

RIETI-TID2023 (SITC Classification)

1. Basic concept

The RIETI Trade Industry Database (RIETI-TID) is based on the United Nations Comtrade and classifies all trade goods based on the integrated broad categories of the Japanese Input-Output table, and further organizes them by production process for each industry. In creating this database, we have focused on industries with active trade transactions within the region in order to understand the manufacturing activities in East Asia.

Figure1: Overview of RIETI-TID2023

Country and region (73)	<p>[Asia] Japan, China, Hong Kong, Taiwan, Korea, Singapore, Thailand, Malaysia, Indonesia, Philippines, Vietnam, Brunei (Darussalam), Cambodia, India</p> <p>[North America] USA, Canada, Mexico</p> <p>[Europe] United Kingdom, Germany, France, Italy, Spain, Netherlands, Austria, Greece, Belgium, Luxembourg, Finland, Sweden, Ireland, Portugal, Denmark, Poland, Czech Rep., Slovakia, Hungary, Lithuania, Latvia, Slovenia, Estonia, Cyprus, Malta, Romania, Bulgaria, Russian Federation, Turkey, Norway, Croatia</p> <p>[South America] Argentina, Brazil, Paraguay, Uruguay, Chile, Venezuela, Colombia, Ecuador, Peru, Bolivia</p> <p>[Oceania] Australia, New Zealand</p> <p>[Middle East] Iran, Iraq, Israel, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates</p> <p>[Africa] Egypt, Gabon, Equatorial Guinea, Nigeria, Republic of South Africa</p>
Period	1980-2023 (Data of some countries for certain years are missing.)
Content	The export value and import value of the countries and regions are organized by partner country (including group and global total), industry (13 sectors), production process (five stages), and year.
Notes	<ul style="list-style-type: none"> ● The TID-Code (and Industry, Sub-Category, and Category) combination for Cambodia import values was found to be incorrect in some cases, and has been corrected retroactively back to 1980. Corrections have also been made to some of the combinations of Industry, Sub-Category, and Category corresponding to TID-Code. ● For the convenience of users, full records (245,712 records) are published from 2022 onward. ● The data for Taiwan includes re-imports and re-exports since 2006. ● Trade value with countries other than the 73 target countries and regions has been categorized as the "RoW" (Rest of the World). ● Due to data limitations, Belgium and Luxembourg are treated as one country for data purposes. This also applies to the Czech Republic and Slovakia. ● Data on Croatia, Iran, Iraq, Israel, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, Egypt, Gabon, Equatorial Guinea, Nigeria, and South Africa are available from 1995 (trade data with Taiwan are from 2008). ● For 2023 data, reported data for Equatorial Guinea, Iran, Iraq, the Russian Federation, Venezuela and Vietnam have not yet been published and are therefore not reflected. ● Trade values have been converted from the national currency into U.S. dollars using nominal exchange rates. (The exchange rate of the target country by year can be found on the UN Comtrade website.) ⇒ https://comtradeplus.un.org/

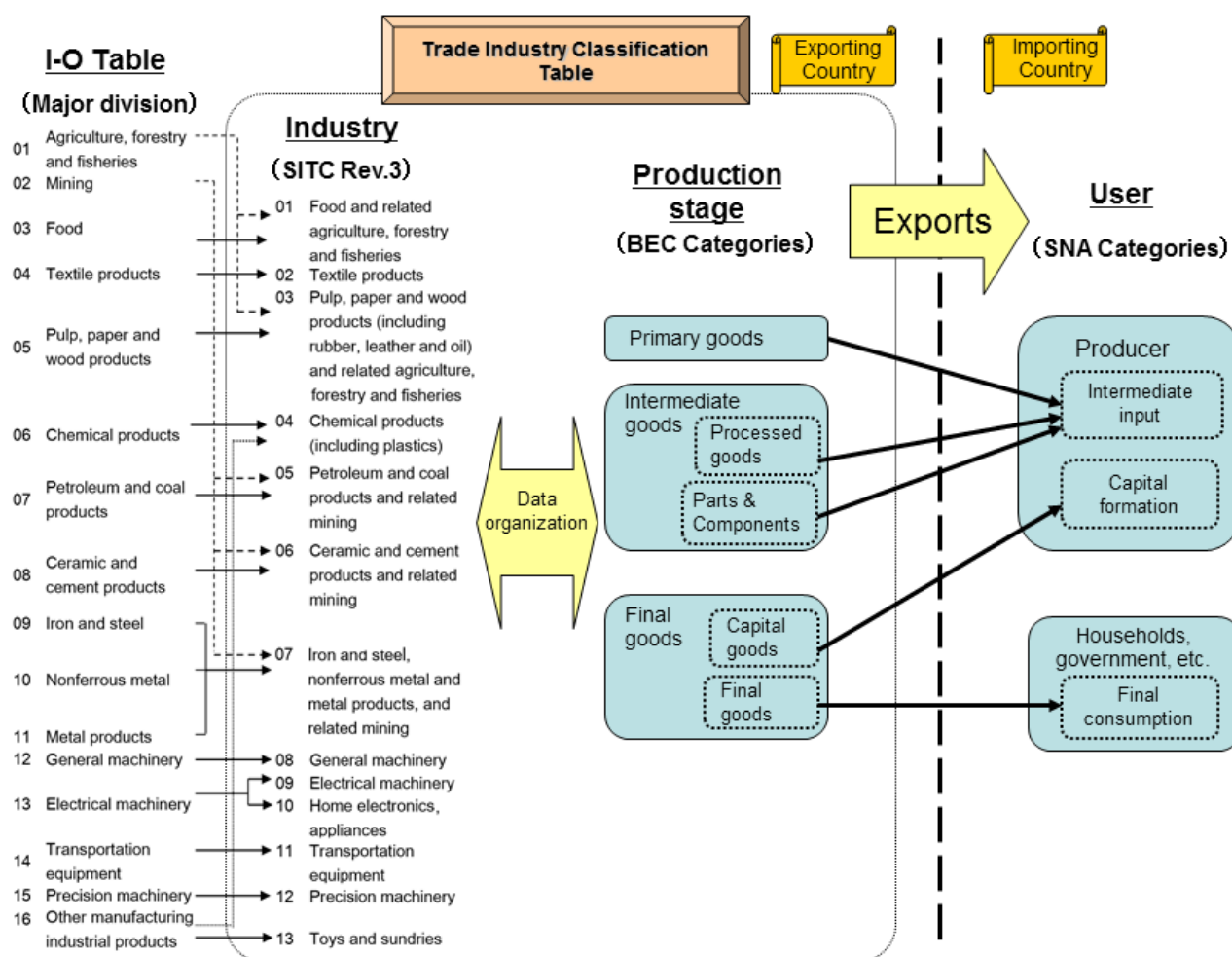
Updates and corrections for 2022 data

The following is a list of countries that have had changes in their total imports for 2022 data. The figures published in the past were compared with the figures after the recent RIETI-TID2023 update.

	2022 (RIETI-TID2022)	2022 (RIETI-TID2023)
Argentina	75,769,770,828	76,050,343,043
Australia	296,062,562,337	296,114,436,501
Austria	209,350,013,690	204,007,197,168
Belgium-Luxembourg	475,100,003,443	480,308,689,984
Bolivia	12,834,365,207	12,877,844,923
Brazil	277,431,452,736	277,564,038,113
Brunei Darussalam	6,774,866,105	9,108,541,299
Bulgaria	54,315,599,589	54,826,486,599
Cambodia	28,944,644,287	29,384,832,983
Canada	539,289,913,123	543,520,016,437
Chile	100,377,667,235	100,675,557,292
China	2,213,516,425,023	2,424,376,799,671
China, Hong Kong SAR	485,773,589,302	647,283,646,054
Colombia	74,120,106,863	74,220,857,154
Croatia	41,224,826,188	41,314,689,179
Cyprus	11,573,049,645	11,594,957,848
Czechoslovakia	324,067,812,524	328,244,003,197
Denmark	118,585,727,188	119,197,433,368
Ecuador	32,060,191,513	32,065,865,325
Egypt	77,197,623,856	93,633,329,615
Equatorial Guinea	430,100	435,600
Estonia	22,277,542,273	23,025,510,492
Finland	84,942,407,203	85,830,271,566
France	771,872,804,013	776,956,158,397
Gabon	657,800	3,871,198,729
Germany	1,384,230,341,870	1,403,767,232,602
Greece	92,848,702,756	92,989,984,020
Hungary	138,933,515,196	142,937,380,078
India	697,950,535,532	715,992,301,955
Indonesia	229,616,628,942	231,974,380,524
Iran	84,179,700	50,579,306,821
Iraq	63,457,900	500,135,900
Ireland	133,302,884,034	139,924,523,598
Israel	86,978,740,600	88,983,285,600
Italy	656,358,151,410	658,715,566,232
Japan	855,057,564,779	868,043,526,886
Kuwait	35,138,976,983	35,155,198,172

	2022 (RIETI-TID2022)	2022 (RIETI-TID2023)
Latvia	24,921,084,803	25,156,339,426
Lithuania	47,722,672,558	50,418,091,516
Malaysia	278,607,716,673	278,826,896,975
Malta	7,766,859,398	8,252,214,918
Mexico	482,515,843,376	505,195,800,717
Netherlands	636,931,816,980	642,514,487,459
New Zealand	53,094,812,752	53,195,966,278
Nigeria	57,676,480,277	58,210,553,575
Norway	101,611,709,093	101,833,206,176
Oman	37,884,623,237	38,090,129,673
Paraguay	15,504,704,581	15,634,024,109
Peru	59,273,383,376	59,347,621,739
Philippines	143,592,904,205	143,730,482,959
Poland	327,324,828,448	330,642,166,613
Portugal	110,081,257,769	111,591,770,578
Qatar	28,299,538,371	28,364,081,245
Rep. of Korea	652,747,468,630	694,489,741,804
Rest of the World	1,244,110,371,163	1,313,288,119,811
Romania	125,348,209,975	127,734,303,186
Russian Federation	937,271,500	937,271,500
Saudi Arabia	1,148,429,700	181,258,129,272
Singapore	372,187,380,770	431,268,021,682
Slovenia	56,155,254,150	56,344,963,277
South Africa	101,792,784,882	102,004,363,115
Spain	465,112,025,376	466,598,287,385
Sweden	188,599,065,352	190,733,620,913
Taiwan	423,038,391,000	423,395,827,000
Thailand	285,197,012,824	289,044,480,996
Turkey	294,262,448,395	294,992,655,956
United Arab Emirates	318,802,856,751	322,573,784,524
United Kingdom	765,143,593,088	768,549,684,868
Uruguay	12,830,180,163	12,841,709,511
USA	3,119,051,871,317	3,154,837,378,352
Venezuela	21,747,000	21,747,000
Viet Nam	287,985,495,407	338,346,410,393

Figure 2: Trade Industry Classification Table Structure



2. Industry classification:

In order to understand the trade structures whereby the production process has been divided, merely grouping the trade goods by production stage is insufficient. Classification for each industry is also required since the extent of division and economic characteristics of production for all goods are diverse. Industries were organized into 13 sectors based on the classification of the manufacturing businesses, including “Agriculture, forestry and fisheries,” and “Mining” in the integrated classification (32 sectors) of Japan’s input-output (I-O) table (Figure 3). The classification is detailed below to more accurately reflect the progress toward the inter-process division of labor in East Asia.

- “Agriculture, forestry and fisheries” and “Mining,” which represent the production of primary goods and materials, are not classified as independent industries as they are in the Japanese I-O table, but are organized as industries upstream of each respective manufacturing industry. More specifically, “Food” and “Pulp, paper and wood products” are categorized as “products related to agriculture, forestry and fishery.” Also, “Chemical products,” “Petroleum and coal products,” “Ceramic and cement products,” “Iron and steel,” “Nonferrous metal,” and “Metal products” are categorized as “products related to mining.”
- “Nonferrous metal” and “Metal products” were combined into one category as their production processes have numerous similarities. In addition, “Iron and steel” is also included in the same industry as it can only be categorized as “Processed goods” in the Broad Economic Categories (BEC) classification.
- “Electrical machinery” was divided into “Electrical machinery” and “Home electronics, appliances,” considering the circumstances of the inter-process division of labor in East Asia.

- D) “Other manufacturing industrial products” was renamed “Toys and sundries” to indicate the specific goods in this industry. Although plastics are classified under “Other manufacturing products” in the I-O table, they are included in “Chemical products” and not in “Toys and sundries,” in view of the production process.

Figure 3: Trade Industry Classification Table

	Industry	Production stage				
		Primary goods	Intermediate goods		Final goods	
			Processed goods	Parts & Components	Capital goods	Consumption goods
1	Food and related agriculture, forestry and fisheries	●	●		●	●
2	Textile products	●	●	●		●
3	Pulp, paper and wood products (including rubber, leather and oil) and related agriculture, forestry and fisheries	●	●	●		●
4	Chemical products (including plastics)	●	●			●
5	Petroleum and coal products, related to mining	●	●			
6	Ceramic and cement products, related to mining	●	●			●
7	Iron and steel, nonferrous metal and metal products, related to mining	●	●	●	●	●
8	General machinery		●	●	●	●
9	Electrical machinery		●	●	●	
10	Home electronics, appliances		●	●	●	●
11	Transportation equipment	●		●	●	●
12	Precision machinery		●	●	●	●
13	Toys and sundries		●	●	●	●

Source : Classification by Broad Economic Categories (BEC), UN Statistics Division

3. Classification of trade goods by production stage:

We employ the BEC classification system in order to classify all of the trade goods by production stage. According to the UN Statistics Division’s website, “BEC was developed in such a way as to provide elements which enable the construction of aggregates approximately comparable to those for the three basic classes of goods in the 1968 System of National Account (SNA).¹ A number of sub-categories were established to supplement these main categories. The sub-categories reflect the various end-uses of commodities.” Based on BEC classification, we organized trade goods into three categories (five subcategories) which are further classified according to the SNA’s standard. Figure 4 shows the profile of the classification. Below we briefly describe the classification of each category.²

“Primary goods” are materials to be used for food and beverages and in industrial supplies. These goods mainly turn into “Intermediate goods” through the first stage of the manufacturing process in the respective industry. Defined as materials for intermediate input, primary goods cover only goods for industrial use, excluding those used in household consumption. This is due to the main objective of the grouping seen in Figure 4, which is to distinguish trade goods based on the production stage.

“Intermediate goods” are trade goods that represent the intermediate input along the path toward becoming the final product. These goods are manufactured goods (processed or assembled) that are produced from primary goods but are still yet to become final products. This category has two subcategories, “Processed goods” and “Parts & Components,” each respectively defined on the basis of BEC. These two subcategories have been created since the goods in each subcategory are considered to have undergone different extents of manufacturing, been subject to different production processes, and tend to represent different shares of specific industries.

¹ The BEC classification corresponds to the classification based on the “use of basic products” in the 1968 SNA (Intermediate Consumption, Final Consumption and Gross Capital Formation).

² Please refer to “China’s Integration in Asian Production Networks and its Implications,” (F. Lemoine. et. al., (2004)) for the classification by production stage.

“Final goods” is defined here as goods used by the producer (as the intermediate input) and goods consumed by households and the government. The two types of goods in this category are “Capital goods” and “Consumption goods,” which are listed as separate categories under SNA since this standard classifies commodity goods based on the main user. They both fall within the one category of “Final goods” because, under the Trade Industry Classification, the primary focus is on the stages of the manufacturing process, not on the end-users of the goods. Even so, this classification is still considered convenient for subsequent studies including in analyzing the relations among domestic production, consumption, and trade, as the classification is associated with SNA and can identify the end-users. Figure 3 shows the structure of the Trade Industry Classification Table.

Figure 4: Classification Table of Trade Goods by Production Stage³

Category	Sub-category	BEC code	BEC Title
Primary goods		111	Food and beverages, primary, mainly for industry
		21	Industrial supplies, n.e.s., primary
		31	Fuels and lubricants, primary
Intermediate goods	Processed goods	121	Food and beverages, processed, mainly for industry
		22	Industrial supplies, n.e.s., processed
		32	Fuels and lubricants, processed
	Parts & Components	42	Parts and accessories of capital goods, except transport equipment
Final goods	Capital goods	53	Parts and accessories of transport equipment
		41	Capital goods, except transport equipment
	Consumption goods	521	Other industrial transport equipment
		112	Food and beverages, primary, mainly for household consumption
		122	Food and beverages, processed, mainly for household consumption
		51	Passenger motorcars
		522	Other non-industrial transport equipment
		61	Durable consumer goods n.e.s.
		62	Semi-durable consumer goods n.e.s.
		63	Non-durable consumer goods n.e.s.

4. About SITC Classification

RIETI-TID2020 used the Standard International Trade Classification (SITC) data from UN Comtrade. Although the classification is a bit rougher,⁴ it reflects the raw materials used in production, production stages, product descriptions, technological progress, and other factors as its characteristics, which is appropriate for reflecting the inter-process division of labor.⁵

³ This classification table represents the traded goods in BEC categories that are linked to the criteria of System of National Account (SNA) and classified by process stage (cf. the research results of CEP II). Since SNA divides the data by user (producer, household, etc.), “capital goods (capital formation)” and “consumption goods (final consumption)” are separated; however, “capital goods” are considered part of “final goods” in this case, based on the idea that international trade is organized into stages of production process. For BEC code 32, 321-motor spirits may be divided into “household consumption” and “use of other industrial transport equipment”; however, this distinction is not made in this case.

⁴ While the Harmonized Commodity Description and Coding System (HS) uses a six-digit classification, SITC used up to a five-digit classification.

⁵ The characteristics of the SITC classification are described on the UN website as follows: “The commodity groupings of SITC reflect (a) the materials used in production, (b) the processing stage, (c) market practices and uses of the products, (d) the importance of the commodities in terms of world trade, and (e) technological changes.” The characteristics of the HS classification are as follows: “The HS contributes to the harmonization of customs and trade procedures and the non-documentary trade data interchange in connection with such procedures, thus reducing the costs related to international trade” (World Customs Organization). “In the HS, goods are classified by what they are, and not according to their stage of fabrication, their use, or origin. The Harmonized System nomenclature is logically structured by economic activity or component material” (University of British Columbia). HS is commonly used for economic analysis because it comprises about 5,000 commodity groups (each identified by a six-digit code), which greatly exceeds the SITC’s approximately 3,100 groups.