Introduction

The publication of Analysis of Producer Price Index is a yearly publication which presents statistics covering five main sectors namely Agriculture, forestry and fishing; Mining; Manufacturing; Electricity & gas supply and Water supply. PPI Local Production is compiled based on the data from the Producer Price Survey which is conducted on a monthly basis. Commencing in reference month of January 2018, PPI was updated using the "basket" of goods for year 2015 by maintaining the same base year, 2010=100.

Objective

The main objective of PPI Local Production is to measures the average changes in price of commodities charged by domestic producers of an industry. The PPI, which is an output-based index, is also a macroeconomic indicator used to monitor the price movements of local outputs and is often viewed as a leading indicator of Consumer Price Index.

Scope and Coverage

PPI covers the following five sectors of the economy, namely Agriculture, forestry & fishing; Mining; Manufacturing; Electricity & gas supply and Water supply. The indices are published at three-digit group level, two-digit division levels and one-digit sector level for Malaysia. PPI is also compiled by Stage of Processing and Commodity Section (SITC). PPI for Local Production by stage of processing is compiled by reclassifying the commodities according to the following stage of processing i.e. Crude materials for further processing; Intermediate materials, supplies & components and Finished goods. Meanwhile, PPI by commodity section covers nine (9) groups namely Food; Beverages & tobacco; Crude materials, inedible; Mineral fuels, lubricants, etc;, Animal and vegetable oils & fats; Chemicals; Manufactured goods; Machinery & transport equipment and Miscellaneous manufactured articles. A total of 1,063 items are used in the compilation of the PPI for Local Production.

Sector Covered

There are five (5) sectors covered based on MSIC as follows:

Sector A: Agriculture, forestry and fishing	
012	Growing of perennial crops
014	Animal production
031	Fishing
011	Growing of non-perennial crops
022	Logging
032	Aquaculture

Sector B: Mining	
061	Extraction of crude petroleum
062	Extraction of natural gas

Sector C: Manufacturing	
10	Manufacture of food products
11	Manufacture of beverages
12	Manufacture of tobacco products
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media
19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
22	Manufacture of rubber and plastics products
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment

Sector C: Manufacturing	
28	Manufacture of machinery and equipment n.e.c.
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
31	Manufacture of furniture

Sector D: Electricity and gas	
351	Electric power generation, transmission and distribution
352	Manufacture of gas; distribution of gaseous fuels through mains

Sector E: Water supply	
360	Water collection, treatment and supply

Concept and Definitions

Classification

The classification of the PPI Local Production by industry is based on the Malaysia Standard Industrial Classification (MSIC) 2008, which adhere to the International Standard Industrial Classification (ISIC) Rev. 4. Meanwhile, the classification of the PPI for Local Production by commodity section is based on the Standard International Trade Classification (SITC) Revision 4.

Prices

This refers to prices received by the producer at the first stage of commercialisation. Producer price of Local Production which refers to ex-factory price is the amount receivable by the producer from the purchaser for a unit of a good produced. It excludes indirect taxes such as excise duties, sales and services tax (SST) and any transport charges invoiced separately by the producer. As for goods produced, processed or assembled in Malaysia, producer prices refer to prices which are net of discounts and rebates given by the manufacturers and net of freight by hired transport and other transport costs between producer and purchaser.

The cost of transport for establishments which do not hire transport services but utilise their own transport facilities normally forms part of the cost of the item, are included as they are difficult to segregate.

Weights

The weights for PPI calculations are obtained from the 2016 Economic Census and other alternative data sources of data for the value of production from the PPI reference month of January 2018. The PPI weights are generally updated within five years. The weight of the product is determined based on the percentage contribution of the item to the output value in the economy. The weight of the PPI according to MSIC, SITC and SOP are given as follows:

Weights by MSIC

<table>
<tr><th rowspan="2">Sector (2005=100)</th><th colspan="3">Weights</th><th rowspan="2">Sector (2010=100)</th></tr>
<tr><th>2005</th><th>2010</th><th>2015</th></tr>
<tr><td>Agriculture</td><td>6.6</td><td rowspan="2">8.2</td><td rowspan="2">6.8</td><td rowspan="2">Agriculture, forestry & fishing</td></tr>
<tr><td>Fishing</td><td>0.8</td></tr>
<tr><td>Mining</td><td>9.8</td><td>9.7</td><td>7.9</td><td>Mining</td></tr>
<tr><td>Manufacturing</td><td>80.0</td><td>78.8</td><td>81.6</td><td>Manufacturing</td></tr>
<tr><td rowspan="2">Electricity, gas & water supply</td><td rowspan="2">2.8</td><td>3.1</td><td>3.4</td><td>Electricity & gas supply</td></tr>
<tr><td>0.3</td><td>0.3</td><td>Water supply</td></tr>
<tr><td>Total</td><td>100.00</td><td>100.00</td><td>100.00</td><td>Total</td></tr>
</table>

Weights by SITC

Commodity Section	Weight	
	2010	2015
Food	5.7	7.5
Beverages & tobacco	1.4	1.3
Crude materials, inedible	8.2	5.8
Mineral fuels, lubricants, etc.	24.6	21.1
Animal and vegetable oils & fats	10.3	9.3
Chemicals	8.1	8.6
Manufactured goods	11.2	13.6
Machinery & transport equipment	25.0	25.6
Miscellaneous manufactured articles	5.5	7.8
Total	**100.0**	**100.0**

Weights by Stage of Processing (SOP)

Stage of Processing	***Weight 2015***
Crude materials for futher processing	*16.4*
Intermediate materials, supplies and components	*56.1*
Finished goods	*27.5*
Total	***100.0***

Selection of Products

The selection of the products for the monthly producer price survey is based on their contributions to the total output of the industry. The selected items are representative of their group. The items included in the compilation of the index collectively a significantly output of the industry selected.

Selection of Establishments

The selection of establishments is based on their contributions to the total output of the selected industry. The selected establishments are representative of their products. These establishments significantly collectively of the total output of the products selected. The lists of establishments are drawn from the Economic Census 2016 as well as from other supplementary sources. The list of these establishments has been updated every year to consider new establishments and any changes in the status of the establishments such as closed down, non-operation, change in activities, factory location and postal addresses. In 2025, the number of establishments covered are 1,600.

Selection of Commodities

A preliminary survey is conducted to identify the major selling product varieties under each of the commodity item selected as well as detailed description/ specification pertaining to the brand, grade, size and unit of measurement of items produced for price collection purposes. Questionnaires are dispatched to all selected establishments at the initial stage to enquire the following information:

(a) Regularly produced commodity brands;
(b) Commodity brands that constitute a significant share of the companies' production;
(c) Detailed descriptions and specifications of the brands stated in (a) and (b); and
(d) Brochures/catalogues of the commodity brands.

1,063 commodities are covered for local production monthly in the compilation of PPI calculation. These commodities are selected in view of their relative importance within the establishments.

Sources of Data

A total of 5,000 price quotations are collected on a monthly basis, from both establishments and government agencies. Among the government agencies covered are as follows:

i. State Water Supply Department
ii. Department of Fisheries
iii. Department of Veterinary Services
iv. Malaysian Rubber Board
v. Malaysian Cocoa Board
vi. Malaysian Pepper Board
vii. Malaysian Palm Oil Board (MPOB)
viii. Federal Agriculture Marketing Authority (FAMA)
ix. Malaysian Timber Industry Board (MTIB)

Quality Control

A series of checks on the prices received are carried out to ensure their reasonableness, consistency and accuracy. The checking procedures include comparisons of prices supplied for the month against those of the previous months of the same respondents as well as with prices reported by other respondents for the same commodity items. Prices that display unusual variations are clarified with respondents to ensure the accuracy.

Prices quoted in the forms are verified on the ground by field supervisors and these are subjected to further scrutiny in the headquarters. Significant price changes are referred to the field supervisors for verifications and in certain cases, the respondents are directly contacted for clarifications.

The data are subjected to thorough checking before being captured. The staff of the Department of Statistics state office is given training at least once a year regarding procedures, concepts and definitions as well as any changes in the selected items and product specifications.

Methodology of Index Calculation

PPI are calculated as a chain of fixed-basket indices. This means that a sequence of fixed-basket indices has been chained together to create a continuous time series. This is necessary to avoid having breaks in an index when a basket update is performed. Effective from the reference month of January 2018, Laspeyres chain index method is used in the calculation of the PPI which employs December 2017 as the link month.

In order to chain indices across baskets, weights for the old and new baskets must be expressed at the prices of a common period. This common period is called as the link month. The PPI Local Production basket is using the old basket (2010=100) and the product is updated with weight to become a new basket (2015=100).

$$P^{ch}_{t/10} = P^{new}_{t/15} \times \left(\frac{P^{previous}_{D17/10}}{P^{new}_{D17/15}} \right)$$

Where

$P^{ch}_{t/10}$	=	*is a chain index (ch) that measures price changes from 2010 to any period until December 2017 (D17)*
$P^{new}_{t/D15}$	=	*is a new series composite index comparing prices at any period t to December 2017 (D17)*
$P^{previous}_{D17/10}$	=	*Is a previous series composite index comparing prices for December 2017 (D17) to 2010 prices*
$P^{new}_{D17/15}$	=	*is a new series composite index comparing prices for December 2017 (D17) to 2015 prices*

In the month following the basket link month, price indices calculated using the new basket are multiplied by the index levels previously published for the old basket.

In the case of the chain index, the weighted averages of indices of lower level groups or items do not match those of the corresponding upper level groups (the chain index has no additivity).

Rate of Change

A rate of change representative of movement in prices may be derived in several ways. The current method of calculating PPI use three measures of change, i.e. the percentage change between any given month and the same month a year ago (year-on-year); the current month over previous month (month-on-month) and the percentage change between annual average for the specific current year to the same fixed period on the previous year. The following example illustrates the computation of index point and percentage change.

Index Point Change

Producer Price Index	*125.4*
Less Previous Index	*124.3*

Equal to	*1.1*

Percentage Change

Index point difference divided by the previous index, multiplied by one hundred

$$= \frac{125.4 - 124.3}{124.3} \times 100$$

$$= 0.9\%$$

Frequency of Compilation

The PPI is compiled for each calendar month while the quarterly and annual indices are computed from the monthly series.

Confidentiality Requirement

The data used for the compilation of PPI have been collected under the provisions of the Statistics Act 1965 (Revised-1989). The Act stipulates that the contents of individual return are confidential. In conformity with the stipulations of this Act, only aggregated figures are published.

Symbols and Abbreviations

-	*negative sign*
etc	*et cetera*
n.e.c	*not elsewhere classified*
n.a	*not available*