Box 2   The consumer price index reweighted and rebased

In February 2017 Statistics South Africa (Stats SA) published the most recent periodic revision of the weights and products – based on the classification of individual consumption by purpose (COICOP) – included in the consumer price index (CPI) basket, effective from January 2017. These revisions ensure that the CPI reflects the most recent consumer spending patterns, and that the reference period of the index remains appropriate and recent while adhering to international best practice.

Whereas the previous update of the CPI weights in February 2013 was based on results from the 2010/11 Income and Expenditure Survey (IES), the February 2017 update was based on Stats SA's Living Conditions Survey (LCS) conducted in 2014/15. According to Stats SA, the LCS surveys household expenditure in the same way as the IES, but also includes additional measures on poverty levels and trends.

The LCS collected information from 23 380 households across South Africa over a period of 12 months. The survey was conducted by applying a combination of the diary method and a recall questionnaire. Households documented their daily acquisitions in diaries provided by Stats SA over a period of two weeks and were also required to complete a household questionnaire over a four-week period. Similar to when the IES was utilised during previous revisions, it was necessary for Stats SA to augment the LCS results with additional data sources to attain more appropriate expenditure levels, and thus more accurate CPI weights. These additional sources included other Stats SA surveys, summarised transaction data from retailers, excise tax receipts, and data from industry associations and regulatory bodies.

The new CPI basket of goods and services contains 412 items, compared with 396 items in the previous basket. The items added to, and removed from, the basket are shown in the following table.

Items added to, and removed from, the new CPI basket

Items entering the basket	Items exiting the basket
Goods	
Food	**Food**
Savoury biscuits	Sweet corn (cream style)
Rusks	Tinned peas
Instant noodles	Spreads (Marmite and Bovril)
Frozen pastry products (pizzas or pies)	
Hot cereals (porridge)	
Ready-mixed flour	
Chicken giblets	
Corned beef	
Beef offal	
Mutton offal	
Fresh pears	
Peanuts	
Chewing gum	
Household contents	**Household contents**
Coffee mugs	Freezers
Sheets and pillow cases	Fans
Sandwich makers/toasters	Teapots
Cooking pots	
Transport	
Diesel	
Recreation	**Recreation**
Video games	Pre-recorded DVDs
Soccer balls	Blank CDs and DVDs
Toy cars	Board games
Crayons	Tennis balls
	Automated pool cleaners
	Health
	Public theatre and ward fees
	Communication
	Stamps

Items added to, and removed from, the new CPI basket	
Items entering the basket	Items exiting the basket
Services	
Housing	
Levies for sectional title properties	
Transport	
Car wash/valet services	
Driving lessons	
Driving licence	
Car rental	

In addition to changing the composition of the basket somewhat, Stats SA also amended the groupings of certain products. In most cases, products previously grouped together are now separated and allocated a specific weight. Stats SA noted that the advantage of defining products more specifically is to facilitate the monitoring of prices that may be relevant for particular economic and policy purposes. These products are:

- beef, which previously had a single weight (although a number of different products were surveyed), will now have four specific beef products, each with their own weight, namely mince, stewing beef, steak and offal;

- frozen chicken portions, which are now classified as IQF [individually quick frozen] and non-IQF, each with their own weight;

- baby food, which is now split into baby cereal and baby formula;

- hamburgers, which previously formed part of meat-based dishes in the 'meals away from home' category, will now be a separate product; and

- hotels, and bed and breakfast establishments, which were previously one product, will now be separated.

The weights of 5 of the 12 main COICOP categories increased, while those of 6 decreased and 1 remained unchanged. The category that registered the largest weight increase is food and non-alcoholic beverages, from 15.41% in the previous basket to 17.24% in the new basket, mostly due to increased expenditure on hot and cold beverages, meat, fish, milk, eggs, cheese, fruit and the 'other food' category. Conversely, the proportion spent on bread and cereals, and on oils and fats fell. The weight of the recreation and culture category also increased substantially, from 4.09 in the previous basket to 5.16% in the new basket, largely due to increased expenditure on television subscriptions. The transport category's weight decreased the most, from 16.43% in the previous basket to 14.28% in the new basket, mainly as a result of decreases in the proportions for fuel, running costs and public transport. The weight of education decreased, from 2.95% in the previous basket to 2.53% in the new basket, due to decreases in the expenditure share of primary, secondary and tertiary education.

In line with international best practice, Stats SA price-updated the new set of weights and also rebased the CPI. The LCS recorded household expenditure values over a 12-month period. These values were inflated and deflated to the mid-point (i.e. May 2015). Stats SA then price-updated the May 2015 values with the relevant CPI indices to December 2016 – known as the 'weights reference period'. The final CPI weights were calculated from these price-updated expenditure values. The purpose of price-updating is to adjust the weights to account for differences in the relative price movements of goods and services since the LCS 2014/15 was conducted.

Since 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. In order to reduce the impact of these changes and to obtain a continuous CPI time series, it is necessary to link the previous set of indices to the new set of indices. The practice of applying a base month instead of a base year was adopted in 2013. Stats SA rebased the CPI from an index level of 100 in December 2012 to an index level of 100 in December 2016. The previous and new indices were linked in December 2016, as the indices using the previous weights and those using the new weights all equal 100 in that month, as do all aggregations of the indices. The index levels for January 2017 were then calculated as usual (i.e. the sum of the lower-level indices multiplied by their weights).

In addition to the new set of weights, Stats SA also made additional changes to the monthly CPI publication, including:

- discontinuing the CPIs for primary and secondary urban areas while retaining the CPI for all urban areas;

- publishing additional tables with indices for 41 product groups for the total country, and for rural areas and each province; and

- in the interest of providing more information on inequality, expanding the number of expenditure groups for which it publishes CPIs from five (quintiles) to 10 (deciles).

Comparison of weights for the new and previous CPI basket

	New CPI (Per cent)	Previous CPI (Per cent)	Difference (Percentage points)
Food and non-alcoholic beverages..................	17.24	15.41	+1.83
Alcoholic beverages and tobacco..................	5.82	5.43	+0.39
Clothing and footwear	3.83	4.07	-0.24
Housing and utilities	24.62	24.52	+0.10
Household contents and services..................	4.35	4.79	-0.44
Health..	1.40	1.46	-0.06
Transport...	14.28	16.43	-2.15
Communication	2.63	2.63	0.00
Recreation and culture	5.16	4.09	+1.07
Education..	2.53	2.95	-0.42
Restaurants and hotels.................................	3.09	3.50	-0.41
Miscellaneous goods and services	15.05	14.72	+0.33
Goods...	48.70	49.86	-1.16
Services…………………………………..	51.30	50.14	+1.16
Total……………………………………….	100.00	100.00	0.00

Following the reweighting and rebasing of the CPI, the headline CPI for all urban areas will remain the inflation target measure for monetary policy purposes. With the inclusion of diesel in the new CPI basket, where applicable, fuel now refers to petrol and diesel in, for example, the measures of underlying (or core) inflation.

References

Statistics South Africa. 2017. 'Living conditions of households in South Africa: an analysis of household expenditure and income data using the LCS 2014/15', January. Pretoria: Statistics South Africa.

Statistics South Africa. 2017. 'Introduction of new weights and basket for the consumer price index', January. Pretoria: Statistics South Africa.