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# Statistical release
**P0142.7**

# Export and Import Unit Value Indices

## January 2014

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|---|---|
| February 2014 | 24 April 2014 |

## Contents

## Introduction of export and import unit value indices

Stats SA here introduces new export and import unit value indices (XMUVIs) to replace the previous export and import price indices. These indices are used mainly for the purpose of deflating trade and national accounts data. Economists may also use them to analyse the impact of currency changes or other factors on prices.

The XMUVI series are based on customs data from the South African Revenue Service (SARS) and they include a much wider span of international trade transactions than was possible with the historic price indices that were based on survey data. The new indices will be published two months after the reference month.

## Advantages of a unit value index

As the same products are not usually imported or exported every month, it makes traditional surveying of prices of these commodities difficult. This is particularly true for certain important categories such as machinery and equipment where the composition of trade varies significantly from month to month. Consequently, certain components of the previous series do not show much movement from month to month.

Many countries publish XMUVIs to avoid this problem. UVIs are derived from customs data recorded from actual imports and exports. SARS provides these data to Stats SA each month following the publication of the merchandise trade data.

The products comprising the index and their respective weights are based on the total value of imports and exports in the previous year. The weights will be updated annually in March for the reference month of January. The indices are calculated by dividing trade values by corresponding trade quantities to obtain implied prices (unit values) every month. Because the composition and value of exports and imports can be highly volatile, the export UVI series will use a three-month moving average and the import UVI series will use a five-month moving average.

Further information can be found in the XMUVI sources and methods document which can be accessed on this website: http://beta2.statssa.gov.za/?page_id=735&id=3.

## Publication details

The official indices will be shown from 2013. The XMUVIs will be published monthly, but with a two-month lag (the data are received at the beginning of the second month). The UVIs will be released on the same day as the PPI release – the last Thursday of the month.

An analytical time series data set starting in January 2010 is available on the Stats SA website. Stats SA advises against linking the XMUVIs with the old price series as they are not comparable.

## Key findings for January 2014

**Exports**

The UVI for exported commodities shows an annual rate of change of 12,0% in January 2014. From December 2013 to January 2014 the PPI for exported commodities increased by 1,0%.

The contributors to the annual rate of 12,0% were ores and minerals (19,8% year-on-year and contributing 4,2 percentage points), metal products, machinery and equipment (7,0% year-on-year and contributing 3,3 percentage points), other transportable goods[1] (10,9% year-on-year and contributing 2,1 percentage points), beverages (24,5% year-on-year and contributing 1,7 percentage points) and agriculture (18,7% year-on-year and contributing 1,0 percentage point) (see Figure 4.2).

The main contributors to the monthly change of 1,0% were ores and minerals (3,5% month-on-month and contributing 0,8 of a percentage point), metal products, machinery and equipment (1,2% month-on-month contributing and 0,5 of a percentage point) and other transportable goods[1] (2,3% month-on-month and contributing 0,4 of a percentage point) (see Figure 4.1).

**Imports**

The UVI for imported commodities shows an annual rate of change of 21,0% in January 2014. From December 2013 to January 2014 the PPI for imported commodities increased by 1,3%.

The main contributors to the annual rate of 21,0% were metal products, machinery and equipment (22,7% year-on-year and contributing 10,2 percentage points), other transportable goods[1] (26,6% year-on-year and contributing 7,2 percentage points) and crude petroleum (17,1% year-on-year and contributing 2,9 percentage points) (see Figure 5.2).

The main contributors to the monthly change of 1,3% were other transportable goods[1] (2,3% month-on-month and contributing 0,6 of a percentage point), metal products, machinery and equipment (0,6% month-on-month and contributing 0,3 of a percentage point) and crude petroleum (1,1% month-on-month and contributing 0,2 of a percentage point) (see Figure 5.1).

[1] Refers to the category “Other transportable goods, except metal products, machinery and equipment” in Tables 1 and 2 (which also excludes the preceding categories in the tables, namely agriculture, ores and minerals and beverages in the case of exports; and crude petroleum, food products and clothing and footwear in the case of imports).

## Key figures and analytical series

### Table A - Key figures

| Product | Weight | Index (2012=100) | | | Percentage change | |
|---|---|---|---|---|---|---|
| | | Jan 2013 | Dec 2013 | Jan 2014 | Jan 2014 vs. Dec 2013 | Jan 2014 vs. Jan 2013 |
| **Exports** | 100,00 | 103,0 | 114,3 | 115,4 | 1,0 | 12,0 |
| **Imports** | 100,00 | 105,2 | 125,7 | 127,3 | 1,3 | 21,0 |

### Table B - Analytical series

| Product | Weight | Index (2012=100) | | | Percentage change | |
|---|---|---|---|---|---|---|
| | | Jan 2013 | Dec 2013 | Jan 2014 | Jan 2014 vs. Dec 2013 | Jan 2014 vs. Jan 2013 |
| **Exports excluding gold** | 92,77 | 102,9 | 115,7 | 116,9 | 1,0 | 13,6 |
| **Exports excluding ores and minerals** | 77,33 | 104,8 | 115,0 | 115,3 | 0,3 | 10,0 |
| **Exports excluding basic metals** | 74,08 | 101,9 | 115,3 | 116,5 | 1,0 | 14,3 |
| **Imports excluding crude petroleum** | 82,89 | 105,1 | 126,3 | 128,0 | 1,3 | 21,8 |

**PJ Lehohla**

**Statistician-General**

## Main index numbers and rates of change (%)

### Table C - Exports

**Base: 2012=100**

| Year and type | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | Index | 101,2 | 100,4 | 101,1 | 99,8 | 100,2 | 100,6 | 100,8 | 98,9 | 98,2 | 98,4 | 99,8 | 100,6 | 100,0 |
| | Rate m/m | 0,0 | -0,8 | 0,7 | -1,3 | 0,4 | 0,4 | 0,2 | -1,9 | -0,7 | 0,2 | 1,4 | 0,8 | .. |
| | Rate y/y | 17,4 | 13,8 | 11,7 | 10,2 | 8,9 | 6,9 | 5,8 | 1,9 | -0,9 | -2,8 | -2,6 | -0,6 | 5,5 |
| 2013 | Index | 103,0 | 105,1 | 108,5 | 110,6 | 109,6 | 111,3 | 111,4 | 113,9 | 113,9 | 114,2 | 113,3 | 114,3 | 110,8 |
| | Rate m/m | 2,4 | 2,0 | 3,2 | 1,9 | -0,9 | 1,6 | 0,1 | 2,2 | 0,0 | 0,3 | -0,8 | 0,9 | .. |
| | Rate y/y | 1,8 | 4,7 | 7,3 | 10,8 | 9,4 | 10,6 | 10,5 | 15,2 | 16,0 | 16,1 | 13,5 | 13,6 | 10,8 |
| 2014 | Index | 115,4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Rate m/m | 1,0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Rate y/y | 12,0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

### Table D - Imports

**Base: 2012=100**

| Year and type | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2012 | Index | 98,9 | 98,9 | 98,7 | 98,7 | 98,8 | 99,0 | 99,3 | 100,0 | 100,5 | 101,1 | 102,0 | 104,0 | 100,0 |
| | Rate m/m | 0,1 | 0,0 | -0,2 | 0,0 | 0,1 | 0,2 | 0,3 | 0,7 | 0,5 | 0,6 | 0,9 | 2,0 | .. |
| | Rate y/y | 18,7 | 16,1 | 13,1 | 12,4 | 11,0 | 11,5 | 10,9 | 10,4 | 8,4 | 6,0 | 4,9 | 5,3 | 10,5 |
| 2013 | Index | 105,2 | 106,9 | 108,2 | 108,9 | 108,8 | 109,2 | 110,7 | 113,4 | 115,9 | 119,1 | 123,5 | 125,7 | 113,0 |
| | Rate m/m | 1,2 | 1,6 | 1,2 | 0,6 | -0,1 | 0,4 | 1,4 | 2,4 | 2,2 | 2,8 | 3,7 | 1,8 | .. |
| | Rate y/y | 6,4 | 8,1 | 9,6 | 10,3 | 10,1 | 10,3 | 11,5 | 13,4 | 15,3 | 17,8 | 21,1 | 20,9 | 13,0 |
| 2014 | Index | 127,3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Rate m/m | 1,3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Rate y/y | 21,0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

### Figure 1 - Export and import unit value indices

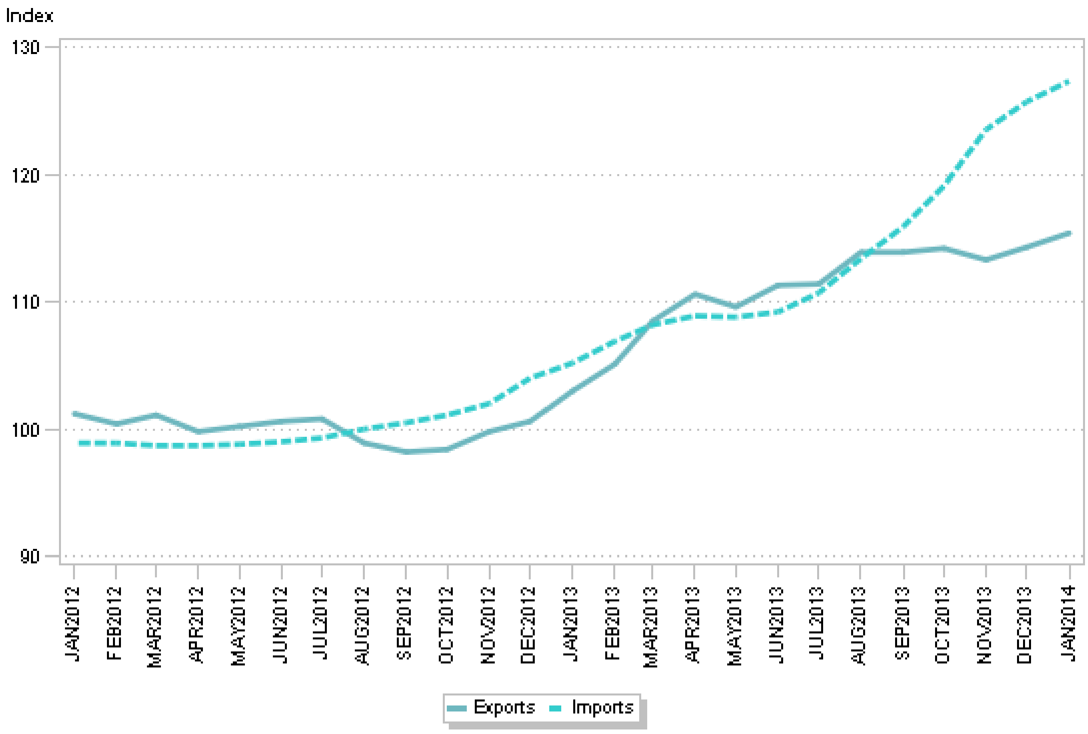


**Figure 2 - Export UVI rates of change (%)**

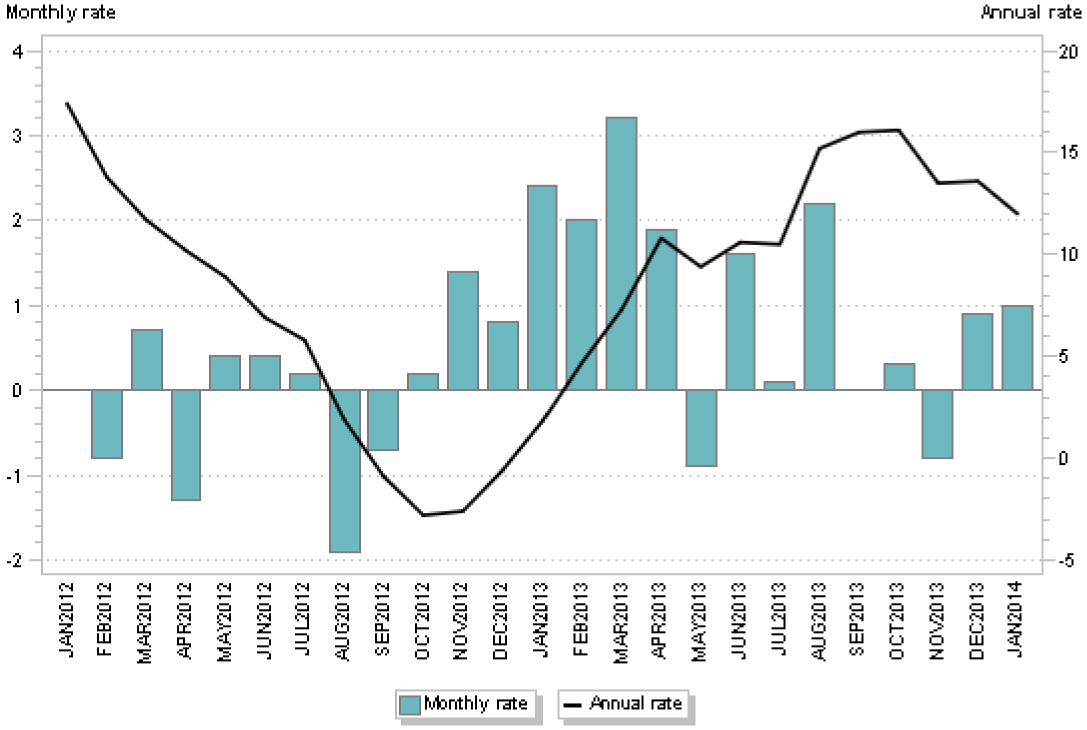
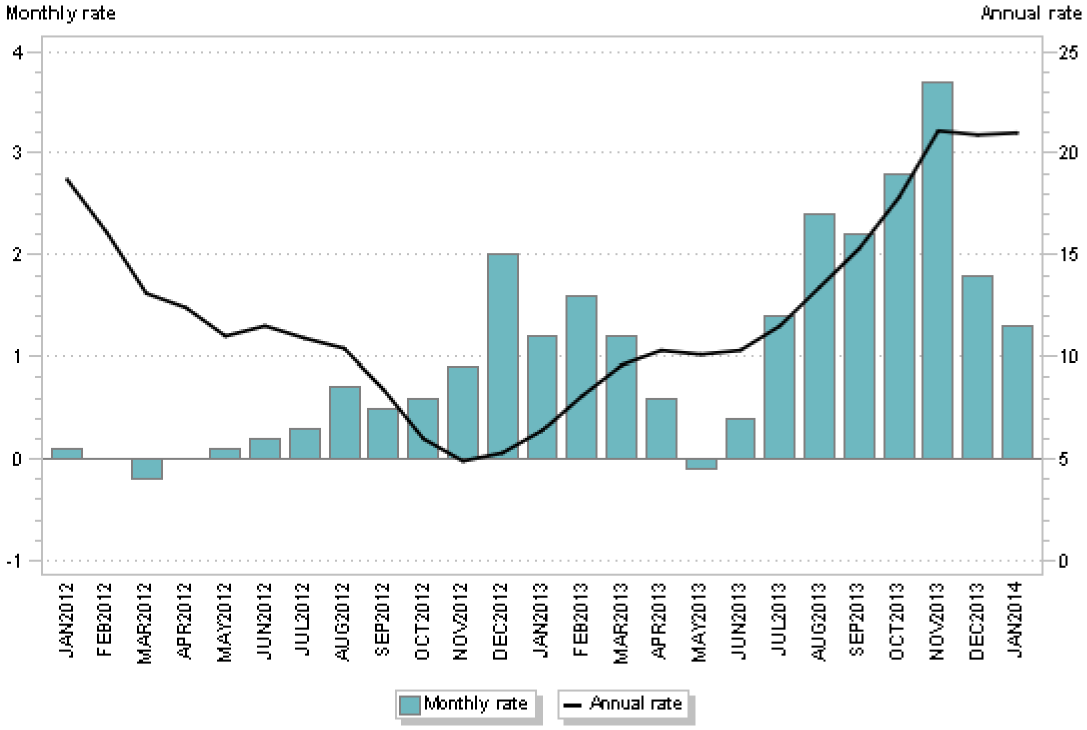



**Figure 3 - Import UVI rates of change (%)**



## Detailed index numbers and rates of change, and contributions

### Table 1 - Exports

| Product | | | Weight | Index (2012=100) | | | Percentage change | |
|---|---|---|---|---|---|---|---|---|
| | | | | Jan 2013 | Dec 2013 | Jan 2014 | Jan 2014 vs. Dec 2013 | Jan 2014 vs. Jan 2013 |
| **All items** | | | 100,00 | 103,0 | 114,3 | 115,4 | 1,0 | 12,0 |
| **Agriculture** | | | 4,96 | 107,9 | 128,0 | 128,1 | 0,1 | 18,7 |
| **Ores and minerals** | | | 22,67 | 96,7 | 111,9 | 115,8 | 3,5 | 19,8 |
| | **Coal** | | 6,54 | 96,1 | 104,4 | 109,4 | 4,8 | 13,8 |
| | **Metal ores** | | 14,53 | 97,4 | 114,5 | 116,3 | 1,6 | 19,4 |
| | | **Iron ores and concentrates** | 9,20 | 103,3 | 117,7 | 119,1 | 1,2 | 15,3 |
| | | **Non-ferrous metal ores and concentrates** | 5,33 | 87,6 | 109,0 | 111,5 | 2,3 | 27,3 |
| | **Other minerals** | | 1,60 | 91,6 | 122,1 | 140,8 | 15,3 | 53,7 |
| **Beverages** | | | 7,06 | 102,4 | 140,1 | 127,5 | -9,0 | 24,5 |
| **Other transportable goods, except metal products, machinery and equipment** | | | 19,23 | 103,0 | 111,6 | 114,2 | 2,3 | 10,9 |
| | **Coke oven and refined petroleum products** | | 5,20 | 108,4 | 113,6 | 110,7 | -2,6 | 2,1 |
| | **Basic chemicals** | | 6,22 | 105,7 | 107,5 | 111,0 | 3,3 | 5,0 |
| | **Other chemical products** | | 3,32 | 97,6 | 119,6 | 130,6 | 9,2 | 33,8 |
| | **Rubber and plastic products** | | 1,67 | 95,9 | 127,3 | 130,2 | 2,3 | 35,8 |
| | **Waste and scrap** | | 2,82 | 97,3 | 100,6 | 102,2 | 1,6 | 5,0 |
| **Metal products, machinery and equipment** | | | 46,08 | 105,5 | 111,6 | 112,9 | 1,2 | 7,0 |
| | **Basic metals** | | 25,92 | 105,2 | 110,4 | 111,4 | 0,9 | 5,9 |
| | | **Basic iron and steel** | 4,40 | 98,3 | 109,9 | 113,5 | 3,3 | 15,5 |
| | | **Products of iron or steel** | 2,41 | 100,7 | 110,1 | 107,4 | -2,5 | 6,7 |
| | | **Basic precious metals and metals clad with precious metals** | 16,41 | 107,3 | 109,3 | 110,3 | 0,9 | 2,8 |
| | | **Other semi-finished metal products** | 2,70 | 106,3 | 119,7 | 119,9 | 0,2 | 12,8 |
| | **Fabricated metal products** | | 1,70 | 102,2 | 104,1 | 108,9 | 4,6 | 6,6 |
| | **General purpose machinery** | | 4,38 | 103,5 | 113,7 | 117,0 | 2,9 | 13,0 |
| | **Special purpose machinery** | | 2,71 | 103,8 | 103,7 | 98,5 | -5,0 | -5,1 |
| | **Transport equipment** | | 8,99 | 106,0 | 115,2 | 117,7 | 2,2 | 11,0 |
| | | **Motor vehicles** | 8,02 | 107,0 | 115,4 | 118,0 | 2,3 | 10,3 |
| | | **Parts and accessories for motor vehicles and their engines** | 0,97 | 100,8 | 115,6 | 117,3 | 1,5 | 16,4 |
| | **Other machinery and equipment** | | 2,38 | 113,9 | 122,6 | 122,7 | 0,1 | 7,7 |

**Figure 4.1 - Contributions to the monthly percentage change in exports**

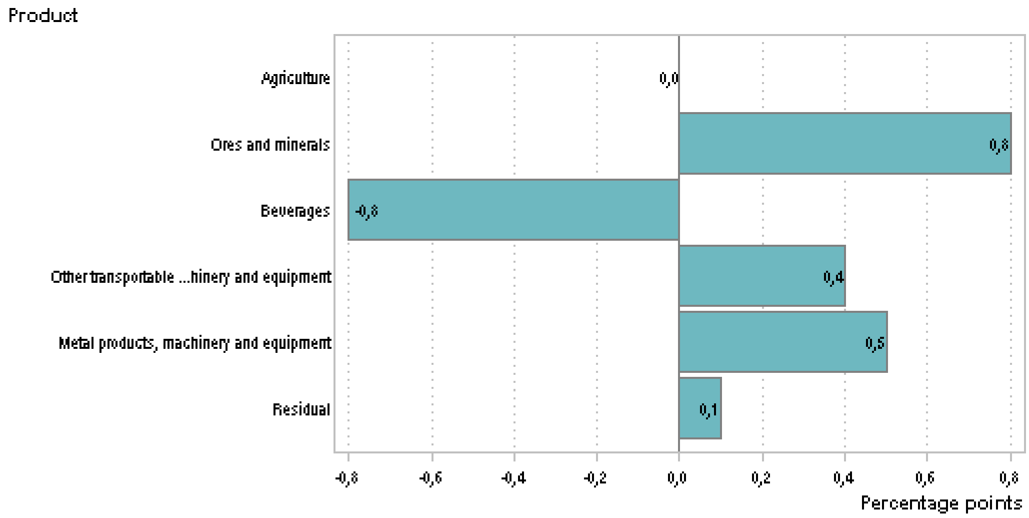



**Figure 4.2 - Contributions to the annual percentage change in exports**

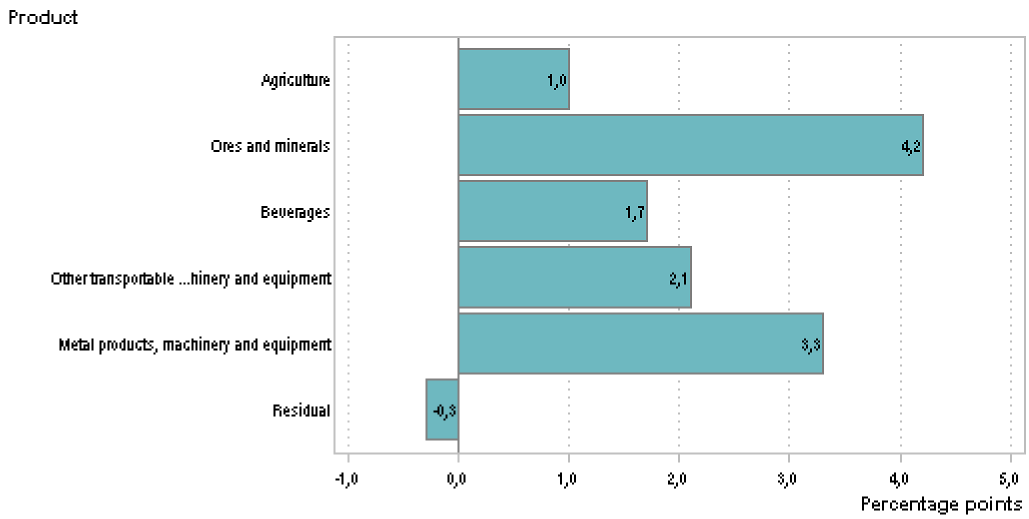


**Table 2 - Imports**

| Product | | | Weight | Index (2012=100) | | | Percentage change | |
|---|---|---|---|---|---|---|---|---|
| | | | | Jan 2013 | Dec 2013 | Jan 2014 | Jan 2014 vs. Dec 2013 | Jan 2014 vs. Jan 2013 |
| **All items** | | | 100,00 | 105,2 | 125,7 | 127,3 | 1,3 | 21,0 |
| **Crude petroleum** | | | 17,11 | 105,8 | 122,5 | 123,9 | 1,1 | 17,1 |
| **Food products** | | | 6,65 | 104,7 | 106,6 | 108,5 | 1,8 | 3,6 |
| | **Fats and oils** | | 3,55 | 98,6 | 96,4 | 97,8 | 1,5 | -0,8 |
| | **Grain mill products** | | 3,10 | 112,0 | 119,4 | 121,9 | 2,1 | 8,8 |
| **Clothing and footwear** | | | 4,38 | 99,8 | 109,4 | 111,6 | 2,0 | 11,8 |
| | **Clothing** | | 2,63 | 98,5 | 111,6 | 112,9 | 1,2 | 14,6 |
| | **Footwear** | | 1,75 | 101,7 | 106,2 | 109,9 | 3,5 | 8,1 |
| **Other transportable goods, except metal products, machinery and equipment** | | | 26,06 | 109,2 | 135,1 | 138,2 | 2,3 | 26,6 |
| | **Paper and paperboard** | | 1,70 | 106,5 | 126,3 | 128,4 | 1,7 | 20,6 |
| | **Coke oven and refined petroleum products** | | 7,51 | 127,3 | 193,6 | 204,7 | 5,7 | 60,8 |
| | **Basic chemicals** | | 5,46 | 103,4 | 117,8 | 118,7 | 0,8 | 14,8 |
| | **Pharmaceutical and other chemical products** | | 6,33 | 104,6 | 111,9 | 112,6 | 0,6 | 7,6 |
| | | **Pharmaceutical products** | 3,59 | 99,6 | 109,2 | 109,4 | 0,2 | 9,8 |
| | | **Other chemical products** | 2,74 | 112,3 | 116,4 | 117,7 | 1,1 | 4,8 |
| | **Rubber and plastic products** | | 2,89 | 100,5 | 118,3 | 119,7 | 1,2 | 19,1 |
| | **Other transportable goods** | | 2,17 | 118,6 | 118,8 | 110,3 | -7,2 | -7,0 |
| **Metal products, machinery and equipment** | | | 45,80 | 103,6 | 126,3 | 127,1 | 0,6 | 22,7 |
| | **Basic metals** | | 3,95 | 99,7 | 112,9 | 114,6 | 1,5 | 14,9 |
| | **Fabricated metal products** | | 2,09 | 110,2 | 123,4 | 124,4 | 0,8 | 12,9 |
| | **General purpose machinery** | | 6,52 | 100,9 | 123,5 | 121,4 | -1,7 | 20,3 |
| | **Special purpose machinery** | | 7,44 | 103,4 | 123,4 | 122,7 | -0,6 | 18,7 |
| | | **Machinery for mining, quarrying and construction, and parts thereof** | 3,05 | 105,0 | 122,5 | 123,1 | 0,5 | 17,2 |
| | | **Agricultural and forestry machinery and parts thereof** | 1,00 | 104,5 | 132,0 | 131,8 | -0,2 | 26,1 |
| | | **Other machinery and parts thereof** | 3,39 | 102,5 | 123,4 | 121,3 | -1,7 | 18,3 |
| | **Office, accounting and computing machinery** | | 2,98 | 105,6 | 122,4 | 123,5 | 0,9 | 17,0 |
| | **Electrical machinery and apparatus** | | 4,32 | 103,3 | 119,7 | 120,3 | 0,5 | 16,5 |
| | **Radio, television and communication equipment and apparatus** | | 6,09 | 102,8 | 161,0 | 164,5 | 2,2 | 60,0 |
| | **Medical appliances, precision and optical instruments, watches and clocks** | | 2,88 | 97,1 | 131,5 | 132,6 | 0,8 | 36,6 |
| | **Transport equipment** | | 9,53 | 108,1 | 119,6 | 121,2 | 1,3 | 12,1 |
| | | **Vehicles** | 7,25 | 105,4 | 117,0 | 118,5 | 1,3 | 12,4 |
| | | **Bodies and parts of vehicles** | 1,58 | 104,6 | 122,4 | 123,8 | 1,1 | 18,4 |
| | | **Other transport equipment** | 0,70 | 123,5 | 125,2 | 128,5 | 2,6 | 4,0 |

**Figure 5.1 - Contributions to the monthly percentage change in imports**

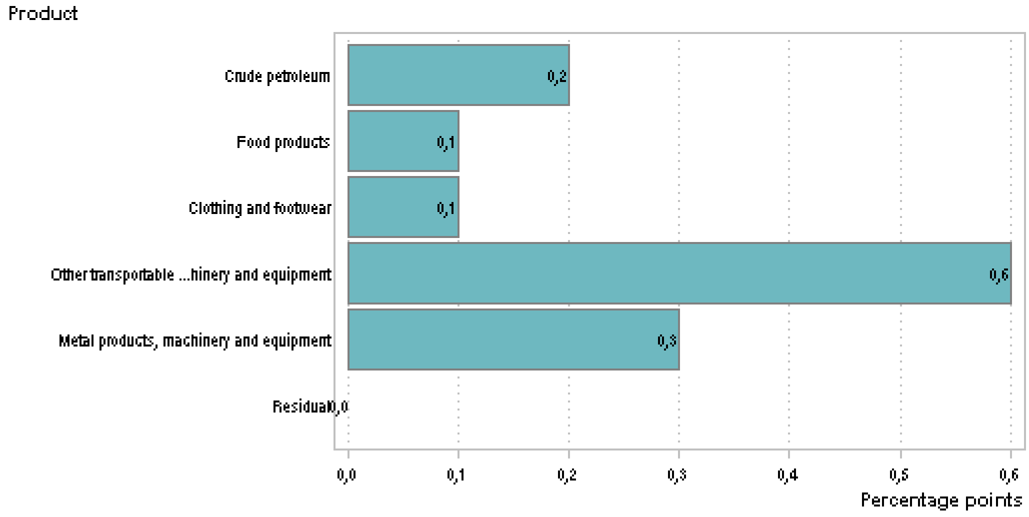
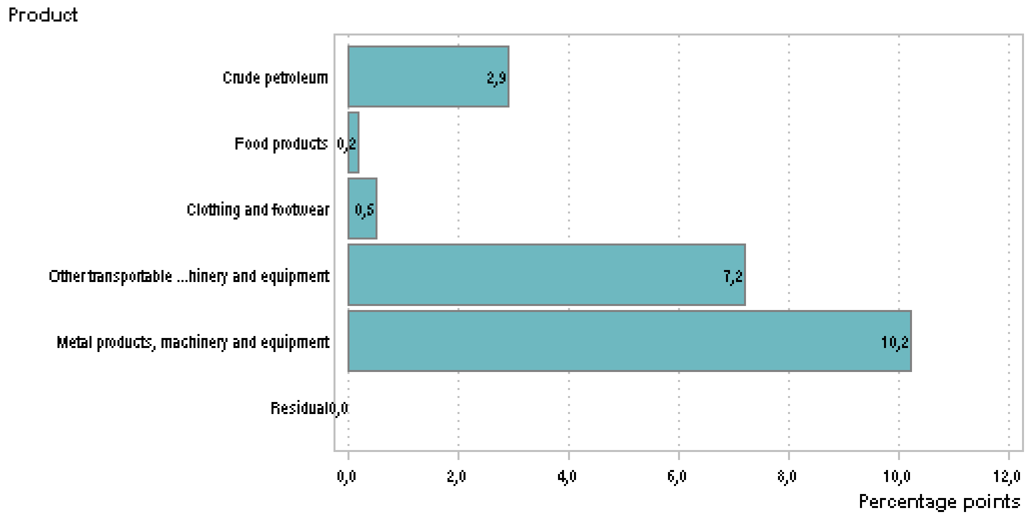



**Figure 5.2 - Contributions to the annual percentage change in imports**



## Explanatory notes

| | |
|---|---|
| **Purpose and results** | The unit value index provides information on the trends in import and export unit values that are weighted with rand values of the previous year. The calculation of unit values for commodities in exports and imports covers transactions reported by the South African Revenue Service. The results are used to compile export and import unit value indices, which are a measure of changes in export prices of locally produced commodities and changes in prices of imported commodities. |
| **Source** | South African Revenue Service (SARS). |
| **Gold** | The export unit value index for gold is calculated from net gold values and quantities obtained from the South African Reserve Bank (SARB) quarterly.<br><br>The index changes quarterly and is included in the UVI calculation with a one quarter lag (e.g. the September 2013 gold value and quantity will only be included in the December 2013 index). |

## Glossary

| | |
|---|---|
| **Chain linking** | The construction of a continuous price series by multiplying together price indices that have been using different weights for different periods. The resulting index is referred to as a chained index (Practical Guide to producing Consumer Price Indices; 2009). Linking is intended to ensure that the individual indices on all levels show the correct development through time, but leads to non-additivity (IMF, 2005). |
| **Contributions** | The contribution (percentage points) of a sub-index to the percentage change in the total index for a given period is calculated by multiplying the difference (i.e. change) in the sub-index by its weight and then dividing by the previous period's total index. In the case of annual percentage changes, the contributions are approximations owing to annual changes in weights. |
| **Percentage change** | The percentage change in an index for any given period is the change between that period's index value and the previous period's index value expressed as a percentage of the latter. |

## General information

Stats SA publishes approximately 300 different statistical releases each year. It is not economically viable to produce them in more than one of South Africa's eleven official languages. Since the releases are used extensively, not only locally but also by international economic and social-scientific communities, Stats SA releases are published in English only.



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**Forthcoming issues**

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|---|---|
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