

## RIETI-TID2022 (HS Classification)

### 1. Basic concept

The RIETI Trade Industry Database (RIETI-TID) is based on the United Nations Comtrade Database 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-TID2022

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, Belgium, Greece, 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	2017-2022 (Data for 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"> <li>● All values of exports and imports in RIETI-TID are cost insurance and freight (CIF)-based apart from Taiwan. 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. For 2019, it was found that this conversion process had not been performed, and this has been corrected.</li> <li>● The data for Taiwan includes re-imports and re-exports.</li> <li>● Trade value with countries other than the 73 target countries and regions has been categorized as the "RoW" (Rest of the World).</li> <li>● Due to data limitations, Belgium and Luxembourg are treated as one country for data purposes. This also applies to the Czech Republic and Slovakia.</li> <li>● For 2022 data, reported data for Gabon, Equatorial Guinea, Iran, Iraq, Russian Federation, Saudi Arabia and Venezuela have not yet been published and are therefore not reflected.</li> <li>● 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.) ⇒ <a href="https://comtradeplus.un.org/">https://comtradeplus.un.org/</a></li> </ul>

## Updates and corrections for 2022 data

The following is a list of countries that have had changes in their total imports of 2020 data. The figures published in the past are replaced with the figures after the recent RIETI-TID2022 update.

	<b>2020 (RIETI-TID2020)</b>	<b>2020 (RIETI-TID2022)</b>
<b>Argentina</b>	41,401,545,679	41,405,317,409
<b>Australia</b>	207,079,302,525	205,454,561,561
<b>Austria</b>	158,589,515,793	158,707,016,810
<b>Belgium-Luxembourg</b>	312,564,192,956	312,702,460,643
<b>Bolivia</b>	7,064,722,918	7,064,924,667
<b>Brazil</b>	163,614,773,484	163,618,553,709
<b>Brunei Darussalam</b>	4,528,559,798	4,528,626,877
<b>Bulgaria</b>	32,684,771,003	33,006,172,762
<b>Cambodia</b>	18,777,137,967	18,777,481,241
<b>Canada</b>	390,257,126,154	390,997,135,300
<b>Chile</b>	57,842,099,714	57,765,732,501
<b>China</b>	1,829,145,246,995	1,842,474,073,541
<b>China, Hong Kong SAR</b>	569,659,071,174	570,601,334,536
<b>Colombia</b>	42,212,547,727	42,213,393,370
<b>Croatia</b>	25,531,060,236	25,623,547,820
<b>Cyprus</b>	8,472,881,720	8,478,597,525
<b>Czechoslovakia</b>	245,385,910,513	246,433,358,344
<b>Denmark</b>	93,901,387,517	92,793,476,779
<b>Ecuador</b>	17,543,677,705	17,492,163,530
<b>Egypt</b>	58,093,823,629	58,094,770,696
<b>Equatorial Guinea</b>	1,890,900	1,890,900
<b>Estonia</b>	15,557,432,998	15,613,305,636
<b>Finland</b>	60,989,027,098	61,009,873,758
<b>France</b>	565,362,438,905	565,439,957,908
<b>Gabon</b>	1,035,100	3,393,138,147
<b>Germany</b>	1,082,360,272,438	1,085,550,050,991
<b>Greece</b>	53,161,681,901	53,352,541,718
<b>Hungary</b>	104,571,730,185	104,956,994,209
<b>India</b>	364,487,738,694	364,164,352,362
<b>Indonesia</b>	139,983,760,232	139,957,554,034
<b>Iran</b>	88,994,400	37,270,119,246
<b>Iraq</b>	61,059,900	61,059,900
<b>Ireland</b>	91,226,174,322	94,254,039,819
<b>Israel</b>	62,664,690,500	62,715,724,500
<b>Italy</b>	414,733,047,850	419,446,037,590
<b>Japan</b>	625,601,471,134	625,633,542,618
<b>Kuwait</b>	28,193,997,844	28,194,915,770

	<b>2020 (RIETI-TID2020)</b>	<b>2020 (RIETI-TID2022)</b>
<b>Latvia</b>	16,273,284,317	16,277,103,880
<b>Lithuania</b>	31,599,527,056	31,602,902,555
<b>Malaysia</b>	185,052,247,743	185,692,042,924
<b>Malta</b>	5,200,627,226	5,701,085,055
<b>Mexico</b>	343,343,312,612	343,352,403,754
<b>Netherlands</b>	469,171,234,403	469,291,162,237
<b>New Zealand</b>	36,493,522,061	36,319,365,981
<b>Nigeria</b>	55,070,424,708	55,287,901,400
<b>Norway</b>	80,138,347,095	80,433,428,674
<b>Oman</b>	61,243,600	27,785,839,604
<b>Paraguay</b>	10,174,012,770	10,174,102,309
<b>Peru</b>	35,896,232,593	35,896,582,749
<b>Philippines</b>	91,942,599,158	96,232,105,237
<b>Poland</b>	249,213,603,937	249,547,233,668
<b>Portugal</b>	77,919,936,395	77,505,681,455
<b>Qatar</b>	24,118,002,109	24,118,443,833
<b>Rep. of Korea</b>	463,228,525,417	463,186,921,016
<b>Rest of the World</b>	874,640,026,609	1,007,934,694,225
<b>Romania</b>	90,946,814,387	91,078,325,769
<b>Russian Federation</b>	221,015,129,491	220,129,639,991
<b>Saudi Arabia</b>	124,366,512,771	124,397,450,057
<b>Singapore</b>	310,389,611,098	310,368,334,950
<b>Slovenia</b>	35,721,561,082	35,848,631,537
<b>South Africa</b>	61,536,282,305	62,638,676,032
<b>Spain</b>	308,768,525,035	308,483,250,999
<b>Sweden</b>	141,721,819,622	141,755,776,687
<b>Taiwan</b>	281,027,036,000	281,067,143,000
<b>Thailand</b>	200,708,907,802	200,702,890,654
<b>Turkey</b>	200,083,847,128	200,214,599,766
<b>United Arab Emirates</b>	208,104,101,885	208,179,130,619
<b>United Kingdom</b>	617,080,282,600	617,281,392,432
<b>Uruguay</b>	7,507,861,592	7,500,399,273
<b>USA</b>	2,295,552,686,324	2,295,721,252,746
<b>Venezuela</b>	13,214,300	13,214,300
<b>Viet Nam</b>	253,676,369,902	253,676,407,729

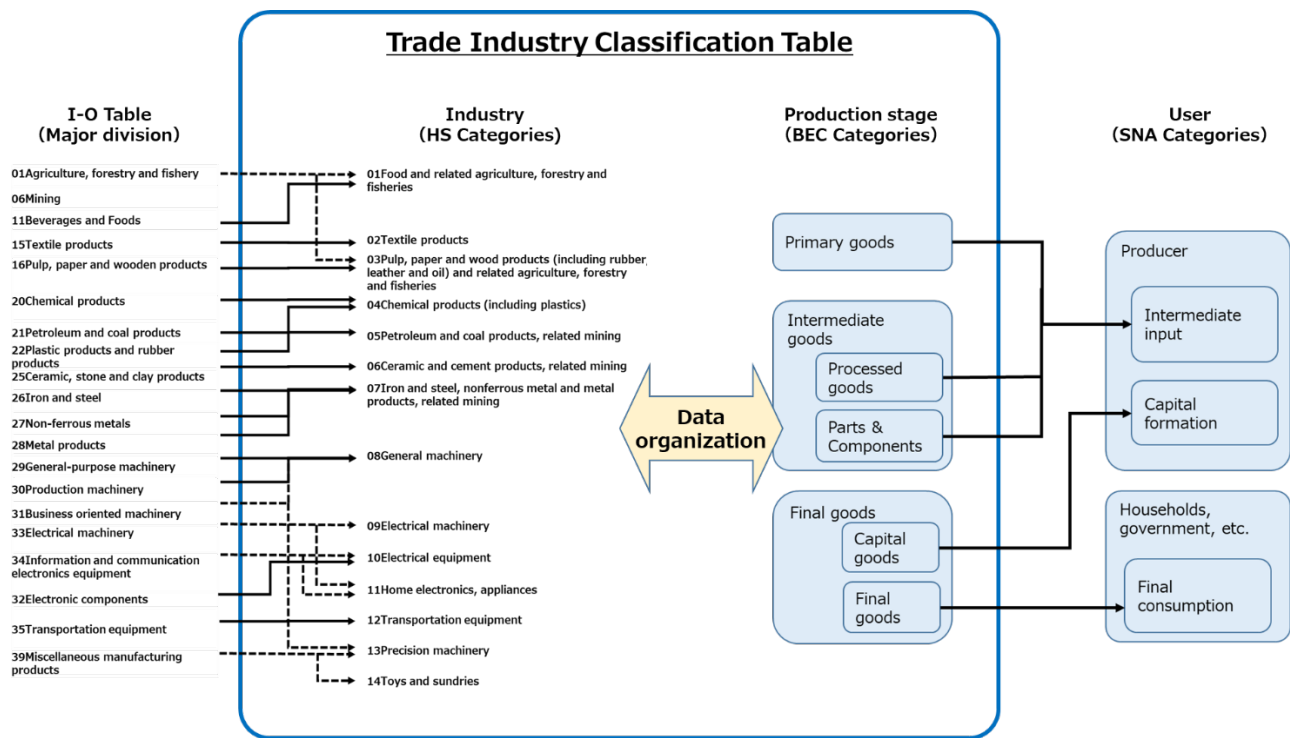


Figure 2: Structure of Trade Industry Classification Table

## 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 reflect the progress toward the inter-process division of labor in East Asia more accurately.

- A) “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.”
- B) “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.
- C) “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.
- D) “Other manufacturing industrial products” was renamed “Toys and sundries” to show the specific goods in this industry. Although plastics are classified as “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

Production stage		Primary goods	Intermediate goods		Final goods	
			Processed goods	Parts & Components	Capital goods	Consumption goods
Industry						
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 mining	●	●			
6	Ceramic and cement products, related mining	●	●			●
7	Iron and steel, nonferrous metal and metal products, related mining	●	●	●	●	●
8	General machinery		●	●	●	●
9	Electrical machinery		●	●	●	
10	Electrical equipment		●	●	●	
11	Home electronics, appliances		●	●	●	●
12	Transportation equipment	●		●	●	●
13	Precision machinery		●	●	●	●
14	Toys and sundries		●	●	●	●

### 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)<sup>1</sup>. 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) criteria<sup>2</sup>.

Figure 4: Classification Table of Trade Goods by Production Stage<sup>3</sup>

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.		

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

<sup>2</sup> 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).

<sup>3</sup> This classification table represents the traded goods in BEC categories that are linked to the criteria of the System of National Accounts (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 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).