

Section 2 Trends in Japan's external trade and investments

1. Trends in trade in goods

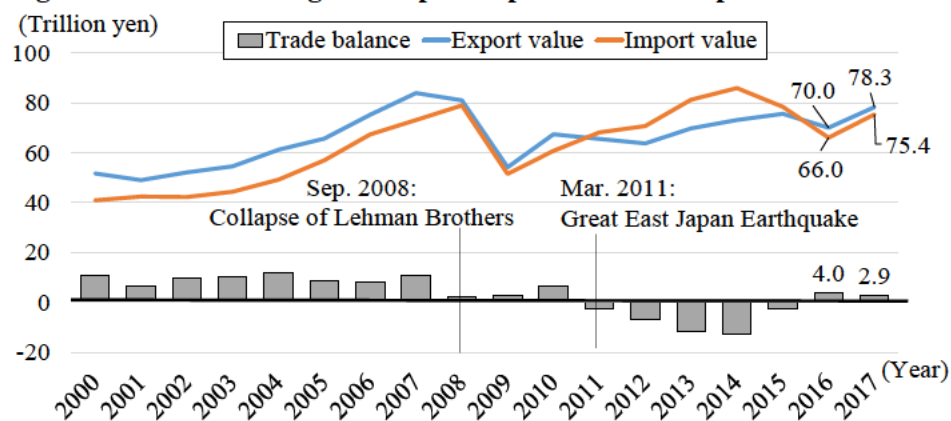
(1) Overview of trade in goods in 2017

In 2017, Japan's trade in goods expanded in terms of the value of both imports and exports. In this paragraph, we will look at trends in Japan's trade in 2017 by partner country and by product item.

The surplus (net exports) in trade in goods was 2,907.2 billion yen in 2017, down 1,086.6 billion yen from the previous year. The main factor behind the reduced surplus was a higher rate of growth in the value of imports than the rate of growth in the value of exports. The value of exports was 78,286.5 billion yen and the value of imports was 75,379.2 billion yen in 2017. The value of both exports and imports recorded double-digit year-on-year growth, 11.8% and 14.1%, respectively (Figures I-1-2-1-1 and I-1-2-1-2). The surplus in trade in goods in 2016, which was the first in six years, resulted from a larger decline in the value of imports than the decline in the value of exports that was caused by resource price falls, among other factors.

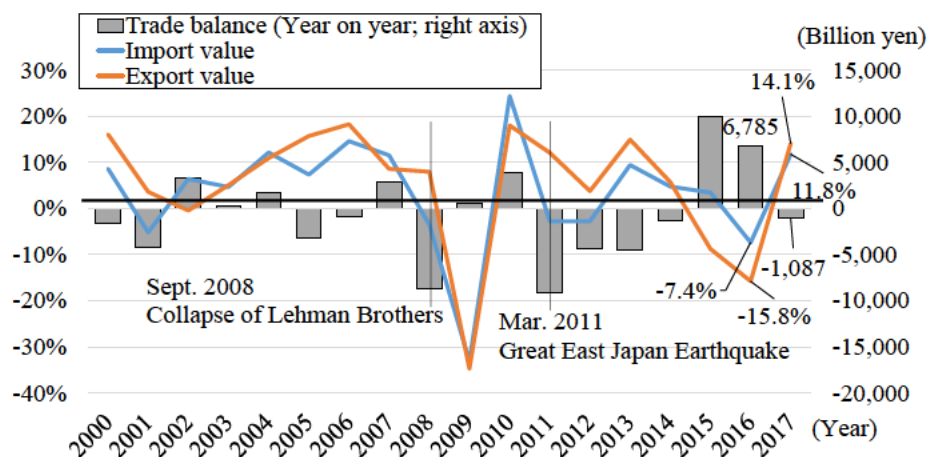
A breakdown of the change in the trade balance by factor shows that the surplus-increasing factors in 2017 were a rise in export prices, which made a positive contribution of 4.4 trillion yen, and an increase in the volume of exports, which made a positive contribution of 3.6 trillion yen. On the other hand, the surplus-decreasing factor was a rise in import prices, which made a negative contribution of 7.0 trillion yen. One of the reasons for the rise in import prices was the first increase in the crude oil price in four years following a steep drop that continued from 2014 onwards (Figure I-1-2-1-3).

Figure I-1-2-1-1 Changes in import/export values in Japan



Source: *Trade Statistics of Japan* (Ministry of Finance (MOF)).

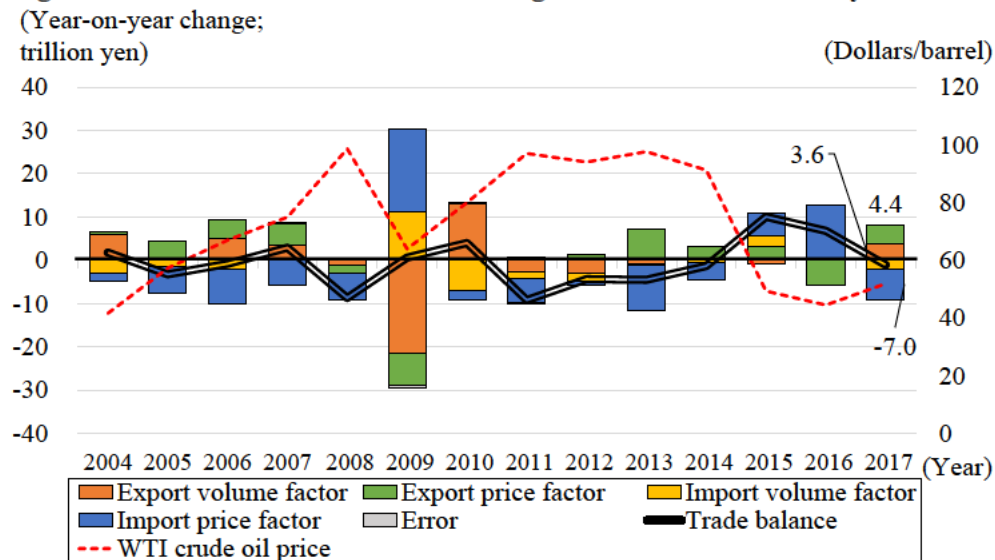
Figure I-1-2-1-2 Changes in import/export values in Japan (year-on-year)



Notes: Export value is the year-on-year growth rates.

Source: *Trade Statistics of Japan* (MOF).

Figure I-1-2-1-3 Breakdown of the changes in the trade balance by factor



Notes: These factors represent the results of multiplying the year-on-year growth of indices by the prices.

Source: *Trade Statistics of Japan* (MOF).

(2) Exports

Next, we will look at factors that increased the value of exports from Japan in 2017 by country/region and by product item while conducting comparison with the previous year. By country/region, exports to Asia, including China, made a positive contribution of 8.30% in 2017. By product item, general machinery made the largest positive contribution of 2.96% on a global basis compared with the previous year. By country/region and by product item, exports of general machinery to Asia made the largest positive contribution to the increase in the value of exports from Japan in 2017, with a conspicuous contribution made by exports to China in particular (Table I-1-2-1-4).

The value of exports from Japan to China hit a record high of 14.9 trillion yen in 2017 (Figure I-1-2-1-5). While exports of general machinery led the increase in overall exports as mentioned above, the

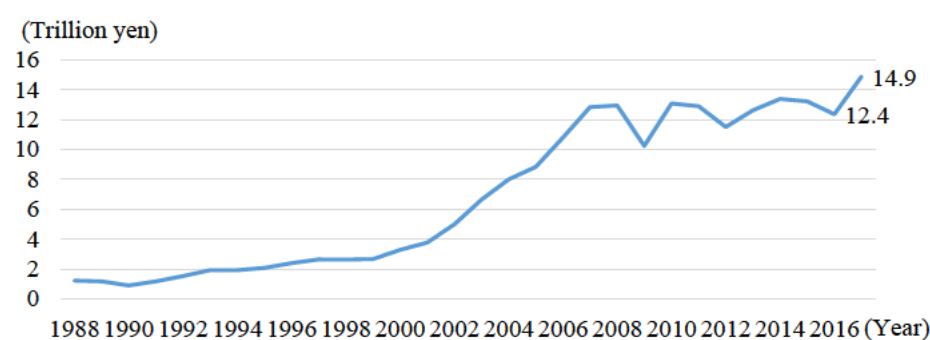
growth in exports of semiconductor manufacturing equipment in particular was conspicuous. The export price of semiconductor manufacturing equipment declined slightly, 1.4%, compared with the previous year, but exports of this item grew 47.9% in terms of value and 50.0% in terms of volume compared with the previous year, marking the fifth consecutive year of increase in both terms (Figure I-1-2-1-6).

Table I-1-2-1-4 Contribution level of export value by major country/region and by product item in Japan (2016 to 2017)

Contributions (export)									
	United States	EU	Asia			Middle East	Russia	Others	Worldwide
				China	ASEAN				
1. Foodstuff	0.01%	0.00%	0.02%	0.00%	0.04%	0.00%	0.00%	0.02%	0.05%
2. Raw materials	0.01%	0.01%	0.24%	0.21%	0.06%	0.00%	0.00%	0.00%	0.26%
3. Mineral fuels	0.03%	0.02%	0.16%	0.02%	0.19%	0.00%	0.00%	0.11%	0.31%
4. Chemical products	0.11%	0.14%	1.23%	1.14%	0.42%	0.00%	0.01%	0.04%	1.53%
5. Products by material	0.11%	0.02%	1.00%	0.59%	0.72%	-0.05%	0.02%	0.10%	1.20%
6. General machinery	0.47%	0.32%	2.04%	2.12%	0.59%	-0.07%	0.05%	0.15%	2.96%
7. Electrical equipment	0.13%	0.14%	1.66%	1.26%	0.80%	0.00%	0.02%	0.02%	1.96%
8. Transportation equipment	0.32%	0.20%	0.57%	0.43%	0.28%	-0.23%	0.08%	0.34%	1.28%
9. Others	0.19%	0.11%	1.39%	1.04%	0.93%	0.01%	0.01%	0.53%	2.24%
Total	1.39%	0.96%	8.30%	6.81%	4.02%	-0.34%	0.17%	1.30%	11.78%

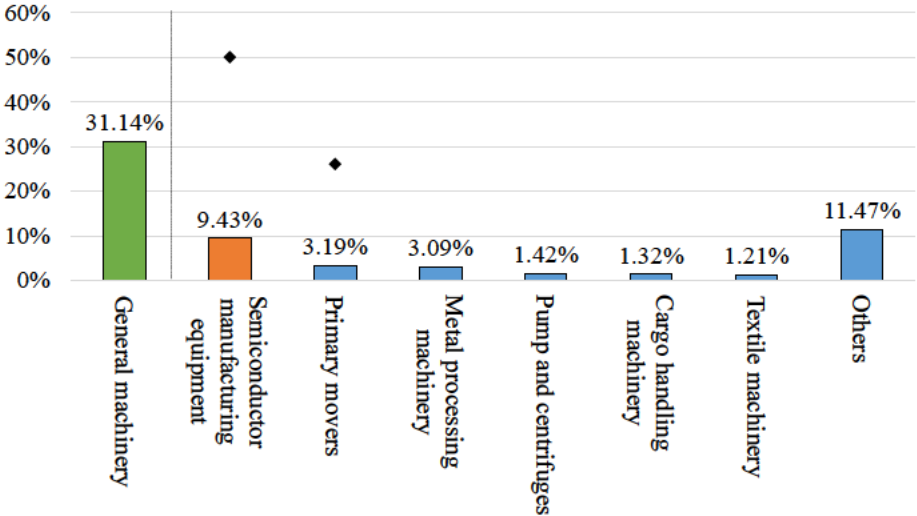
Source: *Trade Statistics of Japan* (MOF).

Figure I-1-2-1-5 Changes in Japanese export to China (value)



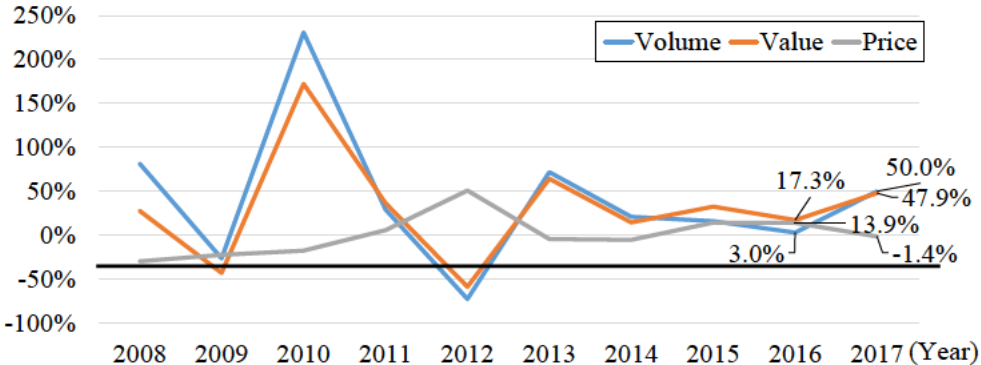
Source: *Trade Statistics of Japan* (MOF).

Figure I-1-2-1-6 Changes in contributions by product item of export values of general machinery and growth rates of exports of semiconductor manufacturing equipment from Japan to China



Notes: The dots represent year-on-year growth rates in the categories. No data on such growth were found for the rest of the categories with no dot.

Source: *Trade Statistics of Japan* (MOF).



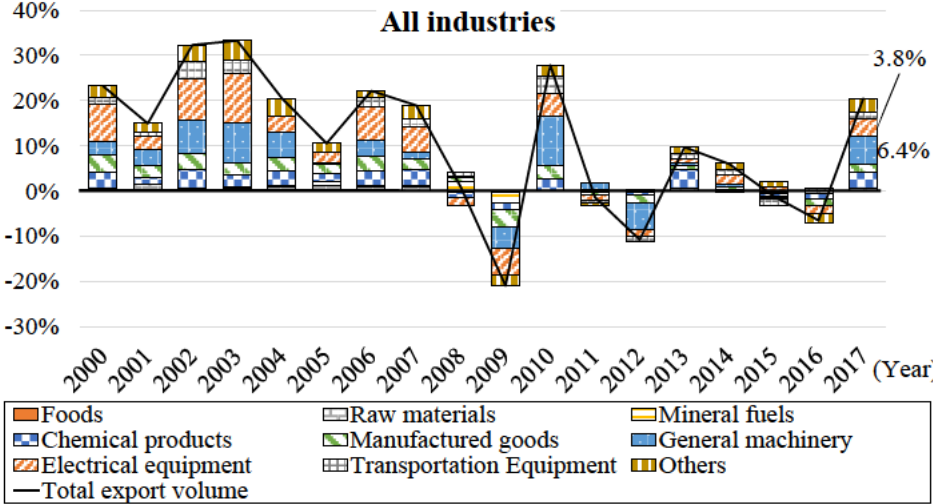
Source: *Trade Statistics of Japan* (MOF).

At the beginning of the 2000s, the growth of exports from Japan to China was led by exports of general machinery and electrical equipment. Although this broad pattern remained unchanged in 2017, there have been changes in the specific items of export in each product category. In the first half of the 2000s, the growth in exports of general machinery to China was supported by exports of multiple items, including primary movers, computers, and metal processing machinery, but since 2007, the contribution by semiconductor manufacturing equipment has increased rapidly, and in 2017, this item made the largest contribution of all items. Concerning exports of electrical equipment to China, in the first half of the 2000s, semiconductors and other electronic parts made significant contributions to the growth of exports, but since around the global economic crisis in 2008, the growth of these items has gradually become moderate (Figure I-1-2-1-7).

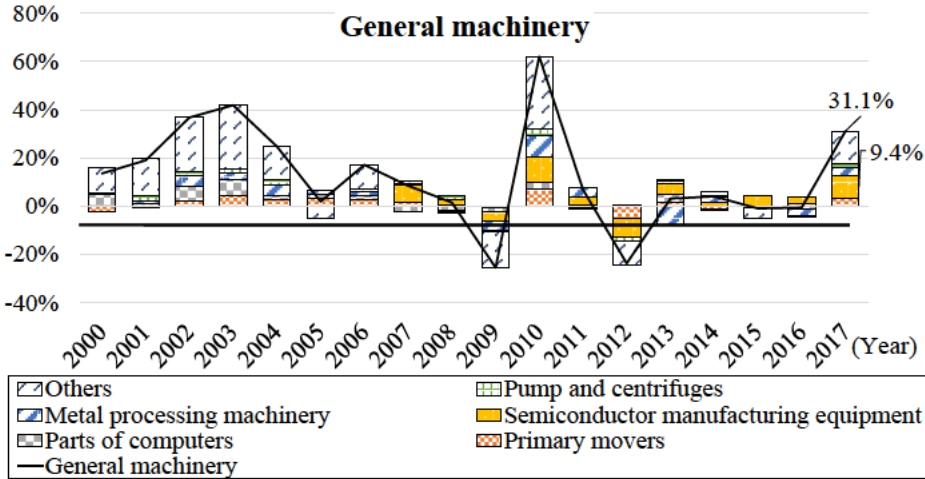
In terms of the value of exports, exports of semiconductors and other electronic parts have remained

almost flat since 2010, while exports of semiconductor manufacturing equipment have expanded rapidly since 2009. Although exports of semiconductor manufacturing equipment temporarily declined in 2012, they have since then continued to grow, approaching exports of semiconductors and other parts in terms of value (Figure I-1-2-1-8). This trend is evidence of the change in the role of Japan in the global value chain of the electrical and electronics equipment industry.

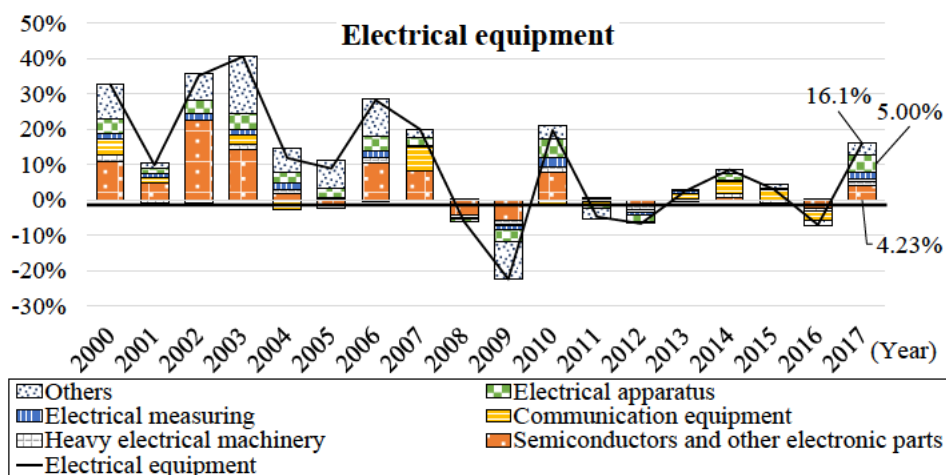
Figure I-1-2-1-7 Changes in contributions by product item of export values of general machinery and electrical equipment from Japan to China (year-on-year)



Source: Trade Statistics of Japan (MOF).

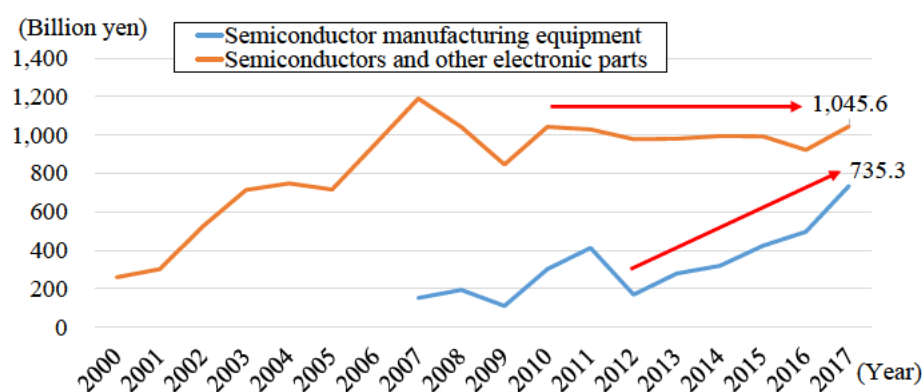


Source: Trade Statistics of Japan (MOF).



Source: Trade Statistics of Japan (MOF).

Figure I-1-2-1-8 Changes in export values of semiconductor manufacturing equipment and semiconductors and other electronic parts from Japan to China



Source: Trade Statistics of Japan (MOF).

(3) Imports

Next, we will look at imports by Japan in 2017. As described above, the value of imports by Japan in 2017 increased steeply, 14.1%, from the previous year mainly because of a rise in import prices, resulting in a decrease in the trade surplus. In this paragraph, we will examine factors that increased the value of imports in 2017 while conducting comparison with the previous year.

By country/region and by product item, imports of mineral fuels from the Middle East made the largest positive contribution of 2.55% to the increase in the value of imports in 2017 compared with the previous year, followed by imports of electrical equipment from Asia, which made a positive contribution of 1.86% (Table I-1-2-1-9).

The value of imports of crude oil and raw oil by Japan increased 29.3% from the previous year, marking the first significant increase in four years. Although the volume declined slightly, 4.0%, the price rose steeply, 34.8%, from the previous year, marking the first rise in three years. The rise in the crude oil price was the main factor behind the increased value of imports that caused the decrease in the trade surplus (Figure I-1-2-1-10).

The crude oil price has recovered considerably: the WTI crude oil price rose 16.6% in 2017 compared with the previous year, marking the first increase in four years. As a result of coordinated production reduction started in January 2017 by major oil-producing countries, including members of the Organization of the Petroleum Exporting Countries (OPEC) and Russia, the supply of crude oil has gradually decreased, and in addition, the crude oil price rose worldwide due to increased geopolitical risks in the Middle East, among other factors (Figure I-1-2-1-11).

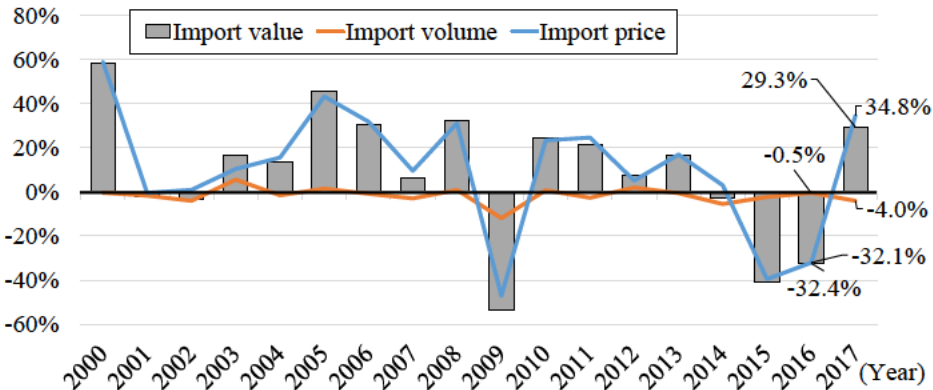
As for the contribution to the growth in the value of Japan's imports by country/region, the Middle East made the largest positive contribution of 2.64% compared with the previous year, but imports from other countries/regions also recovered considerably. Among other countries/regions, Asia made significant contributions, with particularly large contributions made by ASEAN (a positive contribution of 4.51%) and China (a positive contribution of 4.34%) (Table I-1-2-1-9).

Table I-1-2-1-9 Contribution level of import value by major country/region and by product item in Japan (2016 to 2017)

	Contributions								
	United States	EU	Asia		Middle East	Russia	Others	Worldwide	
			China	ASEAN					
1. Foodstuff	0.17%	0.28%	0.27%	0.13%	0.22%	0.00%	0.02%	0.25%	0.99%
2. Raw materials	0.10%	0.04%	0.22%	0.03%	0.33%	0.01%	0.00%	0.71%	1.08%
3. Mineral fuels	0.65%	-0.01%	0.67%	0.08%	0.77%	2.55%	0.33%	1.55%	5.74%
4. Chemical products	0.16%	-0.06%	0.47%	0.46%	0.20%	0.03%	0.00%	0.08%	0.69%
5. Products by material	-0.02%	0.08%	0.63%	0.48%	0.26%	0.05%	0.14%	0.31%	1.18%
6. General machinery	0.28%	0.15%	0.83%	0.94%	0.45%	0.00%	0.00%	0.04%	1.30%
7. Electrical equipment	-0.09%	0.11%	1.86%	1.28%	1.63%	-0.03%	0.00%	0.05%	1.90%
8. Transportation equipment	-0.25%	0.20%	0.09%	0.14%	0.07%	0.00%	0.00%	0.07%	0.12%
9. Others	0.16%	0.13%	0.77%	0.80%	0.59%	0.01%	0.00%	0.08%	1.14%
Total	1.16%	0.92%	5.80%	4.34%	4.51%	2.64%	0.49%	3.14%	14.14%

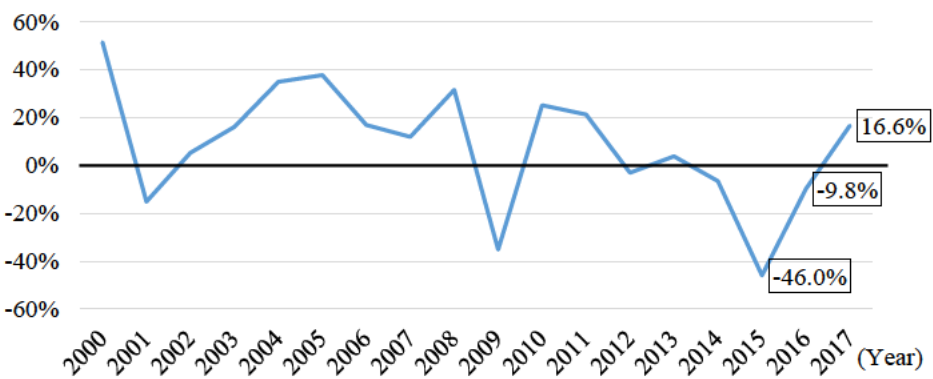
Source: *Trade Statistics of Japan* (MOF).

Figure I-1-2-1-10 Changes in imports of crude oil and raw oil in Japan



Source: Trade Statistics of Japan (MOF).

Figure I-1-2-1-11 Changes in year-on-year growth rates of WTI crude oil prices

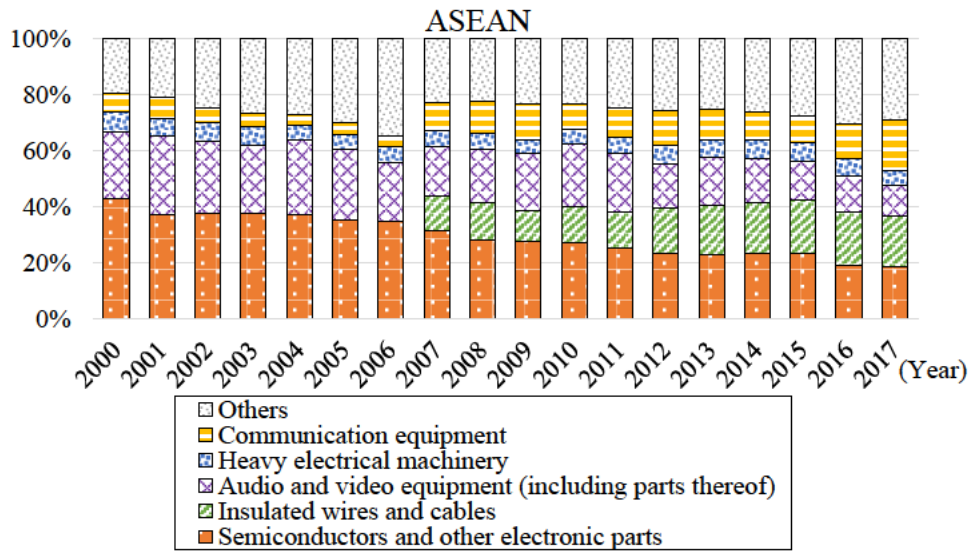


Source: EIKON (Thomson Reuters).

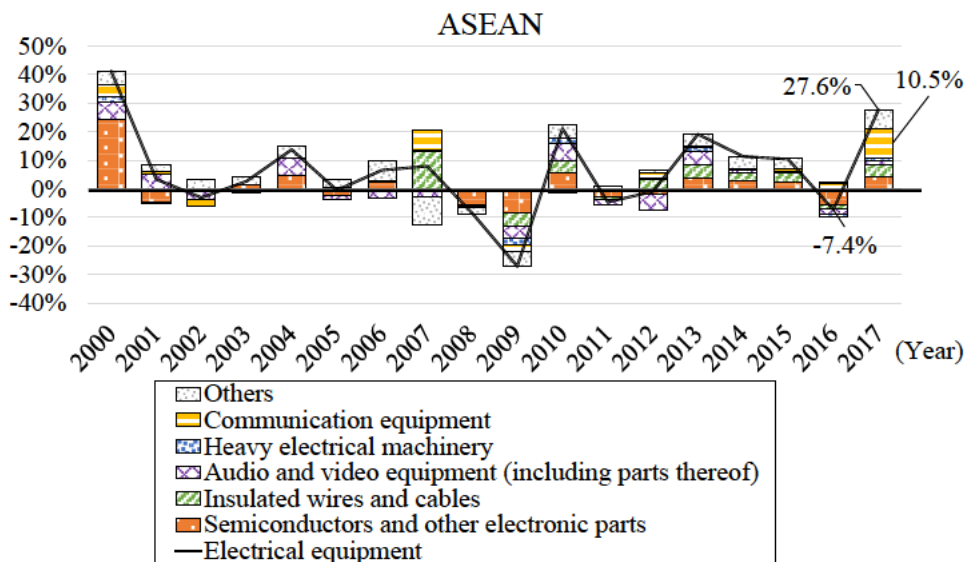
Electrical equipment made the largest contribution to the growth of imports by Japan from both ASEAN and China. A further breakdown of the electrical equipment category shows that communication equipment made the largest contribution to the growth of imports from both ASEAN and China. As for the item-by-item share in the value of imports by Japan from ASEAN, semiconductors and other electronic parts had a share higher than 40% in 2000, but the share has gradually declined year after year. On the other hand, the shares of communication equipment and insulated electric wires/cables have expanded markedly since 2007 (Figure I-1-2-1-12).

Next, looking at the item-by-item share in the value of imports by Japan from China, audio and video equipment and related parts and heavy electrical machinery, including industrial-use machinery, together accounted for more than half of overall imports in 2000. However, since 2007, the shares of audio and video equipment and heavy electrical equipment rapidly shrank as a result of the expansion of the share of communication equipment. In 2017, the value of imports of communication equipment accounted for 42.5% of imports of electrical equipment in general and 12.6% of the total value of imports (Figure I-1-2-1-13).

Figure I-1-2-1-12 Shares of import values of electrical equipment by product item and changes in contributions of year-on-year growth rates from ASEAN to Japan

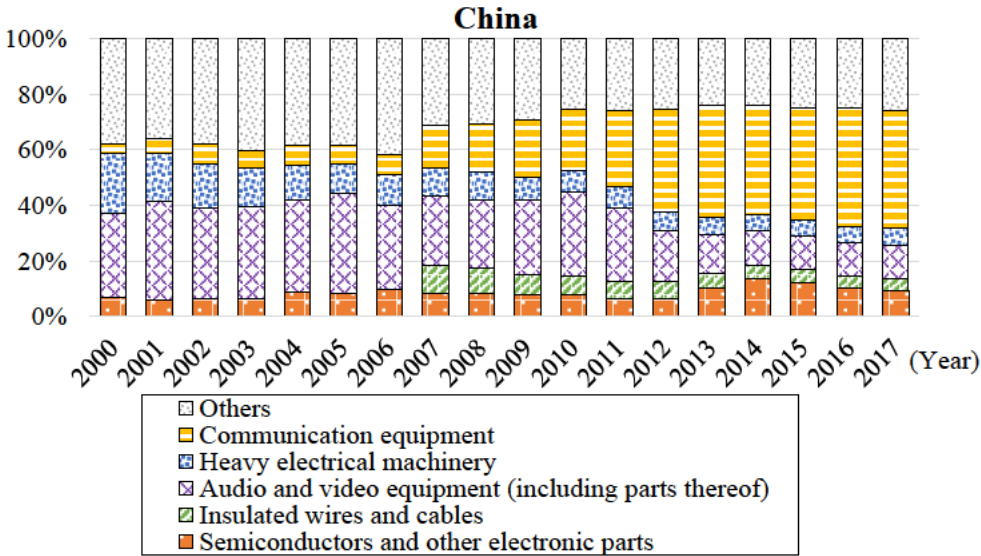


Source: Trade Statistics of Japan (MOF).

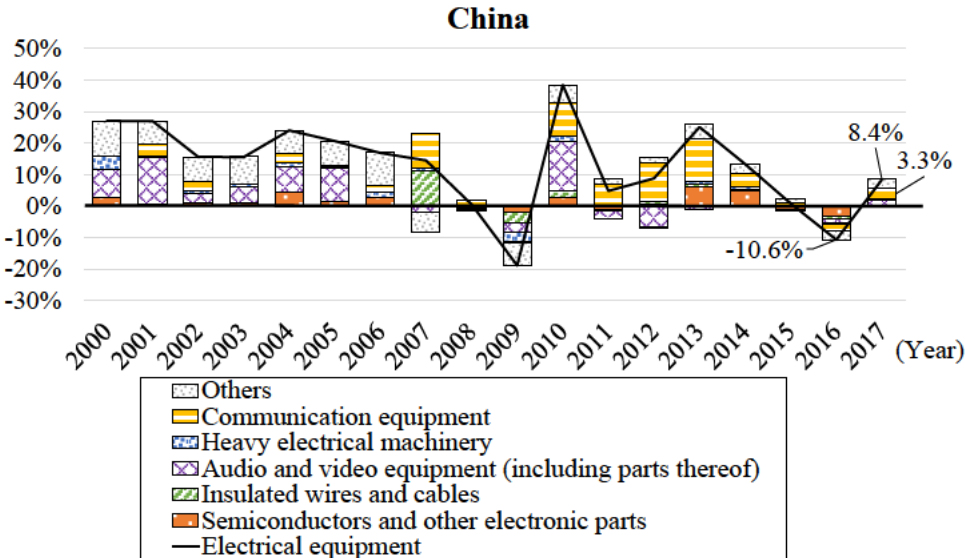


Source: Trade Statistics of Japan (MOF).

Figure I-1-2-1-13 Shares of import values of electrical equipment by product item and changes in contributions of year-on-year growth rates from China to Japan



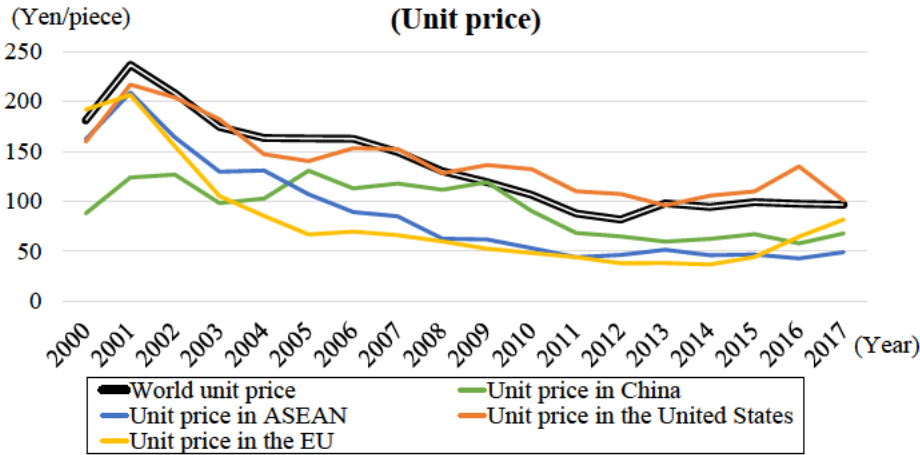
Source: Trade Statistics of Japan (MOF).



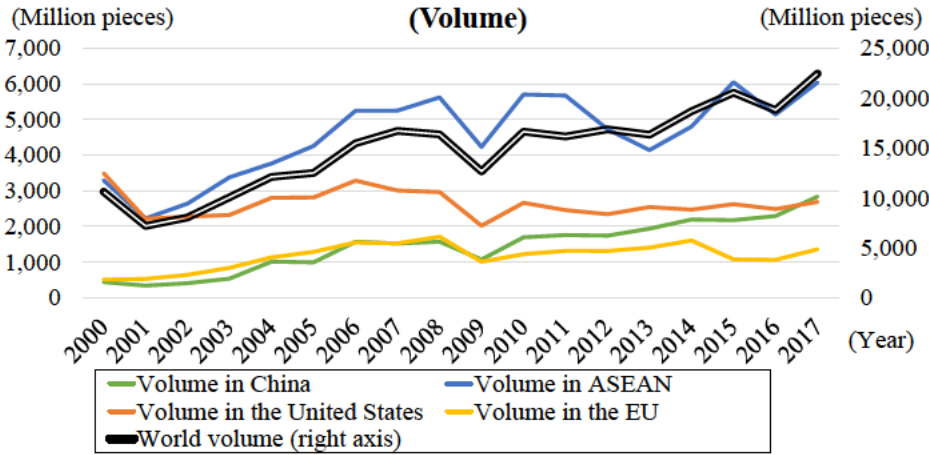
Source: Trade Statistics of Japan (MOF).

Since 2007, imports of electrical equipment--particularly communication equipment--mainly from China, have increased significantly. Despite declining temporarily in 2016, imports of those items are still increasing at a similar pace. In recent years, as the increase in the value of imports of semiconductors and other electronic parts by Japan has subsided, the expansion of the share of imports of communication equipment from ASEAN, which is an Asian trading partner just as China is, in imports by Japan has been conspicuous. One reason for the weak growth in the value of imports of semiconductors and other electronic parts is a fall in import prices. While the volume of imports continues to grow as a trend, import prices are falling markedly across all major countries/regions. Although prices recovered slightly in 2017, they have remained low compared with 2000 (Figure I-1-2-1-14).

Figure I-1-2-1-14 Changes in import prices and volume of semiconductors and other electronic parts (IC) to Japan by economy and region



Source: *Trade Statistics of Japan* (MOF).



Source: *Trade Statistics of Japan* (MOF).

2. Trends in the current account balance

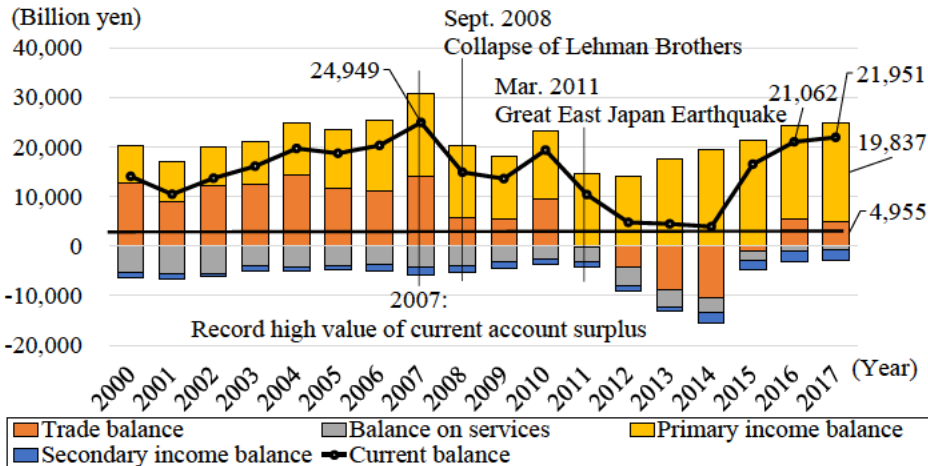
(1) Overview of the current account balance in 2017

In this paragraph, we will provide an overview of the trends in Japan’s current account balance.

In 2017, Japan’s current account balance recorded a surplus of 21,951.4 billion yen, representing an increase of 889.9 billion yen from the previous year’s surplus and the third consecutive annual increase. The surplus in 2017 was the second largest on record, after the surplus of 24,949.0 billion yen in 2007. The main factors behind the increased surplus were the considerable increase of 1,019.1 billion yen from the previous year in the primary income surplus and a decrease of 403.0 billion yen from the previous year in the services account deficit to the lowest level ever (Figures I-1-2-2-1 and I-1-2-2-2).

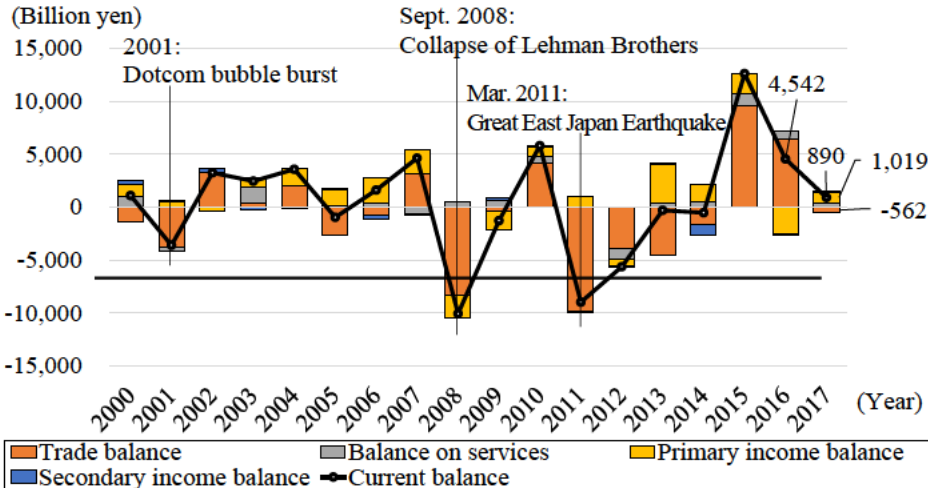
Next, we will look at the characteristics of each current account balance item.

Figure I-1-2-2-1 Changes in account balance in Japan



Source: *Balance of Payments* (MOF).

Figure I-1-2-2-2 Year-on-year changes in account balance in Japan

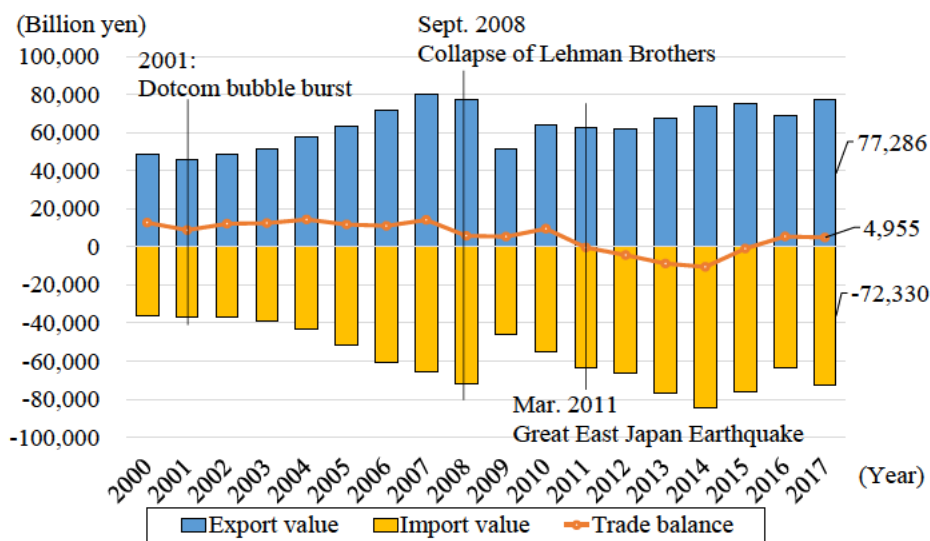


Source: *Balance of Payments* (MOF).

(2) Trade balance

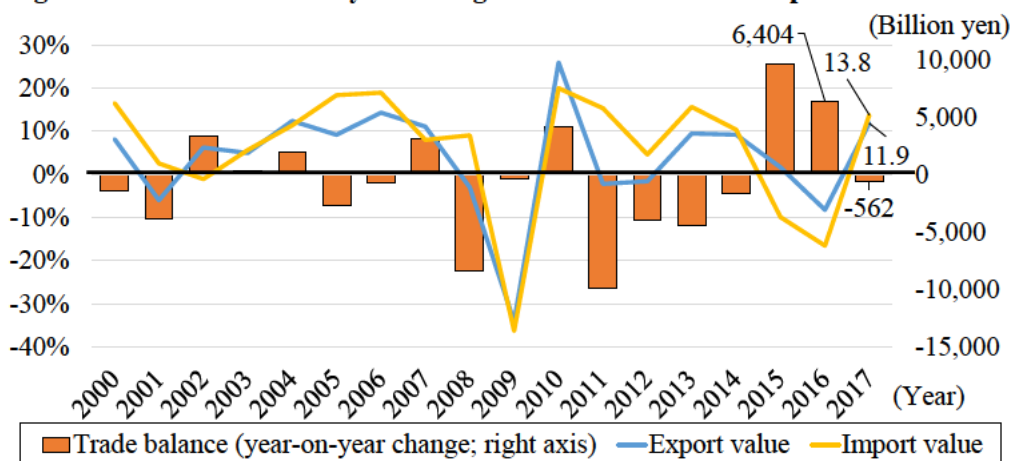
In 2017, the trade balance recorded a surplus of 4,955.4 billion yen, marking the second consecutive annual surplus, but the surplus was down 562.2 billion yen from the previous year. The main factor behind the reduced surplus was a steep recovery in the value of imports due to a rise in import prices, as was mentioned earlier. The value of exports was 77,285.5 billion yen, up 11.9% from the previous year and the value of imports was 72,330.1 billion yen, up 13.8%, although these figures do not exactly match the figures from trade statistics, which are tabulated through a different method. (Figures I-1-2-2-3 and I-1-2-2-4).

Figure I-1-2-2-3 Changes in trade balance in Japan



Source: *Balance of Payments* (MOF).

Figure I-1-2-2-4 Year-on-year changes in trade balance in Japan

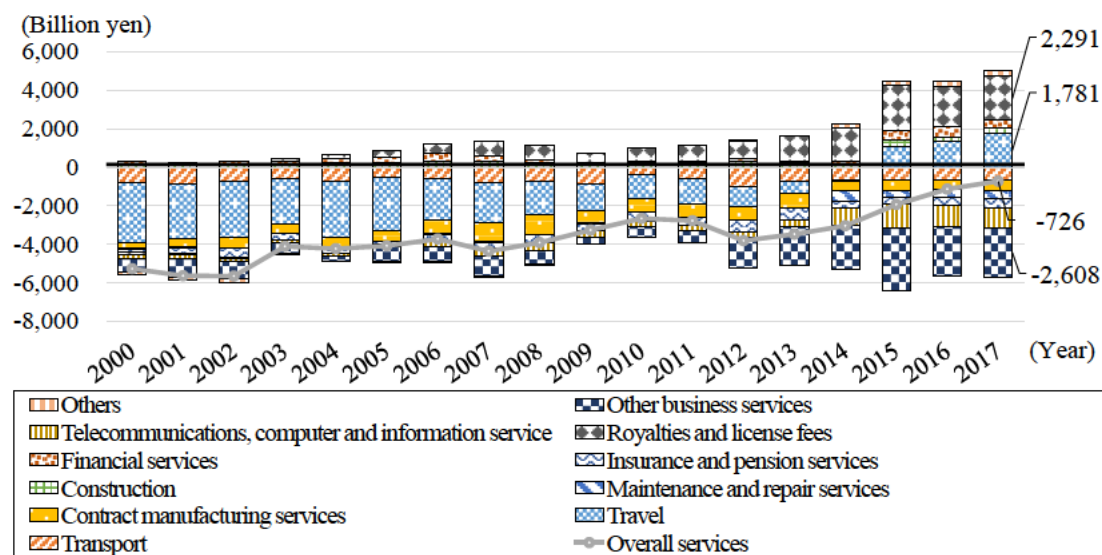


Source: *Balance of Payments* (MOF).

(3) Services account balance

Next, we will look at the services account balance in detail. In 2017, Japan’s services account balance recorded a deficit of 725.7 billion yen, which was the smallest-ever deficit and which represented an improvement of 403.1 billion yen from the previous year’s deficit and the fifth consecutive annual reduction of the deficit. The main factor behind the reduced deficit was the expansion of the surpluses in the balance related to travel and the balance related to royalties, license fees, etc. for intellectual property rights (Figures I-1-2-2-5 and I-1-2-2-6).

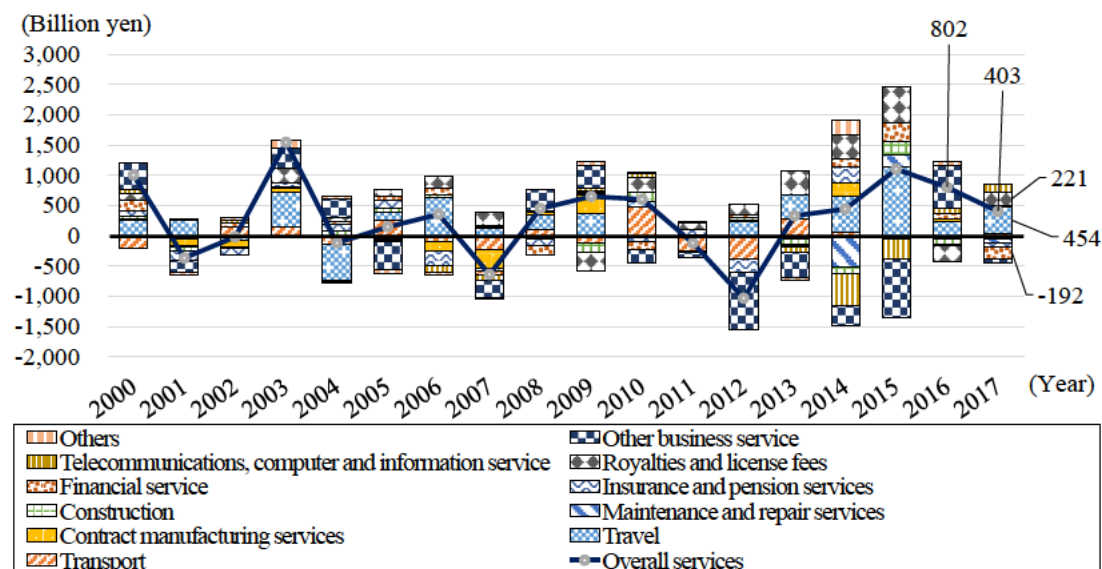
Figure I-1-2-2-5 Changes in service balance in Japan



Notes: The term “Other business services” refers to “research and development services,” “expert or business management consulting services,” and “technology- or trade-related and other services.”

Source: *Balance of Payments* (MOF).

Figure I-1-2-2-6 Year-on-year changes in service balance in Japan



Notes: The term “Other business services” refers to “research and development services,” “expert or business management consulting services,” and “technology- or trade-related and other services.”

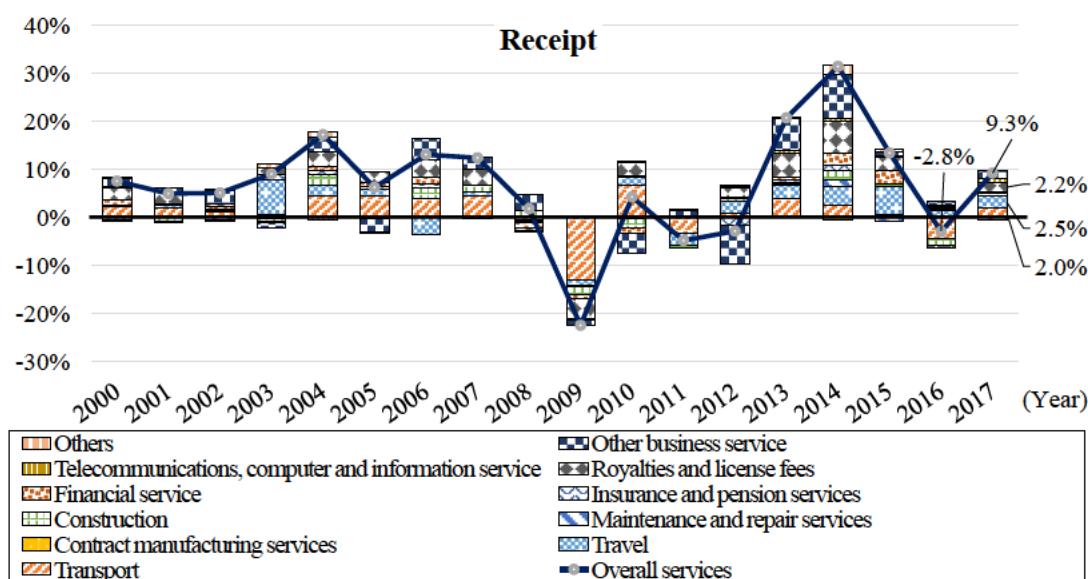
Source: *Balance of Payments* (MOF).

In 2017, the balance related to travel recorded a surplus of 1,780.9 billion yen, representing an increase of 454.2 billion yen from the previous year’s surplus and the third consecutive annual improvement in the balance since 2015, when the balance swung from deficit to surplus. Receipts in the balance related to travel made a positive contribution of 2.5% in 2017, marking the sixth consecutive annual increase. This indicates that the surplus increased mainly because of growth in

payments by foreign tourists visiting Japan. Meanwhile, the balance related to royalties, license fees, etc. for intellectual property rights in 2017 recorded a surplus of 2,290.5 billion yen, which was the largest-ever surplus and which represented an increase of 220.6 billion yen from the previous year's surplus and the first increase in two years. Royalties, license fees, etc. for intellectual property rights have made the largest contribution to the surplus in the services account balance since 2005. The main factor behind the increased surplus was an increase in the positive contribution from receipts to 2.2%, suggesting that the overseas use of intellectual property rights owned by Japan is increasing (Figure I-1-2-2-7).

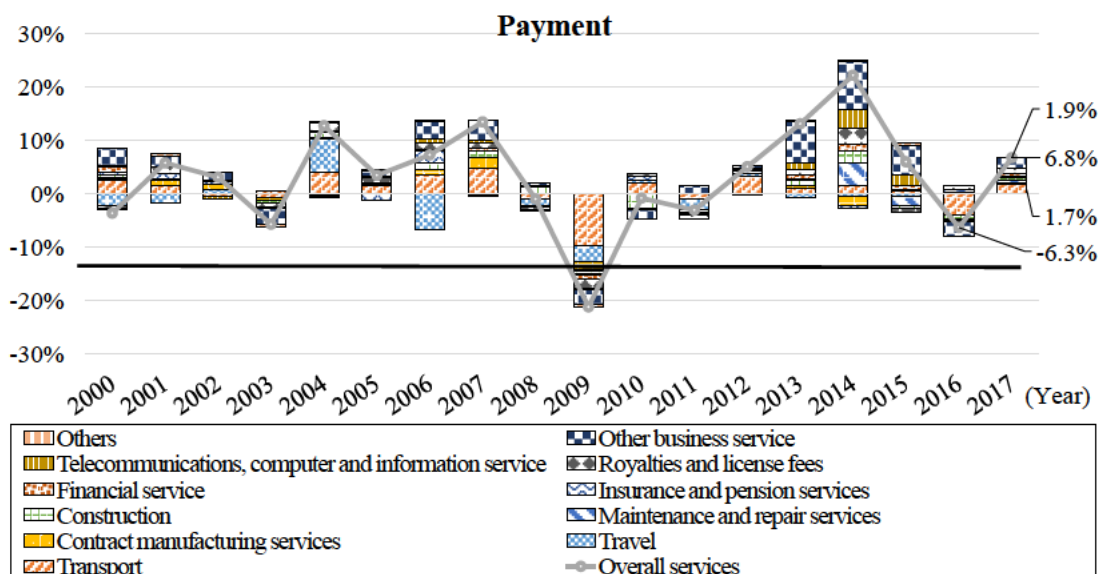
At the beginning of the 2000s, the balance related to travel was making the largest contribution to the deficit in the services account balance. However, the deficit declined against the backdrop of an increase in foreign tourists visiting Japan and the balance shifted to surplus in 2015. For three consecutive years until 2017, the balance related to travel recorded a surplus. On the other hand, the value of per-capita travel service receipts declined for two consecutive years after peaking at 153,000 yen in 2015. The decline in the receipts could affect future trends in the balance related to travel (Figure I-1-2-2-8).

Figure I-1-2-2-7 Changes in contributions of growth rates regarding services account balance by receipt and payment in Japan



Notes: The term “Other business services” refers to “research and development services,” “expert or business management consulting services,” and “technology- or trade-related and other services.”

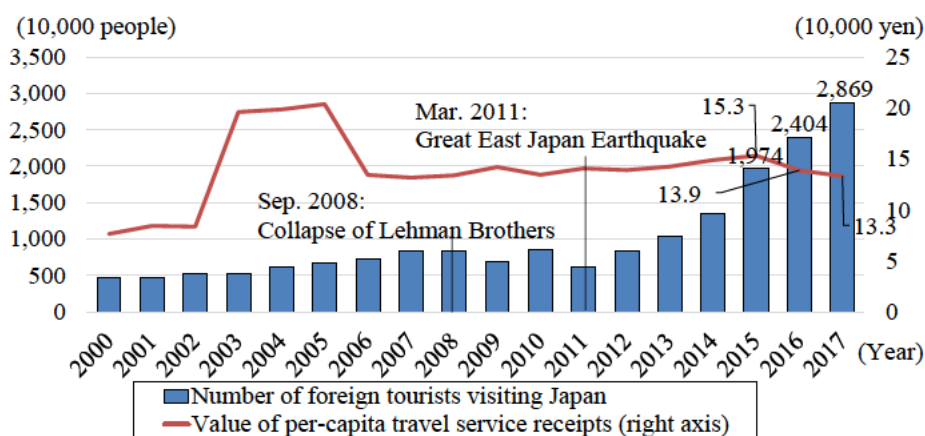
Source: *Balance of Payments* (MOF).



Notes: The term “Other business services” refers to “research and development services,” “expert or business management consulting services,” and “technology- or trade-related and other services.”

Source: *Balance of Payments* (MOF).

Figure I-1-2-8 Changes in the number of foreign tourists visiting Japan and those in value of per-capita travel service receipts



Notes: (1) The methods for reporting balance relating to travel were changed in 2003, and the amount of yen that has been taken into and out from Japan is required to be included in such reporting in terms of both receipt and payment of balance related to travel. Accordingly, the data on the balance in the figure shows a dramatic increase in the balance in 2003. In addition, the methods for reporting balance related to travel were changed in 2006 again, and the value involving trade other than “travel services” is excluded from such reporting.

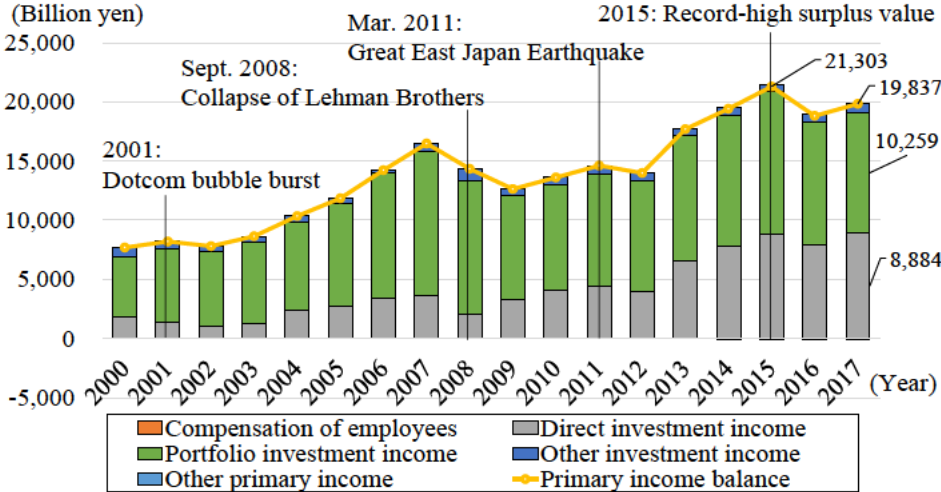
Source: *Balance of Payments* (MOF), *HOUNICHI GAIKYAKU TOUKEI* (Japan Tourism Agency).

(4) Primary income balance

Next, we will look at Japan’s primary income balance in detail. In 2017, the primary income balance recorded a surplus of 19,837.4 billion yen, representing an increase of 1,019.1 billion yen from the

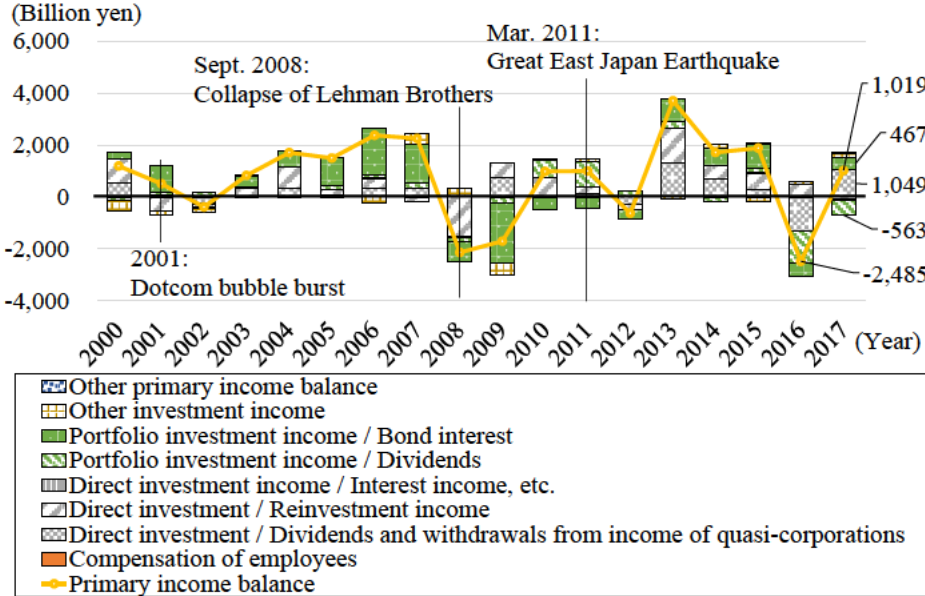
previous year’s surplus and the first increase in two years. The main factor behind the increased surplus is an increase in the surplus from direct investment income. “Dividends and withdrawals from income of quasi-corporations,”¹⁶ which is a direct investment income item, and “bond interest,” which is a bond investment income item, increased markedly (Figures I-1-2-2-9 and I-1-2-2-10).

Figure I-1-2-2-9 Changes in the primary income balance in Japan



Source: *Balance of Payments* (MOF).

Figure I-1-2-2-10 Year-on-year changes in the primary income balance in Japan



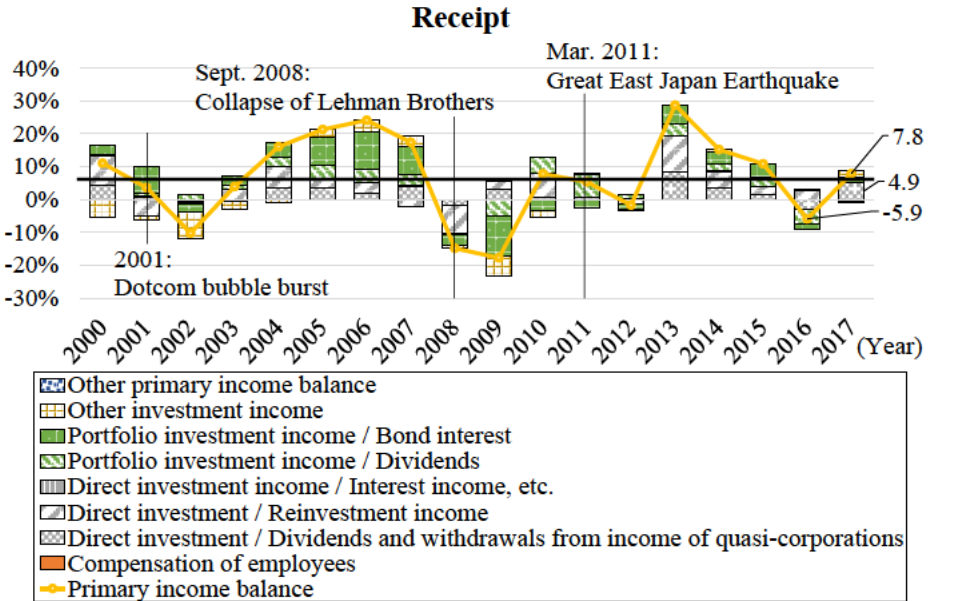
Source: *Balance of Payments* (MOF).

The balance related to dividends and withdrawals from income of quasi-corporations recorded a surplus of 4,279.2 billion yen, representing an increase of 1,049.1 billion yen from the previous year’s

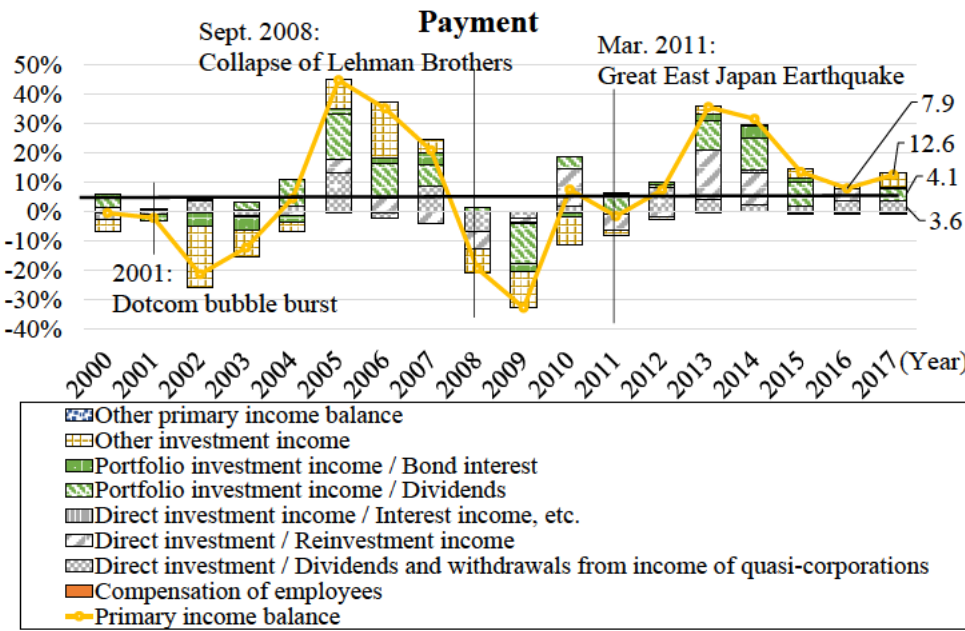
16 This item covers the dividends paid out of earnings that are distributed to the direct investor from the direct investment enterprise as well as branch profits remitted to the head office (Cited from the website of the Bank of Japan (<https://www.boj.or.jp/en/statistics/outline/exp/data/exbpsm6.pdf>)).

surplus and the first increase in two years. Despite the increase in the surplus, the value of dividends paid by Japanese companies to foreign investors also rose, as the positive contributions from receipts and payments increased to 4.9% and 3.6%, respectively. The balance related to bond interest recorded a surplus of 9,067.2 billion yen, representing an increase of 466.6 billion yen from the previous year's surplus and, as in the case of the balance related to dividends and withdrawals from income of quasi-corporations, the first increase in two years. Despite the increase in the surplus, receipts and payments made positive contributions of 1.8% and 0.4%, respectively (Figure I-1-2-2-11).

Figure I-1-2-2-11 Changes in contributions of growth rates regarding the primary income balance by receipt and payment in Japan



Source: *Balance of Payments* (MOF).

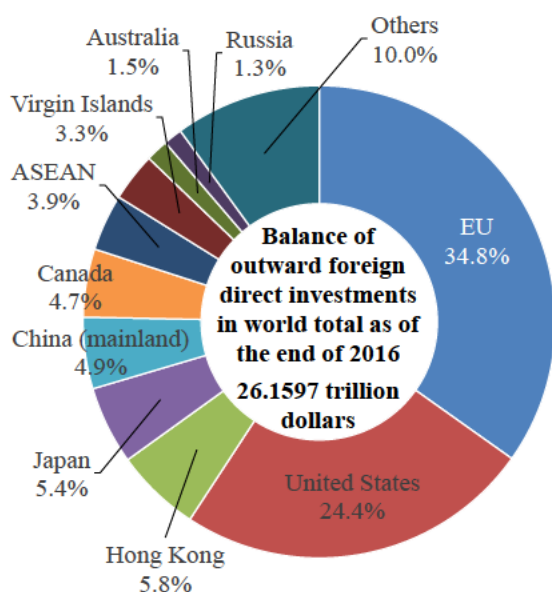


Source: *Balance of Payments* (MOF).

3. Trends in foreign direct investments

Next, we will look at the trends in outward foreign direct investments by Japan. At the end of 2016, the balance of outward foreign direct investments by Japan had a share of 5.4% in the total global balance of outward foreign direct investments, making Japan one of the largest investors in the world, despite being ranked behind the EU and the United States. In terms of the balance of outward foreign direct investments by country/region, Japan was ranked fourth, after the United States, the United Kingdom and Hong Kong (Figure I-1-2-3-1).

Figure I-1-2-3-1 Shares of balance of direct investments by economy and region worldwide (as of the end of 2016)

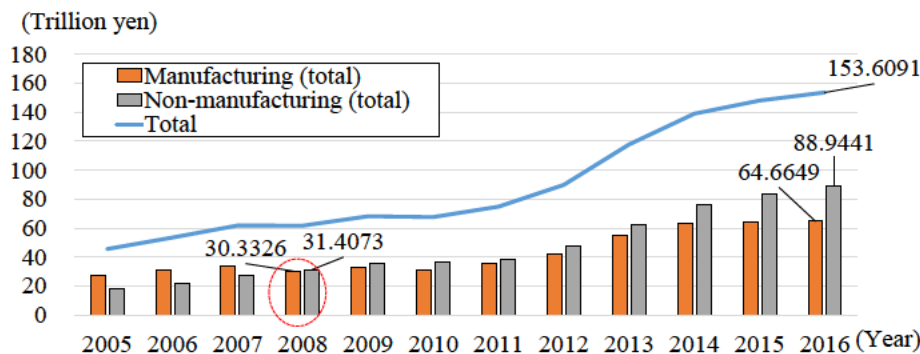


Notes: These figures are somewhat different from those in Japan due to foreign exchange rates and other factors.

Source: FDI/MNE Database (UNCTAD).

The balance of outward foreign direct investments by Japan at the end of 2016 was 153,609.1 billion yen, marking an increase of 3.7% from the previous year for the sixth straight annual growth. The balance of investments by the manufacturing industry was 64,664.9 billion yen, while the balance of investments by the non-manufacturing industry was 88,944.1 billion yen. Until 2007, the value of investments by the manufacturing industry was higher than the value of investments by the non-manufacturing industry, but in 2008, the balance of investments by the non-manufacturing industry exceeded the balance of investments by the manufacturing industry and the difference in favor of the non-manufacturing industry has widened significantly since then (Figure I-1-2-3-2).

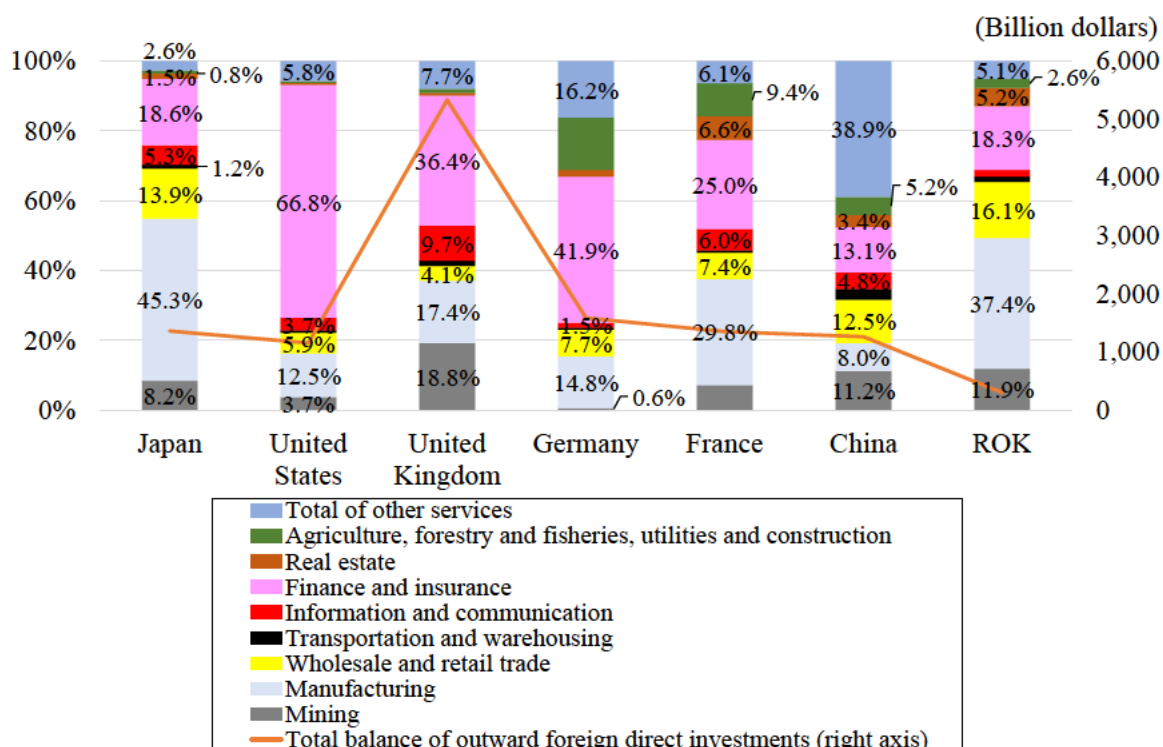
**Figure I-1-2-3-2 Changes in balance of outward foreign direct investments in Japan
(as of the end of 2016)**



Source: *Balance of Payments* (MOF).

A comparison of outward foreign direct investments by major countries, including Japan, by industry shows Japan is one of the countries in which the manufacturing industry's share is large, together with the ROK and France, and the manufacturing industry's share in Japan, 46.5%, was the largest of the three countries. In the United States, the financial and insurance industry has a share of around 70%, followed by the manufacturing industry with a share of 12.5%. In the United Kingdom and Germany as well, the financial and insurance industry has the largest share, while the manufacturing industry's share is not large, at between 10% and 20%. The manufacturing industry's share in China, at 8.0%, is the smallest of all countries compared here (Figure I-1-2-3-3).

Figure I-1-2-3-3 Balance of outward foreign direct investments and shares thereof by industry in major economies



Next, we will look at outward foreign direct investments by Japan by investment recipient country/region. At the end of 2017, the top four investment recipients--the United States, the United Kingdom, China and the Netherlands--accounted for more than 10 trillion yen of the total balance of outward foreign direct investments by Japan. On a flow basis, the United States was also the largest recipient of outward foreign direct investments by Japan in 2017 with 5,578.6 billion yen invested, followed by the United Kingdom, the Netherlands, and China (Table I-1-2-3-4).

Table I-1-2-3-4 Top ten economies in terms of flows and balance of outward foreign direct investments by economy and region in Japan

		As of the end of 2017 (100 million yen; flow; net)			As of the end of 2017 (100 million yen; balance)
1	United States	55,786	1	United States	542,595
2	United Kingdom	28,943	2	United Kingdom	170,197
3	Netherlands	16,434	3	China	132,059
4	China	10,446	4	Netherlands	128,019
5	Bermuda	8,531	5	Australia	77,542
6	Singapore	7,893	6	Thailand	69,429
7	Luxembourg	6,331	7	Singapore	66,576
8	Thailand	5,885	8	Cayman Islands	41,640
9	Cayman Islands	5,877	9	ROK	41,312
10	Indonesia	3,817	10	Indonesia	34,309

Source: Balance of Payments (MOF).

Source: *Japan's External Financial Assets and Liabilities* (MOF).

Column 1 Japan's trade and major export industries in the Meiji period

As this year marks the 150th anniversary of the Meiji Restoration, this white paper will look back at Japan's trade in the Meiji period.

In the early years of the Meiji period, Japan's trade and economic structure changed dramatically, as the country opened itself to the outside world by concluding the Japan-U.S. Treaty of Amity and Commerce in 1858, shifting away from the policy of national isolation that had been maintained for a long time during the Edo period.

A comparison of the pace of the expansion of Japan's trade at that time with global trade shows that the value of Japanese exports and the value of Japanese imports in 1902-1911, expressed as index figures relative to the base of 100 in 1882-1891, were 418 and 488, respectively, against the index of 186 for the value of global imports and exports. This means that Japanese imports and exports expanded at a pace more than twice as fast as the growth in global trade. Compared with other countries, Japan recorded a much larger trade expansion between 1885 and 1910: Japan's trade expanded 13.9-fold, against a 1.9-fold growth for United Kingdom and France, a 2.2-fold growth for Italy, and a 2.6 to 2.8-fold growth for Russia, the United States and Germany.¹⁷

Japan's trade statistics in the late years of the Tokugawa Shogunate and the early years of the Meiji period have various statistical consistency problems, such as a change in the standard for tabulation of statistics after the establishment of the new Meiji government in 1868, the combined tabulation of gold- and silver-backed currencies, and the impact of the fall of the silver price. As a result, there are no systematic Japanese trade statistics that cover trade in the period from the late years of the Tokugawa Shogunate to the early years of the Meiji period. Therefore, we will provide an overview of Japan's trade in the Meiji period based on trade data cited from *BOUEKI TO KOKUSAI SHUUSHI*,¹⁸ which covers the period from 1874 onwards, despite its lack of data for the period from the late years of the Tokugawa Shogunate to the early years of the Meiji period.

1. Changes in the value of trade and the trade balance

Looking at the trade statistics for the period from 1874 to 1911, the value of exports grew by a factor of around 27, from 19.70 million yen to 534.60 million yen, over the 37 years. The value of imports increased by a factor of around 17.3, from 34.50 million yen to 597.30 million yen (Column Figure 1-1). In particular, the growth in the value of trade from 1890 onwards is conspicuous.

Although the trade balance basically remained in deficit, it recorded a surplus in four years during the period. The annual deficit ranged from 800,000 yen (1882) to 186.80 million yen (1898) and averaged 28 million yen.

2. Main items of import and export

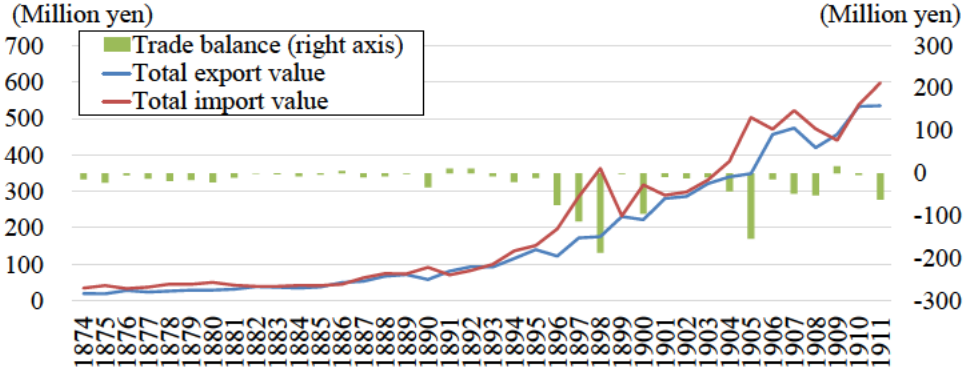
What were the main items of import and export at that time? Column Figure 1-2 shows changes in

17 Ishii (2000), pp. 1-2.

18 Yamazawa and Yamamoto (1980).

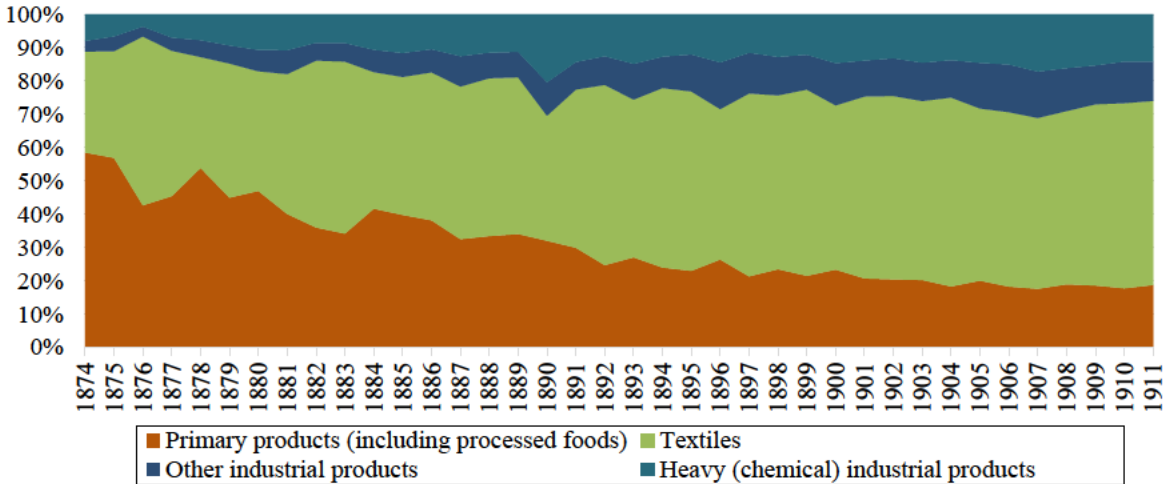
the shares of product items as classified into four categories--primary products (processed foods and agricultural, fishing, forestry and mineral products), textile products, heavy and chemical industry products (machinery, metals, and chemical products) and other industrial products (ceramic products, wooden products and miscellaneous products)--in the value of exports between 1874 and 1911.

Column Figure 1-1 Changes in trade values in the Meiji period



Source: Yamazawa and Yamamoto (1980), Tables 1 and 2.

Column Figure 1-2 Changes in shares of export values by product item



Source: Yamazawa and Yamamoto (1980), Table 1.

In the early years of the Meiji period, primary products had the largest share, around 60%, but the share gradually declined later, falling to around 20% in the latter half of the period from 1874 to 1911. In exchange, textile products' share rose from around 30% to around 60%.

Looking at the export data based on more detailed product classification, raw silk, tea, coal and copper together accounted for 60-70% of the total value of exports, and it is said that these products were strategic items used to earn foreign currencies.¹⁹ The main export market for raw silk was France until the middle of the 1880s and the United States thereafter. Tea was exported mainly to the United States, while coal was exported as fuel for ships mainly to China, Hong Kong and Singapore. Copper

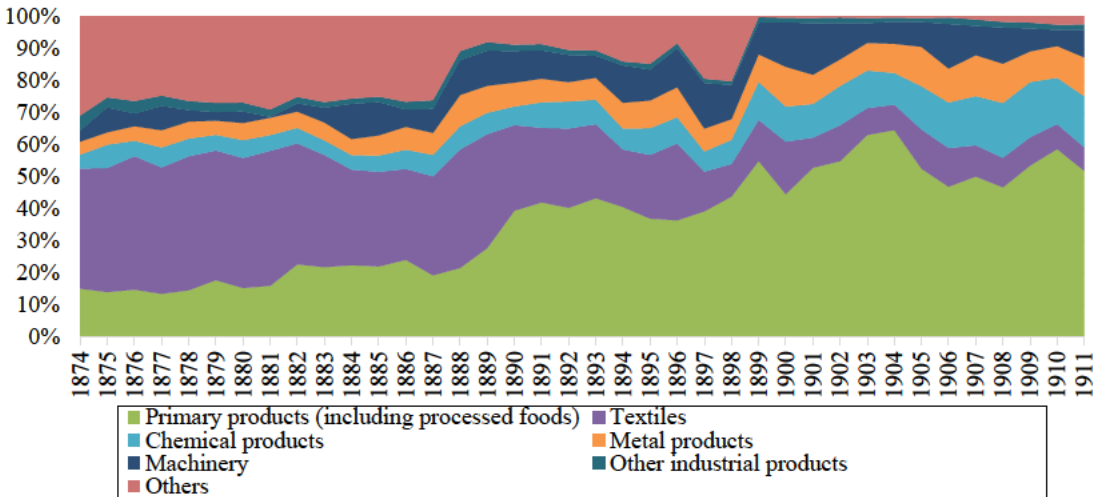
¹⁹ Sugiyama (2012), p. 156.

was exported to China, Hong Kong and Europe.

In Column Figure 1-3, items of imports are classified into six categories--primary products (processed foods and agricultural, fishing, forestry and mineral products), textile products, chemical products, metal products, machinery and other industrial products (ceramic products, wooden products and miscellaneous products). In the early years of the Meiji period, textile products had the largest share in the value of imports, but from 1897 onwards, the share declined to around 10%. Meanwhile, the primary products' share in the value of imports expanded from around 15% in the early years of the Meiji period to around 50% in 1897 and later. Although imports of machinery from Western Europe were essential for industrial development in the Meiji period, machinery's share in the value of imports remained modest at around 10% throughout that period.

Looking at the import data based on more detailed product classification, the main items of import were textile products, including cotton yarn and cotton and woolen fabric, and sugar, which together accounted for 40-60% of the total value of imports. In the 1870s, the share was 35% for cotton yarn and cotton fabric, 20% for woolen fabric, and 10% for sugar. Subsequently, imports of cotton products declined in line with the progress in import substitution due to the development of the cotton spinning industry after the middle of the 1880s. In exchange, imports of raw cotton from India increased. Although industrial products' share in the value of imports gradually declined, Japan remained heavily dependent on imports for the supply of machinery and metal products that it was unable to source domestically, and imports of oil also became important.²⁰

Column Figure 1-3 Changes in shares of import values by product item



Source: Yamazawa and Yamamoto (1980), Table 2.

3. Main export destinations and import sources

Column Figure 1-4 shows changes in the value of exports by region. The United States, which was the main export destination for raw silk and tea, accounted for 30-40% of the total value of exports in the 1880s and later. In the early years of the Meiji period, exports to Europe accounted for the largest

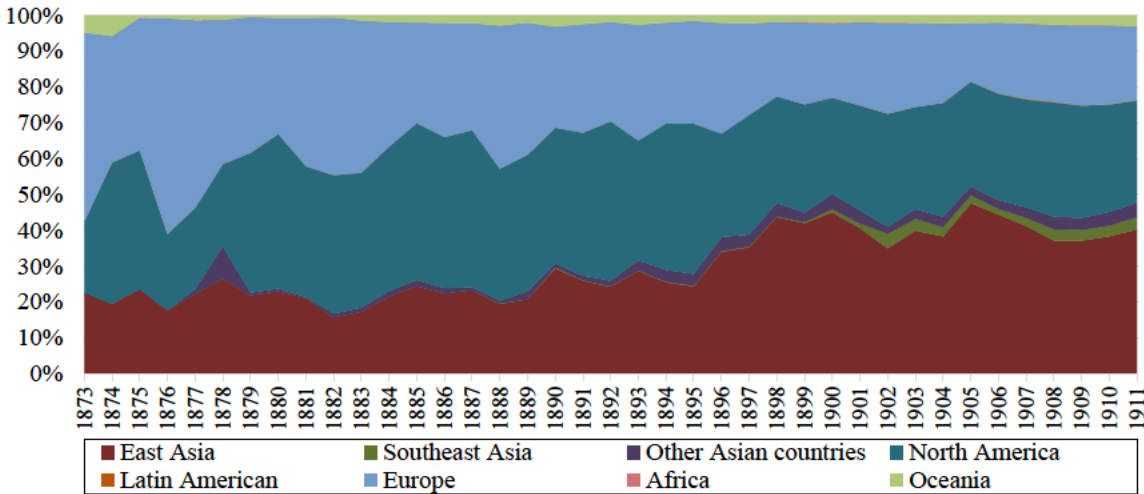
20 Sugiyama (2012), p. 156.

share, around half of the total value of export, making this region the largest export market for Japan. However, as the United States gradually replaced France as the main export market for raw silk, Europe's share as an export market declined to around 20%. East Asia's share grew steadily, from around 20% to around 40%.

Column Figure 1-5 shows changes in the value of imports by region. As the United Kingdom was the main import source of cotton yarn and fabric, woolen fabric, iron products, metals and metal products, and machinery, imports from Europe had the largest share. Although Europe's share temporarily rose close to 80%, Europe's importance as an import source declined in line with progress in the subsequent industrialization of Japan. At first, the United States' share was less than 10%, but it gradually increased to around 10%. As for Asia, at first, imports came only from East Asia, including China, but imports from Southeast Asia and other parts of Asia increased, with the whole of Asia's share rising to around 50%.

In the late years of the Tokugawa Shogunate, Japan's trade structure was based on exports of primary products, such as raw silk and tea, to the U.S. and European markets and imports of light industry products, such as cotton and woolen fabric, and machinery and other industrial products from Europe. However, from the middle of the 1890s onwards, Japan rapidly shifted from exports of primary products to exports of light industry products, such as cotton yarn and fabric, with industrial products' share in exports rising from 12% in the 1880s to 38% in 1899. In the 1890s and later, the item-by-item share in trade with the United States and Europe did not change much, which means that Japan's trade structure based on raw silk and cotton products as the two main items of export had already been established by the end of the 1890s. At the same time, Japan had already established a trade balance structure under which net imports in trade with Asia and Europe were offset by net exports in trade with the United States. As a result, the U.S. and Asian markets became more important for Japan's trade than before (Column Table 1-6).²¹

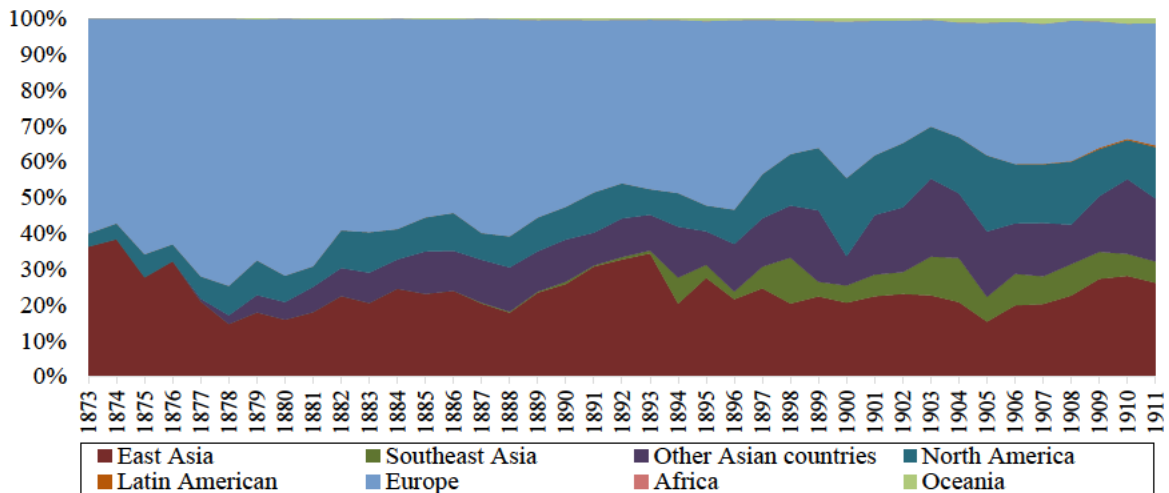
Column Figure 1-4 Changes in shares of export values by region



Source: Yamazawa and Yamamoto (1980), Table 13.

21 Sugiyama (2012), p. 159-160.

Column Figure 1-5 Changes in shares of import values by region



Source: Yamazawa and Yamamoto (1980), Table 14.

Column Table 1-6 Trade balance by region between 1876 and 1910 (five-years total)

Year	Asia			North America	Europe		Latin America	Africa	Oceania	Total
	East Asia	India	Subtotal		United Kingdom	Other European countries				
1876-80	-1	-1	-2	28	-59	9			1	-23
1881-85	2	-18	-9	54	-49	25			2	23
1886-90	2	-29	-29	87	-83	20			6	2
1891-95	0	-32	-54	162	-128	49			8	37
1896-1900	101	-129	-105	74	-256	-34		1	10	-310
1901-05	272	-280	-134	144	-264	-3	0	2	15	-240
1906-10	309	-286	-76	331	-383	-1	-2	3	27	-100

Notes: East Asia includes China, Hong Kong and Taiwan. These figures have been rounded off to the nearest integer and may not add up to the indicated total.

Source: Sugiyama (2012), p.159, Table 10-7.

4. Development of the export industry

As was mentioned earlier, it is said that export industries, mainly primary products such as raw silk, tea, coal and copper, put Japan on the track of industrialization, as they served as strategic industries to earn foreign currencies following Japan's opening to the outside world. As Japan needed to depend on imports from the United States and European countries for the supply of machinery, equipment and materials in order to introduce modern industries, earning foreign currencies through export industries was important.

Here, we will provide a brief review of the four main export industries in the Meiji period.

(1) Silk reeling

Silk reeling developed into Japan's largest export industry because of an increase in raw silk demand

in foreign markets and a price rise. According to a survey conducted in 1864 by a silk wholesaler in Edo (as Tokyo was called at that time), the volume of raw silk production, which was 20,000 units (one unit = 9 *kanme*) before Japan's opening to the outside world, grew to 40,000 units thereafter, with 30,000 units out of the total produced for export. In line with the increase in the volume of raw silk production, raw silk reeling techniques changed, as *zaguri* reeling started to spread wide in place of *taguri* and *douguri* reeling. Moreover, as a result of an outbreak of the silkworm disease in Europe and a decline in the supply of Chinese silk due to the Taiping Rebellion, demand increased in the European market for Japanese silk, whose quality was better than silk produced in China and other Asian countries. However, in line with an upsurge in the raw silk price, a decline in the quality of Japanese silk became conspicuous because of mass production of inferior products, and exports of Japanese silk stalled by the end of the 1860s.

Confronted with this situation, the Meiji government introduced advanced technology from Western Europe based on the industrial development policy in order to establish Japan as a modern state and built the Tomioka Silk Mill in order to spread technology capable of mass producing high quality raw silk widely in Japan. This silk mill introduced French silk reeling technique, and silk reeling equipment introduced by the mill underwent technical improvements. In addition, women were invited from across Japan to become silk reeling trainees and trained women played a role in spreading the technique nationwide.

The annual average growth rate of the volume of raw silk production between 1876 and 1900 was 8.8%, while the export ratio was around 40% on average from the 1880s to the 1900s and was higher than 70% in the 1910s (Column Table 1-7). It was pointed out that the greatest factor that made it possible for the Japanese raw silk industry to develop as an export industry is that Japan was able to shift its exports of silk from the European market, where demand for Japanese silk declined, to the U.S. market because of the rapid development of the U.S. silk fabric industry after 1870.²²

Column Table 1-7 Changes in production amount, export volumes and export rates in the silk reeling industry

	Production volume in silk reeling (1,000 <i>kanme</i>)	Export volume (1,000 <i>kanme</i>)	Export rate (%)
1880	533	234	43.9%
1890	922	338	36.7%
1900	1,894	741	39.1%
1910	3,174	2,347	73.9%

Source: Sugiyama (2012), Table 15-1.

(2) Tea processing

An increase in demand for Japanese tea in foreign markets following Japan's opening to the outside world invigorated processed tea production in Japan. As a result, in the 1890s, tea processing became a

²² Sugiyama (2012), p. 224.

major export industry with an export ratio of higher than 80% (Column Table 1-8). The main export destination was the United States, where Japanese tea competed with Chinese tea. However, Japanese tea was relatively low-priced until the middle of the 1870s, so it was able to secure a certain market share.

(3) Coal production

As coal, along with wood, was a domestically available resource, coal production was not only an export industry used to earn foreign currencies but was also the main energy industry. In the Edo period, coal was used for salt production. However, following the opening of China and Japan to the outside world and an increase in East Asian trade due to the opening of the Suez Canal in 1869, demand for coal as fuel for steamships expanded. The volume of coal production steadily increased from the end of 1870s onwards due to the introduction of Western mining technology. In 1886, the Takashima, Miike and Chikuhou coal mines together accounted for 62.5% of the total domestic coal production. Coal exported from Japan was mostly limited to coal produced in these three coal mines, and the export ratio was higher than 30% until the 1870-1880s and rose to around 40% in the 1890s and 1900s (Column Table 1-8). Japanese coal gained superiority in geographically adjacent markets, such as Shanghai, Hong Kong and Singapore.

(4) Copper production

Exports of copper from Japan expanded against the backdrop of an increase in copper demand due to the development of telecommunications and electrical equipment-related industries in the United States and European countries. Although the export ratio was just over 30% in the 1870s and 1880s, it later rose rapidly and stayed at around 70-80% (Column Table 1-8). At first, China was the main export market, but from the 1890s onwards, exports to European countries, such as the United Kingdom, increased.

Column Table 1-8 Changes in production amount, export volumes and export rates in the tea processing, copper processing and coal industries

	Tea processing industry (1,000 <i>kanme</i>)			Coal industry (1,000 tons)			Copper production industry (tons)		
	Domestic production volume	Export volume	Import rate (%)	Domestic production volume	Export volume	Import rate (%)	Domestic production volume	Export volume	Export rate (%)
1870	N.A.	1,970	N.A.	208	56	26.9	2,110	733	34.7
1880	3,206	4,852	151.3	882	286	32.5	4,669	1,547	33.1
1890	6,945	5,960	85.8	2,608	1,215	46.6	18,115	19,192	105.9
1900	7,643	5,158	67.5	7,429	3,350	45.1	25,309	20,436	80.7
1910	8,342	5,271	63.2	15,681	2,794	17.8	49,324	35,610	72.2

Source: Sugiyama (2012), Tables 15-2 and 15-3.