



KENYA NATIONAL BUREAU OF STATISTICS

Re~Based Producer Price Index (PPI) Report

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Chapter 1: Introduction

1.1 Background of Producer Price Index

The Kenya National Bureau of Statistics (KNBS) has been monitoring the changes in production prices every quarter through the quarterly Producer Price Index (PPI). The PPI has been used as an indicator of inflationary trends from the producer's perspective, a deflator for industrial statistics, for economic monitoring and comparison among others. Based on the wide range of uses, it is important that the KNBS continues to compile the PPI which is more accurate and reliable.

The PPI has been produced since 2012 with the weights derived from the 2009 data, which was the reference year for the Census of Industrial Production (CIP) 2010. Over time, the production patterns and the industrial structure changes and there is need to rebase the index to reflect current status. Rebasing PPI is also in line with the internationally accepted best practices for reviewing indices after a certain period of time.

This re-based Producer Price Index (PPI) is derived from the results of the Census of Industrial Production (CIP) 2018 carried out by Kenya National Bureau of Statistics (KNBS). Data collection was done across all the 47 counties for a period of eighty (80) days from July to October. The CIP 2018 provided updated industrial statistics with a reference year of 2017 which updated the baseline data collected in 2009. This updated data generated the weights used in the development of updated Producer Price Indices (PPI). This report gives the key highlights of the structure of the rebased PPI, the methodology employed as well as the results.

1.2 Why Producer Price Index

PPI is an index designed to measure the average change in the price of goods and services either as they leave the place of production or as they enter the production process. PPI measures price change from the perspective of the producer and this contrast other measures such as the Consumer Price Index (CPI), which measure price change from the purchaser's perspective. The sellers' and purchasers' prices can differ due to Governments subsidies, sales and taxes, and distribution costs. KNBS computes the PPI of goods as they leave the place of production (ex-factory) valued using the basic prices.

Basic Price (IMF, 2004) - Amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, on that unit as a consequence of its production or sale. It excludes any transport charges invoiced separately by the producer.

Producer's Price (IMF, 2004) - Amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any VAT, or similar deductible tax, invoiced to the purchaser. It excludes any transport charges invoiced separately by the producer.

Difference between basic and producer prices is mainly in subsidy that the producer receives and taxes on production. In most cases producers do not receive subsidies, so the basic and producer prices are the same.

Two categories of producer price indices;

- ✓ Output prices (at basic or producer prices)
- ✓ Input prices (at purchaser prices)

1.3 Input and Output PPI

1.3.1 Input PPI

Input PPI measures potential inflation, by indicating the price pressures that producers are facing. Given that the producer faces many other costs e.g. labour and capital costs and also considering

how much of any overall price change the market will bear, it is unusual to see the full effect of an immediate input price rise being transmitted directly to the output price. Input prices also include import prices for import goods that are used in the manufacturing process.

1.3.2 Output PPI

Output prices measure the price change that actually takes place and are therefore a more direct measure of inflation. It's worth noting that output prices can also be an input further along in the production process, a measure of potential inflation in further stages of production.

1.4 Data requirements for compilation of output PPI

- A set of well-specified products
- A representative sample of establishments
- Information to compile weights at industry / establishment/product group level
- Information from industries to monitor potential change in quality.

Chapter 2: Uses of Producer Price Index

Overall, PPIs measure the change in the prices of goods and services bought and sold by producers. Movements in producer prices are clearly important for the measurement of inflation and the analysis of the process of inflation within the economy. PPI is one of the principle price indices in the system of economic statistics i.e. the CPI, PPI, and the export and import price indices which are key macroeconomic indicators.

PPIs serve multiple purposes, but mainly are designed to measure the average change in the price of goods and services either as they leave the place of production or as they enter the production process. Therefore, users should be aware not only of the methods employed by the Bureau in collecting data and compiling the indices, but also of the potential such indices have for errors and biases, for proper interpretation of the results.

2.1 Purpose

The PPI provides a weighted average of the price changes in a group of products between one time period and another. The average price change over time cannot be directly observed and must be estimated by measuring the actual prices at different points in time. The PPI does not attempt to measure the actual level of prices but is limited to the measurement of the average change in prices from one period to another. The PPI does not measure the value of production or cost of production, but it can be used to measure either the change in output prices owing to changes in the basic prices received by producers or, alternatively, the change in prices paid by producers for inputs of goods and services used in the production of output.

2.3 Uses

Price instability introduces uncertainty into economic analysis and decision making, so the main uses of the PPI relate to efforts to minimize this uncertainty. PPI therefore has the following main uses:

- ✓ Short-term indicator of inflationary trends: A quarterly PPI with detailed product and industry data allows monitoring of short-term price inflation for different types or through different stages of production. Key users are Central Bank of Kenya (CBK), National Treasury, Investment banks and also government agencies requiring data for macroeconomic forecasting.
- ✓ National accounts deflators. Deflation of nominal values of output for the compilation of production volumes for use in the preparation of national accounts; (Volumes underlying the nominal values are not directly measured).
- ✓ Indexation in legal contracts in both the public and private sectors. The purpose is mainly to take the inflationary risk out of the contract;

- ✓ Required by international organizations and Research Organizations such as IMF for economic monitoring and comparison;
- ✓ Analytical tool for businesses/ researchers

2.4 Reliability

Collecting data for PPI requires sampling, from a representative sample of establishments, a set of well-defined products whose overall price changes are representative of the many transactions taking place. The Bureau has been monitoring prices of some selected products on a periodic basis (quarterly).

Chapter 3: Methodology, structure, composition and weighting pattern of PPI

3.1 Steps followed in the compilation of PPI

3.1.1 Determine objectives, scope, coverage and classification structure of the PPI

The 2018 Census of Industrial Production (CIP) was carried out in the whole country and establishments based data was collected for all industrial activities. The CIP 2018 data, which was used to develop the weights for rebasing PPI, was classified using the International Standards of Industrial Classifications (ISIC) of all economic activities (ISIC rev 4). Following the ISIC rev 4 classification, the scope of the PPI extends to ISIC sections B, C, D and E namely;

- Section B: Mining and quarrying
- Section C: Manufacturing
- Section D: Electricity, gas, steam and air conditioning Supply
- Section E: Water Supply; Sewerage, Waste management and remediation activities

The products were also classified using the Central Product classifications (CPC) at the 5- digit.

3.1.2 Deriving the weights and sample

Production output data compiled from Census of Industrial Production 2018 was used to compute the weights to be used to rebase PPI. The reference period for the census was 2017 and thus the rebased PPI weights reflect quantities produced in 2017, valued at basic prices. The top-down approach was used in deriving weights, i.e. starting with section, division, group and finally the class. The weights had to be redistributed so that the selected sections, divisions, group or activities represented the whole industry. This means that the weights for the non-sampled activities were assigned to the ones selected.

Each product selected for inclusion in the PPI was assigned a CPC code. Likewise, each establishment selected in the sample was assigned an ISIC industry code. The weights for the sampled establishments cover the entire four-digit industry. Likewise, weights for the products selected within an establishment took the entire weights for the sampled establishment.

The establishments with highest output were selected with at least two, and preferably three, establishments selected for each activity. The weights for the sampled establishments covered the entire four digit industry even though not all establishments were selected. Also, the weights for the products selected within an establishment should include the entire weight for the sampled establishment.

The final PPI weights were examined at a broad level and their credibility was confirmed through a comparison with corresponding national accounts aggregates. This was done to ensure consistency and for international comparison.

3.1.3 Collecting and editing the prices

The KNBS compiles a quarterly PPI and data is collected on quarterly basis. The price observations are as at the 15th day of the mid-month of the quarter. Specifically, prices references are as at mid

of February, May, August and November of the year, representing quarter one, two, three and four, respectively.

The data collection for rebased PPI was undertaken in November and December 2019. The prices for quarter one, two, three and four of 2019 were collected for products which were not in the previous PPI. Where the sampled establishments and products selected were similar to the ones in the previous PPI, only the price for the fourth quarter was collected since the previous prices were available. The prices for the first quarter 2019 (which ended in March 2019) were taken to be the base prices for the rebased PPI.

For the new products, the specification of the products was very important to ensure that prices for the same products will be captured in the future. Data collectors had been taught how to capture the product specification and worked in close consultation with their supervisors. All characteristics that influence the transaction price (make, model, type of packaging, conditions of sale etc.) were captured in the description. Data collectors were required to check for completeness of the questionnaires and confirm the data accuracy with the respondents where price variations were huge.

3.1.4 Adjustment for changes in quality

Changes in a product happen from time to time. This can be in the form of packing or change in the units of measure. Furthermore, production of a particular product may cease and be replaced with a different product. The producer prices are adjusted whenever there is a quality change to ensure the prices collected are comparable through time. The respondents were asked whether there has been a quality change to the products being captured.

3.1.5 Calculating the index

The prices were keyed in an excel system and geometric average of the price relatives were computed for each product. Since the items included in each elementary aggregate are fairly homogeneous, the elementary aggregate was calculated using the Jevons formula.

Jevons Index for an Item (Elementary Aggregate) (IMF, 2004)

The geometric average of price relatives were computed as;

$$I_{J,a}^{t-1:t} = \prod_{i=1}^n \left(\frac{p_i^t}{p_i^{t-1}} \right)^{1/n}$$

Where;

$I_{J,a}^{t-1:t}$ is the implicitly weighted Jevons price index for elementary aggregate a between period $t-1$ and period t ; n is the number of Price Observations i in elementary aggregate a ; and

$\frac{p_i^t}{p_i^{t-1}}$ is the price relative for price observation i between period $t-1$ and period t .

Using the weights available at all levels of ISIC, aggregation of prices was done by product and industry to get higher level aggregates. The weighting was done to reflect the importance of each priced product in terms of its share of total output of the establishment.

3.1.6 Disseminating the indices

The index released at the end of the quarter refers to the change in prices for that particular quarter since there's no lag. KNBS uploads the quarterly PPIs in the KNBS website which is widely accessible to users. During the data collection, the data collectors are also required to give a copy of the previous quarter report to the establishments. There are other users who request for detailed PPI data sets which are usually responded to.

3.1.7 Maintain sample of businesses and product specifications

It is expected that the sample is regularly updated as new establishments to include any new establishments and exclude establishments which have closed down. The frequency depends on how much change there is in the active establishments. It is largely expected that PPIs will be compiled using the sampled establishments and products identified.

3.1.8 Review and reweighting of the industry

Review and reweighting of the index should be carried out to ensure the index remains representative of the activities covered over time. It is proposed that the index be rebased on a 5-yearly basis, following the planned cycle of CIPs, with the CPC/ISIC values for the PPI revalued to reference base period prices. However, reweighting should be done if key establishments which can influence the weighting structure close down.

Chapter 4: Rebased PPI Results

4.1 Differences between PPI using 2009 and 2017 weights

- a) The proportion shares of manufacturing, water, electricity, mining and quarrying changed between 2009 and 2017 as shown in Table 4.1. The share of manufacturing reduced from 90.14 per cent in 2009 to 86.72 per cent in 2017, indicating a slight change in the structure of the industrial production. All the other sections weights increased though marginally.

Table 4.1: Weights at the 1-digit level of ISIC (Sections)

Activity	Percent (%)	
	2009	2017
Manufacturing	90.14	86.72
Electricity, gas, steam and air conditioning supply	7.95	9.23
Mining and quarrying	1.48	2.33
Water supply; sewerage, waste management and remediation activities	0.42	1.72

- b) A total of 16 additional ISIC activities with a total weight of 9.53 per cent have been included in the re-based PPI as shown in Table 4.1.

Table 4.1 Activities added in the rebased PPI

ISIC	Activity descriptions	Weight
729	Mining of other non-ferrous metal ores	1.52
1101	Distilling, rectifying and blending of spirits	1.30
1311	Preparation and spinning of textile fibres	0.35
1312	Weaving of textiles	0.30
1392	Manufacture of made-up textile articles, except apparel	0.37
1394	Manufacture of cordage, rope, twine and netting	0.09
1430	Manufacture of knitted and crocheted apparel	0.29
1621	Manufacture of veneer sheets and wood-based panels	0.79
1622	Manufacture of builders' carpentry and joinery	0.11
2011	Manufacture of basic chemicals	0.58
2013	Manufacture of plastics and synthetic rubber in primary forms	0.14
2100	Manufacture of pharmaceuticals, medicinal chemical and botanical products	1.52
2395	Manufacture of articles of concrete, cement and plaster	0.39
2420	Manufacture of basic precious and other non-ferrous metals	0.48
2720	Manufacture of batteries and accumulators	0.38
2732	Manufacture of other electronic and electric wires and cables	0.93
	Total	9.53

- c) The share of the manufacture of grain mill products (ISIC 1061) to the all industrial sectors increased from 6.80 per cent in the 2009 to 9.74 per cent in 2017. Similarly, manufacture of dairy products increased from 2.1 per cent to 3.29 per cent during the period.
- d) Manufacture of refined petroleum products activity (ISIC 1920) does not exist in the re-based PPI as a result of the closure of the Kenya Petroleum Refineries Limited (KPRL). This activity had a weight of 8.9 per cent in 2009.

Table 4.3: The 2-digit level of ISIC, the dominant industries in manufacturing, 2017

Code	Description	%
10	Manufacture of food products	43.0
24	Manufacture of basic metals	8.1
20	Manufacture of chemicals and chemical products	7.4
23	Manufacture of other non-metallic mineral products	6.8
11	Manufacture of beverages	6.5
22	Manufacture of rubber and plastics products	5.1
17	Manufacture of paper and paper products	4.3
18	Printing and reproduction of recorded media	3.0

Table 4.3: The 2-digit level of ISIC, the dominant industries in manufacturing, 2009

Division	%
Manufacture of Food products	34.6
Refined petroleum products	8.9
Manufacture of beverages	6.7
Manufacture of basic metals	6.7
Manufacture of chemicals and chemical products	6.1
Printing	5.8
Manufacture of rubber and plastics products	5.6
Manufacture of other non-metallic mineral products	4.4

Table 4.4: The 3-digit level of ISIC, the most important industries in manufacturing, 2017

Code	Group	%
107	Manufacture of other food products (Mainly tea)	19.48
106	Manufacture of grain mill products, starches and starch products	11.23
241	Manufacture of basic iron and steel	7.51
239	Manufacture of non-metallic mineral products n.e.c.	6.81
110	Manufacture of beverages	6.47
202	Manufacture of other chemical products	6.41
222	Manufacture of plastics products	5.08

Table 4.5: The 4-digit level of ISIC, the most important industries in manufacturing, 2017

ISIC Rev	Class	%
1079	Manufacture of other food products n.e.c.	11.64
1061	Manufacture of grain mill products	11.23
2410	Manufacture of basic iron and steel	7.51
2394	Manufacture of cement, lime and plaster	6.36
2220	Manufacture of plastics products	5.08
1040	Manufacture of vegetable and animal oils an	4.80
2023	Manufacture of soap and detergents, cleanin	4.45
1050	Manufacture of dairy products	3.79
1072	Manufacture of sugar	3.32
1071	Manufacture of bakery products	3.18
1104	Manufacture of soft drinks	3.11
1811	Printing	3.04

Chapter 5: Conclusion and recommendations

The majority of the prices are collected via personal visits by head office staff to the establishments in both Nairobi and in other regions. The data collection by mail and email has not proven to be effective. It is therefore proposed, in the longer term, to progressively train regional office staff on PPI data collection and gradually hand over responsibility to them.

There is need for continuous examination of the selected product specifications to assess their adequacy, and the actual reported price series to assess the credibility of the data. These can be achieved through;

- i. Complete descriptions to remove ambiguity in relation to identifying the specific, homogeneous product for repeat pricing.
- ii. Description of actual generic product on the form, ensuring that the forms are self-standing so that editing staff are clear about the nature of the product being priced;
- iii. Clarity of the transaction details in terms of both the size lot of the product being transacted (e.g. packs of 50 cartons) and the unit of pricing (e.g. price per pack of 50, or price per carton).

All the product and transaction specifications will be progressively reviewed and tightened as necessary, in consultation with respondents.

Concerning the credibility of the individual PPI price series, it takes time to analyze all the available series in relation to:

- (i) The magnitude and frequency of the price changes for each product;
- (ii) The volatility of the price series;
- (iii) The degree of consistency between the movements in prices between similar products within same company, and similar products between different companies.

Price observations requiring querying and confirmation with the respondent, or justification on economic grounds, are identified and investigated.

Chapter 6: Annex

Chart 6.1: Producer Price Indices by Section, Base Period March 2019=100

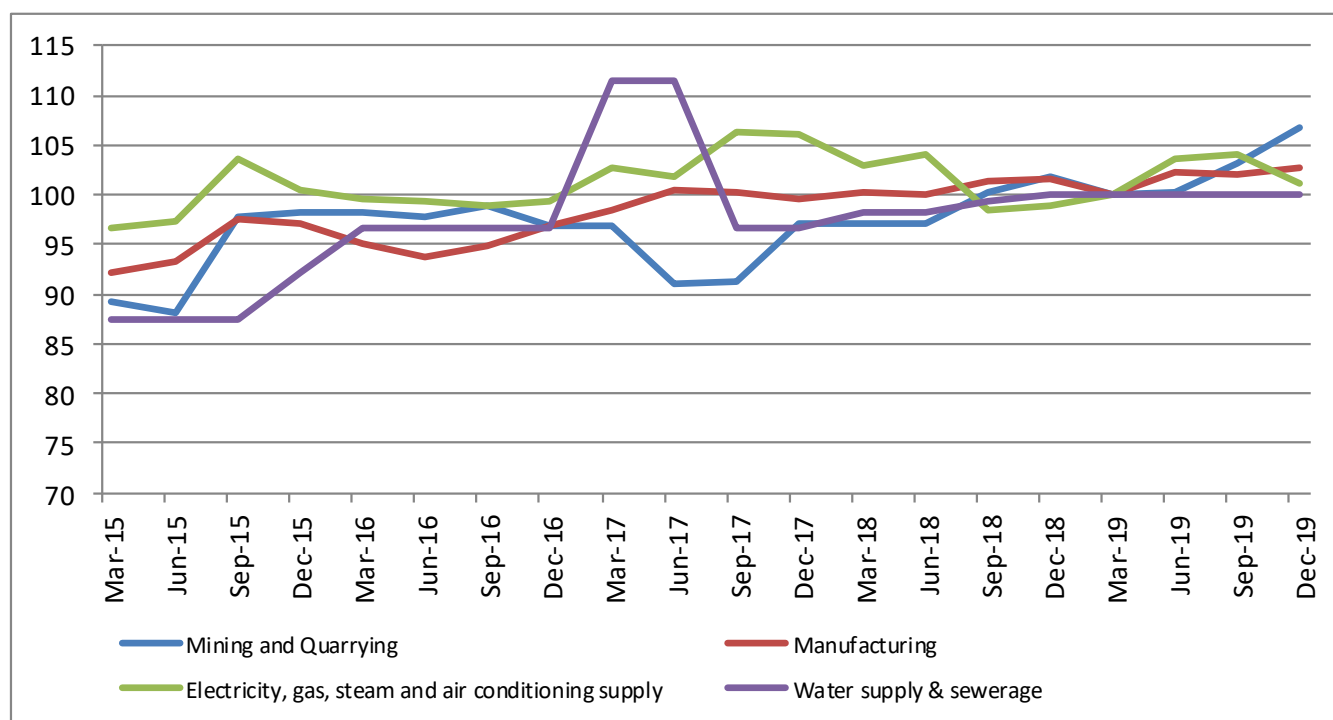


Table 6.1: Producer Price Indices by Division, Base Period March 2019=100

Code	Descriptions	Weights	Mar-19	Jun-19	Sep-19	Dec-19
07	Mining of metal ores	1.519	100.00	100.81	102.54	107.91
08	Mining and Quarrying	0.81	100.00	99.24	104.57	104.68
10	Manufacture of food products	37.30	100.00	105.64	104.06	104.80
11	Manufacture of beverages	5.61	100.00	100.69	101.03	105.89
12	Manufacture of tobacco products	1.01	100.00	100.00	100.60	100.36
13	Manufacture of textiles	1.34	100.00	100.28	100.54	99.78
14	Manufacture of wearing apparel	2.47	100.00	100.18	100.16	99.79
15	Manufacture of leather and related products	1.10	100.00	100.10	100.34	101.88
16	Manufacture of wood and of products of wood and cork except furniture	1.02	100.00	98.26	95.28	94.36
17	Manufacture of paper and paper products	3.74	100.00	99.42	99.01	95.40
18	Printing and reproduction of recorded media	2.64	100.00	100.09	100.30	100.18
20	Manufacture of chemicals and chemical products	6.41	100.00	100.45	106.15	106.08
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	1.52	100.00	99.45	99.99	98.13
22	Manufacture of rubber and plastics products	4.41	100.00	99.40	97.31	100.82
23	Manufacture of other non-metallic mineral products	5.91	100.00	100.52	100.30	99.91
24	Manufacture of basic metals	6.99	100.00	99.97	100.33	100.44
25	Manufacture of fabricated metal products except machinery and equipment	2.02	100.00	100.00	101.20	100.88
27	Manufacture of electrical equipment	1.30	100.00	100.07	100.25	100.15
29	Manufacture of motor vehicles	1.92	100.00	95.11	97.87	97.53
35	Electricity	9.23	100.00	103.64	103.99	101.22
36	Water	1.72	100.00	100.00	100.00	100.00
	Total	100.00	100.00	102.39	102.26	102.58

Table 6.2: Producer Price Indices by Class, Base Period March 2019=100

ISIC	Description	Weight	Mar-19	Jun-19	Sep-19	Dec-19
0729	Mining of other non-ferrous metal ores	1.52	100.00	100.81	102.54	107.91
0810	Quarrying of stone, sand and clay	0.29	100.00	100.00	100.00	100.00
0893	Extraction of salt	0.52	100.00	98.82	107.10	117.63
1030	Processing and preserving of fruit and vegetables	1.45	100.00	100.38	101.70	101.17
1040	Manufacture of vegetable and animal oils and fats	4.17	100.00	100.86	101.03	101.79
1050	Manufacture of dairy products	3.29	100.00	106.64	104.62	100.73
1061	Manufacture of grain mill products	9.74	100.00	115.25	117.24	118.05
1071	Manufacture of bakery products	2.75	100.00	100.00	100.34	101.34
1072	Manufacture of sugar	2.88	100.00	108.56	103.42	104.32
1073	Manufacture of cocoa, chocolate and sugar confectionery	1.17	100.00	93.30	93.68	95.66
1079	Manufacture of other food products n.e.c.	10.09	100.00	102.17	96.03	96.79
1080	Manufacture of prepared animal feeds	1.76	100.00	99.57	101.08	104.90
1101	Distilling, rectifying and blending of spirits	1.30	100.00	100.00	100.00	117.81
1103	Manufacture of malt liquors and malt	1.62	100.00	102.19	102.85	105.72
1104	Manufacture of soft drinks; production of mineral waters and other bottled waters	2.70	100.00	100.00	100.00	100.00
1200	Manufacture of tobacco products	1.01	100.00	100.00	100.60	100.36
1311	Preparation and spinning of textile fibres	0.48	100.00	101.65	102.31	100.52
1312	Weaving of textiles	0.39	100.00	99.02	99.02	99.66
1392	Manufacture of made-up textile articles, except apparel	0.38	100.00	99.80	99.89	98.94
1394	Manufacture of cordage, rope, twine and netting	0.09	100.00	100.00	100.00	100.00
1410	Manufacture of wearing apparel, except fur apparel	2.18	100.00	100.15	100.11	100.02
1430	Manufacture of knitted and crocheted apparel	0.29	100.00	100.43	100.61	98.05
1511	Tanning and dressing of leather; dressing and dyeing of fur	0.57	100.00	100.00	100.00	100.00
1520	Manufacture of footwear	0.54	100.00	100.20	100.69	103.86
1610	Sawmilling and planing of wood	0.12	100.00	100.00	100.00	100.00
1621	Manufacture of veneer sheets and wood-based panels	0.79	100.00	96.97	92.98	91.52
1622	Manufacture of builders' carpentry and joinery	0.11	100.00	105.39	106.21	108.13
1702	Manufacture of corrugated paper and paperboard and of containers of paper and paper boards	2.05	100.00	98.08	98.13	92.96
1709	Manufacture of other articles of paper and paperboard	1.69	100.00	100.15	99.39	98.01
1811	Printing	2.64	100.00	100.09	100.30	100.18
2011	Manufacture of chemicals	0.58	100.00	105.01	116.48	115.55
2013	Manufacture of plastics and synthetic rubber in primary forms	0.27	100.00	99.28	100.34	99.79
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	1.70	100.00	100.12	110.25	103.46
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	3.86	100.00	100.00	103.20	106.27
2100	Manufacture of pharmaceuticals, medicinal chemical and botanical products	1.52	100.00	99.95	101.87	99.54
2220	Manufacture of plastics products	4.41	100.00	99.40	97.31	100.82
2394	Manufacture of cement, lime and plaster	5.52	100.00	100.33	100.09	99.64
2395	Manufacture of articles of concrete, cement and plaster	0.39	100.00	103.29	103.29	103.60
2410	Manufacture of basic iron and steel	6.52	100.00	99.94	100.27	100.42
2420	Manufacture of basic precious and other non-ferrous metals	0.48	100.00	100.00	100.00	100.00
2511	Manufacture of structural metal products	0.77	100.00	100.00	100.00	100.00
2599	Manufacture of other fabricated metal products n.e.c.	1.24	100.00	100.00	101.95	101.42
2720	Manufacture of batteries and accumulators	0.38	100.00	100.00	100.00	100.00
2732	Manufacture of other electronic and electric wires and cables	0.93	100.00	100.00	100.00	100.00
2910	Manufacture of motor vehicles	0.95	100.00	100.08	100.46	100.25
2920	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers	0.97	100.00	90.25	95.33	94.87
3510	Electric power generation, transmission and distribution	9.23	100.00	103.79	104.17	95.98
3600	Water collection, treatment and supply	1.72	100.00	100.00	100.00	100.00

Appendix 1: ISIC (4-digit) PPI Weights derived from 2017 data

ISIC	Description	Weight
0729	Mining of other non-ferrous metal ores	1.52
0810	Quarrying of stone, sand and clay	0.29
0893	Extraction of salt	0.52
1030	Processing and preserving of fruit and vegetables	1.45
1040	Manufacture of vegetable and animal oils and fats	4.17
1050	Manufacture of dairy products	3.29
1061	Manufacture of grain mill products	9.74
1071	Manufacture of bakery products	2.75
1072	Manufacture of sugar	2.88
1073	Manufacture of cocoa, chocolate and sugar confectionery	1.17
1079	Manufacture of other food products n.e.c.	10.09
1080	Manufacture of prepared animal feeds	1.76
1101	Distilling, rectifying and blending of spirits	1.30
1103	Manufacture of malt liquors and malt	1.62
1104	Manufacture of soft drinks; production of mineral waters and other bottled waters	2.70
1200	Manufacture of tobacco products	1.01
1311	Preparation and spinning of textile fibres	0.48
1312	Weaving of textiles	0.39
1392	Manufacture of made-up textile articles, except apparel	0.38
1394	Manufacture of cordage, rope, twine and netting	0.09
1410	Manufacture of wearing apparel, except fur apparel	2.18
1430	Manufacture of knitted and crocheted apparel	0.29
1511	Tanning and dressing of leather; dressing and dyeing of fur	0.57
1520	Manufacture of footwear	0.54
1610	Sawmilling and planing of wood	0.12
1621	Manufacture of veneer sheets and wood-based panels	0.79
1622	Manufacture of builders' carpentry and joinery	0.11
1702	Manufacture of corrugated paper and paperboard and of containers of paper and paper boards	2.05
1709	Manufacture of other articles of paper and paperboard	1.69
1811	Printing	2.64
2011	Manufacture of chemicals	0.58
2013	Manufacture of plastics and synthetic rubber in primary forms	0.27
2022	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	1.70
2023	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	3.86
2100	Manufacture of pharmaceuticals, medicinal chemical and botanical products	1.52
2220	Manufacture of plastics products	4.41
2394	Manufacture of cement, lime and plaster	5.52
2395	Manufacture of articles of concrete, cement and plaster	0.39
2410	Manufacture of basic iron and steel	6.52
2420	Manufacture of basic precious and other non-ferrous metals	0.48
2511	Manufacture of structural metal products	0.77
2599	Manufacture of other fabricated metal products n.e.c.	1.24
2720	Manufacture of batteries and accumulators	0.38
2732	Manufacture of other electronic and electric wires and cables	0.93
2910	Manufacture of motor vehicles	0.95
2920	Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and and semi-trailers	0.97
3510	Electric power generation, transmission and distribution	9.23
3600	Water collection, treatment and supply	1.72

Reference

IMF, *Producer Price Index Manual: Theory and Practice*, 2004