

# 編 製 方 法 說 明

## 進 口 及 出 口 物 價 指 數

### 一、緣起：

我國係海島經濟，進出口貿易與國內經濟發展關係密切。民國42年10月，為調度外匯及核定進出口配額，臺灣銀行曾就進出口商品中，選取重要項目，以國內市場批發價或產地價格，編算臺灣進口貨價格指數及臺灣出口貨價格指數，供為參考。嗣因機構權責變遷，主編單位曾多次改變，至58年，由經濟部國貿局接辦，其編製方法仍沿舊習。至63年，因查編技術及管理等問題而停編，並建議由本總處另行編布。本總處鑑於經濟迅速成長，對外貿易大幅增加，進出口物價指數日益重要，乃應經濟部國貿局以及各方需求，蒐集國內外有關資料，研究籌劃，並於66年著手試編，歷時一年餘完成，經邀專家學者反覆審議，認為試編結果良好，乃自67年9月起正式編布。

嗣後為配合經濟發展、貿易結構改變，每逢民國0或5之年改換基期，並重新檢討分類及查價項目，予以改編；85年基期改編，指數改採點銜接法，以86年12月為銜接點，已發布指數不再重新計算，基期(85)年平均指數為100；自105年基期起，鑑於產業結構與產品更迭快速，為更適切反映國內產銷情勢變遷，改以逢民國年尾數為0、3、5、8之年份進行更換基期作業；108年基期指數計算仍沿用點銜接方式，以109年12月為銜接點，新基期指數於110年2月(資料時間為110年1月)正式公布。

### 二、編製目的與用途：

(一)編製目的：衡量我國進出口商品價格水準之變動情形。

(二)主要用途：

- 1.用作重要經濟指標之一，提供財經決策與學術研究之基本資料。
- 2.供調度外匯及核定配額之參考。
- 3.用作調節進出口商品供需及有關機關研究分析之用。

### 三、查價項目：

依據我國108年進出口商品結構，選取代表性商品進口304項、出口295項。

### 四、指數分類：

(一)基本分類：

依國際商品統一分類系統(HS)分類，各類、章項下選查項目未達3個者，不予發布。

- 1.進口物價指數：除總指數外，下分18個類及65個章指數，其中發布者為15個類及28個章指數。
- 2.出口物價指數：除總指數外，下分15個類及55個章指數，其中發布者為14個類及27個章指數。

(二)複分類指數：

編製按用途別分類指數。

### 五、基 期：

以民國105年全年平均=100。

### 六、權 數：

以民國108年各類商品之進(出)口通關總值結構為權數，未選為查價商品之貿易總值則按同類查價商品之進(出)口通關總值比例分配於查價商品內。

### 七、價格查報：

(一)查價方式：採通訊調查或網路填報方式，由選定之進出口商按月向本總處填報。

(二)查價地區及對象：調查臺灣地區主要進出口廠商。

(三)查價基準：進口商品調查 CIF 價格，出口商品調查 FOB 價格為原則，以各月最接近20日之實際成交價格為準，如無交易，則以最近行情代替或沿用上月價格。

## 八、計算方法：

(一)指數公式：總指數與類指數均採用拉氏之變式：i表計算期，j表項目，k表查價花色，P表價格，Q表數量， $P_{109.12}$ 表109年12月之價格。

1.計算項目價比：

$$\frac{P_{i,j}}{P_{109.12,j}} = \frac{1}{n_j} \sum_k \frac{P_{i,j,k}}{P_{109.12,j,k}} \quad n_j: \text{第 } j \text{ 項商品花色數。}$$

2.計算指數：

$$I_{i/105}^{108CH} = \frac{\sum_j \frac{P_{i,j}}{P_{109.12,j}} (P_{109.12,j} \cdot Q_{108,j})}{\sum_j (P_{109.12,j} \cdot Q_{108,j})} \times I_{109.12/105}^{105CH}$$

$P_{109.12,j} \cdot Q_{108,j}$  為j項商品108年通關量以109年12月價格衡量之通關總值。

$I_{109.12/105}^{105CH}$  為105年市場籃，以105年指數為100之109年12月指數。

$I_{i/105}^{108CH}$  為108年市場籃，以105年指數為100之i計算期鏈指數。

(二)年指數：年指數為各月指數之簡單算術平均(取2位小數)。

(三)查價項目缺貨缺價之處理：

改查性質相類似之新花色牌號價格，並以漲跌率估算其基期價格，其估算方法如下：

$$\text{新查商品基期價格} = \frac{\text{新查商品前1期計算期價格}}{\text{原查商品缺貨時之前1期價格}} \times \text{原查商品基期價格}$$

(四)商品以契約貨幣報價，其中以外幣報價者，則按每月新台幣對契約幣值平均匯率換算為新台幣計價(進出口按月採用銀行買賣中間點之每日平均匯率)。

## 九、指數發布：

當月結束後5個工作日內(如遇春節或較長連假，將酌予調整)發布上月物價變動新聞稿，並公布於本處網站(<https://www.dgbas.gov.tw>)及中華民國統計資訊網(<https://www.stat.gov.tw>)，詳細結果則刊載於物價統計月報電子書。

# Description of Methods Used in Compilation of Import / Export Price Index

## 1. Historical Notes

Taiwan Area is an island economy, therefore foreign trade has strong relationship with its economic development. In October 1953, to meet the requirements for the management of foreign exchange assets and the allocation of import/export quotas, the Bank of Taiwan selected major items of import and export goods and compiled the priced data of these selected items, obtained from the domestic wholesale markets or from the production sites, into the import and export indices. Due to the change in responsibility of the sponsoring organization, the compilation job switched from one agency to another for several times. In 1969, the job was taken over by the Board of Foreign Trade, the Ministry of Economic Affairs, which followed the existent approach.

In 1974, the compilation was suspended due to methodological and managerial problems. The Directorate-General of Budget, Accounting and Statistics (DGBAS) was nominated to compile the import/export price indices. In view of the growing importance of the index series entailed in the fast economic growth and the quick expansion of foreign trade, the DGBAS accepted the responsibility and engaged in collection of related data at home and abroad to prepare for production of a set of new index series. An one-year trial compilation was launched in 1977. After several reviews, scholars and experts assessed that results of the experimental compilation were satisfactory. The official issue began in September 1978.

In order to match the changes of trade economic composition, the base period is revised once every five years, in the meanwhile the groups and priced items are also adjusted. From the base year of 1996, we introduced the relative importance to compile the indices; the link period is next Dec. To accommodate with the fast altering industrial structure and evolving products, the import/export price indices will be rebased every 2-3 years instead of every 5 years from the base year of 2016 in order to reflect the production situations more finely and representatively. The import/export price index still used point linking method for compilation, and adopted 2019 weights since 2021. The rebased index was released from February 2021 using January 2021 data.

## 2. Purpose and Uses

### (1) Purpose

The import/export price index is measure the fluctuations of import / export prices in Taiwan Area.

### (2) Uses

- ① As one of the important indicators for fiscal and economic policies, and for academic studies.
- ② As a reference for management of foreign exchange assets and allocation of quotas;
- ③ As a reference for regulation of the demand and supply of import/export commodities and as an input for analysis of concerned institutions.

## 3. Priced Items

According to the trade composition of 2019 in Taiwan Area, 304 major import items and 295 major export items are selected for pricing.

## 4. Index Classification

The import/export price indices arranged by the standard classification and those by supplementary classifications in order to meet the needs in variety of analysis and research.

### (1) Indices by Standard Classification

Standard classification has been reclassified according to the Harmonized Commodity Description and Coding System (HS). Sections and chapters with less than 3 items will not be published.

- ① Import Price Indices:

The series includes a general index and group indices for 18 sections and 65 chapters of import goods, with 15 sections and 28 chapters released.

② Export Price Indices:

The series includes a general index and group indices for 15 sections and 55 chapters of export goods, with 14 sections and 27 chapters released.

(2) Indices by Supplementary Classification

The series also includes indices arranged by Usage.

## 5. Base Period

The base period is 2016.

## 6. Weights

Since the base period 2019, the customs-clearing values of import (or export) goods of 2019 in Taiwan Area, including re-imports (re-exports), are used as the weights, with the value of import (export) items outside the sample being added proportionally to that of surveyed items similar in attributes and price trends.

## 7. Pricing

(1) Pricing Method

The prices are reported by selected importers and exporters every month by mail or through Internet Reporting System.

(2) Coverage of the survey

The sample covers major importers and exporters in Taiwan Area.

(3) Pricing Criteria

The price, based on the CIF value for imports and the FOB value for exports, is taken from the transaction on or closest to the 20th each month. If there is no such transaction, the price occurring recently or the price of the previous month is used instead.

## 8. Computation

(1) Formula: The general index and group indices are computed by the derived Laspeyres Weighted aggregate formula.

① Average price relatives:

$$\frac{P_{i,j}}{P_{2020.12,j}} = \frac{1}{n_j} \sum_k \frac{P_{i,j,k}}{P_{2020.12,j,k}}$$

i: current period                      j: priced item                      k: brands  
P: price                                      Q: quantity

$n_j$  : Number of brand for the jth item.

② Index:

$$I_{i/2016}^{2019CH} = \frac{\sum_j \frac{P_{i,j}}{P_{2020.12,j}} (P_{2020.12,j} \cdot Q_{2019,j})}{\sum_j (P_{2020.12,j} \cdot Q_{2019,j})} \times I_{2020.12/2016}^{2016CH}$$

$P_{2020.12,j} \cdot Q_{2019,j}$  : total supply volume of 2019 basket for commodity j, valued at December 2020 price

$I_{2020.12/2016}^{2016CH}$  : the price index for December 2020 with 2016 basket and 2016 as the base period

$I_{i/2016}^{2019CH}$  : the chain price index for i period with 2019 basket and 2016 as the base period.

(2) Yearly Index:

The yearly index is derived from the arithmetical average of monthly indices, rounded to nearest hundredth..

(3) Treatment for lack of priced items:

If the commodity of a specific brand is out of supply on market, a similar commodity bearing a different brand is priced and the adjustment should be made according to the following formula:

$$\begin{array}{l} \text{Estimated price of} \\ \text{substitute} \\ \text{commodity at base} \\ \text{period} \end{array} = \frac{\begin{array}{l} \text{Price of substitute} \\ \text{commodity at period prior to} \\ \text{current one} \end{array}}{\begin{array}{l} \text{Price of originally surveyed} \\ \text{commodity at period just} \\ \text{prior to running out of supply} \end{array}} \times \begin{array}{l} \text{Price of originally} \\ \text{surveyed} \\ \text{commodity at base} \\ \text{period} \end{array}$$

(4) Exchange Rate

For a commodity whose price is denoted by a contracted foreign currency, the price is converted into one measured in terms of the New Taiwan Dollar (NT\$) by the average exchange rate of the NT\$ against the contracted foreign currency for the period. The monthly average currency rates of bank's selling and buying is applicable to the conversion for the import/ export commodities.

## 9. Publication

The monthly index is published on the 5th working day (subject to postponement due to Chinese Lunar New Year or other consecutive public holidays) after the end of the reference month in news release. The e-book "Price Statistics Monthly" with the detailed figures is made available immediately at the time of release; please see <https://eng.dgbas.gov.tw> or <https://eng.stat.gov.tw> for details.