0,41	0,37
<b>05.1.1</b>	<b>Furniture and furnishings</b>			0,41	0,37
05.1.1.1	05111001	Bedroom suite	All provinces	0,09	0,08
05.1.1.1	05111003	Lounge suite	All provinces	0,22	0,21
05.1.1.1	05111005	Dining room and kitchen furniture	All provinces	0,10	0,08
<b>05.2.</b>	<b>Household textiles</b>			0,49	0,45
<b>05.2.1</b>	<b>Household textiles</b>			0,49	0,45
05.2.1.1	05211001	Duvet cover and pillowcase set	All provinces	0,10	0,09
05.2.1.1	05211002	Blankets	All provinces	0,08	0,08
05.2.1.1	05211003	Curtains (including making and hanging charges) and material for curtains	All provinces	0,08	0,07
05.2.1.1	05211006	Bed bases and mattresses	All provinces	0,20	0,18
05.2.1.1	05211007	Sheets and/or pillowcases	All provinces	0,03	0,03
<b>05.3.</b>	<b>Household appliances</b>			0,48	0,44
<b>05.3.1</b>	<b>Major household appliances whether or not electrical</b>			0,40	0,36

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
05.3.1.1	05311002	Refrigerator/ freezer and refrigerator combination	All provinces	0,20	0,17
05.3.1.2	05312001	Washing machine	All provinces	0,08	0,08
05.3.1.3	05313002	Microwave oven	All provinces	0,04	0,04
05.3.1.3	05313004	Stove and/or oven	All provinces	0,08	0,07
<b>05.3.2</b>	<b>Small electrical household appliances</b>			0,08	0,08
05.3.2.1	05321001	Iron	All provinces	0,02	0,02
05.3.2.1	05321002	Kettle	All provinces	0,03	0,03
05.3.2.1	05321004	Toaster/ sandwich maker	WC, EC, NC, NW, MP, LP	0,00	0,00
05.3.2.1	05321006	Hotplates	All provinces	0,03	0,03
<b>05.4.</b>	<b>Glassware, tableware and household utensils</b>			0,14	0,13
<b>05.4.1</b>	<b>Glassware, tableware and household utensils</b>			0,14	0,13
05.4.1.1	05411004	Coffee mug	EC, NC, FS, KZN, NW, GP, MP, LP	0,01	0,01
05.4.1.1	05411005	Crockery	All provinces	0,03	0,03
05.4.1.1	05411006	Glassware	All provinces	0,01	0,01
05.4.1.2	05412001	Cutlery set	All provinces	0,03	0,03
05.4.1.2	05412002	Teaspoon	All provinces	0,02	0,01
05.4.1.3	05413003	Non-electrical frying pan	WC, NC, FS, KZN, NW, GP, MP	0,01	0,01
05.4.1.3	05413005	Grater	WC, EC, NC, FS, KZN, NW, GP, MP	0,01	0,01
05.4.1.3	05413006	Cooking pot	All provinces	0,02	0,02
<b>05.5.</b>	<b>Tools and equipment for house and garden</b>			0,09	0,10
<b>05.5.1</b>	<b>Major tool and equipment</b>			0,03	0,03
05.5.1.1	05511001	Power drills	WC, EC, NC, FS, NW, GP, LP	0,01	0,01
05.5.1.1	05511002	Power-driven garden tools - lawnmower	WC, NC, FS, KZN, NW, GP, MP, LP	0,02	0,02
<b>05.5.2</b>	<b>Small tools and miscellaneous accessories</b>			0,06	0,07

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
05.5.2.1	05521001	Household batteries	WC, GP	0,00	0,00
05.5.2.1	05521005	Garden hand tools (such as spades)	All provinces	0,01	0,01
05.5.2.1	05521006	Garden water sprinkler	WC, NC ,NW, GP, MP	0,02	0,02
05.5.2.1	05521008	Light bulb	All provinces	0,03	0,03
<b>05.6.</b>	<b>Goods and services for routine household maintenance</b>			2,77	2,88
<b>05.6.1</b>	<b>Non-durable household goods</b>			0,39	0,36
05.6.1.1	05611002	Laundry soap	All provinces	0,06	0,06
05.6.1.1	05611003	Washing powder	All provinces	0,21	0,19
05.6.1.1	05611004	Dish-washing liquid	All provinces	0,06	0,05
05.6.1.1	05611005	Wax shoe polish	All provinces	0,02	0,02
05.6.1.1	05611007	Indoor insecticide	All provinces	0,01	0,01
05.6.1.1	05611008	Toilet care	All provinces	0,01	0,01
05.6.1.1	05611009	Fabric softener	All provinces	0,01	0,01
<b>05.6.2</b>	<b>Domestic services and household services</b>			2,38	2,53
05.6.2.1	05621001	Domestic workers	All provinces	2,38	2,53
<b>06.</b>	<b>Health</b>				
<b>06.1.</b>	<b>Medical products, appliances and equipment</b>			0,55	0,57
<b>06.1.1</b>	<b>Pharmaceutical products</b>			0,55	0,57
06.1.1.1	06111001	Painkillers	All provinces	0,11	0,11
06.1.1.1	06111002	Cough mixture	All provinces	0,02	0,02
06.1.1.1	06111003	Vitamin and mineral supplements	All provinces	0,09	0,10
06.1.1.1	06111006	Cold and flu medication	All provinces	0,01	0,01
06.1.1.1	06111007	Heartburn (+ anti-acids)	All provinces	0,02	0,02
06.1.1.1	06111009	Sore throat lozenges	All provinces	0,01	0,01

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
06.1.1.1	06111010	Laxatives	All provinces	0,02	0,02
06.1.1.1	06111011	Prescription medicine	All provinces	0,24	0,24
06.1.1.1	06111012	Dispensing fees	All provinces	0,02	0,03
06.1.1.1	06111013	Eye drops	All provinces	0,01	0,01
<b>06.2.</b>	<b>Out-patient services</b>			0,73	0,82
<b>06.2.1</b>	<b>Medical services</b>			0,66	0,74
06.2.1.1	06211001	Private - general practitioners	All provinces	0,41	0,45
06.2.1.1	06211002	Private - gynaecologists	All provinces	0,09	0,10
06.2.1.1	06211003	Private - physicians	All provinces	0,07	0,08
06.2.1.1	06211004	Private - paediatricians	WC, FS, KZN, NW, GP, MP, LP	0,05	0,06
06.2.1.1	06211005	Public - general practitioners	WC, KZN, NW, GP, MP	0,03	0,03
06.2.1.1	06211006	Public - medical specialists	WC, KZN, NW, GP	0,01	0,02
<b>06.2.2</b>	<b>Dental services</b>			0,07	0,08
06.2.2.1	06221001	Dentists	All provinces	0,07	0,08
<b>06.3.</b>	<b>Hospital services</b>			0,05	0,05
<b>06.3.1</b>	<b>Hospital services</b>			0,05	0,05
06.3.1.1	06311001	Private - ward fees	WC, NC, FS, KZN, GP, MP, LP	0,03	0,03
06.3.1.1	06311002	Private - theatre fees	WC, NC, FS, KZN, GP, MP	0,02	0,02
<b>07.</b>	<b>Transport</b>				
<b>07.1.</b>	<b>Purchase of vehicles</b>			5,89	5,91
<b>07.1.1</b>	<b>Motor cars</b>			5,89	5,91
<b>07.1.1.1</b>	<b>Motor cars - new</b>			5,40	5,42
07.1.1.1	07111001	Hatchback	All provinces	2,13	2,18
07.1.1.1	07111002	Sedan	All provinces	2,11	2,15

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
07.1.1.1	07111003	SUV, MPV	EC, FS, GP, KZN, LP, NW, WC	0,68	0,66
07.1.1.1	07111004	New bakkie	All provinces	0,48	0,43
<b>07.1.1.2</b>	<b>Motor cars - used</b>			0,48	0,48
07.1.1.2	07112001	Hatchback	All provinces	0,18	0,19
07.1.1.2	07112002	Sedan	All provinces	0,18	0,19
07.1.1.2	07112003	SUV, MPV	WC, EC, NC, FS, KZN, GP, MP, LP	0,05	0,04
07.1.1.2	07112004	Bakkie	All provinces	0,07	0,06
<b>07.2.</b>	<b>Operation of personal transport equipment</b>			5,80	6,01
<b>07.2.1</b>	<b>Spare parts and accessories</b>			0,43	0,43
07.2.1.1	07211001	New tyres and tubes	All provinces	0,25	0,25
07.2.1.1	07211002	Shock absorbers	All provinces	0,02	0,02
07.2.1.1	07211003	Disc pads	All provinces	0,03	0,03
07.2.1.1	07211006	Spark plugs	All provinces	0,02	0,02
07.2.1.1	07211008	Clutch kits	All provinces	0,03	0,03
07.2.1.1	07211009	Battery	All provinces	0,08	0,08
<b>07.2.2</b>	<b>Fuels and lubricants</b>			4,64	4,82
07.2.2.1	07221001	Unleaded petrol	All provinces	3,34	3,47
07.2.2.1	07221002	Diesel	All provinces	1,30	1,35
<b>07.2.3</b>	<b>Maintenance and repair</b>			0,34	0,37
07.2.3.1	07231004	Car services	All provinces	0,25	0,27
07.2.3.1	07231005	Car wash/ valet services	All provinces	0,09	0,10
<b>07.2.4</b>	<b>Other services in respect of personal transport equipment</b>			0,39	0,39
07.2.4.1	07241002	Motor vehicle licence and registration fees	All provinces	0,13	0,13
07.2.4.1	07241004	Toll fees	All provinces	0,08	0,09

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
07.2.4.1	07241006	Driving lessons	All provinces	0,06	0,05
07.2.4.1	07241007	Driving licences	All provinces	0,12	0,12
<b>07.3.</b>	<b>Transport services</b>			3,05	2,43
<b>07.3.1</b>	<b>Passenger transport by railway</b>			0,08	0,09
07.3.1.1	07311001	Train fees	WC, EC, NC, KZN, NW, GP	0,08	0,09
<b>07.3.2</b>	<b>Passenger transport by road</b>			2,70	2,04
07.3.2.1	07321001	Local bus fees	All provinces	0,07	0,05
07.3.2.1	07321002	Taxi fares	All provinces	2,29	1,65
07.3.2.1	07321003	Long distance bus fares	All provinces	0,05	0,03
07.3.2.1	07321007	Car rental	All provinces	0,29	0,31
<b>07.3.3</b>	<b>Passenger transport by air</b>			0,27	0,30
07.3.3.1	07331001	Airfares	All provinces	0,27	0,30
<b>08.</b>	<b>Communication</b>				
<b>08.1.</b>	<b>Postal services</b>			0,02	0,02
<b>08.1.1</b>	<b>Postal services</b>			0,02	0,02
08.1.1.1	08111002	Renting of post boxes	All provinces	0,01	0,01
08.1.1.1	08111003	Courier services	WC, NC, FS, KZN, NW, GP, MP, LP	0,01	0,01
<b>08.2.</b>	<b>Telephone and telefax equipment</b>			0,20	0,19
<b>08.2.1</b>	<b>Telephone and telefax equipment</b>			0,20	0,19
08.2.1.1	08211001	Cellular phones	All provinces	0,20	0,19
<b>08.3.</b>	<b>Telephone and telefax services</b>			2,20	2,21
<b>08.3.1</b>	<b>Telephone and telefax services</b>			2,20	2,21
08.3.1.1	08311001	Telephone fees	All provinces	0,08	0,09
08.3.1.1	08311002	Cell phone fees	All provinces	2,04	2,04
08.3.1.1	08311004	Internet usage costs - wired	All provinces	0,05	0,05

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
08.3.1.1	08311005	Internet usage costs - wireless	All provinces	0,03	0,03
<b>09.</b>	<b>Recreation and culture</b>				
<b>09.1.</b>	<b>Audio-visual, photographic and information processing equipment</b>			0,58	0,60 <sup>1</sup>
<b>09.1.1</b>	<b>Equipment for the reception, recording and reproduction of sound and pictures</b>			0,23	0,22
09.1.1.1	09111003	Soundbars/ speakers	All provinces	0,05	0,05
09.1.1.2	09112001	Television	All provinces	0,16	0,16
09.1.1.2	09112002	Subscription television decoder	All provinces	0,02	0,01
<b>09.1.2</b>	<b>Photographic equipment</b>			0,02	0,03
09.1.2.1	09121001	Camera	All provinces	0,02	0,03
<b>09.1.3</b>	<b>Information processing equipment</b>			0,30	0,32
09.1.3.1	09131002	Laptops	All provinces	0,19	0,20
09.1.3.1	09131004	Tablets	All provinces	0,08	0,09
09.1.3.1	09131004	Printer cartridges	All provinces	0,02	0,03
<b>09.1.4</b>	<b>Recording media</b>			0,03	0,03
09.1.4.1	09141001	Pre-recorded CD/ subscription music	All provinces	0,03	0,03
<b>09.2.</b>	<b>Other major durables for recreation and culture</b>			0,01	0,02
<b>09.2.2</b>	<b>Musical instrument</b>			0,01	0,02
09.2.2.1	09221001	Musical instruments: pianos, organs and other musical instruments	WC, NC, FS, KZN, NW, GP	0,01	0,02
<b>09.3.</b>	<b>Other recreational items and equipment, gardens and pets</b>			0,61	0,66
<b>09.3.1</b>	<b>Games, toys and hobbies</b>			0,08	0,08
09.3.1.1	09311003	Doll	All provinces	0,02	0,02
09.3.1.1	09311004	Teddy bears	All provinces	0,01	0,01

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
09.3.1.1	09311005	Toy cars	All provinces	0,02	0,03
09.3.1.1	09311006	Video games	All provinces	0,03	0,02
<b>09.3.2</b>	<b>Equipment for sport, camping and open-air recreation</b>			0,21	0,23
09.3.2.1	09321001	Swimming pool chlorine	All provinces	0,11	0,12
09.3.2.1	09321003	Sleeping bag	WC, EC, NC, FS, KZN, NW, GP	0,02	0,02
09.3.2.1	09321004	Sports boots	All provinces	0,02	0,03
09.3.2.1	09321005	Swimming pool cleaning equipment	All provinces	0,05	0,05
09.3.2.1	09321006	Soccer ball	All provinces	0,01	0,01
<b>09.3.3</b>	<b>Gardens, plants and flowers</b>			0,07	0,08
09.3.3.1	09331002	Seeds	All provinces	0,04	0,05
09.3.3.1	09331004	Plant pots	All provinces	0,03	0,03
<b>09.3.4</b>	<b>Pets and related products</b>			0,25	0,27
09.3.4.1	09341001	Dog food - pellets	All provinces	0,14	0,16
09.3.4.1	09341002	Dog food - tinned	All provinces	0,03	0,03
09.3.4.1	09341003	Cat food - tinned	All provinces	0,03	0,03
09.3.4.1	09341004	Cat food - pellets	All provinces	0,05	0,05
<b>09.4.</b>	<b>Recreational and cultural services</b>			2,97	3,14
<b>09.4.1</b>	<b>Recreational and sporting services</b>			0,17	0,18
09.4.1.1	09411002	Membership fees for gymnasiums, health, sport and social clubs	All provinces	0,13	0,14
09.4.1.1	09411003	Rugby tickets	WC, EC, FS, KZN, GP, MP	0,01	0,01
09.4.1.1	09411004	Soccer tickets	WC, EC, FS, KZN, GP, MP	0,01	0,01
09.4.1.1	09411005	Cricket tickets	WC, EC, FS, KZN, GP, MP	0,02	0,02
<b>09.4.2</b>	<b>Cultural services</b>			1,08	1,12

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
09.4.2.1	09421001	Movie tickets	All provinces	0,09	0,10
09.4.2.3	09423001	Television licences	All provinces	0,04	0,04
09.4.2.3	09423002	Subscription to pay-TV channels	All provinces	0,95	0,98
<b>09.4.3</b>	<b>Games of chance</b>			1,72	1,84
09.4.3.1	09431001	Lotto ticket	All provinces	1,72	1,84
<b>09.5.</b>	<b>Newspapers, books and stationery</b>			0,58	0,61
<b>09.5.1</b>	<b>Books</b>			0,14	0,15
09.5.1.1	09511001	Top 10 books	All provinces	0,04	0,04
09.5.1.1	09511002	Textbooks	All provinces	0,10	0,11
<b>09.5.2</b>	<b>Newspapers and periodicals</b>			0,31	0,33
09.5.2.1	09521001	Newspapers	All provinces	0,27	0,28
09.5.2.1	09521002	Magazines	All provinces	0,04	0,05
<b>09.5.4</b>	<b>Stationery and drawing materials</b>			0,13	0,13
09.5.4.1	09541001	Books (including exam pads)	All provinces	0,01	0,01
09.5.4.1	09541003	Pens	All provinces	0,04	0,04
09.5.4.1	09541004	Files	All provinces	0,03	0,03
09.5.4.1	09541006	Crayons	All provinces	0,03	0,03
09.5.4.1	09541006	Printer paper	All provinces	0,02	0,03
<b>09.6.</b>	<b>Package holidays</b>			0,15	0,17
<b>09.6.1</b>	<b>Package holidays</b>			0,15	0,17
09.6.1.1	09611001	Holiday tour package	EC, GP, KZN, LP, MP, NW, WC	0,15	0,17
<b>10.</b>	<b>Education</b>				
<b>10.1.</b>	<b>Pre-primary and primary education</b>			0,71	0,78
<b>10.1.1</b>	<b>Pre-primary and primary education</b>			0,71	0,78

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
10.1.1.1	10111001	Pre-primary and primary education	All provinces	0,71	0,78
<b>10.2.</b>	<b>Secondary education</b>			0,73	0,79
<b>10.2.1</b>	<b>Secondary education</b>			0,73	0,79
10.2.1.1	10211001	Secondary education	All provinces	0,73	0,79
<b>10.4.</b>	<b>Tertiary education</b>			1,00	1,05
<b>10.4.1</b>	<b>Tertiary education</b>			1,00	1,05
10.4.1.1	10411001	Tertiary education and education not definable by level	All provinces	1,00	1,05
<b>11.</b>	<b>Restaurants and hotels</b>				
<b>11.1.</b>	<b>Catering services</b>			2,51	2,20
<b>11.1.1</b>	<b>Restaurants, cafés and the like</b>			2,51	2,20
11.1.1.1	11111001	Red meat-based products	All provinces	0,32	0,27
11.1.1.1	11111002	Poultry-based products	All provinces	0,61	0,51
11.1.1.1	11111003	Fish and other seafood-based products	All provinces	0,20	0,17
11.1.1.1	11111004	Pizzas	All provinces	0,35	0,30
11.1.1.1	11111005	Pies	All provinces	0,06	0,05
11.1.1.1	11111006	Cold beverages	All provinces	0,17	0,17
11.1.1.1	11111007	Hot beverages	WC, FS, KZN, NW, GP, MP, LP	0,04	0,04
11.1.1.1	11111008	Alcoholic beverages	All provinces	0,45	0,43
11.1.1.1	11111009	Hamburgers	All provinces	0,31	0,26
<b>11.2.</b>	<b>Accommodation services</b>			0,98	1,05
<b>11.2.1</b>	<b>Accommodation services</b>			0,98	1,05
11.2.1.1	11211001	University boarding fees	All provinces	0,06	0,05

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
11.2.1.1	11211003	Bed and breakfast/ guesthouses	All provinces	0,05	0,05
11.2.1.1	11211004	Hotels	All provinces	0,87	0,94
<b>12.</b>	<b>Miscellaneous goods and services</b>				
<b>12.1.</b>	<b>Personal care</b>			1,43	1,38
<b>12.1.3</b>	<b>Appliances, articles and products for personal care</b>			1,43	1,38
12.1.3.1	12131001	Shampoo	All provinces	0,03	0,04
12.1.3.1	12131002	Conditioner	WC, NC, FS, NW, GP	0,01	0,01
12.1.3.1	12131003	Tissues	All provinces	0,03	0,03
12.1.3.1	12131004	Sanitary towels	All provinces	0,05	0,04
12.1.3.1	12131005	Tampons	All provinces	0,01	0,01
12.1.3.1	12131006	Bar of bath soap	All provinces	0,18	0,16
12.1.3.1	12131007	Toothbrush	All provinces	0,03	0,03
12.1.3.1	12131008	Skin lotion	All provinces	0,26	0,24
12.1.3.1	12131010	Toilet paper	All provinces	0,15	0,16
12.1.3.1	12131011	Disposable nappies	All provinces	0,32	0,30
12.1.3.1	12131012	Toothpaste	All provinces	0,07	0,07
12.1.3.1	12131013	Aerosol deodorant	All provinces	0,01	0,01
12.1.3.1	12131014	Hair relaxer	All provinces	0,04	0,04
12.1.3.1	12131015	Hair colour	WC, NC, FS, NW, GP, LP	0,00	0,00
12.1.3.1	12131016	Hair pieces	All provinces	0,03	0,03
12.1.3.1	12131017	Bubble bath	All provinces	0,02	0,02
12.1.3.1	12131018	Powder (including baby powder)	All provinces	0,11	0,11
12.1.3.1	12131017	Wipes	All provinces	0,03	0,03
12.1.3.1	12131018	Make-up - foundation	All provinces	0,03	0,03

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
12.1.3.1	12131017	Non-electrical shavers and shaver blades	All provinces	0,02	0,02
<b>12.3.</b>	<b>Personal effects not elsewhere classified</b>			0,34	0,34
<b>12.3.1</b>	<b>Jewellery, clocks and watches</b>			0,11	0,12
12.3.1.1	12311001	Watches	All provinces	0,11	0,12
<b>12.3.2</b>	<b>Other personal effects</b>			0,23	0,22
12.3.2.1	12321001	Travelling bags	All provinces	0,06	0,06
12.3.2.1	12321002	School bags	All provinces	0,12	0,11
12.3.2.2	12322001	Goods for children and babies (prams and push-carts)	All provinces	0,03	0,03
12.3.2.2	12322003	Sunglasses	All provinces	0,02	0,02
<b>12.4.</b>	<b>Social protection</b>			0,36	0,38
<b>12.4.1</b>	<b>Social protection services</b>			0,36	0,38
12.4.1.2	12412001	Crèche fees	All provinces	0,36	0,38
<b>12.5.</b>	<b>Insurance</b>			9,45	9,89
<b>12.5.2</b>	<b>Insurance connected with the dwelling</b>			1,06	1,15
12.5.2.1	12521001	Insurance on buildings	All provinces	0,74	0,79
12.5.2.1	12521002	Insurance on contents of dwellings	All provinces	0,32	0,36
<b>12.5.3</b>	<b>Insurance connected with health</b>			6,60	7,11
12.5.3.1	12531001	Medical-aid contributions	All provinces	6,60	7,11
<b>12.5.4</b>	<b>Insurance connected with transport</b>			0,59	0,64
12.5.4.1	12541001	Insurance for private transport	All provinces	0,59	0,64
<b>12.5.5</b>	<b>Other insurance</b>			1,20	0,99
12.5.5.1	12551001	Funeral policies	All provinces	1,20	0,99

COICOP code	Indicator product code	Indicator product	Provincial baskets	Weight	
				Total country	Headline
<b>12.6.</b>	<b>Financial service not elsewhere classified</b>			1,48	1,53
<b>12.6.2</b>	<b>Financial service not elsewhere classified</b>			1,48	1,53
12.6.2.1	12621001	Bank charges	All provinces	1,48	1,53
<b>12.7.</b>	<b>Other services not elsewhere classified</b>			1,58	1,29
<b>12.7.1</b>	<b>Other services not elsewhere classified</b>			1,58	1,29
12.7.1.1	12711001	Funeral expenses	All provinces	1,52	1,25
12.7.1.1	12711002	Gravestones and maintenance of graves (excluding unveiling)	All provinces	0,06	0,04

**Annexure 2 – Collection methodology**

3-digit COICOP code and description	5-digit COICOP code and description	Respondents	Collection method	Frequency
01.1 Food 01.2 Non-alcoholic beverages	See Annexure 1	Supermarkets, convenience stores, specialty shops, e.g. butcheries, green grocers and markets	Field collection	Monthly
02.1 Alcoholic beverages 02.2 Tobacco	02.1.1.1 Spirits 02.1.2.1 Wine 02.1.3.1 Beer 02.2.1.1 Cigarettes	Liquor stores and supermarkets	Field collection	Monthly
03.1 Clothing 03.2 Footwear	See Annexure 1	Clothing and footwear retailers, i.e. chain stores and smaller independent stores	Field collection	Monthly
04.1 Actual rentals for housing	04.1.1.1 Actual rentals paid by tenants	Letting agents in Stats SA's rental survey	Field collection	Mar, Jun, Sep, Dec [see section 7.1.4]
04.2 Owners' equivalent rent	04.2.1.1 Owners' equivalent rent	Letting agents in Stats SA's rental survey	Field collection	Mar, Jun, Sep, Dec [see section 7.1.4]
04.3 Maintenance and repair of the dwelling	04.3.1.1 Materials for the maintenance and repair of the dwelling	Hardware and DIY stores	Field collection	Monthly
04.3 Maintenance and repair of the dwelling	04.3.2.1 Services for maintenance	Electricians and plumbers in the CPI collection areas	Plumbers and electricians	May, Nov
04.4 Water supply and miscellaneous services connected to the dwelling	04.4.1.1 Water supply 04.4.4.1 Other services relating to the dwelling not elsewhere classified	All municipalities within CPI collection areas	Email, internet collection	Water supply: Jul/Aug depending on when tariff changes are implemented Assessment rates: Jul, Aug

3-digit COICOP code and description	5-digit COICOP code and description	Respondents	Collection method	Frequency
04.5 Electricity, gas and other fuels	04.5.1.1 Electricity 04.5.3.1 Paraffin	All municipalities within CPI collection areas	Email, internet collection	Jul, Aug
05.1 Furniture and furnishings, carpets and other flooring	05.1.1.1 Furniture and furnishings	Furniture outlets and other major retailers who sell furniture in addition to other products, e.g. hypermarkets	Field collection	Monthly
05.2 Household textiles	05.2.1.1 Household textiles	Furniture outlets, hypermarkets and other independent suppliers of household textiles	Field collection	Monthly
05.3 Household appliances	05.3.1.1 Refrigerator, freezer and fridge-freezer 05.3.1.2 Washing machine 05.3.1.3 Electrical stove and oven, microwave oven 05.3.2.1 Small electrical household appliances	Furniture outlets, hypermarkets and other major retailers of appliances, and other independent retailers	Field collection	Monthly
05.4 Glassware, tableware and household utensils	05.4.1.1 Crockery and glassware 05.4.1.2 Cutlery set and teaspoons 05.4.1.3 Kitchen and domestic utensils	Retailers of glass, tableware and household utensils	Field collection	Monthly
05.5 Tools and equipment for house and garden	05.5.1.1 Major tools and equipment 05.5.2.1 Small tools and miscellaneous accessories	Major retailers of tools and equipment for house and garden, e.g. hardware stores, hypermarkets and other independent retailers	Field collection	Monthly
05.6 Goods and services for routine household maintenance	05.6.1.1 Non-durable household goods 05.6.2.1 Domestic services	Supermarkets, hypermarkets and other independent retailers; the Unemployment Insurance Fund is a data source for domestic worker wages	Field collection Unemployment Insurance Fund database	Monthly Domestic worker wages: Mar, Jun, Sep, Dec
06.1 Medical products, appliances and equipment	06.1.1.1 Pharmaceutical products	Pharmacies, supermarkets and other retailers of pharmaceutical products	Email collection	Monthly

3-digit COICOP code and description	5-digit COICOP code and description	Respondents	Collection method	Frequency
06.2 Out-patient services	06.2.1.1 Medical services 06.2.2.1 Dental services	Medical services include general practitioners, gynaecology, paediatricians and physicians; National Department of Health for public general practitioners and medical specialists	Telephonic collection Email and telephonic collection for public hospitals	Feb (telephone) Apr (email, telephone – public hospitals)
06.3 Hospital services	06.3.1.1 Hospital services	Private hospital groups	Email	Feb, May, Aug, Nov for private ward and private theatre fees
07.1 Purchase of vehicles	07.1.1.1 Purchase of new motor cars	Price list from major newspapers and websites for new vehicle prices	Newspapers/internet collection	Monthly
07.1 Purchase of vehicles	07.1.1.2 Purchase of second-hand motor cars	Retail selling value for stock in specified condition obtained from TransUnion Auto Dealers' Guide	Online access	Monthly
07.2 Operation of personal transport equipment	07.2.1.1 Spare parts and accessories	Spares outlets	Field collection	Monthly
07.2 Operation of personal transport equipment	07.2.2.1 Fuels and lubricants	Department of Mineral Resources and Energy	Internet collection	Monthly
07.2 Operation of personal transport equipment	07.2.3.1 Maintenance and repair	Motor vehicle maintenance services	Telephonic collection	Monthly
07.2 Operation of personal transport equipment	07.2.4.1 Other services in respect of personal transport equipment	Department of Transport	Email collection	Monthly
07.2 Operation of personal transport equipment	07.2.4.1 Other services in respect of personal transport equipment	Sample of toll gates based on annual traffic volumes	Internet collection	Mar

3-digit COICOP code and description	5-digit COICOP code and description	Respondents	Collection method	Frequency
07.3 Transport services	07.3.1.1 Passenger transport by railway	Rail company providing daily commuter services and Gautrain	Email and telephonic collection	Mar, Jun, Sep, Dec
07.3 Transport services	07.3.2.1 Passenger transport by road	Bus operators, taxi ranks and other departure points	Field collection and Internet collection	Mar, Jun, Sep, Dec
07.3 Transport services	07.3.3.1 Passenger transport by air	Airlines which provide daily scheduled flights to and from destinations across South Africa; these are termed domestic flights	Internet collection	Monthly
08.1 Postal services	08.1.1.1 Postal services	SA Post Office	Telephonic collection	Jan
08.1 Postal services	08.1.1.1 Postal services	Courier service providers	Email collection	Monthly
08.2 Telephone and telefax equipment	08.2.1.1 Telephone and telefax equipment	Cell phone retailers	Field collection	Monthly
08.3 Telephone and telefax services	08.3.1.1 Telephone and telefax services	Telkom and cell phone operators	Internet collection	Monthly
09.1 Audio-visual, photographic and information processing equipment	09.1.1.2 Television sets, video-cassette players and recorders	Retailers of electronic and computer appliances	Field collection	Monthly
09.1 Audio-visual, photographic and information processing equipment	09.1.2.1 Photographic and cinematographic equipment	Retailers of electronic and computer appliances	Field collection	Monthly

<b>3-digit COICOP code and description</b>	<b>5-digit COICOP code and description</b>	<b>Respondents</b>	<b>Collection method</b>	<b>Frequency</b>
09.1 Audio-visual, photographic and information processing equipment	09.1.3.1 Information processing equipment	Retailers of electronic and computer appliances	Field collection	Monthly
09.1 Audio-visual, photographic and information processing equipment	09.1.4.1 Recording media	Streaming services	Internet collection	Monthly
09.2 Other major durables for recreation and culture	09.2.2.1 Musical instruments	Musical instrument stores and other major retailers such as hypermarkets	Field collection	Monthly
09.3 Other recreational items and equipment, gardens and pets	09.3.1.1 Games, toys and hobbies	Retailers of games and toys	Field collection	Monthly
09.3 Other recreational items and equipment, gardens and pets	09.3.2.1 Equipment for sport, camping and open-air recreation	Retailers of swimming pool equipment, camping equipment and sports equipment	Field collection	Monthly
09.3 Other recreational items and equipment, gardens and pets	09.3.3.1 Gardens, plants and flowers	Nurseries and retail outlets	Field collection	Monthly
09.3 Other recreational items and equipment, gardens and pets	09.3.4.1 Pets and related products	Retailers of pet food and requirements	Field collection	Monthly

3-digit COICOP code and description	5-digit COICOP code and description	Respondents	Collection method	Frequency
09.4 Recreational and cultural services	09.4.1.1 Recreational and sporting services	Chain and independent gyms, sport stadiums	Gym fees: Internet and telephonic Rugby: Internet Soccer: Telephonic Cricket: Internet	Gym fees: Jan, Apr, July, Oct Rugby: Feb. Soccer: Aug, Sep, Oct, Nov, Dec, Jan, Feb, Mar, Apr, May Cricket: Sep
09.4 Recreational and cultural services	09.4.2.1 Cinemas, theatres, concerts	Cinemas	Internet collection	Monthly
09.4 Recreational and cultural services	09.4.2.3 Television and radio taxes and hire of equipment	South African Broadcasting Corporation (SABC)	Internet collection	Apr, Oct
09.4 Recreational and cultural services	09.4.2.3 Television and radio taxes and the hire of equipment	Subscription to paid TV channels	Internet collection	Monthly
09.4 Recreational and cultural services	09.4.3.1 Games of chance	Gambling Board of South Africa	Internet collection	Jan
09.5 Newspapers, books and stationery	09.5.1.1 Books	Book sellers with branches nationwide maintaining a top 10 list	Internet collection	Monthly
09.5 Newspapers, books and stationery	09.5.1.1 Books	University textbooks from different book sellers	Internet collection	Monthly
09.5 Newspapers, books and stationery	09.5.2.1 Newspapers and periodicals	Marketing departments of sampled newspapers and magazines	Telephonic collection	Monthly
09.5 Newspapers, books and stationery	09.5.4.1 Stationery and drawing materials	Stationery retailers	Field collection	Monthly
09.6 Package holidays	09.6.1.1 Package holidays	Travel agencies	Telephonic collection	Monthly

<b>3-digit COICOP code and description</b>	<b>5-digit COICOP code and description</b>	<b>Respondents</b>	<b>Collection method</b>	<b>Frequency</b>
10.1 Pre-primary and primary education	10.1.1.1 Pre-primary and primary education	Pre-primary and primary schools	Telephonic collection	Mar
10.2 Secondary education	10.2.1.1 Secondary education	Secondary schools	Telephonic collection	Mar
10.4 Tertiary education	10.4.1.1 Tertiary education	Tertiary education institutions within CPI collection areas	Email collection	Mar
11.1 Catering services	11.1.1.1 Restaurants 11.1.1.2 Cafés, bars and the like (take away outlets)	Chain and independent restaurants and take away outlets	Field and internet collection	Monthly
11.2 Accommodation services	11.2.1.1 Accommodation services	3-star hotels and bed and breakfast accommodation	Internet and telephonic collection	Monthly
11.2 Accommodation services	11.2.1.1 Accommodation services	All universities within CPI collection areas	Email collection	Mar
12.1 Personal care 12.3 Personal effects not elsewhere classified	See Annexure 1	Supermarkets, convenience stores, specialty shops, e.g. jewellery stores and others	Field collection	Monthly
12.4 Social protection	12.4.1.2 Crèches, nurseries	Crèches	Telephonic collection	Mar
12.5 Insurance	12.5.2.1 Insurance connected with the dwelling	Sample of short-term insurance companies based on market share and customers' brand loyalty levels	Email and telephonic collection	Jan, Jul

3-digit COICOP code and description	5-digit COICOP code and description	Respondents	Collection method	Frequency
12.5 Insurance	12.5.3.1 Insurance connected with health	Medical schemes	Internet, email, telephonic collection	Feb
12.5 Insurance	12.5.4.1 Insurance connected with transport	Sample of short-term insurance companies; mainstream insurance companies and specialist motor vehicle insurance companies are included in the sample	Email and telephonic collection	Mar, Jun, Sep, Dec
12.5 Insurance	12.5.5.1 Other insurance	Financial institutions, funeral service providers	Internet collection	Jan, Apr, Jul, Oct
12.6 Financial services not elsewhere classified	12.6.2.1 Financial services not elsewhere classified	Sample of banks	Internet collection	Monthly
12.7 Other services not elsewhere classified	12.7.1.1 Other services	Funeral service providers	Telephonic collection	Jan, Apr, Jul, Oct

**Annexure 3 – Medical product codes and corresponding information**

Product code	Indicator product	Quote no.	Code	Quote description
06211001	Private - General practitioners	001	0190	Consultation fee - Patients with medical aid
		002	0190	Consultation fee - Private patients
06211002	Private - Gynaecologists	001	0190	Consultation fee - Patients with medical aid
		002	0190	Consultation fee - Private patients
		005	3617	Ultrasound obstetrics - Patients with medical aid
		006	3617	Ultrasound obstetrics - Private patients
06211003	Private - Physicians	001	0190	Consultation fee - Patients with medical aid
		002	0190	Consultation fee - Private patients
06211004	Private - Paediatricians	001	0190	Consultation fee - Patients with medical aid
		002	0190	Consultation fee - Private patients
06211005	Public - General practitioners	001	001	Consultation fee - Uniform patient fee
06211006	Public - Medical practitioners	001	001	Consultation fee - Uniform patient fee
06221001	Private - Dentists	001	8101	Oral examination - Patients with medical aid
		002	8101	Oral examination - Private patients
		003	8341	Amalgam restorations - Patients with medical aid
		004	8341	Amalgam restorations - Private patients

## Glossary

<b>Acquisitions approach</b>	The acquisitions approach measures changes in the price paid by householders for net acquisitions of homes, purchased from the corporate or the public sector. In practice, this means homes built by developers or the state and sold to households for the first time. It includes major additions and alterations to existing homes.
<b>Aggregate</b>	A set of transactions relating to a specified flow of goods and services, such as the total purchases made by resident households of consumer goods and services in some period. The term “aggregate” is also used to mean the value of the designated set of transactions.
<b>Aggregation</b>	The process of combining or adding different sets of price changes to obtain larger sets of price changes. The larger set is described as having a higher level of aggregation than the sets of which it is composed.
<b>Base period</b>	The period in which the index is set to 100 (this is the index reference period).
<b>Basket</b>	A specified set of goods and services. In a CPI context, the set may comprise the actual quantities of consumption goods or services acquired or used by households in some period.
<b>Bias</b>	A systematic tendency for the calculated CPI to diverge from some ideal or preferred index, resulting from the method of data collection or processing, or the index formula used.
<b>Category</b>	In COICOP: classification of goods and services at 2-digit level.
<b>Chain index</b>	An index number in which the value in any given period is related to a base in the previous period, as distinct from one which is related to a fixed base (OECD).
<b>Chaining</b>	Joining together two indices that overlap in one period by rescaling one of them to make its value equal to that of the other in the same period, thus combining them into a single time series. More complex methods may be used to link together indices that overlap by more than one period (OECD).
<b>Class</b>	In COICOP: classification of goods and services at 3-digit level.
<b>Collection frequency</b>	Frequency of data collection, e.g. monthly, quarterly or annually.
<b>Collection method</b>	The methods of collection include the use of direct (field) collection, internet, email and fax.
<b>Consumer price index</b>	A monthly or quarterly price index compiled and published by an official statistical agency that measures changes in the prices of consumption goods and services acquired or used by households. Its exact definition may vary from country to country.
<b>Consumption expenditure</b>	Expenditure on goods and services acquired and privately used by household members, including imputed values for items produced and consumed by the household itself.

<b>Cost of living index</b>	An index that measures the change between two periods in the minimum expenditures that would be incurred by a utility-maximising consumer, whose preferences or tastes remain unchanged, in order to maintain a given level of utility (or standard of living or welfare).
<b>CPI collection areas</b>	The cities, towns or municipalities from which sample prices for indicator products are collected.
<b>CPI compilation</b>	The process of calculating the CPI.
<b>CPI core index</b>	CPI excluding items that are policy-related, seasonal, or volatile.
<b>Data editing</b>	A process of cleaning raw data to remove coverage or content errors by applying a set of pre-determined rules.
<b>Deflator</b>	A price index that is used to divide the value of some aggregate in order to revalue its quantities at the prices of the index reference period.
<b>Democratic weights</b>	Each household is given equal weight in the calculation of the index, irrespective of the size of its expenditures.
<b>Diary method</b>	A data collection method whereby respondents are given open-ended forms (diaries) to record all purchases (acquisitions) on a daily basis.
<b>Domestic worker</b>	A person employed to work in a household as a cleaner, cook, nanny, driver, gardener, etc.
<b>Durables</b>	A consumption good that can be used repeatedly or continuously for purposes of consumption over a long period of time, typically several years.
<b>Dwelling unit</b>	Structure or part of a structure or group of structures occupied or meant to be occupied by one or more than one household. Includes a structure or part of a structure that is vacant and/or under construction, but can be lived in at the time of the survey. Includes units in collective living quarters.
<b>Elementary aggregates</b>	The smallest aggregate for which expenditure data are available and used for CPI purposes. The values of the elementary aggregates are used to weight the price indices for elementary aggregates to obtain higher-level indices.
<b>Expenditure weights</b>	See weights.
<b>Field collection</b>	The direct collection of prices from outlets by fieldworkers (price collectors).
<b>Geographical CPI areas</b>	See CPI collection areas.
<b>Geometric mean</b>	A method of calculating a type of average by taking the nth root of the product of n items.
<b>Geometric Laspeyres index</b>	A weighted geometric average of the price relatives using the expenditure shares of the weights reference period as weights. Also called Logarithmic Laspeyres index.
<b>Gross domestic product</b>	Growth domestic product is the total value of goods and services produced within the geographic boundaries of a country in a specified period of time.
<b>Group</b>	In COICOP: classification of goods and services at 4-digit level.

<b>Head office collection</b>	The collection of prices by staff based at Stats SA head office via internet, email and fax.
<b>Headline CPI</b>	This monthly price index is compiled and published measuring changes in the prices of consumption goods and services for all urban areas.
<b>Household</b>	Households may be individual persons living alone or groups of persons living together who make common provision for food or other essentials for living.
<b>Household expenditure</b>	Total amount spent by household when acquiring goods and services over a given period of time.
<b>Household expenditure survey</b>	Sample survey of households in which the households are asked to provide data on, or estimates of, the amounts they spend on consumption goods and services over a given period of time.
<b>Imputation</b>	Data imputation is the substitution of estimated values for missing or inconsistent data items (fields) (OECD).
<b>Index number</b>	An index number is a numerical value comparing a price or quantity or some other variable with a base value.
<b>Index reference period</b>	The period in which an index is set to 100.
<b>Indexation</b>	The periodic adjustment of the money values of regular scheduled payments based on the movement of the CPI or some other price index. The payments may be wages or salaries, social security or pensions, other social security benefits, rents, interest payments, etc.
<b>Indicator products</b>	Representative products within an elementary aggregate for which a sample of prices is collected, usually from a sample of different outlets. In COICOP: classification of goods and services at 8-digit level.
<b>Inflation</b>	A persistent change in the general level of prices. In finance, inflation is a continuous decline in the value of money, which is reflected in the ever-increasing prices of goods and services. Two measures of inflation are most often used, namely monthly inflation and annual inflation.
<b>Inflation rate</b>	The percentage change in the CPI.
<b>Inflation target</b>	In setting monetary and anti-inflationary policy, the Treasury determines a range or target in the chosen inflation measure (e.g. headline CPI) as part of an approach to reduce inflation. The central bank adjusts chosen financial instruments (e.g. interest rates) in order to contain inflation within the target.
<b>Initiation</b>	Initiation occurs when a Structured Product Description (SPD) form is completed for an item for the first time.
<b>Jevons price index</b>	An elementary price index defined as the unweighted geometric average of the sample price relatives.

<b>Laspeyres price index</b>	A basket index in which the basket is composed of actual goods and services in earlier periods. It can be expressed as a weighted arithmetic average of the price relatives that uses the expenditure shares in the earlier period as weights.
<b>Link factor</b>	A ratio used to join a new index series to an old index series to form a continuous series.
<b>Linking</b>	Splicing together two consecutive sequences of price observations, or price indices, that overlap in one or more periods. When the two sequences overlap by a single period, the usual procedure is simply to rescale one or other sequence so that the value in the overlap period is the same in both sequences and the spliced sequences form one continuous series.
<b>Minibus taxi</b>	A motor vehicle that usually sits about 15 passengers and is used for public transport in South Africa, e.g. Toyota Hiace (Siyaya).
<b>Municipality</b>	A generic term describing the unit of government in the third sphere responsible for local government in a geographically demarcated area. It includes district, local and metropolitan municipalities.
<b>Non-durables</b>	Household items that do not last long, for example food and personal care items. Households acquire these items on a daily, weekly or monthly basis.
<b>Ottawa group</b>	This international expert group is also known as the United Nations International Working Group on Price Indices. The group focuses on applied research in the area of consumer price indices.
<b>Owner-occupied housing</b>	Dwellings owned by the households that live in them. The dwellings are fixed assets that their owners use to produce housing services for their own consumption, these services usually being included within the scope of the CPI. The rents may be imputed by the rents payable on the market for equivalent accommodation or by user costs.
<b>Owners' equivalent rent</b>	The cost of consuming a housing service. It is the opportunity cost incurred by owners who live in their own home rather than renting it out.
<b>Payments approach</b>	Payments for a particular good should be allocated to the period in which they were made, irrespective of whether the product was delivered (consumed) or not. This approach is not generally used in CPIs.
<b>Plutocratic weights</b>	Households are given different weights in the calculation of the index according to their relative importance, which is mostly based on expenditure.
<b>Price index</b>	A price index is a normalised average (typically a weighted average) of prices for a given class of goods or services in a given region, during a given interval of time. It is a statistic designed to help to compare how these prices, taken as a whole, differ between time periods or geographical locations.

<b>Price relative</b>	The ratio of the price of an individual product in one period to the price of that same product in some other period.
<b>Primary sampling unit</b>	Geographical area comprising one or more enumeration areas of the same type (and therefore not necessarily contiguous) that together have at least one hundred dwelling units.
<b>Product</b>	In COICOP: classification of goods and services at 5-digit level.
<b>Provincial basket</b>	A specified set of goods and services in a specific province. In a CPI context, the set may comprise the actual quantities of consumption goods or services acquired or used by households in some period.
<b>Rebasing</b>	This refers to changing the index reference period.
<b>Recall method</b>	A data collection method whereby respondents are asked to recall information for a survey reference period several months prior to the current survey month.
<b>Reference population</b>	The set of households included within the scope of the index.
<b>Regulated prices</b>	Regulated prices are those administered prices that are monitored and controlled by government policy. To this end, price regulation does not necessarily imply the presence of an economic regulator, but the restriction on the extent to which prices may vary, depending on government's policy objective. Products and services included are water, electricity, paraffin, petrol, diesel, telephone fees and cell phone calls.
<b>Rental equivalence</b>	The estimation of the imputed rents payable by owner-occupiers based on the rents payable on the market for accommodation of the same type.
<b>Respondent</b>	The person or organisation that answers questions or completes a questionnaire.
<b>Reweighting</b>	Replacing the weights used in an index with a new set of weights.
<b>Southern African Development Community (SADC)</b>	An inter-governmental organisation headquartered in Gaborone, Botswana. Its goal is to further socio-economic cooperation and integration as well as political and security cooperation among 16 southern African states.
<b>Sampled product</b>	In COICOP: classification of goods and services at 12-digit level.
<b>Sampling</b>	Selecting elements from a population in such a way that they are representative of the population.
<b>Sampling frame</b>	A comprehensive list of distinct and distinguishable units within a population from which a sample is drawn.
<b>Scope</b>	The set of products for which a price index is intended to measure price changes. The scope of a CPI will generally be defined in terms of a designated set of consumption goods and services purchased by a designated set of households.
<b>Semi-durables</b>	Semi-durable goods differ from durable goods in that their expected lifetime of use, though more than one year, is often significantly shorter and their purchasers' value is substantially less.

<b>Services</b>	A service is the non-material counterpart of a physical good. A service provision comprises a sequence of activities that does not result in ownership of the outcome, and this is what fundamentally differentiates it from furnishing someone with physical goods.
<b>Substitution</b>	<ul style="list-style-type: none"> <li>– of outlets: substitution of similar outlets occurs to replace outlets that have closed down.</li> <li>– of products: substitution of similar products occurs to replace items that have become permanently unavailable (i.e. items reported as “Permanently unavailable” on the pricing form).</li> </ul>
<b>Substitution bias</b>	This is generally understood to be the bias that results when a basket index is used to estimate a cost of living index, because a basket index cannot take account of the effects on the cost of living of the substitutions made by consumers in response to changes in relative prices. In general, the earlier the period to which the basket relates, the greater the upward bias in the index.
<b>Survey</b>	A process which collects, examines, and reports on data concerning variables of interest for a reference period.
<b>Survey reference period</b>	The period of time relevant for a particular survey.
<b>System of National Accounts (SNA)</b>	A coherent, consistent, and integrated set of macroeconomic accounts, balance sheets, and tables based on a set of internationally agreed concepts, definitions, classifications, and accounting rules. Household income and consumption expenditure accounts form part of the SNA. The expenditure data are one of the sources that are used to estimate expenditure weights for CPI purposes.
<b>Trimmed mean</b>	An average rate of inflation after “trimming” away a certain percentage of the distribution of price changes at both ends of that distribution.
<b>Unit status code</b>	Items selected for pricing in outlets are subject to changes in their collection status. The item status is tracked using a set of codes called unit status codes (USCs).
<b>Urban</b>	An urban area, or built-up area, is a human settlement with a high population density and infrastructure of built environment.
<b>User cost</b>	The cost incurred over a period of time by the owner of a fixed asset or consumer durable as a consequence of using it to provide a flow of capital or consumption services. User cost consists mainly of the depreciation of the asset or durable (measured at current prices and not at historic cost) plus the capital, or interest, cost.
<b>Utility</b>	The satisfaction derived from consumption of a good or service.
<b>Value</b>	Price times quantity. The value of the expenditures on a set of homogeneous products can be factored uniquely into its price and quantity components.
<b>Volume seller</b>	The volume seller is based on the quantity sold. In general, the volume seller is assumed to be the brand and unit with the most shelf space allocated to it.

<b>Weights</b>	A set of numbers summing to unity that are used to calculate weighted averages. Weights represent the relevant importance of the indicator product in a subgroup. The weight of a product is calculated by dividing household expenditure on that product by total household expenditure on all goods and services.
<b>Weights reference period</b>	The period, usually one or more years, whose expenditures serve as weights for the index. The period whose expenditure shares serve as the weights for a Young index.
<b>Young index</b>	An index calculated as a weighted arithmetic average of the individual price relatives, holding constant the expenditure shares of the weights reference period.

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