

RIETI-TID2023 (HS 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	2017-2023 (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 (14 sectors), production process (five stages), and year.
Notes	<ul style="list-style-type: none"> ● For 2017 and 2018 Cambodia data, an error was found in some of the combinations of import value and TID-Code, and have subsequently been corrected. ● In addition, corrections have been made to some of the combinations of Industry, Sub-Category, and Category corresponding to TID-Code. ● For each country's imports from Taiwan, the value of each country's exports as announced by the Customs Administration, Ministry of Finance, Taiwan, is multiplied by 1.1 and is converted to CIF, but it was found that this conversion process had not been implemented for 2017. Data have been corrected. In making the correction, not only the value of exports from Taiwan but also the value of imports from Taiwan were calculated using the latest data. ● For the convenience of users, full records (261,069 records) are published from 2017 onward. ● The data for Taiwan includes re-imports and re-exports. ● 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. ● 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	79,293,642,352	79,454,584,346
Australia	301,425,856,055	301,458,062,935
Austria	213,320,732,734	206,552,433,170
Belgium-Luxembourg	483,272,781,360	483,805,336,391
Bolivia	12,977,207,673	13,011,904,340
Brazil	284,820,575,970	284,825,482,038
Brunei Darussalam	6,770,004,101	9,170,014,033
Bulgaria	55,001,134,693	55,108,014,790
Cambodia	29,445,119,199	29,511,807,659
Canada	548,490,641,361	550,514,066,271
Chile	101,339,989,524	101,584,303,822
China	2,475,166,534,189	2,479,730,391,121
China, Hong Kong SAR	661,251,526,554	661,273,310,291
Colombia	75,111,373,455	75,120,083,616
Croatia	41,634,936,248	41,652,028,649
Cyprus	11,662,813,665	11,665,985,188
Czechoslovakia	333,157,233,248	333,175,504,048
Denmark	120,418,780,060	120,419,204,645
Ecuador	32,534,336,847	32,538,912,898
Egypt	76,916,273,286	94,360,095,894
Equatorial Guinea	430,100	435,600
Estonia	22,621,842,471	23,166,932,957
Finland	86,525,508,269	86,702,809,622
France	785,543,193,275	785,571,973,219
Gabon	657,800	3,934,922,036
Germany	1,423,924,989,990	1,424,099,577,214
Greece	93,691,239,273	93,712,820,110
Hungary	140,615,093,559	140,869,939,128
India	718,940,964,025	721,751,485,853
Indonesia	235,248,032,180	235,295,959,430
Iran	84,179,700	51,108,076,901
Iraq	62,327,100	500,135,900
Ireland	146,032,491,124	146,368,637,543
Israel	91,000,203,600	91,171,125,600
Italy	663,500,378,902	663,518,127,677
Japan	886,410,589,167	886,439,232,742
Kuwait	35,540,731,291	35,542,617,219

	2022 (RIETI-TID2022)	2022 (RIETI-TID2023)
Latvia	25,280,026,968	25,316,790,635
Lithuania	50,608,291,802	50,768,094,660
Malaysia	283,755,113,430	283,771,222,480
Malta	8,287,860,081	8,343,386,997
Mexico	486,878,552,360	486,878,669,657
Netherlands	660,155,504,507	660,194,822,165
New Zealand	53,779,695,457	53,785,889,657
Nigeria	58,402,466,187	58,849,177,321
Norway	102,933,729,404	102,951,592,349
Oman	38,240,079,704	38,428,025,059
Paraguay	15,788,949,865	15,798,527,325
Peru	59,947,390,331	59,974,805,525
Philippines	147,047,157,788	147,166,720,014
Poland	334,955,093,666	334,972,784,038
Portugal	112,825,623,423	112,853,429,162
Qatar	28,671,462,069	28,704,330,713
Rep. of Korea	720,845,250,238	720,832,324,660
Rest of the World	1,281,765,409,280	1,307,695,885,188
Romania	128,930,143,080	129,061,643,967
Russian Federation	937,271,500	937,271,500
Saudi Arabia	1,148,429,700	182,913,480,050
Singapore	446,620,983,004	446,737,285,407
Slovenia	56,928,736,389	56,938,209,445
South Africa	103,212,845,608	103,222,287,121
Spain	470,237,611,691	470,487,357,861
Sweden	192,193,569,664	193,150,021,153
Taiwan	421,592,503,000	423,395,827,000
Thailand	296,227,250,809	291,936,912,194
Turkey	297,035,541,087	297,097,243,425
United Arab Emirates	323,288,451,678	326,683,086,249
United Kingdom	778,723,704,069	778,827,246,363
Uruguay	12,908,762,077	12,940,513,446
USA	3,239,979,591,229	3,240,092,970,964
Venezuela	21,599,600	21,747,000
Viet Nam	345,598,506,861	345,599,284,611

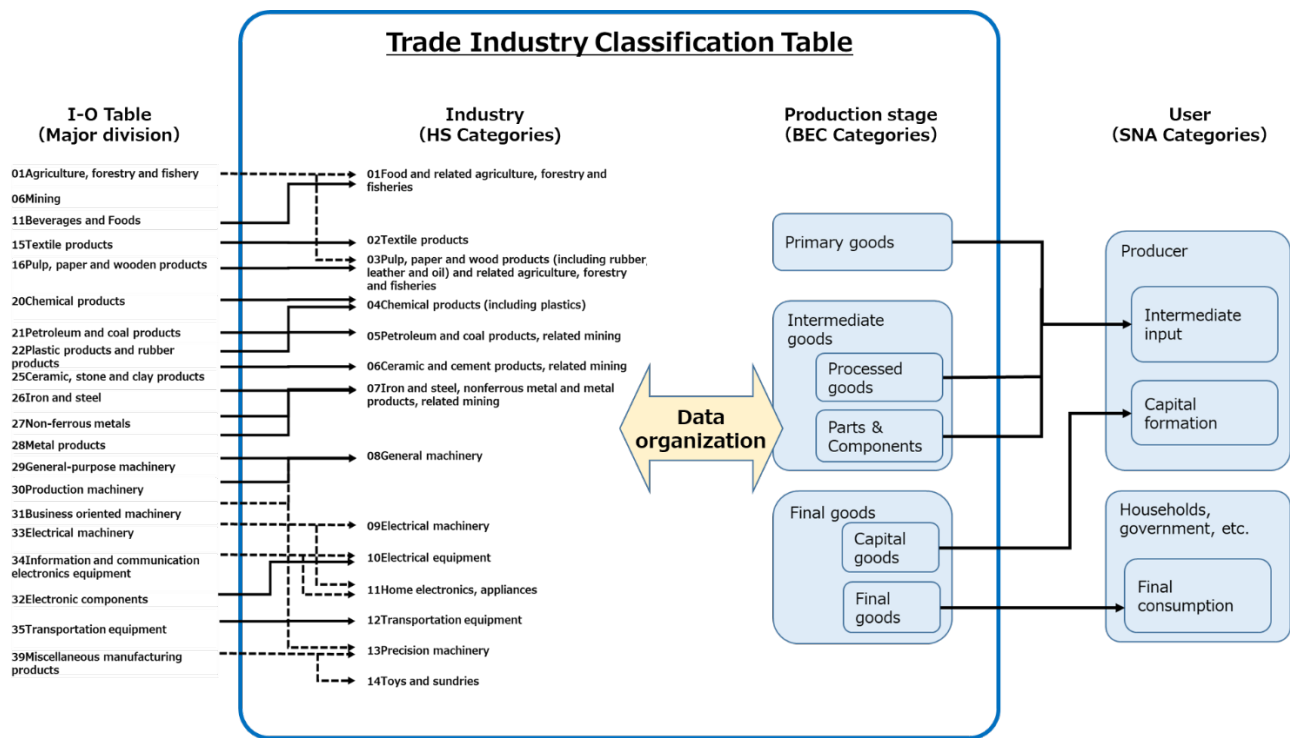


Figure 2: Trade Industry Classification Table Structure

2. Classification of trade goods by production stage:

Industries were organized into 14 sectors based on the classification of the manufacturing businesses, including “Agriculture, forestry and fisheries,” and “Mining” in the integrated classification (37 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,” “Electrical equipment” and “Home electronics, appliances” considering the circumstances of the inter-process division of labor in East Asia.
- “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 Electrical equipment		●	●	●	
11 Home electronics, appliances		●	●	●	●
12 Transportation equipment	●		●	●	●
13 Precision machinery		●	●	●	●
14 Toys and sundries		●	●	●	●

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

3. Classification of trade goods by production stage:

The data organized into 14 industry categories were further classified by production stage into three categories (five subcategories): materials, intermediate goods (processed goods and components), and final goods (capital goods and consumer goods) (Figure 4)¹. This classification is based on the UN's Broad Economic Categories (BEC) classification, which aggregates trade data for each industry of traded goods into three categories and classifies them according to SNA (System of National Account) criteria².

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
		53	Parts and accessories of transport equipment
Final goods	Capital goods	41	Capital goods, except transport equipment
		521	Other industrial transport equipment
	Consumption goods	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.

¹ Please refer to “China’s Integration in Asian Production Networks and its Implications,” (F. Lemoine. et. al., (2004)) for the classification by production stage.

² 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).

³ This classification table represents the traded goods in BEC categories that are linked to the criteria of the 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 by stage of the production process. And 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. About HS Classification

The Harmonized Commodity Description and Coding System (HS) classification is more detailed than the SITC classification. HS is commonly used for economic analysis because it comprises about 5,000 commodity groups (each identified by a six-digit code), greatly exceeding the SITC's approximately 3,100 groups. It also has the characteristic of classifying commodities by what they are, rather than by their stage of manufacture, use, or origin.

Specifically, 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).