RIETI-TID2020 (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-TID2020

Country and region（73）	[Asia] Japan, China, Hong Kong, Taiwan, Korea, Singapore, Thailand, Malaysia, Indonesia, Philippines, Vietnam, Brunei (Darussalam), Cambodia, India [North America] USA, Canada, Mexico [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 [South America] Argentina, Brazil, Paraguay, Uruguay, Chile, Venezuela, Colombia, Ecuador, Peru, Bolivia [Oceania] Australia, New Zealand [Middle East] Iran, Iraq, Israel, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates [Africa] Egypt, Gabon, Equatorial Guinea, Nigeria, Republic of South Africa
Period	2017-2020（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	● 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.) ⇒ http://comtrade.un.org/db/mr/daExpNotebyRepYear.aspx ● 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 Directorate General of Customs of Taiwan is multiplied by 1.1 and is converted to CIF. ● 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 2020 data, reported data for Gabon, Equatorial Guinea, Iran, Iraq, Oman, and Venezuela have not yet been published and are therefore not reflected. ● Corrections have been made to the total number of records in RIETI-TID (HS Classification) data amounting to an increase from 215,859 in RIETI-TID2019 and before to 215,905 in RIETI-TID2020. This is a result of including "blank" data which were not recorded in the past. No change will occur to the previously released figures due to this.

Updates and corrections for 2019 data

The following is a list of countries that have had changes in their total imports of 2019 data. The figures published at the time of release of RIETI-TID2019 are replaced with the figures after the recent RIETI-TID2020 update.

	2019 (RIETI-TID2019)	2019 (RIETI-TID2020)
Argentina	48,064,996,675	47,963,021,644
Australia	214,959,750,419	214,904,406,106
Austria	172,833,261,070	169,686,906,610
Belgium-Luxembourg	446,847,048,999	338,990,632,875
Bolivia	6,567,582,000	9,721,020,201
Brazil	169,437,660,501	190,318,890,460
Brunei Darussalam	4,320,842,675	4,239,105,837
Bulgaria	35,572,062,993	35,193,078,454
Cambodia	20,158,479,453	20,185,199,637
Canada	441,557,795,149	438,132,690,724
Chile	69,362,049,903	67,669,794,806
China	1,986,035,574,179	1,854,643,329,853
China, Hong Kong SAR	576,149,939,298	577,442,826,956
Colombia	51,680,462,085	50,891,871,947
Croatia	27,357,659,491	27,180,365,386
Cyprus	9,046,623,525	8,966,578,571
Czechoslovakia	267,476,537,048	259,446,965,218
Denmark	94,499,629,412	94,232,092,860
Ecuador	20,193,100,442	20,066,483,657
Egypt	76,895,911,155	76,697,051,993
Equatorial Guinea	933,929,680	1,872,857,042
Estonia	17,223,754,192	16,504,753,127
Finland	65,882,412,924	65,851,355,698
France	634,124,641,892	621,812,104,040
Gabon	2,272,354,444	3,314,047,255
Germany	1,167,052,528,080	1,129,321,766,889
Greece	59,582,257,784	59,379,551,882
Hungary	108,376,727,301	108,123,121,984
India	476,597,241,952	476,697,354,688
Indonesia	170,340,015,401	169,928,257,913
Iran	34,814,285,039	48,400,699,111
Iraq	49,542,055,626	74,166,899,027
Ireland	98,604,230,376	91,766,224,681
Israel	75,653,931,000	67,805,617,900
Italy	467,155,044,339	466,338,209,182
Japan	709,847,191,060	710,091,699,946
Kuwait	33,426,568,888	33,389,544,427

	2019 (RIETI-TID2019)	2019 (RIETI-TID2020)
Latvia	16,585,430,131	16,565,186,892
Lithuania	34,033,283,963	33,723,894,442
Malaysia	199,886,564,880	200,220,861,238
Malta	8,156,709,079	8,156,200,429
Mexico	411,797,454,737	411,088,772,036
Netherlands	501,871,903,390	496,040,487,159
New Zealand	41,686,015,362	41,629,326,823
Nigeria	47,471,044,503	45,895,296,061
Norway	82,001,171,205	84,398,533,506
Oman	29,969,811,392	48,853,788,006
Paraguay	12,187,851,824	12,128,449,286
Peru	42,305,559,534	42,216,715,882
Philippines	118,668,883,382	118,874,107,095
Poland	241,332,333,627	239,655,432,915
Portugal	89,181,472,520	89,353,691,790
Qatar	27,057,364,955	27,056,949,622
Rep. of Korea	505,361,777,542	503,823,739,555
Rest of the World	832,936,060,345	1,063,641,634,863
Romania	95,814,752,464	95,608,211,613
Russian Federation	243,102,740,136	242,403,086,627
Saudi Arabia	135,499,014,353	135,206,966,372
Singapore	342,685,225,392	342,539,771,465
Slovenia	37,569,575,991	37,076,469,604
South Africa	80,283,946,879	78,440,654,851
Spain	358,844,750,621	354,683,665,744
Sweden	151,582,232,067	151,394,303,940
Taiwan	258,657,017,000	280,992,339,000
Thailand	211,078,760,469	210,983,233,442
Turkey	182,270,826,691	182,022,030,632
United Arab Emirates	288,277,188,664	246,575,249,770
United Kingdom	672,049,044,330	671,773,228,066
Uruguay	8,320,103,282	8,213,467,893
USA	2,456,516,091,040	2,448,581,205,046
Venezuela	5,561,332,547	17,658,974,400
Viet Nam	246,185,722,356	246,256,540,756

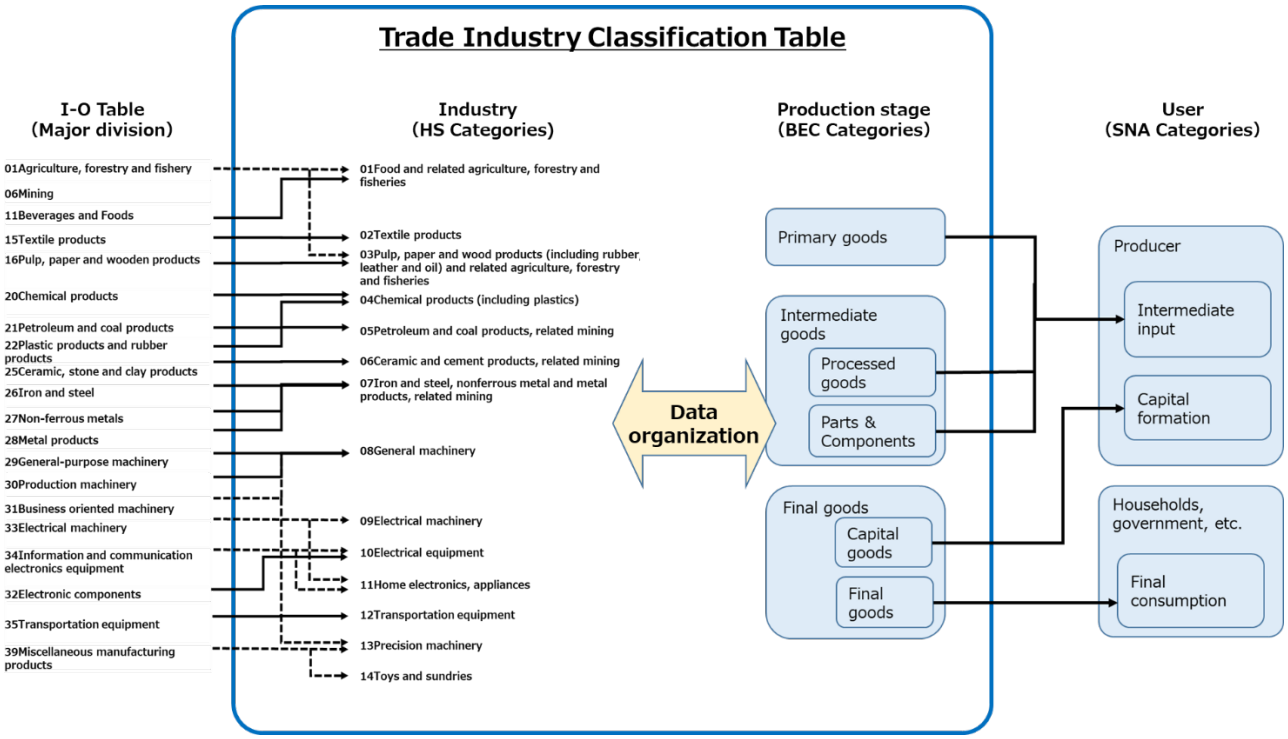

Figure 2: Structure of Trade Industry Classification Table

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 as “Toys and sundries” to show the specific goods in this industry. Although plastics are classified in “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 / Industry		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 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)[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) criteria[2].

Figure 4: Classification Table of Trade Goods by Production Stage[3]

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 motor cars
		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 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).