
Bank of Japan

Research and Statistics Department

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Outline of the Input-Output Price Index of the Manufacturing Industry by Sector (IOPI, 2005 base)

1. Purpose and Uses

The IOPI focuses on the prices of products in the manufacturing industry. The IOPI consists of the Input Price Index and the Output Price Index, which covers prices of goods and services* used for production and goods made by production, respectively. The main purposes of the index are: 1) facilitating comparative analyses of price fluctuations in inputs and outputs for various sectors of the manufacturing industry, and 2) facilitating analyses of price fluctuations among sectors in the manufacturing industry.

- * Up to the 2000 base, inputs from service sectors are not included in the Input Price Index. From the 2005 base, Input Price Index newly covers services in addition to goods consumed in production processes of the manufacturing industry. To enhance the convenience for the users, the 2000 base Input Price Index including services (From January 2000 to December 2005) is newly compiled and released.

2. Classification and Weights

The Input Price Index covers raw and intermediate materials that include scrap and by-products used for production, fuel, and energy that are consumed in production processes (both domestic products and imports), and services provided in production processes. The Output Price Index covers manufactured products that include scrap and by-products (both domestic products and exports).

For the Input Price Index, the weights are based on the input values of goods (i.e., raw and intermediate materials, fuel, and energy) and services for the manufacturing industry at purchasers' prices in the I-O Tables during the base year 2005, published by the Ministry of Internal Affairs and Communications. For the Output Price Index, the weights are based on the values of domestic products for the manufacturing industry at producers' prices in the I-O Tables during the base year 2005.*¹

The IOPI has two levels of sector classifications: the Manufacturing industry sector and the Major sector. The former consists of one category and the latter consists of 16 categories. Each sector has three levels of commodity groups: Aggregated major commodity group, Major commodity group and Commodity group (except for the Major sector in the Output Price Index, which is equal to Major commodity group). The Manufacturing industry sector also has sub-indexes of Domestic products, Imports, and Services for Input Price Index, and those of Domestic products and Exports for Output Price Index, respectively*².

A sub-index for the Major sector “Electrical machinery, Information and communication electronics equipment, and Electronic components”*³ is compiled as Reference index.

- *1 Weights of Commodity group are calculated by using the weights of Commodity of the Corporate Goods Price Index (CGPI) and those of Item of the Services Producer Price Index (SPPI).
- *2 For reference, a sub-index of Goods (Domestic products and Imports) for Input Price Index is also compiled.
- *3 In accordance with the revision of the I-O Tables, major sector “Electrical machinery” of IOPI is divided into three major sectors, “Electrical machinery,” “Information and communications

equipment,” and “Electrical components.” To enhance the convenience for the users, “Electrical machinery, Information and communication electronics equipment, and Electronic components,” which corresponds to “Electrical machinery” of the 2000 base, is compiled as a Reference index.

3. Base year for the Index and the Weight Calculation

The base year is 2005 for both the index calculation and the weight calculation.

4. Price data (Selection of Commodities)

Commodity indexes in the CGPI and Item indexes in the SPPI are adopted in order to compile Commodity group indexes of the IOPI and they are the sole source for the IOPI price data*. The total number of selected Commodities and Items amounts to 1,263 for the Input Price Index and 1,259 for the Output Price Index. Both the Input Price Index and the Output Price Index exclude the consumption tax.

* In accordance with the revision of the CGPI and the SPPI, Commodity indexes in the 2005 base CGPI and Item indexes in the 2005 base CSPI are adopted as the basis for the IOPI indexes for Jan. 2005–Dec. 2009, and those in the 2010 base CGPI and the 2010 base SPPI for the IOPI indexes from Jan. 2010 onward. Therefore, Commodity group indexes of the IOPI which are not covered in the 2010 base CGPI or the 2010 base SPPI are assumed to remain unchanged from Jan. 2010 onward.

5. Index Formula

The index formula is the fix-weighted Laspeyres formula. For details, refer to column 6, "Index formula for the CGPI."

6. Publication

In principle, the preliminary figures are released at 8:50 a.m. on the 20th working day of the month following the survey month. The release date may be brought forward a few working days, when the number of working days in the month is limited. Revised figures are released together with the next month's preliminary figure indexes; revised data are marked with the symbol "r."

Scheduled retroactive revisions are made to the released indexes four times a year (in March, April, September, and October, along with the release of the preliminary figures for the February, March, August, and September indexes).

7. The 2005 Base Linked Indexes

The 2005 Base Linked Index is available from January 1975 for the Manufacturing industry sector, and from January 1980 for the Major sector.*1 *2

*1 Up to the 2000 base, the linked index was from January 1990. From the 2005 base, the linked index for the Manufacturing industry sector and the Major sector has been extended.

*2 The linked index of “Electrical machinery,” “Information and communications equipment,” and “Electrical components” are compiled from January 2000 onward.

8. Notes on Usage

It should be noted that price data obtained from the CGPI include those collected from producers or wholesalers and those on CIF or FOB basis even though they are called input prices or output prices for the manufacturing sector.