Statistics South Africa

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Producer Price Index

Methods, Sources and Theory

v.1.3

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Chapter 1: Introduction to the South African PPI

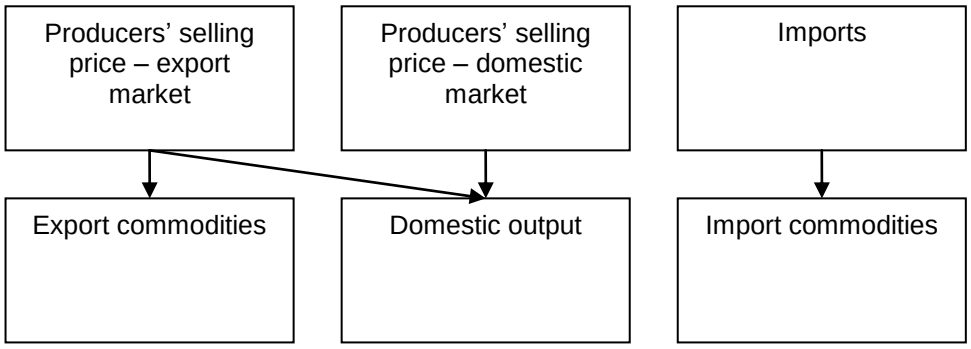
1.1 History of the South African PPI

Prior to 2013, the South African PPI consisted of three parts, namely domestic output of South African industry groups, exported commodities and imported commodities. Domestic output included the value of all products produced within the boundaries of South Africa, irrespective of whether they are exported or used in the domestic market. Imports were not included in this index. For the Domestic output and Import tables respectively, prices were measured at the first supply phase, by South African producers, and at the first purchasing phase, where the goods enter South Africa.

Within the domestic output PPI structure the high-level groups were:

- Agriculture, fishing, forestry
- Manufacturing
- Mining, electricity, gas, steam and water

Figure 1: Interrelationships



Note: Statistics Sweden interrelationships are used as a guide

1.2 Background on price indices

Four of the principal price indices in the system of economic statistics—the PPI, the Consumer Price Index (CPI), and the export and import price indices—are well known and closely watched indicators of macroeconomic performance. They are direct indicators of the purchasing power of money in various types of transactions and other flows involving goods and services. As such, they are also used to deflate nominal measures of goods and services produced, consumed, and traded to provide measures of volumes (IMF PPI Manual).

Ten fundamental steps can be defined for the design, construction, dissemination, and maintenance of a producer price index. These steps are (IMF PPI Manual, 2004):

1. Determining the objectives, scope, and conceptual basis of the index;
2. Deciding on the index coverage and classification structure;
3. Deriving the weighting pattern;
4. Designing the sample;
5. Collecting and editing the prices;
6. Adjusting for changes in quality;
7. Calculating the index;
8. Disseminating the indices;
9. Maintaining samples of businesses and product specifications; and
10. Reviewing and reweighting the index.

This manual will cover steps one to five, step seven; and steps nine to ten.

1.3 Definition of the PPI

The PPI indicates changes in producer prices of locally produced commodities including exports. The PPI is defined as *"A measure of the change in the prices of goods either as they leave their place of production or as they enter the production process (OECD)."*

1.4 Uses of the PPI

PPIs are used for a variety of different purposes. There has always been substantial interest in, and demand for, price indices from the general public, private sector as well as government and international agencies. The PPI may be used for purposes of:

- ⇒ As a short-term indicator of inflationary trends – The monthly PPI with detailed product and industry data allows short-term price inflation to be monitored through different stages of production.
- ⇒ Contract price adjustments – The purpose of using the PPI for indexing long-term contracts to take the inflationary risk out of the contract.
- ⇒ A deflator in the compilation of national accounts – a fundamental use of the PPI is as a deflator in the national accounts. Therefore, the concepts underlying the PPI are often conditioned by those underlying the national accounts.

Chapter 2: Types of producer price indices

2.1 Overview

The aggregation of the PPI may take various forms; the South African PPI uses the stages of production approach. With this concept, each commodity is allocated to the stage in which it is used.

Alternatives are the stage of processing, net output price indices per industry, PPI for the country or region, etc. The selection of the aggregation method depends on the intended uses of the PPI.

2.1.1 Stages-of-production

For this approach each commodity is allocated to the stage in which it is used. A product is included in each stage to which it contributes, and not assigned solely to one stage. The classification of products to the different stages is usually achieved by reference to input-output (I/O) tables in order to avoid multiple counting of the stages that are not aggregated (IMF).

This type of PPI has two types of indices, input and output (Statistics New Zealand). The output producer price indices relate to selected products that are primary to a particular industry, irrespective of the industrial classification of establishments undertaking the activity. The input producer price indices relate to selected products used by establishments classified to particular industries (ABS).

The PPI output indices show changes in prices before the addition of commodity indirect taxes. This is similar to an ex-factory price or the revenue actually received by a producer. In the calculation of input indices, the values for commodities purchased generally show changes in prices after the addition of tax (Statistics New Zealand).

2.2 Aggregation of the South African PPI

When selecting an aggregation type, a number of questions are required to be taken into consideration. The OECD sets the following list as a guideline to the selection of aggregation type:

a) Will the PPIs be used for deflation of outputs (and inputs?), and/or as a measure of inflation?
b) Assuming that a choice has to be made, are industry PPIs of higher priority than product PPIs or vice versa?
c) Which industries and products should be covered? At what level of detail?
d) Will separate indices be compiled for export and domestic market prices?
e) Which prices are we trying to measure? Producer prices, wholesale prices?
f) What will the geographical coverage be? National, regional?

g) Monthly or quarterly time series?

With the analysis of these guidelines, the level of aggregation most suited to the South African PPI, is the stages-of-production approach. The decision rests on the fact that although the PPI is a key inflation indicator, it is also used for deflation of the national accounts. The approach of the PPI gives a value-chain perspective on the level of inputs and outputs, and eliminates double counting.

The tables published in the current PPI include industry (divided into input and output) and product information. Industry tables available are:

Table 1: Industry tables

Industry	Input	Output
Agriculture, forestry and fishing		X
Mining		X
Manufacturing[1]	X	X
Water, gas and electricity		X

Appendix A gives the Input and Output 3-digit group CPC for each of the higher-level industries.

[1] Manufacturing with be published as “final manufactured goods” and “intermediate manufactured goods”.

Chapter 3: Classification

3.1 Background

The PPI uses two classification systems, the Central Product Classification (CPC) and Standard Industrial Classification (SIC) systems. As the name suggests, the CPC is used to identify and aggregate products. The CPC is a classification based on the physical characteristics of goods or on the nature of the services rendered. Each type of good or service distinguished in the CPC is defined in such a way that it is normally produced by only one activity as defined in ISIC[2].

The CPC covers products that are an output of economic activities, including transportable goods, non-transportable goods and services (OECD).

It is a 5-digit classification system, consisting of:

⇒ Sections – one digit code;
⇒ Divisions – two-digit code;
⇒ Groups – three-digit code;
⇒ Classes – four-digit code;
⇒ Subclasses – five-digit code

Each product grouping is then assigned an industry classification according to SIC, which classifies the different industries. Standard Industrial Classification version 5 (SIC v5) and Central Product Classification version 2 (CPC v2) are used in the PPI.

3.2 The structure of classification of the South African PPI

The structure of the PPI is made up of 1-digit, 2-digit, 3-digit, 4-digit, 5-digit and 9-digit classification levels (within CPC), where the 9-digit code is an indicator product or elementary index attached to a weight.

[2] International Standard Industrial Classification of All Economic Activities - This classification is the international standard for the classification of productive economic activities. The main purpose is to provide a standard set of economic activities so that entities can be classified according to the activity they carry out.

For example, the hierarchy of product description for the prices of the commonly referred to “motor vehicles” products is the following:

Table 2: Central Product Classification (CPC) hierarchy

Product hierarchy		**Product description**
CPC Section	4	Metal products, machinery and equipment
CPC Division	49	Transport equipment
CPC Group	491	Motor vehicles, trailers and semi-trailers; parts and accessories thereof
CPC Class	4911	Motor vehicles
CPC Sub-class	49113	Motor cars and other motor vehicles principally designed for the transport of persons
Indicator product (for sub-class 49113)	491130001	Passenger Vehicles
Sampled product (for indicator product 491130001)	491130001(1)	Volkswagen Polo 1.6 Trend-line
	491130001 (2)	Volkswagen Jetta 2.0 TSI Highline

Indicator products:

In order to collect prices, CPC sub-classes need to be divided into meaningful groups, called indicator products. These groups of products are typical groupings of products on a lower level than the CPC sub-class. Indicator products are chosen in a manner that will ensure that they represent the majority of the output of the sub-class they represent. These groupings are sourced from industry associations or data from Statistics South Africa Stats SA industry surveys, such as the Manufacturing Large Sample Survey (LSS).

Sampled products:

Sampled products are the actual products that are priced in the PPI process. Each sampled product will be priced consistently over time to ensure comparability. Sampled products are chosen in a manner that will ensure that their price movements will reflect the price movements of the indicator product that they represent. The specific products are sourced from dominant role-players or data from Stats SA industry surveys.

Chapter 4: Weighting sources and derivation

4.1 Industry weights

“The value aggregate from the national accounts framework that aligns with the basic price received by the producer of goods and services is the value of production (IMF PPI Manual, 2004)”. In other words, the value-added from the national accounts lays the basis of the weighting structure on industry in the PPI.

Some industries and products will be of little importance in terms of their share of total production. For example, an industry that represents less than 0.1 per cent of production within the industrial or service sectors could be excluded from the sample. In such cases, the output for the industry that is excluded should be distributed across those that were selected, or it should be assigned to a closely related industry. It may also be possible to make meaningful combinations of smaller industries producing related products that meet the criteria for minimum sizes. A similar procedure would also be applied to products that are insignificant. In either case, the weight for the non-sampled component needs to be included somewhere in the weighting structure.

4.2 Product weights

The primary sources of weight information for the PPI are business- or establishment-based censuses, the national accounts, annual industry surveys, and business registers (the use of all of these depends on the level of detail available). In some instances additional data is required to supplement the primary source, in order to select indicator products for pricing. These include administrative sources, association surveys, retail and wholesale surveys and customs data. The South African PPI makes use of the National Accounts, Large Sample Surveys (LSS), administrative sources as well as external association data.

Table 3: Sources of weights at product level

Industry	Industry-level weights	Product-level weights
Agriculture, forestry and fishing	National Accounts 2013	• Agriculture: Gross Income from Agricultural products (2013). Department of Agriculture Forestry and Fisheries. • Fishing: Census of Agriculture, Forestry and Fishing (2007). Statistics South Africa. • Forestry: Report on Commercial Timber Resources and Primary Roundwood Processing in South Africa (2011/12). Department of Agriculture, Forestry and Fisheries.
Mining	National Accounts 2013	South African Mining Industry Annual Commodity Summary (2013). Department of Mineral Resources.
Manufacturing	National Accounts 2013	Large Sample Survey (2011). Statistics South Africa.
Water, gas and electricity	National Accounts 2013	Water: Department of Water Affairs 2013.

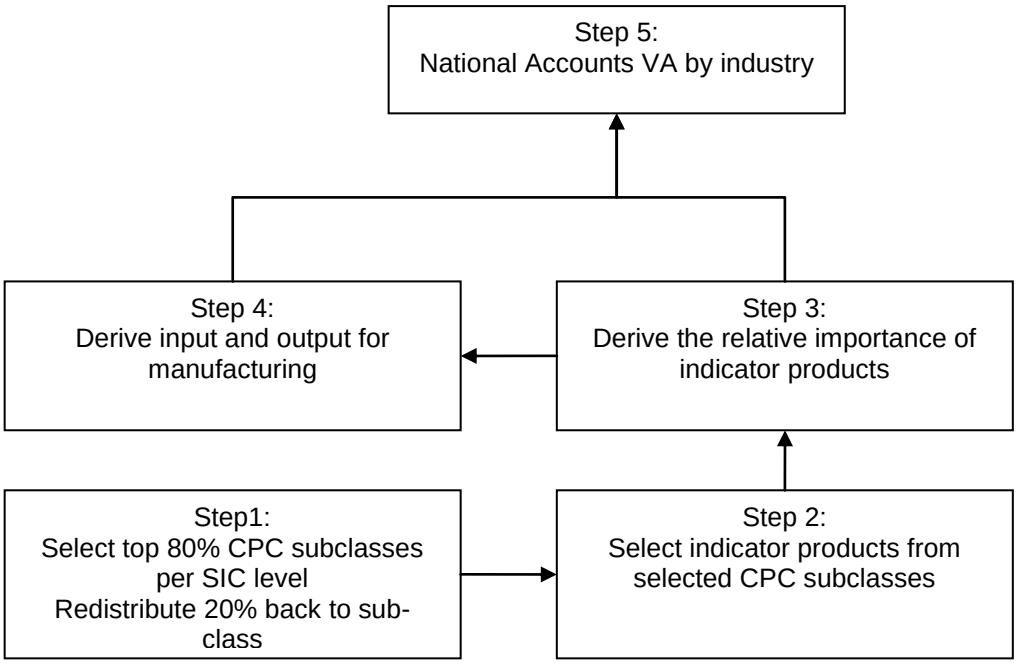
4.3 PPI weight selection

For higher level weighting, the PPI uses National Accounts SIC value-added (VA) at 3-digit CPC group level. At this level a selection is made whether the 3-digit CPC group is an input or output for manufacturing.

Furthermore, for the selection of the 5-digit sub-class level, sales values in relation to total sales in a group are used. For 5-digit sub-classes to be included in the 3-digit group and basket, it should fall into the top 80 cumulative percentage of the group. This ensures that at least 80% of groups are covered in the basket of the PPI and insignificant groups are excluded from the PPI.

Indicator product selection is done on either industry product share data or LSS detailed 8-digit data.

Derivation of weights:



4.4 Review of the PPI weights

The PPI value-added weights will be reviewed on an annual basis. This implies that the index will be reweighted and chain-linked every year in the January statistical release. In addition to the update of the higher-level weighting, the product proportions within the PPI will be investigated (from external and official sources) during the year, so that appropriate changes may be made to the indicator product or subclass level.

Every three years, with the release of a new Manufacturing LSS, all the detailed product proportions as well as the value-added industry weights for the PPI will be reviewed, and all weights will be adjusted to reflect the most current economic conditions.

For Mining and Agriculture, forestry and fishing the detailed products as well as lower level proportions will be reviewed and updated on an annual basis[3].

[3] Dependent on availability

Chapter 5: Basket of goods

5.1 Introduction

The basket is a list of specific goods, which forms the sample for price collection in the PPI.

The National Accounts value-added as well as Stats SA industry surveys and external industry information guides the PPI on the number of indicator products to be included in the PPI.

5.2 Selection criteria for basket of goods

All National Accounts value-added with a high relative importance at 3- and 4-digit SIC group level is included in the PPI. Based on national accounts data, all goods are either classified as intermediate or final manufactured goods.

Furthermore, for the selection of the 5-digit sub-class level, sales values in relation to total sales in a group are used. For 5-digit sub-classes to be included in the 3-digit group and basket, it should fall into the top 80 cumulative percentage of the group. This ensures that at least 80% of groups are covered in the basket of the PPI and insignificant groups are excluded from the PPI.

Indicator product selection is done on either industry product share data or LSS detailed 8-digit data.

5.3 The number of products in the basket

The total number of indicator products in the basket is 270. Refer to Appendix B for the complete basket of products in the PPI.

Chapter 6: Sampling

6.1 Introduction

There are two types of sampling in the PPI, sampling of businesses and sampling of sampled products per indicator product. For the former, a frame of all businesses per industry is required and the latter is optimisation of the sample with respect to the number of sampled products collected per indicator product, based on a variance estimation formula.

There are various factors to consider when selecting a sample (ILO Manual Chapter 5):

- Size and allocation of the sample
- Empirical evidence on bias on the various methods
- Sophistication of price collectors
- Access to sampling expertise in central office
- Type of products
- Sampling frame availability and correctness

6.2 Selection of businesses (respondents)

Administrative records from various LSS industry surveys form the basis for the PPI sampling frame. Other frame sources include industry association information, where this data is cross-referenced with that of LSS industry surveys to sample the businesses with the highest turnover to represent the selected industries, and more specifically products.

In the actual selection, the top 80% of businesses within an industry that represents a certain product are selected.

6.3 Optimal allocation of items

Producing a PPI is a major operation in any country and a great deal of resources are spent on price collection. Therefore, it is important to allocate these resources in the most efficient way. The general approach to sample allocation was established by Neymann, called the Neymann optimum allocation approach. It uses a mathematical expression for the variance of the estimate and another expression for the cost. Both variance and cost are functions of sample size. Optimal allocation then amounts to minimising variance for a given cost or minimising cost for a given variance.

As for cost, it is important to note that not all price observations are equally costly. It is less expensive to collect an extra price in an outlet that is already in the sample than to add a price in an outlet that is new to the sample.

6.4 Selection of a sampled product from the respondent

When selecting sampled products from a company, the price collector has to ensure that the selected ones are the volume sellers, in other words the products for which the highest volumes and/or turnover are sold. Once this is established the item and transaction characteristics should be established.

The item characteristics include for example (OECD, 2000):

- ⇒ Type of product
- ⇒ Brand name or model number
- ⇒ Main price determining characteristics, size, weight, power, etc.

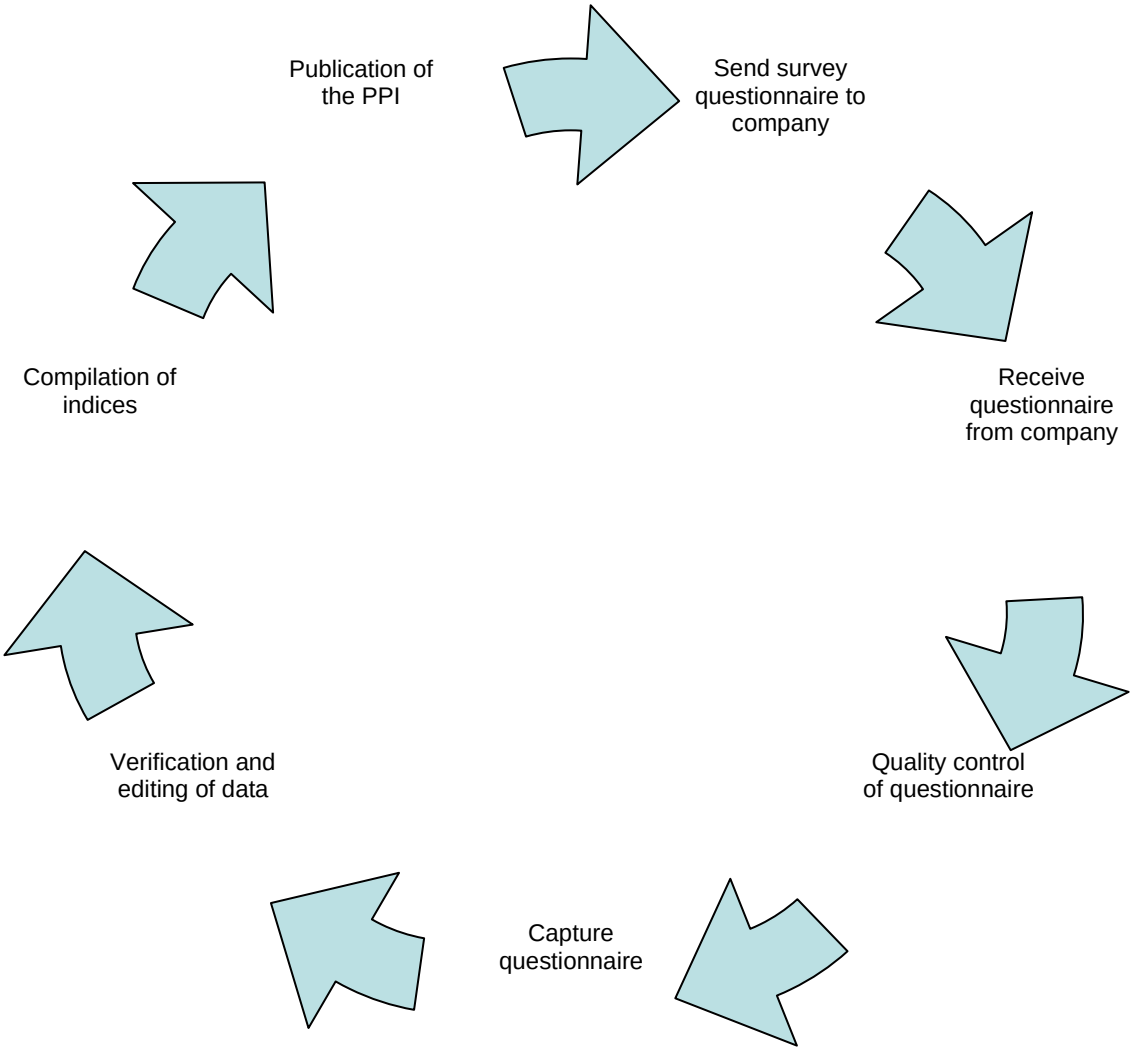
The transaction characteristics include for example (OECD, 2000):

- ⇒ Type of buyer: exporter, wholesaler, retailer, manufacturer, government
- ⇒ Type of contract: single/multiple deliveries, orders, one year, agreed volume
- ⇒ Unit of measure per unit: metre, kilogram etc.)
- ⇒ Delivery basis: free on board, sale with/without delivery to customer,
- ⇒ Type of price: average, list, free on board, net of discount
- ⇒ Type of discount: seasonal, volume, cash, competitive, trade

Chapter 7: Data collection and processing (includes editing and data quality evaluation)

7.1 Introduction

The process flow of the PPI takes on the following form:



7.2 Collection period and frequency

When collecting prices for a particular period, there are two basic choices of collection period: point-in-time and period averages (IMF Manual, 2004).

Point-in-time prices relate to the price of a product on a particular date in the month, whereas period prices are an estimate of the price across the month and so are average prices for the month. The pros and cons of each method are summarised in the table below (IMF).

Table 4: Point-in-time and period prices

Method	Pros	Cons
Point-in-time	Consistency in month-to-month changes in price	• A transaction may not have taken place on the specified date. • More susceptible to short-term external influences (for example, extreme weather conditions, labour stoppages) that could affect the price on the particular day of price collection. • Miss short-term prices changes, between collection dates
Period prices	• Yields a smoother time series • Less susceptible to timing of price increases • The method is also easier for respondents since they can select a transaction and specify the relevant transaction date within the period.	• The index will be less timely when compared with point-in-time estimates, since the average cannot be calculated until the end of the period. • Average prices should relate to a narrowly defined product of constant quality, rather than a broad commodity group.

The South African PPI uses the point-in-time approach, and all prices, with the exception of water, are collected on a monthly basis. The majority of prices are collected for the first seven days of the month (to ensure consistency in the final index, the price observation should compare like with like for each period), with the exception of electricity, agriculture and mining products.

7.3 Type of prices collected

A PPI measures actual prices paid to or received from producers for goods or services. These prices are commonly referred to as transaction prices and include all discounts or rebates given.

7.4 Processing and data validation

Once the questionnaires are received from the companies, the questionnaires are quality controlled to ensure that all fields were completed, and that each questionnaire was completed accurately. Thereafter, the questionnaire is captured and the data validated and edited if required.

Verification includes logical, range, variance and consistency checks (OECD).

⇒ Validation edits - to check the validity of basic identification of classificatory items in unit data.

⇒ Logical edits - ensure that two or more data items do not have contradictory values.

⇒ Consistency edits - check to ensure that precise and correct arithmetic relationships exist between two or more data items.

⇒ Range edits - identify whether or not a data item value falls inside a determined acceptable range.

⇒ Variance edits - involve looking for suspiciously high variances at the output edit stage.

Chapter 8: Imputations in the PPI

The PPI and CPI follow the same methods when imputing for missing prices. There are three methods that the IMF PPI and ILO CPI manual prescribe and give guidelines on, they are:

⇒ Omit the item for which the price is missing so that a matched sample is maintained (like is compared with like) even though the sample is depleted

⇒ Carry forward the last observed price

⇒ Imputation:

- Impute the missing price by the average price change for the prices that are available in the elementary aggregate.
- Impute the missing price by the price change for a particular comparable product from a similar establishment.

Stats SA uses all three methods of imputation in the calculation of the PPI. The choice of method is determined by the level of aggregation of a particular index and the frequency of price collection for a particular product.

The matched sample approach is used when one observation in a sample for an elementary aggregate is temporarily unavailable. For example, if the PPI collects data for 10 types of shirts and one of those is temporality unavailable, the average price change is calculated on the remaining nine. In this way, the assumption is that the price would have moved in the same way as the average of the prices of the items that remain included in the elementary index. This type of imputation is applied at the lowest level of calculation/aggregation, at the elementary index[4] level.

The carry-forward approach is strictly applied to annual, bi-annual, quarterly and other infrequent surveys (not applied to monthly collected data). In the case of these periodic changes, it is legitimate to infer that the prices should remain constant until the next change. This type of imputation is applied at the lowest level of calculation/aggregation, at the elementary index level.

Imputation by average price change is only considered once there is no data available to calculate an average percentage change for a specific indicator product. The lack of data could be attributed to various causes, for example seasonal behaviour, shortage in the market, etc. If data for a specific indicator product is missing, it is imputed on a similar product or group of products. An alternative to average price change on elementary index level is to use price change for a particular comparable product or specific comparable product from (a) similar establishment(s).

[4] An elementary index in the South African PPI refers to an indicator product (9-digit CPC)

Chapter 9: Index calculation

9.1 Overview

The calculations of price indices are usually conducted in two stages. First, price indices are calculated for the elementary aggregates, and then these elementary price indices are averaged to obtain higher-level indices using the relative sales values of the elementary aggregates as weights.

9.2 Elementary indices

Elementary aggregates are constructed by grouping individual goods into relatively homogeneous products and transactions. They may be formed for products in various regions of the country or for the country as a whole, or for establishments. In other words, compilers of the PPI have to select representative products within an elementary aggregate and then collect a sample of each of the representative products, usually from a sample of different producers. The individual representative products for which prices are actually collected are described as the sampled products.

According to the IMF PPI Manual some key concepts underlie the construction of elementary indices:

⇒ Elementary aggregates should be fairly homogeneous.

⇒ They should also consist of products that may be expected to have similar price movements, minimising a wide dispersion of price changes.

⇒ The elementary aggregates should be appropriate to serve as strata for sampling purposes in light of the sampling regime planned for the data collection.

For elementary index compilation, the Jevons index is used. The Jevons index is defined as the unweighted geometric mean of the price ratios (pt/pt-1), which is identical to the ratio of the unweighted geometric mean prices.

The formula is given as:

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

The chained monthly indices link together the month-to-month changes through successive multiplication. The Jevons formula is transitive as the chained monthly indices are identical to the corresponding direct indices which compare prices in each successive month directly with those of the reference month.

9.3 High-level indices

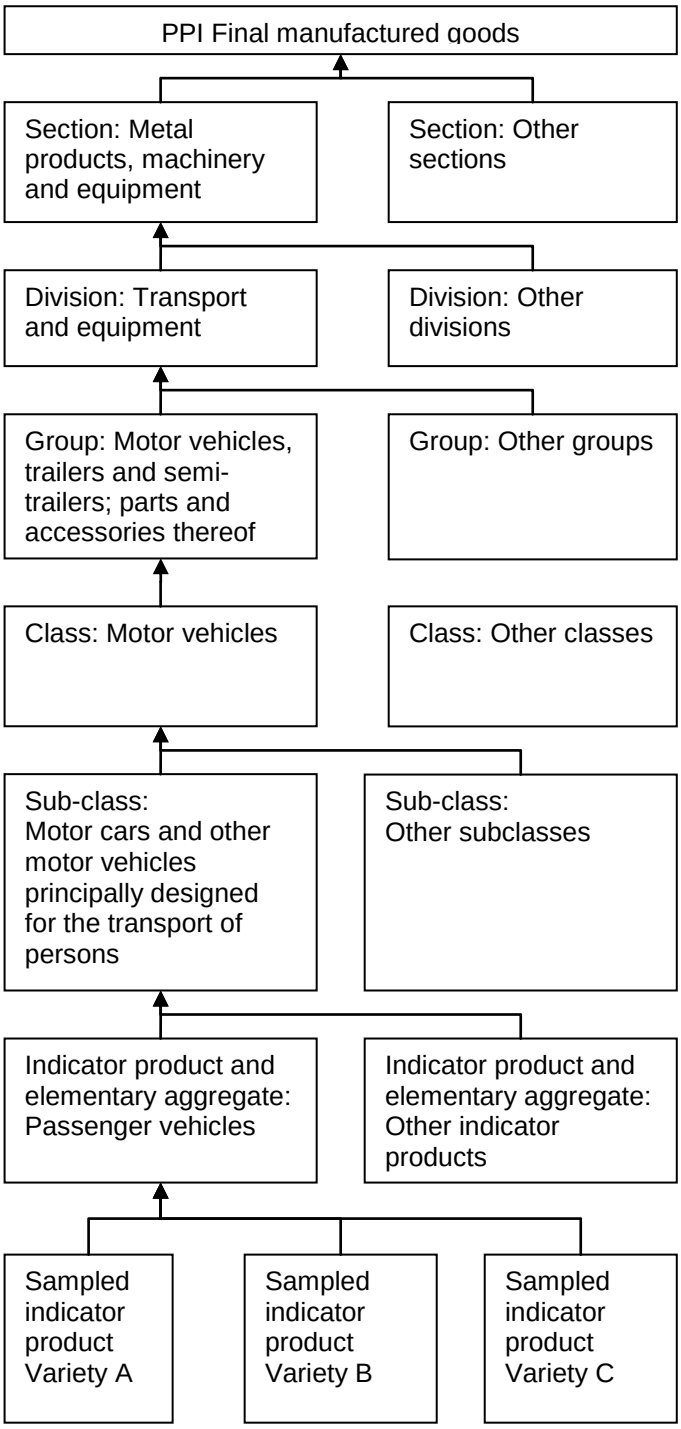
The second stage of calculating the PPI does not involve individual prices or quantities. Instead, a higher-level index is calculated as a Young index in which the elementary price indices are averaged using a set of predetermined weights. The formula can be written as follows:

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

where $I^{0:t}$ denotes the overall PPI, 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 price reference period.

Almost certainly, the most important aspect of index compilation is consistency. Consistency in aggregation means that if an index is calculated stepwise by aggregating lower-level indices to obtain indices at progressively higher levels of aggregation, the same overall result should be obtained as if the calculation had been made in one step.

9.4 Graphical example of the aggregation structure of the PPI[5]



[5] Weighting occurs in one step in the PPI. For example, if a motor vehicle index is published, all items under motor vehicles will be normalised to unity and weighted. If the final manufactured goods index is calculated, then all items under manufacturing are weighted. Two or more subindices are not used to aggregate a higher-level index.

9.5 Linking of the PPI

The PPI high-level weights as well as certain elementary indices will be updated annually. When new weights are introduced the price reference period for the new index can be the last period of the old index; the old and the new indices being linked together at this point. The old and the new indices constitute a linked index.

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 or new classifications. These tasks are often undertaken simultaneously at the time of reweighting to minimise overall disruption to the time series and any resulting inconvenience to users of the indices.

Annual chaining has the advantage that changes (such as the inclusion of new goods) can be introduced on a regular basis, although every index needs some ongoing maintenance, whether annually chained or not.

9.5.1 Features of a linked index

There are several important features of a linked index:

- The linked index formula allows weights to be updated, and facilitates the introduction of new items and sub-indices and the removal of obsolete ones.
- In order to be able to link the old and the new series, an overlapping period (k) is needed in which the index has to be calculated using both the old and the new set of weights.
- A linked index may have two or more links. Between each link period, the index may be calculated as a fixed weight index using any index number formula. 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 new series is chained onto the old one the higher-level indices after the link, cannot be obtained as weighted arithmetic averages of individual indices using the new weights. If, on the other hand, the index reference period is changed and the index series prior to the link period is rescaled to the new index reference period, this series cannot be aggregated to higher-level indices by use of the new weights. Such results need to be carefully explained and presented.

9.5.2 Method of linking the PPI

The method used to link the PPI is known as splicing and chaining. When weights are updated which reflect the latest production patterns, a new series is created. Consequently, two series exist, the old and the new. However, as with all prices statistics, a continuous series is required. To accomplish this, the splicing technique is applied; this means that to make the new index comparable to the old, the indices are spliced at a year that is common to both series.

Chaining occurs when the spliced index change is multiplied to the end index of the old index to obtain a continuous series.

The process followed for the new PPI will be as follows (example to follow):

1. Rebase the elementary indices to 2012=100
2. Calculate the 2012 publication level indices based on the 2010 value added derived weights
3. Calculate the December 2012 and January 2013 publication level indices based on the 2011 weights[6]
4. Calculate the ratio between indices (from step 3) between January 2013 and December 2012.
5. Apply the ratio calculated (from step 4) to the published aggregates to obtain the index for January 2013[7]
6. The following month the same procedure will be followed.

Note that chain-linking leads to non-additivity.

[6] Step 3 and 4 is splicing
[7] Step 5 is chaining

Table 5: Example – Linking and splicing the index

EXAMPLE	Weight 2010	Weight 2011	Jan-12	Nov-12	Old index Dec-12	Average index of products 2012	New index Dec-12	Jan-13	Feb-13	Mar-13
Elementary price indices										
A	21.2	24.6	101.2	109.1	111.3					
B	25.8	24.1	102.1	121.3	122.3					
C	16.9	18.1	99.0	110.0	112.4					
D	15.9	15.9	97.1	115.7	117.6					
E	20.2	17.3	100.0	113.6	111.4					
Elementary price indices rebased								Derived from monthly price ratios		
A			91.8	99.0	101.0	110.2	101.0	102.3	103.6	105.0
B			83.8	99.6	100.4	121.8	100.4	100.3	101.6	102.9
C			89.0	98.9	101.1	111.2	101.1	101.7	102.3	102.9
D			83.2	99.2	100.8	116.7	100.8	101.6	101.9	102.6
E			88.9	101.0	99.0	112.5	99.0	102.7	103.0	103.5
Higher-level indices	Old						New			
G= A+B+C	63.9	66.8	87.9	99.2	100.8		100.8	101.4	102.5	103.7
H=D+E	36.1	33.2	86.4	100.2	99.8		99.9	102.2	102.5	103.1
Total	100.0	100.0	87.3	99.6	100.4		100.5	101.7	102.5	103.5
Chaining of higher-level indices to 2008=100							Ratios			
G= A+B+C								1.006	1.011	1.011
H=D+E								1.023	1.003	1.006
Total								1.012	1.008	1.009
Chaining of higher-level indices to 2008=100							Apply ratio to previous index			
G= A+B+C	63.9	66.8	87.9	99.2	100.8		100.8	101.4	102.5	103.7
H=D+E	36.1	33.2	86.4	100.2	99.8		99.8	102.1	102.4	103.0
Total	100.0	100.0	87.3	99.6	100.4		100.4	101.6	102.4	103.4

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Appendix A: Input and Output CPCs

CPC Code	CPC description	Input/Output
CPC 0	**Agriculture, forestry and fishing products**	
CPC 01	Products of agriculture, horticulture and market gardening	Output
CPC 02	Live animals and animal products (excluding meat)	Output
CPC 03	Forestry and logging products	Output
CPC 04	Fish and other fishing products	Output
CPC 1	**Ores and minerals; electricity, water and gas**	
CPC 11	Coal and lignite; peat	Output
CPC 13	Gold, uranium and thorium ores and concentrates	Output
CPC 14	Metal ores and concentrates	Output
CPC 16	Other minerals	Output
CPC 17	Electricity, town gas, steam and hot water	Output
CPC 18	Natural water	Output
CPC 2	**Food products; beverages and tobacco; textiles, apparel and leather products**	
CPC 211	Meat and meat products	Output
CPC 212	Prepared and preserved fish, crustaceans, molluscs and other aquatic invertebrates	Output
CPC 213	Prepared and preserved vegetables, pulses and potatoes	Output
CPC 214	Prepared and preserved fruit and nuts	Output
CPC 215	Animal and vegetable oils and fats	Output
CPC 221	Processed liquid milk and cream	Output
CPC 222	Other dairy products	Output
CPC 231	Grain mill products	Output
CPC 232	Starches and starch products; sugars and sugar syrups n.e.c.	Output
CPC 233	Preparations used in animal feeding	Output
CPC 234	Bakery products	Output
CPC 235	Sugar	Output
CPC 236	Cocoa, chocolate and sugar confectionery	Output
CPC 237	Macaroni, noodles, couscous and similar farinaceous products	Output
CPC 239	Food products n.e.c	Output
CPC 241	Ethyl alcohol; spirits, liqueurs and other spirituous beverages	Output
CPC 242	Wines	Output
CPC 243	Malt liquors and malt	Output
CPC 244	Soft drinks ;bottled mineral waters	Output
CPC 250	Tobacco products	Output
CPC 263	Textile yarn and thread of natural fibres	Input
CPC 264	Textile yarn and thread of man-made filaments or staple fibres	Input
CPC 266	Woven fabrics (except special fabrics) of cotton	Input
CPC 267	Woven fabrics (except special fabrics) of manmade filaments and staple fibres	Input
CPC 271	Made-up textile articles	Output
CPC 272	Carpets and other textile floor coverings	Input
CPC 281	Knitted or crocheted fabrics	Input
CPC 282	Wearing apparel, except fur apparel	Output
CPC 291	Tanned or dressed leather; composition leather	Input
CPC 293	Footwear, with outer soles and uppers of rubber or plastics, or with uppers of leather or textile materials, other than sports footwear, footwear incorporating a protective metal toe- cap and miscellaneous special footwear	Output

CPC 3	Other transportable goods, except metal products, machinery and equipment	
CPC 311	Wood, sawn or chipped lengthwise, sliced or peeled, of a thickness exceeding 6mm; railway or tramway sleepers (cross-ties) of wood not impregnated	Input
CPC 312	Wood continuously shaped along any of its edges or faces; wood wool; wood flour; wood in chips or particles	Input
CPC 313	Wood in the rough, including those treated with paint, stains, creosote or other preservatives; railway or tramway sleepers (cross-ties) of wood, impregnated	Input
CPC 314	Boards and panels	Input
CPC 316	Builders' joinery and carpentry of wood (including cellular wood panels, assembled parquet panels, shingles and shakes)	Input
CPC 317	Packing cases, boxes, crates, drums and similar packings, of wood; cable-drums of wood; pallets, box pallets and other load boards, of wood; casks, barrels, vats, tubs and other coopers' products and parts thereof, of wood (including staves)	Input
CPC 321	Pulp, paper and paperboard	Output
CPC 322	Books, in print	Output
CPC 323	Newspapers and periodicals, daily, in print	Output
CPC 326	Stamps, cheque forms, banknotes, stock certificates, brochures and leaflets, advertising material and other printed matter	Output
CPC 331	Coke and semi-coke of coal, of lignite or of peat; retort carbon	Output
CPC 333	Petroleum oils and oils obtained from bituminous materials, other than crude; preparations n.e.c. containing by weight 70% or more of these oils, such oils being the basic constituents of the preparations	Output
CPC 334	Petroleum gases and other gaseous hydrocarbons, except natural gas	Output
CPC 336	Radioactive elements and isotopes and compounds; alloys, dispersions, ceramic products and mixtures containing these elements, isotopes or compounds; radioactive residues	Output
CPC 341	Basic organic chemicals	Input
CPC 342	Basic inorganic chemicals n.e.c.	Input
CPC 346	Fertilizers and pesticides	Output
CPC 347	Plastics in primary forms	Input
CPC 348	Synthetic rubber and factice derived from oils, and mixtures thereof with natural rubber and similar natural gums, in primary forms or in plates, sheets or strip	Input
CPC 351	Paints and varnishes and related products; artists' colours ;ink	Output
CPC 352	Pharmaceutical products	Output
CPC 353	Soap, cleaning reparations, perfumes and toilet preparations	Output
CPC 354	Chemical products n.e.c.	Output
CPC 355	Man-made fibres	Output
CPC 361	Rubber tyres and tubes	Output
CPC 362	Other rubber products	Input
CPC 363	Semi-manufactures of plastics	Input
CPC 364	Packaging products of plastics	Input
CPC 369	Other plastic products	Output
CPC 371	Glass and glass products	Input
CPC 373	Refractory products and structural non-refractory clay products	Output
CPC 374	Plaster, lime and cement	Output
CPC 375	Articles of concrete, cement and plaster	Output
CPC 379	Other non-metallic mineral products n.e.c.	Output
CPC 381	Furniture	Output

CPC 382	Jewellery and related articles	Output
CPC 387	Prefabricated buildings	Output
CPC 389	Other manufactured articles n.e.c.	Output
CPC 393	Metal waste or scraps	Input
CPC 4	**Metal products, machinery and equipment**	
CPC 411	Basic iron and steel	Input
CPC 412	Products of iron or steel	Input
CPC 413	Basic precious metals and metals clad with precious metals	Input
CPC 414	Copper ,nickel, aluminium, alumimina, lead, zinc and tin, unwrought	Input
CPC 415	Semi-finished products of copper, nickel, aluminium, lead, zinc and tin or their alloys	Input
CPC 416	Other non-ferrous metals and articles thereof (including waste and scrap of some metals); cermets and articles thereof	Input
CPC 421	Structural metal products and parts thereof	Output
CPC 422	Tanks, reservoirs and containers of iron, steel or aluminium	Output
CPC 429	Other fabricated metal products	Output
CPC 431	Engines and turbines and parts thereof	Output
CPC 432	Pumps, compressors, hydraulic and pneumatic power engines, and valves, and parts thereof	Output
CPC 439	Other general -purpose machinery and parts thereof	Output
CPC 444	Machinery for mining, quarrying and construction, and parts thereof	Output
CPC 447	Weapons and ammunition and parts thereof	Output
CPC 448	Domestic appliances and parts thereof	Output
CPC 452	Computing machinery and parts and accessories thereof	Output
CPC 461	Electric motors, generators and transformers, and parts thereof	Output
CPC 462	Electricity distribution and control apparatus, and parts thereof	Output
CPC 463	Insulated wire and cable; optical fibre cables	Output
CPC 464	Accumulators, primary cells and primary batteries, and parts thereof	Output
CPC 465	Electric filament or discharge lamps; arc lamps; lighting equipment; parts thereof	Output
CPC 491	Motor vehicles, trailers and semi-trailers; parts and accessories thereof	Output
CPC 492	Bodies (coachwork) for motor vehicles; trailers and semi-trailers; parts and accessories thereof	Output

Appendix B: Basket of products in the PPI, price collection methodology and frequencies

SIC Code	SIC Description	Indicator products	Price collection methodology	Frequency	Type of price
1	**Agriculture, forestry and fishing**				
11	**Agriculture**				
111	**Growing of crops**				
1111		Wheat	Markets	Monthly	Average price
1111		Maize	Markets	Monthly	Average price
1111		Sunflower seed	Markets	Monthly	Average price
1111		Sugar cane	Sugar Cane Growers Association	Monthly (on month lag)	Price per ton of Recoverable Value (RV)
1112		Tomatoes	Markets	Monthly	Average price
1112		Onions	Markets	Monthly	Average price
1112		Potatoes	Markets	Monthly	Average price
1113		Bananas	Markets	Monthly	Average price
1113		Oranges	Markets	Monthly	Average price
1113		Grapes	Markets	Monthly	Average price
1113		Lemons and limes	Markets	Monthly	Average price
1113		Apples	Markets	Monthly	Average price
112	**Farming of animals**				
1121		Cattle	Auctions	Monthly	Average price
1121		Sheep	Auctions	Monthly	Average price
1121		Raw milk	Processors of milk/Farmers/Association	Monthly	Average price
1121		Wool	Auctions/Companies	Monthly	Average price
1122		Pigs	Auctions	Monthly	Average price
1122		Poultry	Association	Monthly	Average price
1122		Eggs	Association/Companies	Monthly	Average price
12	**Forestry and logging**				
122	**Logging**				
1220		Sawn and planted timber - Softwood	Companies	Monthly	Price per unit
1220		Sawn and planted timber - Hardwood	Companies	Monthly	Price per unit
13	**Fishing**				
131	**Ocean and coastal fishing**				
1310		Small pelagic (e.g. anchovies and pilchards)	Fishing Producers/Companies	Monthly	Price per unit
1310		Hake	Fishing Producers/Companies	Monthly	Price per unit
1310		Rock lobster	Fishing Producers/Companies	Monthly	Price per unit
1310		Squid	Fishing Producers/Companies	Monthly	Price per unit
2	**Mining and Quarrying**				
21	**Mining of Coal**				
210	**Mining of Coal**				
2100		Coal	Mining Producers/Companies	Monthly	Contract price/Average price
22	**Extraction crude petroleum /natural gas**				
221	**Extraction of crude petroleum and natural gas**				
2210		Natural gas	Companies	Monthly	Price per unit
2210		Natural gas condensate	Companies	Monthly	Price per unit/Brent crude

					oil average

23	**Mining of gold**				
230	**Mining of gold**				
2300		Gold	Mining Producers/Companies	Monthly	Average price
24	**Mining of metal ores, except gold**				
241	**Mining of iron ore**				
2410		Haematite	Mining Producers/Companies	Monthly	Average price
242	**Mining of non-ferrous metal ores, except gold**				
2421		Chromite - Less than 44% Cr2O3	Mining Producers/Companies	Monthly	Average price
2421		Chromite - 44% to 48% Cr2O3	Mining Producers/Companies	Monthly	Average price
2422		Metallic copper	Mining Producers/Companies	Monthly	Average price
2423		Metallurgical manganese	Mining Producers/Companies	Monthly	Average price
2424		Platinum	Companies/Platinum refiners/ London Metal Exchange	Monthly	London Metal Exchange (LME) average price
2424		Rhodium	Mining Producers/Companies	Monthly	Average price
2424		Palladium	Mining Producers/Companies	Monthly	Average price
2429		Nickel	Mining Producers/Companies	Monthly	Average price
25	**Other mining and quarrying**				
251	**Stone quarrying, clay and sand-pits**				
2510		Aggregate stones	Mining Producers/Companies	Monthly	Average price
2520		Gem diamonds	Mining Producers/Companies	Monthly	Average price
2520		Industrial diamonds	Mining Producers/Companies	Monthly	Average price
2531		Phosphate concentrate	Mining Producers/Companies	Monthly	Average price
2539		Andalusite	Mining Producers/Companies	Monthly	Average price
4	**Electricity and water**				
41	**Electricity**				
411	**Production, collection and distribution of electricity**				
4111		Electricity	Eskom	Monthly	Weighted average
42	**Collection, purification and distribution of water**				
420	**Collection, purification and distribution of water**				
4200		Processed water	Water Boards	Annually	Price per unit
4200		Raw water	Department of Water Affairs	Annually	Price per unit
3	**Manufacturing**				
30	**Manufacture of food products, beverages and tobacco products**				
301	**Production, processing and preserving of meat, fish, fruit, vegetables, oils and fats**				
3011		Beef carcasses	Producers/Companies	Monthly	Price per unit
3011		Pork carcasses	Producers/Companies	Monthly	Price per unit
3011		Lamb carcasses	Producers/Companies	Monthly	Price per unit
3011		Chicken - Fresh or chilled	Producers/Companies	Monthly	Price per unit

3011		Frozen chicken	Producers/Companies	Monthly	Price per unit
3011		Bacon	Producers/Companies	Monthly	Price per unit
3011		Polony	Producers/Companies	Monthly	Price per unit
3011		Meat burgers	Producers/Companies	Monthly	Price per unit
3011		Meat pies	Producers/Companies	Monthly	Price per unit
3011		Viennas	Producers/Companies	Monthly	Price per unit
3012		Fresh and chilled fish	Producers/Companies	Monthly	Price per unit
3012		Tinned fish	Producers/Companies	Monthly	Price per unit
3013		Frozen potato fries	Producers/Companies	Monthly	Price per unit
3013		Canned baked beans	Producers/Companies	Monthly	Price per unit
3013		Canned vegetables	Producers/Companies	Monthly	Price per unit
3013		Fruit concentrates	Producers/Companies	Monthly	Price per unit
3013		Fruit juice	Producers/Companies	Monthly	Price per unit
3013		Canned or bottled peaches	Producers/Companies	Monthly	Price per unit
3013		Jam	Producers/Companies	Monthly	Price per unit
3013		Raisins	Producers/Companies	Monthly	Price per unit
3014		Cooking oil	Producers/Companies	Monthly	Price per unit
3014		Margarine	Producers/Companies	Monthly	Price per unit
302	**Manufacture of dairy products**				
3020		Fresh full-cream milk	Producers/Companies	Monthly	Price per unit
3020		Long life full-cream milk	Producers/Companies	Monthly	Price per unit
3020		Cream	Producers/Companies	Monthly	Price per unit
3020		Yoghurt	Producers/Companies	Monthly	Price per unit
3020		Gouda	Producers/Companies	Monthly	Price per unit
3020		Cheddar	Producers/Companies	Monthly	Price per unit
3020		Mozzarella	Producers/Companies	Monthly	Price per unit
3020		Ice-cream	Producers/Companies	Monthly	Price per unit
3020		Dairy mixtures	Producers/Companies	Monthly	Price per unit
303	**Manufacture of grain mill products, starches and starch products, animal feeds**				
3031		Brown bread meal	Producers/Companies	Monthly	Price per unit
3031		Cake flour	Producers/Companies	Monthly	Price per unit
3031		White bread flour	Producers/Companies	Monthly	Price per unit
3031		Maize meal	Producers/Companies	Monthly	Price per unit
3031		Cereals	Producers/Companies	Monthly	Price per unit
3032		Glucose and glucose syrup	Producers/Companies	Monthly	Price per unit
3033		Dairy cattle feeds	Producers/Companies	Monthly	Price per unit
3033		Cat and dog food	Producers/Companies	Monthly	Price per unit
3033		Poultry Feeds	Producers/Companies	Monthly	Price per unit
304	**Manufacture of other food products**				
3041		Brown bread	Producers/Companies	Monthly	Price per unit
3041		White bread	Producers/Companies	Monthly	Price per unit
3041		Sweet biscuits	Producers/Companies	Monthly	Price per unit
3042		Raw cane sugar	Producers/Companies	Monthly	Price per unit
3042		Refined sugar	Producers/Companies	Monthly	Price per unit
3043		Chocolate slabs and bars	Producers/Companies	Monthly	Price per unit
3043		Sweets	Producers/Companies	Monthly	Price per unit
3044		Uncooked pasta	Producers/Companies	Monthly	Price per unit
3049		Tea	Producers/Companies	Monthly	Price per unit
3049		Chips	Producers/Companies	Monthly	Price per unit
3049		Mayonnaise	Producers/Companies	Monthly	Price per unit
3049		Tomato sauce	Producers/Companies	Monthly	Price per unit
3049		Peanut butter	Producers/Companies	Monthly	Price per unit

3049		Instant coffee	Producers/Companies	Monthly	Price per unit
3049		Spices and condiments	Producers/Companies	Monthly	Price per unit
3049		Nutritional, dietary and formulated food supplements	Producers/Companies	Monthly	Price per unit
3049		Nuts	Producers/Companies	Monthly	Price per unit
3049		Non-dairy creamers	Producers/Companies	Monthly	Price per unit
3049		Powdered soft drinks	Producers/Companies	Monthly	Price per unit
305	**Manufacture of beverages**				
3051		Spirits	Producers/Companies	Monthly	Price per unit
3051		Red wine	Producers/Companies	Monthly	Price per unit
3051		White wine	Producers/Companies	Monthly	Price per unit
3051		Spirit coolers	Producers/Companies	Monthly	Price per unit
3052		Beer	Producers/Companies	Monthly	Price per unit
3053		Soft drinks	Producers/Companies	Monthly	Price per unit
306	**Manufacture of tobacco products**				
3060		Cigarettes	Producers/Companies	Monthly	Price per unit
31	**Manufacture of textiles, clothing and leather goods**				
311	**Spinning, weaving and finishing of textiles**				
3111		Woven cotton fabrics	Producers/Companies	Monthly	Price per unit
3111		Synthetic woven fabrics	Producers/Companies	Monthly	Price per unit
312	**Manufacture of other textiles**				
3121		Linen	Producers/Companies	Monthly	Price per unit
3121		Loose car seat covers	Producers/Companies	Monthly	Price per unit
3122		Carpets (excl mats and rugs)	Producers/Companies	Monthly	Price per unit
313	**Manufacture of knitted and crocheted fabrics and articles**				
3130		Knitted or crocheted fabrics	Producers/Companies	Monthly	Price per unit
3130		Pantyhose and tights	Producers/Companies	Monthly	Price per unit
3130		Socks	Producers/Companies	Monthly	Price per unit
3130		Knitwear	Producers/Companies	Monthly	Price per unit
314	**Manufacture of wearing apparel, except fur apparel**				
3140		Panties	Producers/Companies	Monthly	Price per unit
3140		T-shirts	Producers/Companies	Monthly	Price per unit
3140		Men’s and boys’ jackets	Producers/Companies	Monthly	Price per unit
3140		Men’s and boys’ trousers	Producers/Companies	Monthly	Price per unit
3140		Men’s and boys’ shirts	Producers/Companies	Monthly	Price per unit
3140		Dresses	Producers/Companies	Monthly	Price per unit
3140		Skirts	Producers/Companies	Monthly	Price per unit
3140		Women's and girls’ pants and jeans	Producers/Companies	Monthly	Price per unit
3140		Blouses	Producers/Companies	Monthly	Price per unit
3140		Bra's	Producers/Companies	Monthly	Price per unit
316	**Tanning and dressing of leather**				
3161		Tanned or dressed leather	Producers/Companies	Monthly	Price per unit
317	**Manufacture of footwear**				
3170		Men’s and boys’ footwear	Producers/Companies	Monthly	Price per unit
3170		Women's and girls’ footwear	Producers/Companies	Monthly	Price per unit
32	**Manufacture of wood, cork, straw, paper, printing, media**				
321	**Sawmilling and planing of wood**				
3210		Untreated logs and structural timber	Producers/Companies	Monthly	Price per unit
3210		Wood in chips or particles	Producers/Companies	Monthly	Price per unit
3210		Treated logs and	Producers/Companies	Monthly	Price per unit

		structural timber			
3210		Transmission and telephone poles	Producers/Companies	Monthly	Price per unit
322	**Manufacture of products of wood, cork, straw and plaiting materials**				
3221		Boards of wood	Producers/Companies	Monthly	Price per unit
3222		Builder's carpentry of wood	Producers/Companies	Monthly	Price per unit
3222		Prefabricated buildings	Producers/Companies	Monthly	Price per unit
3223		Pallets and other load boards	Producers/Companies	Monthly	Price per unit
323	**Manufacture of paper and paper products**				
3231		Newsprint	Producers/Companies	Monthly	Price per unit
3231		Paper for printing	Producers/Companies	Monthly	Price per unit
3231		Packing and wrapping paper in rolls or sheets	Producers/Companies	Monthly	Price per unit
3231		Plain cut paper	Producers/Companies	Monthly	Price per unit
3232		Sacks and bags of paper	Producers/Companies	Monthly	Price per unit
3232		Corrugated cardboard boxes	Producers/Companies	Monthly	Price per unit
3239		Disposable nappies for babies	Producers/Companies	Monthly	Price per unit
3239		Toilet paper	Producers/Companies	Monthly	Price per unit
324	**Publishing**				
3241		Books	Producers/Companies	Monthly	Price per unit
325	**Printing and activities related to printing**				
3251		Newspapers	Producers/Companies	Monthly	Price per unit
3251		Magazines	Producers/Companies	Monthly	Price per unit
3251		Printed Stationary	Producers/Companies	Monthly	Price per unit
33	**Manufacture of coke, refined petroleum products, nuclear, chemicals, rubber, plastic**				
331	**Manufacture of coke oven products**				
3310		Charcoal	Producers/Companies	Monthly	Price per unit
3310		Pre-mixed asphalt	Producers/Companies	Monthly	Price per unit
3310		Bituminous mixtures	Producers/Companies	Monthly	Price per unit
332	**Petroleum refineries/synthesisers**				
3321/2/3		Petrol	SAPIA/Petro SA	Monthly	Average price
3321/2/3		Diesel	SAPIA/Petro SA	Monthly	Average price
3321/2/3		Engine oils	Producers/Companies	Monthly	Price per unit
3321/2/3		LPG gasses	Producers/Companies	Monthly	Price per unit
3321/2/3		Lubricating preparations	Producers/Companies	Monthly	Price per unit
3321/2/3		Petroleum gasses or gaseous hydrocarbons	Producers/Companies	Monthly	Price per unit
3321/2/3		Jet fuel	Producers/Companies	Monthly	Price per unit
333	**Processing of nuclear fuel**				
3330		Radioactive elements and compounds (uranium)	Producers/Companies	Monthly	Price per unit
334	**Manufacture of basic chemicals**				
3341		Basic organic chemicals	Producers/Companies	Monthly	Price per unit
3341		Basic inorganic chemicals	Producers/Companies	Monthly	Price per unit
3342		Organic fertilizers	Producers/Companies	Monthly	Price per unit
3342		Mixed fertilizers	Producers/Companies	Monthly	Price per unit
3343		Ethylene polymers and copolymers (PET)	Producers/Companies	Monthly	Price per unit
3343		Vinyl chloride polymers (PVC) and copolymers	Producers/Companies	Monthly	Price per unit
3343		Synthetic rubber	Producers/Companies	Monthly	Price per unit
3343		Polyurethane	Producers/Companies	Monthly	Price per unit
3343		Polyethylene	Producers/Companies	Monthly	Price per unit

335	**Manufacture of other chemicals products**				
3351		Herbicide	Producers/Companies	Monthly	Price per unit
3352		Paints	Producers/Companies	Monthly	Price per unit
3353		Antiviral and retroviral drugs	Department of Health	Monthly	Price per unit
3353		Cold and flu preparations	Department of Health	Monthly	Price per unit
3353		Provitamins, vitamins, hormones and antibiotics	Department of Health	Monthly	Price per unit
3354		Laundry bars and tablets	Producers/Companies	Monthly	Price per unit
3354		Washing powder	Producers/Companies	Monthly	Price per unit
3354		Perfumes and deodorant	Producers/Companies	Monthly	Price per unit
3354		Lotions and creams	Producers/Companies	Monthly	Price per unit
335/6	**Manufacture of other chemicals products/Man-made fibres**				
3359/60		Prepared explosives	Producers/Companies	Monthly	Price per unit
3359/60		Water and pool treatment chemicals	Producers/Companies	Monthly	Price per unit
3359/60		Synthetic fibres - Polyester	Producers/Companies	Monthly	Price per unit
337	**Manufacture of rubber products**				
3371		Tyres	Producers/Companies	Monthly	Price per unit
3379		Unvulcanised compounded rubber	Producers/Companies	Monthly	Price per unit
3379		Conveyor belts or belting	Producers/Companies	Monthly	Price per unit
3379		Industrial rubber products	Producers/Companies	Monthly	Price per unit
338	**Manufacture of plastic products**				
3380		Plastic pipes, tubes and fittings	Producers/Companies	Monthly	Price per unit
3380		Plastic bags	Producers/Companies	Monthly	Price per unit
3380		Plastic containers	Producers/Companies	Monthly	Price per unit
3380		Motor vehicle parts and components of plastic	Producers/Companies	Monthly	Price per unit
3380		Industrial mouldings of plastic	Producers/Companies	Monthly	Price per unit
3380		Stationery goods of plastic	Producers/Companies	Monthly	Price per unit
34	**Manufacture of other non-metallic mineral products**				
341	**Manufacture of glass and glass products**				
3411		Safety glass	Producers/Companies	Monthly	Price per unit
3411		Fibre glass	Producers/Companies	Monthly	Price per unit
3411		Glass containers	Producers/Companies	Monthly	Price per unit
342	**Manufacture of non-metallic mineral products n.e.c**				
3422		Refractory bricks and shapes	Producers/Companies	Monthly	Price per unit
3423		Clay bricks	Producers/Companies	Monthly	Price per unit
3423		Ceramic tiles	Producers/Companies	Monthly	Price per unit
3424		Cement	Producers/Companies	Monthly	Price per unit
3425		Ready-mix concrete	Producers/Companies	Monthly	Price per unit
3425		Cement or concrete bricks	Producers/Companies	Monthly	Price per unit
3425		Roof tiles	Producers/Companies	Monthly	Price per unit
3425		Concrete pipes	Producers/Companies	Monthly	Price per unit
3425		Prefabricated cement and concrete components	Producers/Companies	Monthly	Price per unit
3429		Abrasive tools	Producers/Companies	Monthly	Price per unit
35	**Manufacture of basic or fabricated metals, machinery, equipment, computing equipment**				
351	**Manufacture of basic iron and steel**				
3510		Ferro-manganese	Producers/Companies	Monthly	Price per unit
3510		Ferro-chromium alloy	Producers/Companies	Monthly	Price per unit
3510		Angles, shapes, sections and similar products of	Producers/Companies	Monthly	Price per unit

		iron or steel			
3510		Flat rolled non-alloy steel products	Producers/Companies	Monthly	Price per unit
3510		Flat rolled stainless steel products	Producers/Companies	Monthly	Price per unit
3510		Bars and rods of iron and steel	Producers/Companies	Monthly	Price per unit
352	**Manufacture of basic precious and non-ferrous metals**				
3520		Unwrought or semi-manufactured platinum	Producers/Companies	Monthly	Price per unit
3520		Unwrought aluminium	Producers/Companies	Monthly	Price per unit
3520		Manganese metal (electrolytic manganese)	Producers/Companies	Monthly	Price per unit
3520		Unwrought or semi-manufactured gold	Producers/Companies	Monthly	Price per unit
353	**Casting of metals**				
3532		Aluminium products	Producers/Companies	Monthly	Price per unit
3531		Semi - finished products and ingots of iron and steel	Producers/Companies	Monthly	Price per unit
354	**Manufacture of structural metal products**				
3541		Aluminium door and window frames	Producers/Companies	Monthly	Price per unit
3541		Steel window frames	Producers/Companies	Monthly	Price per unit
3541		Roof sheeting	Producers/Companies	Monthly	Price per unit
3541		Ventilation, ducting, booths, hoods of base metal	Producers/Companies	Monthly	Price per unit
3542		Reservoirs, tanks, vats and similar containers of iron, steel or aluminium	Producers/Companies	Monthly	Price per unit
355	**Manufacture of other fabricated metal products**				
3553		Locks and padlocks, clasps, keys and parts thereof of base metal	Producers/Companies	Monthly	Price per unit
3559		Cans	Producers/Companies	Monthly	Price per unit
3559		Wire	Producers/Companies	Monthly	Price per unit
356	**Manufacture of general purpose machinery**				
3561		Engines for motor vehicles	Producers/Companies	Monthly	Price per unit
3562		Hydraulic linear acting power engines and motors, and parts thereof	Producers/Companies	Monthly	Price per unit
3562		Pumps	Producers/Companies	Monthly	Price per unit
3562		Taps, cocks and valves	Producers/Companies	Monthly	Price per unit
3569		Heating and cooling systems	Producers/Companies	Monthly	Price per unit
3569		Commercial and industrial refrigerating and freezing equipments	Producers/Companies	Monthly	Price per unit
3569		Filtering or purifying machinery and apparatus(except for air or engines)	Producers/Companies	Monthly	Price per unit
357	**Manufacture of special purpose machinery**				
3574		Mining, quarrying and construction machinery and parts thereof	Producers/Companies	Monthly	Price per unit
3577		Munitions, ammunitions and cartridges	Producers/Companies	Monthly	Price per unit
358	**Manufacture of household appliances**				

3580		Geysers	Producers/Companies	Monthly	Price per unit
3580		Stoves and ovens	Producers/Companies	Monthly	Price per unit
3580		Fridge-freezer	Producers/Companies	Monthly	Price per unit
359	**Manufacture of office, accounting and computing machinery**				
3590		Computers	Producers/Companies	Monthly	Price per unit
36	**Manufacture of electrical machinery and apparatus n.e.c**				
361	**Manufacture of electric motors, generators and transformers**				
3610		Generators sets	Producers/Companies	Monthly	Price per unit
3610		Electric motors	Producers/Companies	Monthly	Price per unit
3610		Power transformers	Producers/Companies	Monthly	Price per unit
362	**Manufacture of electricity distribution and control apparatus**				
3620		Electricity distribution and control equipment	Producers/Companies	Monthly	Price per unit
363	**Manufacture of insulated wire and cable**				
3630		Electrical conductors	Producers/Companies	Monthly	Price per unit
364	**Manufacture of accumulators, primary cells and primary batteries**				
3640		Batteries	Producers/Companies	Monthly	Price per unit
365	**Manufacture of electric lamps and lighting equipment**				
3650		Electric lighting equipment	Producers/Companies	Monthly	Price per unit
366	**Manufacture of other electrical equipment n.e.c**				
3660		Automotive wire cables	Producers/Companies	Monthly	Price per unit
38	**Manufacture of transport equipment**				
381	**Manufacture of vehicles**				
3810		Passenger Vehicles	Producers/Companies	Monthly	Price per unit
3810		Bakkies and vans not exceeding 3.5 tons	Producers/Companies	Monthly	Price per unit
3810		Lorries, trucks and vans exceeding 3.5 tons	Producers/Companies	Monthly	Price per unit
382	**Manufacture of bodies for motor vehicles, mfg of trailers and semi - trailers**				
3820		Draw bar trailers	Producers/Companies	Monthly	Price per unit
3820		Bodies for motor vehicles	Producers/Companies	Monthly	Price per unit
3820		Tipper, tanker and trailer parts	Producers/Companies	Monthly	Price per unit
383	**Manufacture of parts and accessories for motor vehicles and their engines**				
3830		Seats for motor vehicles	Producers/Companies	Monthly	Price per unit
3830		Suspension, brakes, clutch, mountings and parts	Producers/Companies	Monthly	Price per unit
3830		Filters for engines	Producers/Companies	Monthly	Price per unit
3830		Catalytic convertors	Producers/Companies	Monthly	Price per unit
3830		Silencers and exhaust pipes	Producers/Companies	Monthly	Price per unit
3830		Radiators	Producers/Companies	Monthly	Price per unit
39	**Manufacture of furniture, recycling and manufacturing n.e.c**				
391	**Manufacture of furniture**				
3910		Furniture	Producers/Companies	Monthly	Price per unit
3910		Mattresses	Producers/Companies	Monthly	Price per unit
392	**Manufacture n.e.c.**				
3921		Gold jewellery	Producers/Companies	Monthly	Price per unit
3921		Precious and semi-precious stones	Producers/Companies	Monthly	Price per unit
3929		Number plates and signs	Producers/Companies	Monthly	Price per unit
3929		Brooms and mops	Producers/Companies	Monthly	Price per unit
395	**Recycling n.e.c**				
3951		Metal waste and scrap	Producers/Companies	Monthly	Price per unit