

METHODOLOGY IN THE GENERATION OF UNIT VALUE INDEX FOR EXPORT AND IMPORT (2018=100)

1. Base Year

The base year is the reference point of the index number series. It is usually a year at which the index number is set to 100.

In order to align with various indices generated by the Philippine Statistics Authority (PSA), such as the Consumer Price Index and Gross Domestic Product, the base year for calculating the Unit Value Index (UVI) for exports and imports is set at 2018.

2. Data Source for the Generation of Unit Value Index


The International Merchandise Trade Statistics (IMTS) serves as the data source for generating the UVI.

The PSA regularly receives copies of export and import declaration in electronic format provided by the Bureau of Customs (BOC) as stipulated in the Memorandum of Agreement on the Electronic Exchange of Information between the BOC and the PSA.

Other export and import documents (hard copy) that did not pass through the online system of the BOC and its authorized VASPs are collected by the Central Office (CO) staff from the BOC collection points located in the National Capital Region (NCR) three times a week. Provincial Office staff collects the hard copies of export documents from the BOC collection points located in areas outside NCR at least once a week to complete the monthly coverage of the export and import statistics.

The classification of commodities are classified in accordance to the Philippine Standard Commodity Classification (PSCC), which is a coding system that conforms to the ASEAN Harmonized Tariff Nomenclature.

3. Determination of the Market Basket

The specific commodities (10-digit PSCC) included in the market basket were selected using the criteria recommended by ASEANStats. These are 1) share to total FOB value of the Chapter is at least 0.20 percent, 2) frequently exported/imported commodity, and 3) homogeneity (unit value of the commodity has no large deviation from other commodities in the Chapter) is at least 60 percent. 

4. Determination of Weights

The weights refer to the relative importance of the chapter/section to the total value of export/import in the country.

a. For Section

The weight of a section is the share of the section to the total value of export/import.

b. For Chapter

The weight of the chapter (2-digit PSCC) is the share of the chapter to the total value of export/import.

5. Computation of the UVI using Chained Laspeyres

a. Derivation of Unit Value (UV)

$$U_{ijkm} = \frac{V_{ijkm}}{Q_{ijkm}}$$

where:

- U_{ijkm} = Unit Value (UV) of commodity k in Chapter j of Section i at month m
 V_{ijkm} = Total value (in USD FOB) of commodity k in Chapter j of Section i at month m
 Q_{ijkm} = Total quantity (by unit of measure) of commodity k in Chapter j of Section i at month m

b. Computation of Price Relative (PR)

The computation of PR for each commodity (10-digit PSCC) in the Chapter (2-digit 2015 PSCC) is given as follows:

at base year	onwards
$P_{ijkm} = \frac{U_{ijkm}}{U_{ijk0}}$	$P_{ijkm} = \frac{U_{ijkm}}{U_{ijk(m-1)}}$

gls

where:

- P_{ijkm} = Price Relative of commodity k in Chapter j of Section i at month m
 U_{ijkm} = UV of commodity k in Chapter j of Section i at month m
 $U_{ijk(m-1)}$ = UV of commodity k in Chapter j of Section i at month $m-1$
 U_{ijk0} = Average UV of commodity k in Chapter j of Section i at base year (2018)

c. Computation of UVI at Chapter Level

at base year	onwards
$I_{ijm} = \prod_{k=1}^{n_{ij}} (P_{ijkm})^{\frac{1}{n_{ij}}} \times 100$	$I_{ijm} = I_{ij(m-1)} \times \prod_{k=1}^{n_{ij}} (P_{ijkm})^{\frac{1}{n_{ij}}}$

where:

- I_{ijm} = UVI of Chapter j in Section i at month m
 $I_{ij(m-1)}$ = UVI of Chapter j in Section i at month $m-1$
 P_{ijkm} = Price Relative of commodity k in Chapter j of Section i at month m
 n_{ij} = Total number of commodities for Chapter j of Section i at month m

d. Computation of UVI at Section Level

$$I_{im} = \frac{\sum_{j=1}^{n_i} w_{ij} \times I_{ijm}}{\sum_{j=1}^{n_i} w_{ij}}$$

where:

- I_{im} = UVI of Section i at month m
 I_{ijm} = UVI of Chapter j in Section i at month m
 w_{ij} = Weight of Chapter j in Section i
 n_i = Total number of chapters for Section i

gk

e. Computation of UVI for Total Export/Import

$$I_m = \sum_{i=1}^{n=21} w_i \times I_{im}$$

where:

I_m = UVI for Total Exports/Imports at month m

I_{im} = UVI of Section i at month m

w_i = Weight of Section i

n = Total number of Sections = 21

