

Supply Table (2020 Output Table by Industry and Product) Use Table (2020 Input Table by Industry and Product)

1 2020 supply and use tables

For the 2020 table, we estimated the use table for the service sector and the supply table, compiled the input-output tables for all sectors, and finally used them to estimate the use table for all sectors.

2 Details of supply and use tables

The supply table shows what kinds of goods and services each industry produces, regardless of whether they are primary or secondary activities. It is categorized by industry classification (where establishments producing multiple types of goods and services are classified based on the primary type of goods or services, they produce). Additionally, the use table shows what kinds of products each industry uses in its production process, regardless of whether it produces as primary or secondary activities, by industry classification.

The supply table includes domestic production and import values by industry and product. It is arranged in a matrix with the product categories on the left (rows) and the industry categories on the top (columns), with the figures in each cell expressed at producers' prices. Additionally, the use table includes intermediate and final demand amounts by industry and product. It is calculated at purchasers' prices and published at both producers' and purchasers' prices.

The term "industry" in the supply and use tables is defined in KAUs (kind of activity units).

3 Sector classifications of supply and use tables

Capturing the input side in the use table is more difficult, particularly for product sectors. From the perspective of survey feasibility, the use table does not have detailed sectors when based on actual measured values. In this case, rather than estimating using different numbers of sectors, it is more efficient to estimate products in the use table by dividing them into the same product sectors as those in the supply table as much as possible, which also enables the output and input values for each industry to be adjusted consistently in the supply and use tables. For this reason, when estimating the supply and use tables, we establish the secondary sector of industries and products as a sector for the estimation work and estimate products in the use table in detail as necessary. When publishing the results, we establish the first-level sector of industries and products as an aggregated sector based on the limitations of ascertaining the input side. The first-level sector of industries and products is shown in Appendix 1. The correspondence between the input-output table's basic sector classification and the first- and second-level sectors of the supply and use tables is shown in Appendix 2. For products related to intellectual property products for which the main industry is not specified, their correspondence with the second-level sectors for products is shown in Appendix 3.

The industrial sectors in the top columns of the tables are broadly divided into three categories based on the classification of production activity entities: (1) market producers, (2) non-market producers (general government) (**), and (3) non-market producers (private non-profit institutions serving households) (*). Additionally, the product sectors on the left (row) side of

the tables are set up to correspond one-to-one with the industrial sectors on the top (column) of the tables. The endogenous sector forms a square matrix (a 117-sector matrix).

4 Method of estimating the supply table

The supply table is basically estimated using the following steps, based on data from the Economic Census for Business Activity, which captures a wide range of secondary activities.

(A) Adjustment of data from the Economic Census

Sales figures from the Economic Census data are adjusted to estimate outputs by industry and product. In this step, the following points are mainly adjusted:

(1) Breakdown of the products of so-called side jobs, such as “secondary activities”

In many fields, the Economic Census data does not provide detailed classifications for sales by product of side jobs. Additionally, the Economic Census data generally does not provide information other than companies’ total sales for privately owned or newly established businesses. Thus, we supplement these data with sales by product.

(2) Segmentation from enterprise-level to KAU-level

Since the “industry” in the supply table is based on the KAU concept, we need to conceptually adjust the Economic Census data. Specifically, the Economic Census data can provide sales figures for each establishment in the manufacturing industry. On the other hand, in the service industry, these figures are not available at the establishment level but are instead captured at the enterprise level. Additionally, the Economic Census data generally does not provide information other than companies’ total sales for privately owned or newly established businesses. When figures cannot be obtained at the establishment level, the statistics collected at the enterprise level are segmented into KAU level.

(B) Adjustments from the Economic Census Data to supply and use tables and input-output table-based statistics

The amounts in Step A are adjusted using the domestic production (gross outputs) obtained from the input-output table.

(C) Adjustments for sectors not available in the Economic Census data

For sectors not available in Step A, the amounts obtained from the input-output table are mainly recorded in the diagonal cells of the relevant products.

5 Method of estimating the use table

This time, the use table was initially estimated only for the service sector (not vertically or horizontally balanced). We estimated the inputs of the input-output table’s column sectors and then re-estimated a balanced use table for all sectors after estimating the input-output table. The main source statistics for these estimates are the Economic Census data and the Survey of Service Industries and Non-profit Organizations (hereinafter referred to as the “Service Input Survey”). The estimates are made in the following steps:

(A) Adjustment of the Economic Census data and the Service Input Survey data

We use the Economic Census data to obtain a rough outline of input items and supplement its details with the Service Input Survey to estimate input amounts by industry and activity.

In this step, the following points are mainly adjusted:

(1) Adjustments of the Economic Census data

Economic Census data essentially provide information on costs at the enterprise level rather than the establishment level. Thus, the Economic Census data is adjusted for industries in the supply and use tables and activities in the input-output table by limiting target enterprises to those consisting of establishments of the same type ($\approx$ KAU) or those with only one primary business activity ($\approx$ activity) thereby restricting them to “pure” enterprises.

(2) Adjustments of the Service Input Survey

The Service Input Survey provides business unit costs which are easier for companies to respond to. Therefore, the business unit costs are essentially considered equivalent to KAUs. Additionally, when estimating the cost of activities, we make adjustments such as excluding costs not included in the primary activities.

(B) Adjustments from Economic Census and Service Input Survey data to the supply and use tables and the input-output table-based statistics

We adjust the figures in Step A to be consistent with those obtained from the use table and the input-output table.

(C) Input estimates in the input-output table of all sectors

We estimate the amounts of initial inputs in the input-output table of non-service sectors, such as agriculture, forestry, fisheries, mining, and manufacturing, using the conventional method. We combine those amounts with input estimates for the service sectors obtained in Step B to estimate the amounts of initial inputs for all sectors. At this point, we complete the estimation of input amounts (cost structure).

(D) Balancing the input-output table

We estimate the transaction values of each cell in the input-output table in the row direction, that is, the output amounts (sales structure), using the conventional method. Together with the input-side estimates obtained in Step C, the input is cross-checked with the output, and balancing to conform figures with the amounts that are thought to be more adequate is carried out completing the input-output table.

(E) Estimation of the final use table

We estimate the use table for all sectors, including both service and non-service sectors, based on technical assumptions derived from the supply table and input-output table. We reconcile and adjust these estimates against the supply table and initial use table, finalizing the values for publication.

- * We estimate the values to ensure that the “total supply (at producers’ prices)” in the supply table matches the “total use (at producers’ prices)” in the use table, the “total supply (at purchasers’ prices)” in the supply table matches the “total use (at purchasers’ prices)” in the use table, and the “output” in the supply table matches the “output” in the use table.