

# 編 製 方 法 說 明

## 躉售物價指數

### 一、查編沿革：

躉售物價指數之查編創始於民國 35 年 2 月，由前臺灣行政長官公署統計室依照本總處訂頒之「物價調查與統計方案」，在臺北市選定 50 項商品，分 6 大類，以民國 26 年上半年為基期，採用簡單幾何平均公式編成，稱為臺北市躉售物價指數。民國 36 年台灣省政府成立後，由省政府負責查編；民國 38 年 6 月 15 日幣制改革，復增編當日及 39 年上半年為基期之物價指數各一種，仍稱為臺北市躉售物價指數。民國 43 年，本總處為謀改進，復邀集有關機關及國內外專家學者審議結果，將原有 50 項商品更換 13 項，編製 41 年為基期之物價指數。迨民國 46 年，為配合國家經濟建設計畫及適應各方需要，改換 45 年為基期，以臺灣各項物品供給量為權數，增選商品為 179 項，分 11 大類，於 48 年 1 月公布，始用拉氏公式編算。民國 56 年 7 月臺北市改制為直轄市，准由臺灣省及臺北市政府主計處合編臺灣區躉售物價指數，並以 52 年至 54 年為基期，增選商品為 382 項，分 12 大類，於 57 年 1 月正式編布。

民國 59 年間為避免聯合編製之聯繫困難，由本總處統一辦理，更換以 55 年為基期，改採臺灣地區各項商品交易值為權數，選查商品 586 項，除編基本分類 12 大類外，增編特殊分類指數，且開始以電子計算機處理，於 60 年 1 月逕行編布。嗣後為配合經濟發展中生產結構之變化，每逢民國 0 或 5 之年改換基期，並視當時經濟發展狀況調整分類及查價項目，70 年基期改編時，改以各項商品總供給值為權數，增查出口商品，並增編按加工階段分類指數；80 年基期改編，鑒於躉售物價語意混淆，以及查價階段不夠明確，改查生產者物價，查價階段明定為生產者之出廠價格，且直接納入進出口物價項目，仍沿用躉售物價指數之名稱，於 82 年 10 月正式公布；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，改以民國逢 0、3、5 及 8 之年份進行更換基期作業；108 年基期選查商品增為 1,195 項，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。另 WPI 國產品(合併國產內銷品及出口品)與生產者物價指數 (Producer Price Index, PPI, 自資料時間 110 年 1 月起公布) 之範疇過於近似，資料僅公布至 110 年 12 月為止。

躉售物價指數係由國產內銷、出口、進口品三項物價指數加權而得，包含國產品銷售價及進口品價格的變動，夾雜企業產出與投入價格變化資訊，

經濟意義不甚明確，易被誤用，行政院主計總處遂自資料時間 110 年 1 月起按月編布經濟意義明確之生產者物價指數(衡量國內生產者所生產產品離開生產場所時之價格水準變動情形)，且主要國家編布生產者物價指數後均停編躉售物價指數，行政院主計總處亦將自資料時間 112 年 1 月起停編躉售物價指數。考量部分使用者表示仍有業管法規引用、合約價款調整或業務參考等使用躉售物價指數之需求，為方便使用者於相關法規或合約完成修訂前參用，行政院主計總處將就生產者物價指數(包括國產內銷及出口品)及進口物價指數之查價項目及權數資料，另編與原躉售物價指數涵蓋範圍相同之「國產與進口品物價指數」：

- (一)編布期間：112 年 1 月至 114 年 12 月(資料時間)。
- (二)發布週期及日期：與每月物價變動概況同時發布。
- (三)發布形式：於「中華民國統計資訊網 (<https://www.stat.gov.tw>) >物價指數>統計表」網頁刊布「國產與進口品物價指數」總指數。

## 二、編製目的與用途：

- (一)編製目的：為反映生產(包括進口)廠商出售原材料、半成品及製成品等之價格水準變動情形。
- (二)主要用途：
  1. 重要經濟指標之一，供財經決策及學術研究之用。
  2. 為編算國民所得統計及產業關聯統計參考。
  3. 依營利事業資產重估辦法規定，用為資產重估之依據。

## 三、查價項目：

依據民國 108 年臺灣地區經濟生產結構及進出口結構，分查國產內銷品 596 項、進口品 304 項、出口品 295 項，合計 1,195 項。

## 四、指數分類：

- (一)基本分類指數：除總指數外，另配合我國第 10 次行業標準分類，下分 4 個大類，30 個中類，81 個小類及 96 個細類之分類指數。
- (二)特殊分類指數：
  1. 加工階段別指數：除內銷品(國產內銷品加進口品)總指數外，下分 3 個大類、6 個中類、8 個小類及 10 個細類。
  2. 內外銷別指數：分內銷品及出口品物價。

## 五、指數基期：

以民國 105 年全年平均=100。

## 六、權 數：

- (一)國產內銷品、進口品、出口品權數：以民國 108 年我國國產銷售值加進

口總值為總供給值，依國產內銷值、進口總值、出口總值比例分攤其權數。

- (二)國產內銷項目權數：以各大類108年國產內銷值(國產銷售值－出口總值)，分攤國產內銷權數值，並依序分攤決定中、小類、細類及項目權數；農、林、漁、牧業產銷值分別參考「農業年報」、「林業統計年報」及「漁業年報」；水及電類主要依據自來水公司及台電提供之資料，其餘則參酌工業生產、國民所得及各同業公會等資料。
- (三)進、出口項目權數：依進、出口物價查價項目權數比例分攤進口品、出口品權數。
- (四)蔬、果權數：從80年基期指數開始，新鮮蔬菜及水果兩類指數採按月變動權數編算，在類權數固定下，各項目之權數則依據106～108年各月平均銷售值計算而呈逐月變動。

### 七、價格查報：

- (一)查價方式：國產內銷品除農、林、漁、牧產品採行政院農業委員會、漁業署、台北農產公司調查之價格資料外，餘採通訊調查或網路填報方式，由選定之國內廠商按月向本總處填報，進、出口品則直接引用本總處進、出口物價之價格資料。
- (二)查價基準：各月最接近20日之實際淨出廠價格(不包括運費及營業稅，亦扣除折讓、贈品、折扣及補貼等)，如無交易時，以最近行情代替或沿用上月價格。

### 八、計算方法：

- (一)指數公式：總指數與類指數採用拉氏之變式計算，各大、中、小、細類權數均予固定，項目中除新鮮蔬菜及水果項目外，權數亦為固定。i表計算期，j表項目，k表花色，P表價格，Q表數量。

- 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：

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

$P_{109.12,j} \times Q_{108,j}$  為 j 項商品108年總供給量以109年12月價格衡量之總

供給值

$I_{110.12/110}^{108CH}$  為105年市場籃，以105年指數為100之109年12月指數

$I_{i/110}^{110CH}$  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更換花色處理：

改查性質相類似之新花色牌號價格，並以漲跌率推算其基期價格，估算方法如下：

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

## 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，並公布於本總處網站(<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 Wholesale Price Index

## 1. Historical Notes

The Wholesale Price Indices (WPI) started in February 1946. In accordance with the Program of Survey and Statistics of Commodity Prices laid down by the Directorate General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, the Office of Statistics in Taiwan Administrator's Headquarters compiled the Taipei WPI by selecting 50 items of commodities in six groups, adopting the simple geometric mean formula with the first half year of 1937 as the base. After the Taiwan currency reform in 1949, two additional series of Taipei WPI with June 15, 1949 and the first half year of 1950 as bases were compiled respectively. In 1954, the DGBAS invited representatives of related agencies, scholars and experts (both Chinese and foreigners) to meeting and decided to replaced thirteen items out of the original fifty for compiling a new index with the whole 1952 as the base.

In order to coordinate with the nation's economic development plan and meet the increasing requirements of all concerned, the base was revised to 1956 in 1957, and the aggregate supply of commodities of Taiwan in 1956 was used as weight. The index, which comprised of 179 items of priced commodities in 11 groups, was published in January 1959, and started to adopt the Laspeyres Weighted Aggregate Formula.

Since Taipei Municipality has become a special municipality under direct control of the Executive Yuan in July 1967, the WPI in Taiwan was jointly compiled by the concerned departments of both Taipei Municipality and Taiwan Province. With the average of 1963 to 1965 as the base and 382 selected items in 12 groups, new index was published officially in January 1968.

During 1970, for avoiding the difficulties of joint compilation, the DGBAS decided to take over the work. The year of 1966 and its transaction value in Taiwan Area were used as base and weight respectively. With 586 selected items in 12 groups, WPI was published in January 1971. It was the first time to add the special group indices and to use computer in compilation of the index. In order to match the changes of the economy and production structure, the base period is revised once every five years, meanwhile the groups and priced items are adjusted as see fit.

In rebased year 1981, we used the total supply value of commodities as weights, while added export commodities to WPI and started to compile the indices by stage of processing. In rebased year 1991, to avoid widespread misconceptions about the meaning of "wholesale", we altered to survey the prices received by producers form

whoever makes the first purchase, the WPI was directly compiled by using domestic wholesale, export and import price indices and published in Oct. 1993. From the base year of 1996, we introduced the relative importance to compile the indices; the link period is next Dec. of base year. From the base year of 2016, the Wholesale Price Indices will be rebased every 2-3 years instead of every 5 years to reflect the production situations more finely and representatively. The WPI 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. The Domestic Products of WPI (compiled from Domestic Sales Excluding Imports, as well as Exports) and PPI (Producer Price Index, data starting in 2021 Jan) were too similar, therefore cease to publish after 2021 Dec.

Since WPI is a weighted compilation of Domestic Products, Export and Imports Indices, it mingles the price changes of business output and input, thus having an ambiguous economic definition and was often misquoted. DGBAS start compiling a much more economic defined Producers Price Index starting Jan 2021, to measure the average changes of selling prices received by domestic producers for their output. As most NSOs discontinued their WPI after introducing PPI, DGBAS shall discontinue WPI after Jan 2023.

## 2. Purpose and Uses

### (1) Purpose

The wholesale price index is to measure the average changes of selling prices received by producers for their outputs, such as raw materials, semi-finished products and finished products.

### (2) Uses

- ① For financial decision-making and academic researches.
- ② As a reference for GDP and I/O Tables.
- ③ The basis for the revaluation and appraisal of assets.

## 3. Priced Items

The following figures show the numbers of selected items, based on economic structure of 2019:

	Domestic Wholesale	Import	Export	Total
Numbers of Items	596	304	295	1,195

#### 4. Index Classification

(1) Basic Grouping

Wholesale Price Index, based on the "Standard Industrial Classification System of The Republic of China(Rev. 10,2016)", is divided into 4 major groups, 30 sub-groups 81 groups and 96 small groups.

(2) Special Grouping

- ① Grouping by stage of processing
- ② Grouping by waygoing

#### 5. Index Base Period

The average index for 2016=100.

#### 6. Weights

(1) Respective weights in the Wholesale Price Index:

	Weights
Domestic Wholesale Price Index	257.00
Import Price Index	340.98
Export Price Index	402.02
Wholesale Price Index	1000.00

(2) The weights of commodities for compiling the Domestic Producer Price Index:

For manufacturer, in 2019, Industrial Production Statistics, National Accounts Statistics and data provided by relative associations are referred for weighting.

For non-manufacturers (Agriculture, Forestry, Fishing, Water Supply, etc.): Year books of Agriculture, Forestry, Fishing, Water Supply and Electricity are referred for weighting.

(3) The weights of commodities for compiling Import and Export Price Indices can be found in the explanation of the respective indices in this publication.

(4) According to the month sale average from 2017 to 2019, the weight of fresh vegetables and fruits are monthly varying weights.

#### 7. Pricing

(1) Price Surveyed

The prices of domestic manufactured goods are reported by designated companies every month by mail or through Internet Reporting Systems, whereas prices of Agriculture, Forestry and Fishing goods are obtained from the digital transmission data dispatched by Council of Agriculture (and its Fisheries Agency)

and Taipei Agricultural Products Marketing corporation.

The prices of import and export goods are directly provided by the Import and Export Price Indices surveys.

(2) Pricing criteria

The designated companies are required to report the actual selling prices of selected commodities with the same specification (in principle, price after adjustment for rebate, tax, shipment, etc.) around the 20th of the month.

## 8. Computation

(1) Formula: The general index and group indices are computed by the derived from of Laspeyres Weighted Aggregate Formula.

① Average price relatives:

$$\frac{P_{i,j}}{P_{2022.12,j}} = \frac{1}{n_j} \sum_k \frac{P_{i,j,k}}{P_{2022.12,j,k}}$$

i : current period    j : priced item    k : brands

P : price                      Q : quantity                      n<sub>j</sub> : number of brands for the jth item

② Index:

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

$P_{2020.12,j} \times Q_{2019,j}$     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) The yearly index is the arithmetical average of the monthly indices, rounded to nearest hundredth.

(3) Treatment for lack of priced items:

If the item 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:



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

## 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) 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.