



## Box 1 The reweighted and rebased consumer price index

In January 2022, Statistics South Africa (Stats SA) published the most recently updated consumer price index (CPI) basket of goods and services with their corresponding weights, according to the classification of individual consumption by purpose (COICOP). Although the reference period for the new weights is 2019, the indices will be rebased to December 2021 = 100.<sup>1</sup> This update follows the previous update in January 2017<sup>2</sup> with December 2016 as the reference period for the weights. These regular revisions are in accordance with international best practice, which requires the CPI basket to be updated at least every five years. This ensures that the CPI reflects the most recent consumer spending patterns, and that the reference period of the index remains appropriate and recent.

According to international best practice, spending data from a comprehensive household expenditure survey should preferably be used to update the CPI basket and weights, as was the case in the previous update when the results from Stats SA's 2014/15 *Living Conditions Survey (LCS)* were used. However, Stats SA has not been able to conduct a household expenditure survey over the past five years due to budget constraints. In the absence of a household expenditure survey, an alternative method for updating the CPI basket was applied, and although not the preferred method, it is still consistent with international best practice. The previous December 2016 weights were adjusted with the growth rates of household final consumption expenditure (HFCE), as measured in the estimates of national accounts between 2016/17 (i.e. the average of 2016 and 2017) and 2019, to derive the 2019 weights. Stats SA used the recently benchmarked estimates of gross domestic product (GDP), including HFCE, which were published in August 2021<sup>3</sup>, for this reweighting exercise. The benchmarking raised the overall level of household expenditure and provided new information on spending changes between product categories.

The year 2019 was chosen as the reference period for the compilation of the new CPI basket and weights as this period preceded the severe distortions to economic aggregates and spending patterns caused by the coronavirus disease 2019 (COVID-19) pandemic in 2020. One of the benefits of using the recently benchmarked HFCE data is that no substantial revisions are foreseen due to the national accounts statistics having recently been benchmarked. Unlike in previous rounds, expenditure values have not been price-updated due to the possible price-distorting effects of COVID-19 on inflation outcomes.

Although the national accounts do not provide the same level of product, geographical and demographic detail as a household expenditure survey, they have the advantage of deriving expenditure estimates from a wide range of data sources and methods. At the most detailed level, the new weights were derived by applying the appropriate growth rates from the HFCE components to the current rand values of the December 2016 CPI weights. The new CPI expenditure values were then aggregated through the classification structure. The national accounts only provide expenditure for the country as a whole, so 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 followed to derive the provincial and expenditure decile CPI weights.

The new CPI basket of goods and services contains 415 items compared with 404 items in the previous basket. A total of 14 products were added and 2 products were removed, along with combining and splitting some products. The new products included in the CPI basket are those that attracted a significant share of consumer spending in 2019, as determined through detailed sales information from major retailers.

### Products added to and removed from the CPI basket

#### New products added

##### Food and non-alcoholic beverages

- Cappuccino sachets
- Dairy fruit juice blends
- Jam
- Pureed baby food
- Samp

##### Alcoholic beverages

- Gin

##### Household contents and services

- Fabric softener
- Floor and wall tiles

#### Products removed

1 For the complete set of new CPI weights published by Stats SA, see [http://www.statssa.gov.za/?page\\_id=1854&PPN=P0141.5&SCH=73241](http://www.statssa.gov.za/?page_id=1854&PPN=P0141.5&SCH=73241).

2 For a discussion of the previous CPI weights and basket update, see 'Box 2: The consumer price index reweighted and rebased' on page 24 in the March 2017 edition of the *Quarterly Bulletin*, available at <https://www.resbank.co.za/en/home/publications/publication-detail-pages/quarterly-bulletins/boxes/2017/7744>.

3 For the national accounts statistics, see [http://www.statssa.gov.za/?page\\_id=1854&PPN=Report%2004-04-04&SCH=72991](http://www.statssa.gov.za/?page_id=1854&PPN=Report%2004-04-04&SCH=72991).

### Products added to and removed from the CPI basket (continued)

| New products added            | Products removed              |
|-------------------------------|-------------------------------|
| <b>Recreation and culture</b> |                               |
| Printer cartridges            | Antennas and satellite dishes |
| Printer paper                 | DVD players                   |
| Soundbars and speakers        |                               |
| <b>Miscellaneous goods</b>    |                               |
| Makeup (foundation)           |                               |
| Razors                        |                               |
| Wipes                         |                               |

Source: Stats SA

The composition of the basket also changed slightly, with two products combined into one in two instances and one product split into two, while one product was renamed.

### Other changes to the CPI basket

| 2016 basket              | 2019 basket                                       |
|--------------------------|---|
|                          | <b>Combined into</b>                              |
| Special maize meal       | Maize meal  |
| Super maize meal         |   |
| Energy-saving lightbulbs | Lightbulbs  |
| Traditional lightbulbs   |   |
|                          | <b>Split between</b>                              |
| Internet usage           | Wired (fibre, ADSL)                               |
|                          | Wireless (cellular)                               |
|                          | <b>Renamed</b>                                    |
| Pre-recorded CDs         | To include music subscription and streaming music |

Source: Stats SA

With each basket item having an attached weight, the new product-level weights were derived from the ratio of new to existing products in each category. In most instances, the aggregate expenditure of a group (after HFCE adjustment) remained fixed, with the weights of all the products in the group adjusted to accommodate the new product(s). Where a new product was added to a group that was not previously part of the basket, the associated expenditure value was added to the total.

### Comparison of CPI weights for all urban areas

|  | 2013<br>weights<br>(Per cent) | 2016<br>weights<br>(Per cent) | 2019<br>weights<br>(Per cent) | Difference between<br>2019 and 2016 weights<br>(Percentage points) |
|--|-------------------------------|-------------------------------|-------------------------------|--|
| Food and non-alcoholic beverages.....  | 15.41                         | 17.24                         | 17.14                         | -0.10  |
| Alcoholic beverages and tobacco.....   | 5.43                          | 5.82                          | 6.26                          | 0.44   |
| Clothing and footwear .....            | 4.07                          | 3.83                          | 3.65                          | -0.18  |
| Housing and utilities .....            | 24.52                         | 24.62                         | 24.49                         | -0.13  |
| Household contents and services.....   | 4.79                          | 4.35                          | 4.37                          | 0.02   |
| Health.....                            | 1.46                          | 1.40                          | 1.44                          | 0.04   |
| Transport.....                         | 16.43                         | 14.28                         | 14.35                         | 0.07   |
| Communication .....                    | 2.63                          | 2.63                          | 2.42                          | -0.21  |
| Recreation and culture .....           | 4.09                          | 5.16                          | 5.20                          | 0.04   |
| Education .....                        | 2.95                          | 2.53                          | 2.62                          | 0.09   |
| Restaurants and hotels.....            | 3.50                          | 3.09                          | 3.25                          | 0.16   |
| Miscellaneous goods and services ..... | 14.72                         | 15.05                         | 14.81                         | -0.24  |
| <b>Goods.....</b>                      | <b>49.86</b>                  | <b>48.70</b>                  | <b>48.68</b>                  | <b>-0.02</b>   |
| <b>Services.....</b>                   | <b>50.14</b>                  | <b>51.30</b>                  | <b>51.32</b>                  | <b>0.02</b>  |
| <b>Total.....</b>                      | <b>100.00</b>                 | <b>100.00</b>                 | <b>100.00</b>                 |  |

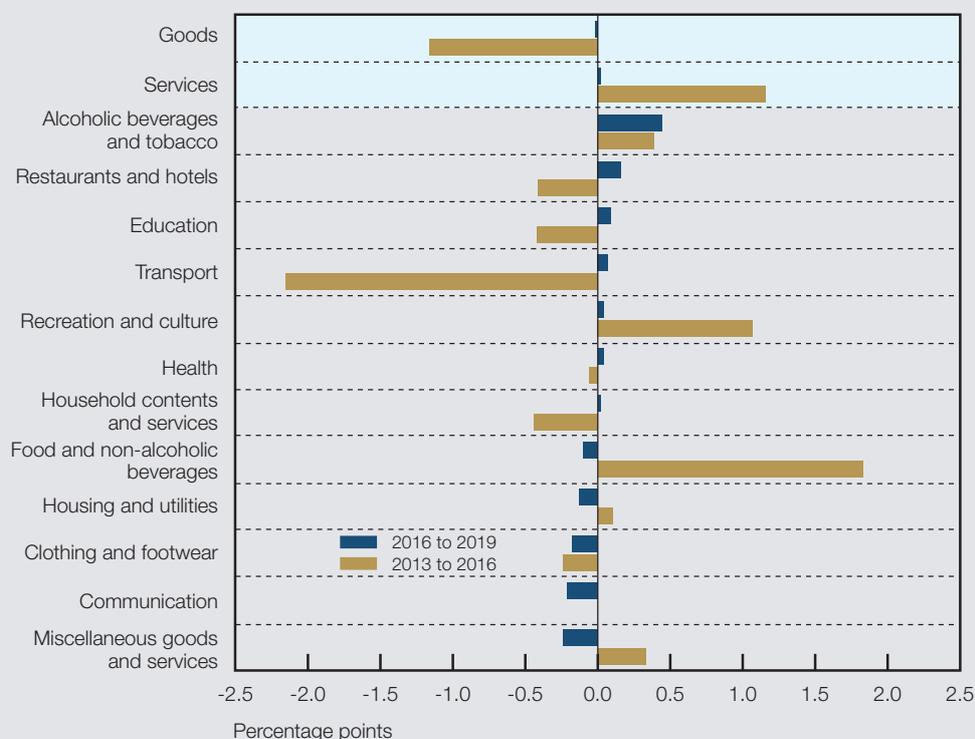
Source: Stats SA





Applying the HFCE growth rates to the CPI basket resulted in very moderate changes to the CPI weights for all of the main product groups relative to the previous CPI basket update. The weights of 7 of the 12 main COICOP categories increased while those of the remaining 5 decreased. Alcoholic beverages and tobacco registered the largest weight increase of 0.44 percentage points. Conversely, the proportion of household spending on miscellaneous goods and services decreased the most, by 0.24 percentage points, followed by the communication category at 0.21 percentage points. The split between goods and services remained almost unchanged in the 2019 CPI basket compared to the 2016 basket.

Changes in CPI weights



As changes in the CPI represent a weighted average of price changes, revisions to the weights can have a significant effect on the level of, and changes in, the index. To reduce the impact of the weight and composition changes, and to ensure continuous CPI time series, the previous set of indices is linked to the new indices.

The practice of applying a base *month* instead of a base *year* was first implemented by Stats SA in 2013. The change in the CPI from an index level of 100 in December 2016 to an index level of 100 in December 2021 applies from January 2022. The previous and new indices were linked from December 2021, as the indices compiled with the previous weights and those compiled with the new weights all equalled 100 in that month, as do all the aggregations of the indices. The index values for January 2022 were then calculated as usual, by measuring the prices of all the detailed products in the new basket and aggregating the lower-level indices multiplied by their weights. The periodic rebasing of indices removes the effect of accumulated inflation over time, which occurs because of the relative size of the index numbers but does not affect the published rates of changes in these rebased indices. However, the weighted sum of the lower-level indices will not be equal to the aggregates for all periods before the rebasing.

Following the reweighting and rebasing of the CPI, the headline CPI (for all urban areas) will still remain the inflation target measure for monetary policy purposes.