Global Value Chains and the Current Status of Japanese Manufacturing Industries —A New National Paradigm as a Hybrid Trading/Investing Nation—

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Summary

1. The shift to deficits in Japan's trade balance, and Japan's shrinking share of world exports have led some to conclude that the Japanese economy is in decline. However, the trade deficit reflects rising energy prices and is not a sign that Japan's income model of earning its living through exports is reaching a dead end. Japan's shrinking share of world exports is attributable to the rise of emerging economies and is a phenomenon affecting all developed countries. Deindustrialization in developed countries has been accompanied by a rise in the contribution of service industries to exports, creating a structure in which there is likely to be little growth in exports of goods.

2. Japan is one of the world's biggest investors in manufacturing industries, and the percentage of its goods that are produced overseas has been rising inexorably. Added value and exports generated by overseas production sites established through direct investment help to lift the level of the Japanese economy through dividend payments to investors and payments of patent royalties. We therefore need to take overseas production sites into account when considering Japan's position in world trade and the world economy.

3. Japanese manufacturers have established overseas production sites through overseas direct investment exclusively in Asia. Trade in Value-Added (TiVA) data compiled by the Organization for Economic Co-operation and Development show that Japanese exports to Asia include a substantial amount of added value destined for final consumption in markets other than Asia. This means that Japan's production sites in Asia function as bases for exporting to the markets of the United States, Europe, and Japan itself.

4. China is increasingly using other Asian countries as bases for exporting outside of the region, instead of itself being used in Asian global value chains (GVCs) as a base for exporting to other regions. However, given the fact that there has been little reduction in the contribution of foreign-owned companies to China's exports, we can reasonably assume that this trend is being driven by foreign companies with operations in China, rather than by local Chinese companies.

5. According to the development stage theory of balance of payments, Japan is evolving from an immature creditor nation to a mature creditor nation. Japan's transition to a mature creditor nation is being underpinned by Asia, which offers higher rates of return than North America or Europe. The scale of return in Asia is also greater. Furthermore, Asia is contributing to growth in the overseas travel balance and receipts of intellectual property royalties, thereby helping to reduce the deficit in the service balance.

6. Japan is transitioning from a trading nation to an investing nation through its direct investment in Asia. However, if Japan's total exports, including those from the overseas subsidiaries of Japanese corporations, are still increasing, then Japan can still be described as a trading nation. We can therefore conclude that Japan's status as an investing nation is not the next stage after its trading nation phase, and that Japan is instead becoming a new type of nation have status as investing nation and trading naition based on GVCs in Asia.

Introduction

In 2018, Japan recorded a trade deficit for the first time in three years. The Japan Foreign Trade Council (JFTC), an organization of major trading companies, is predicting another deficit in 2019[(1)]. The most important reason for Japan's trade deficit is an increase in fossil fuel imports due to rising energy prices. However, some observers take the view that Japan needs a new strategy because its income model of earning its living through exports has reached a dead end due to a loss of momentum as Japanese electrical goods, which were traditionally very competitive, are superseded by South Korean and Chinese products.

Trade deficits are becoming the norm for Japan, and there has also been a significant decline in its share of global trade. According the International Monetary Fund (IMF), Japan accounted for 10.3% of the world's exports in 1996, but by 2018 this had dropped to 3.8%. Claims that the phrase "major trading nation" no longer reflects Japan's position in the world economy have destructive force and further heighten uncertainty about the future.

However, such claims are based on a one-dimensional view of the customs-cleared trade statistics and do not accurately reflect Japan's real situation. Because of the growth of global value chains (GVCs), every country's exports now include intermediate goods acquired from other countries. For this reason, high export figures do not necessarily indicate that export industries are highly competitive.

Japan's active overseas investment is causing its overseas assets to expand, leading to increased income, such as interest and dividends. For this reason, Japan's position in the global economy needs to be viewed in terms of its total external transactions, that is current account, including not only the trade in goods, but also the trade in services, including transportation, travel, and intellectual property royalties, as well as the primary income balance.

Also significant is the fact that Japanese companies have been shifting their production bases overseas through foreign direct investment. In the case of automobile exports, for example, the relocation of production operations to other countries has inevitably caused Japan's exports to shrink, even though demand is buoyant, especially in Asian markets. This downward pressure on Japan's exports is tending to intensify as overseas production sites increase their capacity and their local procurement ratios in order to survive against fierce competition. In addition, the overseas production sites of manufacturers of certain parts, such as wire harnesses, have also started to function as export bases.

In this article we will reexamine Japan's position in global trade. We will first consider whether or not Japan is really a major trading nation. We will then explore the reasons why a decline in a country's trade surplus also leads to a reduction in its share of global trade. In the final part of this article, we will verify Japan's situation in terms of its balance of payments development stage. The main argument of the article will be that because Japan is shifting its production bases overseas, while also expanding the scope of its income model, which is based on earning its living through exports, to encompass the whole of Asia, it is increasingly taking on the characteristics of an investor nation.

1. Is Japan Still a Major Trading Nation?

As a trading nation that makes its living from the processing trade, Japan has achieved economic development through an income model based on earning its living from exports. However, some commentators believe that Japan has declined so far that it no longer deserves to be called a major trading nation. How should we react to these views?

(1) Can Japan Still Earn a Living Through Exports?

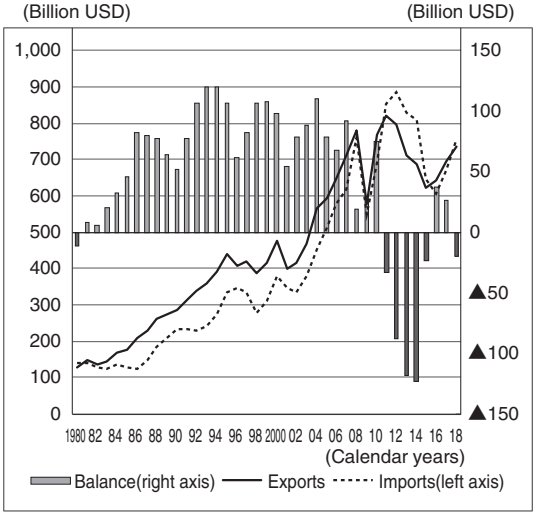
In 2018, Japan's exports grew by a modest 5.3% year on year to $737.8 billion, while imports rose by 12.7% to $756.4 billion, causing Japan to experience its first trade deficit in three years (Fig.1). In 2011, Japan recorded its first trade deficit in 30 years due to a massive increase in imports of natural gas and other fossil fuels in response to higher thermal power plant operating rates following the shutdown of nuclear plants after the Tohoku Earthquake. Trade deficits thereafter became the norm for Japan and continued until 2015.

Because Japan is poorly endowed with resources, its trade balance is susceptible to energy price movements. In fact, there is a negative correlation between energy prices and Japan's trade balance, which means that the trade balance tends to shift into deficit whenever energy prices rise, and into surplus when prices are falling (Fig.2). Energy price forecasts by the U.S. Energy Information Administration (EIA) suggest that a major downturn in oil and natural gas prices is unlikely before 2050 (EIA [2019]), so trade deficits could become the norm for Japan.

Another reason put forward to explain Japan's trade deficit is a decline in the export competitiveness of Japanese industries. We certainly find much evidence of this loss of competitiveness in consumer electronics outlets, where products manufactured by South Korean and Chinese companies are gaining a dominant position not only in Japan, but also in emerging economies, where consumer demand is strong. In the case of smartphones, Japanese manufacturers are managing to hold onto a reasonable share of the domestic market, but Japanese brands no longer feature among the world's top 12 smartphone manufacturers and are included in the "others" category[(2)]. Manufacturers of LCD panels and semiconductors, an area in which Japan has excelled in the past, are in the same situation. It is hardly surprising that Japan's export-based income model is now seen as a thing of a past.

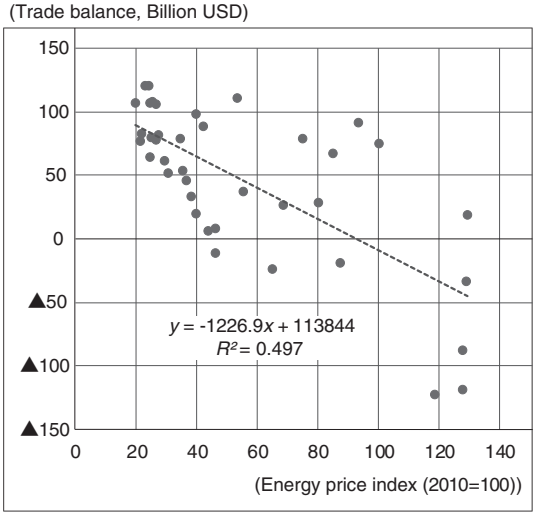
Japan, a country with limited natural resources, has achieved economic development by importing energy and raw materials, processing them, and exporting the resulting high-value-added industrial products. The "common-sense" view taught to Japanese elementary school children in their social studies classes is that Japan is a trading nation that makes its living through the processing trade.

Fig. 1 Japan's Imports/Exports and Trade Balance



Notes: Customs-cleared basis.
Source: Compiled by JRI using IMF, *Direction of Trade Statistics*

Fig. 2 Japan's Trade Balance and Energy Prices (1980-2018)



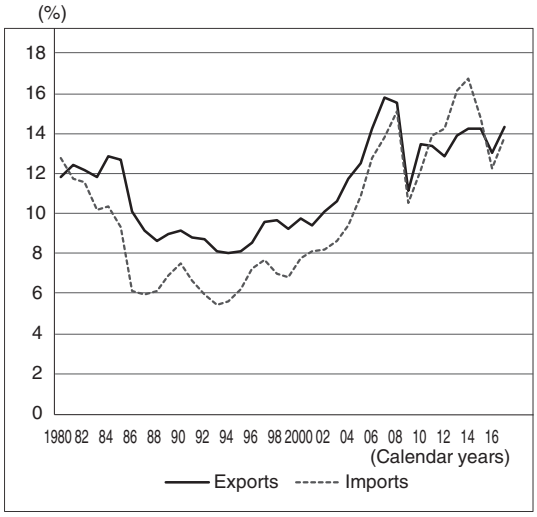
Notes: Customs-cleared basis.
Source: Compiled by JRI using IMF and World Bank data

However, this perception of reality is gradually breaking down under the impact of chronic trade deficits and a conspicuous decline in Japans' share of world exports.

Yet this loss of ground in the consumer electronics and smartphone markets may not necessarily represent Japan's overall export situation. To answer this question, we need to look at Japan's export dependency by tracking trends in its ratio of exports to GDP. After falling from 12.6% in 1986 to 8.1% in 1995, the ratio shifted to a gradual upward trend in 2001 and has hovered around the 14% mark in recent years (Fig.3). In terms of national totals, Japan is actually exporting even more than it did in the 1990s, when it recorded an average annual trade surplus of $100 billion.

Japan's present trade deficits are ultimately the result of rising energy prices, and it would be premature to attribute them to a breakdown of Japan's income model of earning its living through exporting. The Ministry of Economy, Trade and Industry assesses the international competitiveness of Japan's manufacturing industries using the trade specialization coefficient, which is an indicator of the level of each industry's trade specialization level. The coefficient is calculated by subtracting imports from exports to obtain net exports, and then dividing net exports by the total value of trade. While this indicator shows a reduced comparative advantage in some areas, such as electrical machinery, this is seen as the result of increased reverse importing, and export substitution linked to overseas production (METI [2007, 2014]).

Fig. 3 Japan's Dependence on Imports and Exports



Source: Compiled by JRI using IMF and World Bank data

According to the Japan Electronics and Information Technology Industries Association (JEITA), Japanese companies, including their overseas production operations, contributed 12% to the value of production by the world's electronic and information technology industries in 2018. This represents a decline of nine percentage points from the 2010 level. However, the contribution made by Japan's electronic component industry declined by just two percentage points over the same period and remains extremely high at 38%, (JEITA [2018]). While Japan's electronic component industry clearly remains highly competitive, we cannot verify this from Japan's trade statistics, since shipments from countries and regions other than Japan make up 76.6% of total shipments, which were worth ¥4,026.1 billion in fiscal 2018.

With the expansion of GVCs, it has become extremely difficult to assess export competitiveness from trade statistics. The competitiveness of developed countries with expanding networks of overseas production bases tends to be underestimated, while that of emerging economies, which host those production bases, tends to be overestimated. Of course, there has been a remarkable improvement in the competitiveness of China and Asian emerging countries, to the extent that in some cases Japanese companies have been pushed out of markets. However, we risk under-estimating the potential of Japanese companies if we simplistically think in terms of a confrontation, with Japanese companies in retreat and companies from emerging countries advancing, while disregarding the fact that Japan's exports have declined because Japanese manufacturers are shifting their production operations offshore.

If we broaden our perspective to include Asia and Japanese-owned companies that are active in Asian countries, we can reasonably conclude that Japan's export-based income model is still valid, and that Japan's status as a trading nation that

earns its living from the processing trade is unchanged.

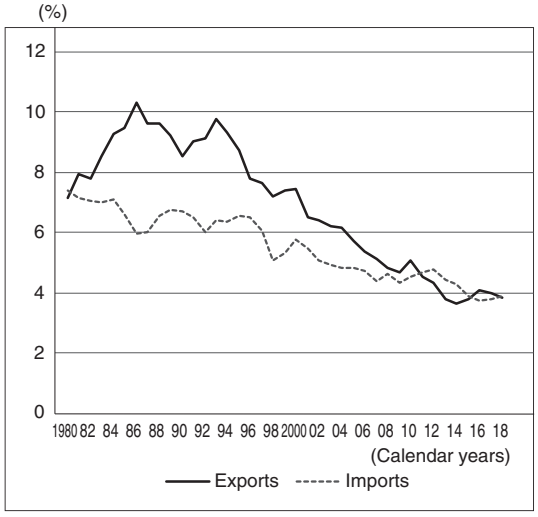
(2) Was Japan Ever a Major Trading Nation?

Like the trade deficit, Japan's significantly reduced share of world exports and imports is also seen as a sign that the Japanese economy is in decline. The shrinkage of Japan's share of exports has been particularly conspicuous. In 1986, Japan accounted for 10.3% of world exports. By 2018, this share had dropped to 3.8% (Fig.4). Even so, Japan is still the fourth-largest exporter in the world after China, the U.S., and Germany. If the top 20 countries in terms of shares of the world economy, such as the G20, can be considered "major countries", then Japan should still be seen as a "major trading nation". However, if this status is limited to just the top three countries, then Japan, which exports less than Germany, is not and never was a "major trading nation". Unlike "processing trade" and "trading nation", the term "major trading nation" is defined very loosely. Depending on the criteria applied, Japan may or may not qualify.

If "major trading nation" is interpreted as meaning "a large country whose economy is based on trading", the term would certainly not apply to Japan. While Japan's export dependency is increasing, as shown in Fig.3 above, it is still among the lowest in the G20 (Fig.5). By international standards, Japan is definitely not a country characterized by vibrant trading activities. In this context, Japan's share of world trade will inevitably decline if Japanese companies continue to shift their production operations offshore.

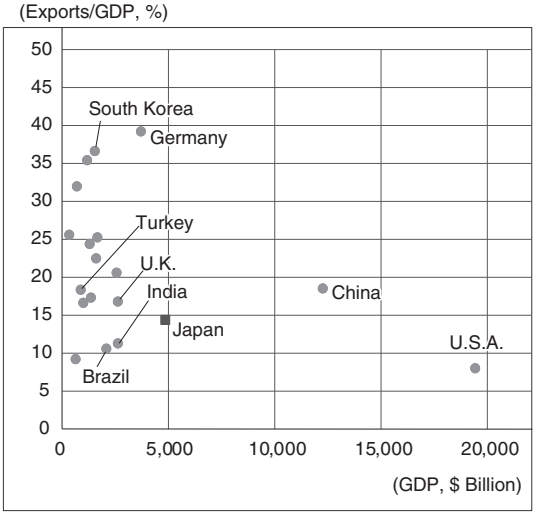
However, Japan is not the only country whose share of world trade is in decline, and there is no need to be unduly pessimistic about this trend. The developed countries' share of world trade has shrunk rapidly with the rise of emerging and developing economies, especially Asian emerging economies, such as China, ASEAN, and India. If emerging economies with high growth levels continue to increase their trade in step with GDP expansion, the developed economies' share of world trade will inevitably shrink (Fig.6). Even Germany may lose its status as a major trading nation if India continues to achieve steady growth by working to strengthen its manufacturing industries through the "Make in India" initiative.

Fig. 4 Japan's Shares of World Exports and Imports



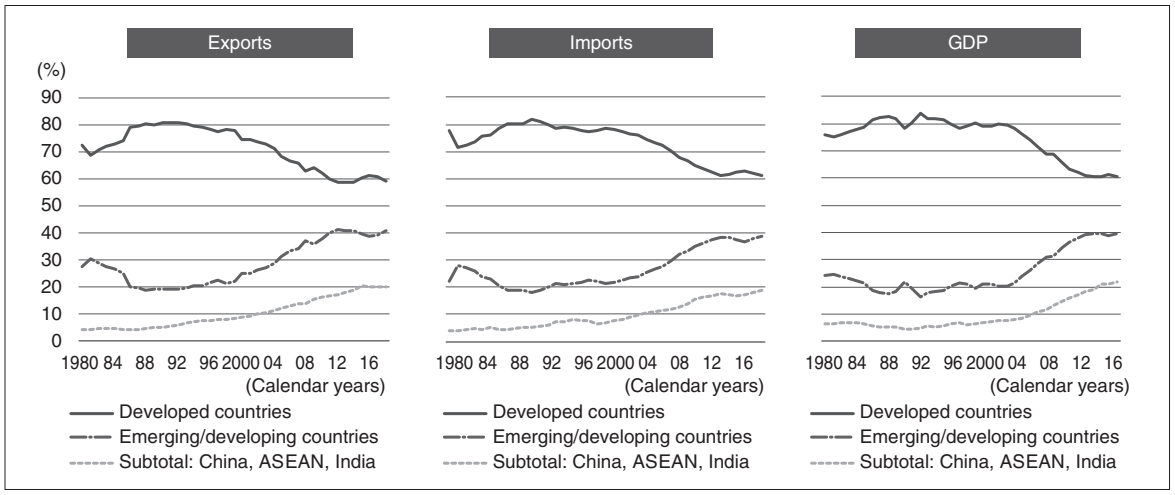
Source: Compiled by JRI using IMF and World Bank data

Fig. 5 GDP and Export/GDP Ratios of G20 Members (2017)



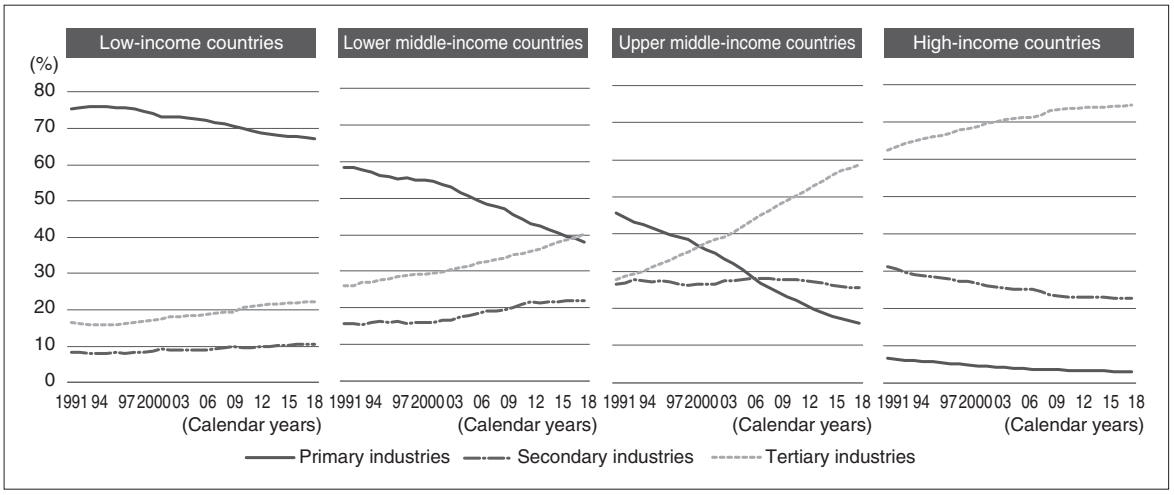
Notes: The EU has been excluded.
Source: Compiled by JRI using IMF and World Bank data

Fig. 6 Developed, Emerging, and Developing Countries' Shares of World Imports, Exports, and GDP



Source: Compiled by JRI using IMF, DOT, and WEO data

Fig. 7 Changes in Industrial Structures by Development Stage (Working Population Basis)



Notes: Income levels (2017) are defined as $995 or less for low-income countries, $996-3,895 for lower middle-income countries, $3,896-12,055 for upper middle-income countries, and $12,056 or higher for high-income countries.
Source: Compiled by JRI using World Bank data

Changes in industrial structures as a result of deindustrialization have also eroded the significance of the "major trading nation" concept. An analysis of changes in industrial structures at each stage of economic development shows that the percentage of the total workforce employed in manufacturing stops growing when a country reaches the upper middle-income stage, as manufacturing is overtaken by service industries. In high-income countries, over 70% of the workforce is employed in service industries, compared with a share of just 20% for manufacturing industries (Fig.7). Developed economies tend to specialize in high value-added industries, such as semiconductors. This results in the formation of industrial structures in which added value provided by service industries accounts for a large percentage of exports, while exports of goods no longer expand

at the same pace as in emerging economies.

According to the Trade in Value-Added (TiVA) data compiled by the Organization for Economic Cooperation and Development (OECD), 64.7% of the added value included in U.S. exports in 2015 came from the service sector, compared with just 28.0% from the manufacturing sector. This figure tends to rise in step with a country's development stage, as indicated by the figures for Vietnam (22.8%), China (34.5%), and Japan (48.3%). The high percentage of added value generated by upstream processes, such as design and R&D, is also illustrated by the fact that Apple Corporation itself accounts for the biggest share of the added value of its iPhone products.

With the spread of AI and the IoT, added value based on "hardware" produced by manufacturing industries is tending to shrink, while added value generated by "software" in such forms as big data analysis is expanding. Around one-third of the added value of automobiles produced in the U.S. comes from services, including R&D (18%), design (3%), advertising and marketing (3%), data processing (2%), and transportation and insurance (4%) (Johansson [2013]). When self-driving vehicles start to come into common use, the added value structure of automobiles themselves is expected to change dramatically, accompanied by a rapid increase in the percentage of added value based on services. Companies in developed countries are investing substantial resources in these areas in an effort to maintain their competitiveness.

2. Building GVCs through Direct Investment

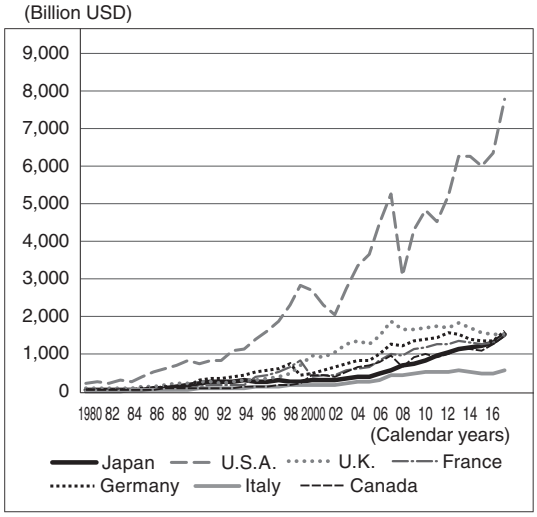
Japan's low export dependency and declining share of global trade do not necessarily signal the stagnation or decline of the Japanese economy. These indicators instead reflect the efforts of Japanese companies to discover paths to survival by building GVCs in Asia through direct investment.

(1) Japan as a Major Manufacturing Investment Nation—Expansion of Offshore Production through Direct Investment

Japanese manufacturers have built GVCs in Asia through foreign direct investment. According to figures released by the United Nations Conference on Trade and Development (UNCTAD), Japan's foreign direct investment outstanding in 2017 was $1.5 trillion. This figure, which is around the average for the G7, is the fifth highest total in the world after the United States ($7.8 trillion), Hong Kong ($1.8 trillion), Germany ($1.6 trillion), the Netherlands ($1.6 trillion), and the United Kingdom ($1.5 trillion) (Fig.8). As a percentage of GDP, however, Japan's investment outstanding is among the lowest in the G7 at 31.3%, which is only slightly higher than the ratio for lowest-ranked Italy (Fig.9). Even the most flattering observer would hesitate to call Japan a "major investing nation" on this basis.

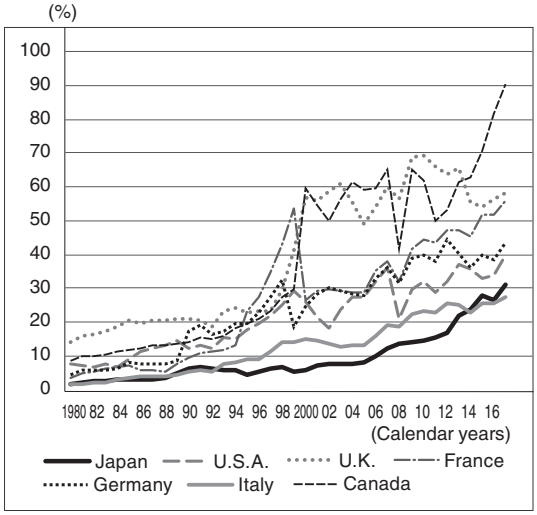
However, a different picture emerges when we look at which industries are investing. Japan's foreign direct investment has been concentrated

Fig. 8 Foreign Overseas Investment by G7 Members (Stock Basis)



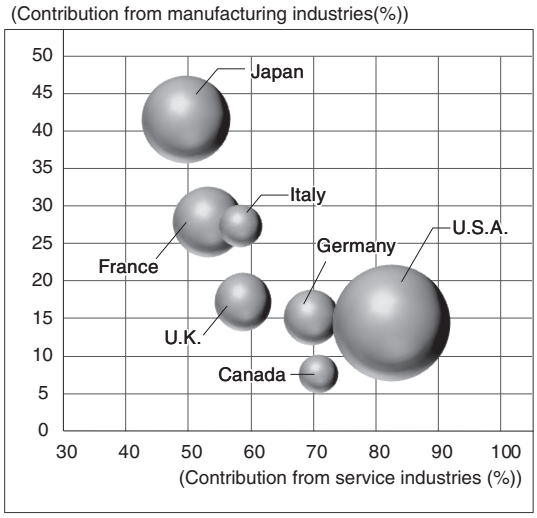
Source: Compiled by JRI using UNCTAD and FDI statistics

Fig. 9 Foreign Overseas Investment by G7 Members (Stock Basis) as Percentages of GDP



Source: Compiled by JRI using UNCTAD and FDI statistics

Fig. 10 Service and Manufacturing Sectors' Shares of Foreign Direct Investment by G7 Members (Stock Basis, 2016/2017)



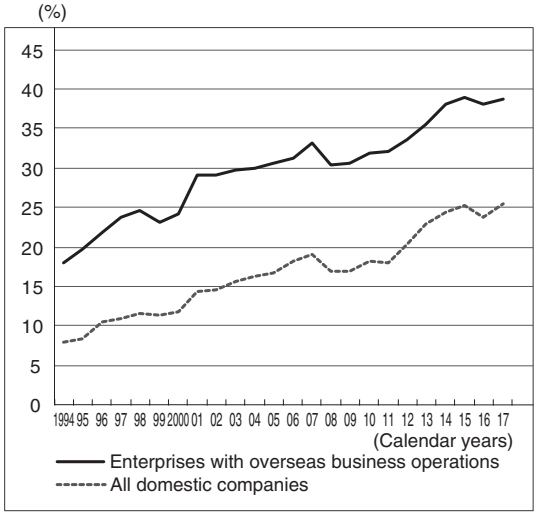
Notes: The size of the bubbles represents the scale of foreign direct investment by manufacturing industries. The figures for Germany and the United Kingdom are for 2016, and all others for 2017.
Source: Compiled by JRI using OECD and UNCTAD data

in manufacturing industries, and the investment outstanding in that sector stands at $631.5 billion. This is the second-highest total after that of the United States ($1,124.8 billion) (Fig.10) and is equivalent to 13% of Japan's GDP. Among the G7 members, France has a higher ratio at 15.7%, but the figures for the United States, the United Kingdom, and Germany are all lower at just 5.8%, 10.0%, and 7.0% respectively. On this basis, Japan is unquestionably one of the world's leading manufacturing investment nations.

Unsurprisingly, Japanese manufacturers are the source of investment in manufacturing industries. Active overseas investment by manufacturers inevitably leads to a rise in the overseas production ratios of these companies as an increasing percentage of their total output is produced overseas. According to the Basic Survey on Overseas Business Activities conducted by the Ministry of Economy, Trade and Industry, the overseas production ratio for all domestic companies in the manufacturing sector rose from 7.9% in fiscal 1994 to 25.4% in fiscal 2017, while the ratio for manufacturers with overseas operations climbed from 18.0% to 38.7% over the same period (Fig.11).

Overseas production ratios vary considerably

Fig. 11 Overseas Production Ratios of Japanese Manufacturers



Notes: For companies with overseas business operations—Net sales of overseas affiliates ÷ (Net sales of overseas affiliates + Net sales of parent company) × 100
For all companies in Japan— Net sales of overseas affiliates ÷ (Net sales of overseas affiliates + Net sales of all companies in Japan) × 100
Source: Compiled by JRI using Ministry of Economy, Trade and Industry, *Basic Survey on Overseas Business Activities*

among different manufacturing industries. The results from the Basic Survey on Overseas Business Activities provide overseas production ratios for 18 industries (based on all domestic companies). The ratios for the transportation equipment, general-purpose machinery, and ICT electronics equipment industries reached 47.2%, 31.9%, and 29.3% respectively in fiscal 2017, indicating that these three industries have engaged actively in foreign direct investment (Fig.12, left). The transportation equipment industry had the highest ratio in 2017, with all domestic companies and overseas affiliates together accounting for 27.2% of net sales of ¥543 trillion. With a ratio of 8.4%, the ICT equipment industry ranks behind the chemical industry (9.4%) and the food industry (9.3%) in terms of sales. The transportation equipment, ICT equipment, and general-purpose machinery (2%) industries have a combined overseas production ratio equivalent to 37.6% of their sales and have helped to lift the total ratio.

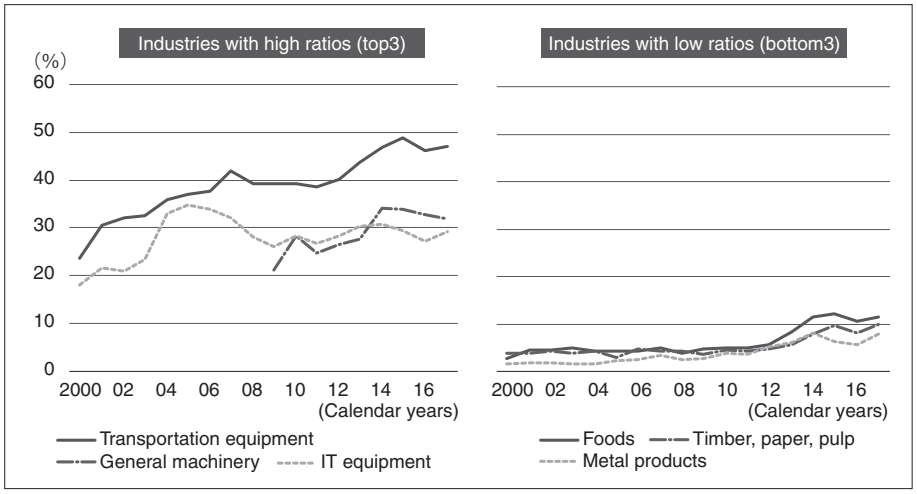
In contrast, the overseas production ratios for the food industry, the lumber, wood, paper and pulp industry, and the metal products industry are low at 11.4%, 9.8% and 6.3% respectively. These industries are focused primarily on domestic markets, which is reflected in the slow rate of increase in their overseas production ratios (Fig.12, right). However, even in these industries, the ratios have risen by 8.7, 6.0, and 6.3 percentage points respectively from the 2000 levels, indicating that the relocation of production sites to other countries is an irreversible trend across the entire manufacturing sector.

Added value and exports generated at overseas production sites established by Japanese companies are naturally recorded in the statistics as being produced overseas rather than in Japan. However, these overseas production operations contribute to the improvement of Japan's economic performance through payments of dividends and patent royalties to the investors. For this reason, we need to take overseas production sites into account when assessing Japan's positioning in world trade and the global economy.

(2) What are the Implications of the Growth of Asia's GVCs?

Overseas production sites established through

Fig. 12 Overseas Production Ratios by Industry (All Domestic Companies Basis)



Source: Compiled by JRI using Ministry of Economy, Trade and Industry, *Basic Survey on Overseas Business Activities*

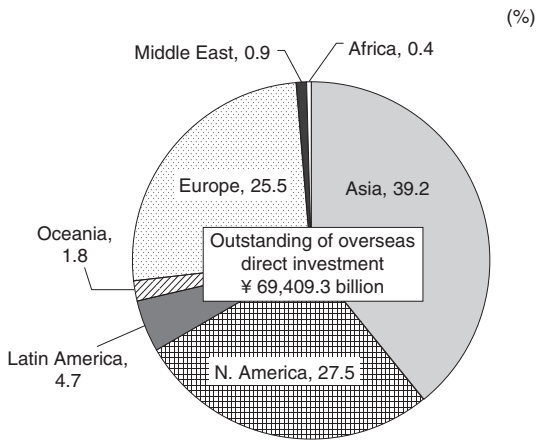
foreign direct investment by Japanese manufacturers are located primarily in Asia. By the end of 2018, the outstanding of foreign direct investment had reached ¥69.4 trillion, with Asia receiving the lion's share at 39.2%. This is substantially higher than the percentages for North America (27.5%) and Europe (25.5%) (Fig.13). A breakdown of the figure for Asia shows that ASEAN leads with a share of 18.0% of total investment, followed by China (12.7%), and other Asian countries (8.5%). Foreign direct investment from Japan has been concentrated in Asia, North America, and Europe and has resulted in the formation of industrial clusters in each of these three regions.

However, there are certain differences in the reasons for establishing production sites in North America and Europe, and those for sites in Asia. Production facilities in North America and Europe are used to manufacture goods for local markets, while those in Asia manufacture goods both for local markets and also for exporting to the United States, and Europe, as well as to Japan. This pattern can be confirmed using the Trade in Value Added (TiVA) statistics maintained by the OECD.

Fig.14 shows trends in Japan's exports to the United States, Europe (the EU28), and Asia on both a gross basis and a value-added basis. Exports calculated on a gross basis are equivalent to the balance of payments on goods and services exported, including not only goods and services produced in Japan, but also those produced in foreign countries and exported via Japan. Exports calculated on a value-added basis reflect added value produced in Japan for final consumption in the countries to which the goods are exported, including added value exported directly from Japan to final consumption locations, together with added value exported through third countries. In this context, "added value" means the value created within Japan, which is the value of goods and services exported minus the value of parts and other intermediate goods produced in other countries. In corporate accounting terms, gross are equivalent to sales and added value to profit.

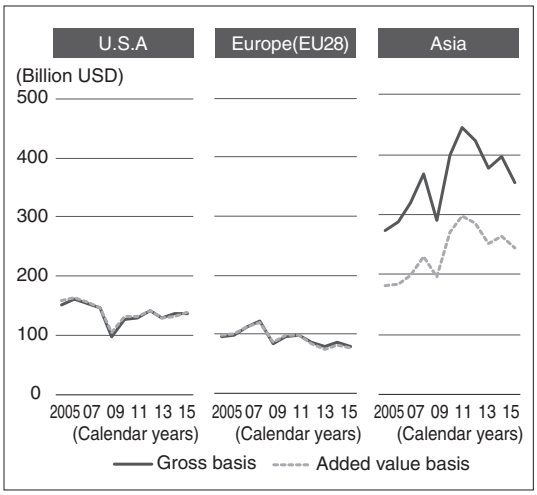
Fig.15 simplifies the trade in added value concept. If we imagine a situation where the only

Fig. 13 Regional Breakdown of the Outstanding of Foreign Direct Investment by Manufacturers (End of 2018)



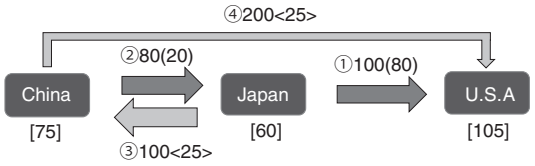
Notes: Asia includes India and other Southwest Asian countries, but their shares are extremely small. East Asia and Southeast Asia together receive 99.6% of investment.
Source: Compiled by JRI from Bank of Japan

Fig. 14 Japan's Exports on a Gross and Added Value Basis



Notes: The figures for Asia refer to China, South Korea, Taiwan, Hong Kong, and the ASEAN8 (excluding Laos and Myanmar). The figures for the EU28 are based on OECD classifications and do not include intraregional trade.
Source: Compiled by JRI from OECD, *TiVA December 2018*

Fig. 15 Positioning of Japan's Exports to the U.S. and China in Value-Added Trade Statistics



Exports from Japan to the U.S. :
Gross basis = 100 < Added value basis = 105
→ 100 from ① → (80) from ① + <25> from ③,④

Exports from Japan to China :
Gross basis = 100 > Added value basis = 75
→ 100 from ③ → 100 from ③ − <25> from ③

: Direct exports : Indirect exports
( ) : Added value at the export source that is included in exports (transaction basis)
< > : Japan's value-added export to U.S.A through China
[ ] : Final demand for the exporting country's products in the destination market

Notes: The figures inside the graph are provided for the sake of convenience and to make the concept easier to understand.
Source: Compiled by JRI from Miura [2019]

countries in the world are Japan, the United States and China, we can confirm that there are differences between exports calculated on a gross basis or on a value-added basis. Exports occur among the three countries, but we will focus only on Japan's exports to the United States and China and exclude extraneous information, such as exports from the United States to Japan and China. It should be noted that the figures are not based on the TiVA statistics and are provided for the sake of convenience to facilitate understanding.

In this diagram, Japan's exports to the United States are represented as 100 on a gross basis. However, because these exports include intermediate goods imported from China with a value of 20, the added value exported directly from Japan to the United States really has a value of 80. Japan also exports indirectly to the United States through China. On a gross basis, Japan's exports to China are worth 100, but this includes a value of 25 for goods assembled in China and exported to the United States as intermediate goods. On a value-added basis, Japan's exports to the United States therefore have a value in excess of 100, since 80 plus 25 equals 105. On the other hand, Japan's exports to China are worth 100 on a gross basis. However, this total includes a value of 25 for the added value that will ultimately be exported to the United States, which means that Japan's exports to China will be worth only 75 on a value-added basis, compared with 100 on a transaction basis.

As shown in Fig.14, Japan's exports to the United States and the EU28 are slightly higher on a value-added basis than on a gross basis. This is because Japanese companies are using their production sites in China and the ASEAN countries as bases for exporting, with the result that exports to developed countries and regions are higher on a value-added basis than on a gross basis. A simple illustration of this pattern can be found in the trade in smartphones. Smartphone components manufactured by Japanese companies are assembled into final products in China for export to the U.S. and Europe.

In contrast, Japan's exports to Asia are higher on a gross basis than on a value-added value basis. This is because Japan's exports to Asia include not only added value for which Asia is the final demand area, but also a considerable amount of added value for which the final demand areas are outside of Asia. On a gross basis, smartphone components exported to China for final assembly are counted as exports to China. However, on a value-added basis, these exports are clearly differentiated according to final demand areas, with goods sold domestically in China counted as exports to China, and those ultimately sold in the United States as exports to the United States.

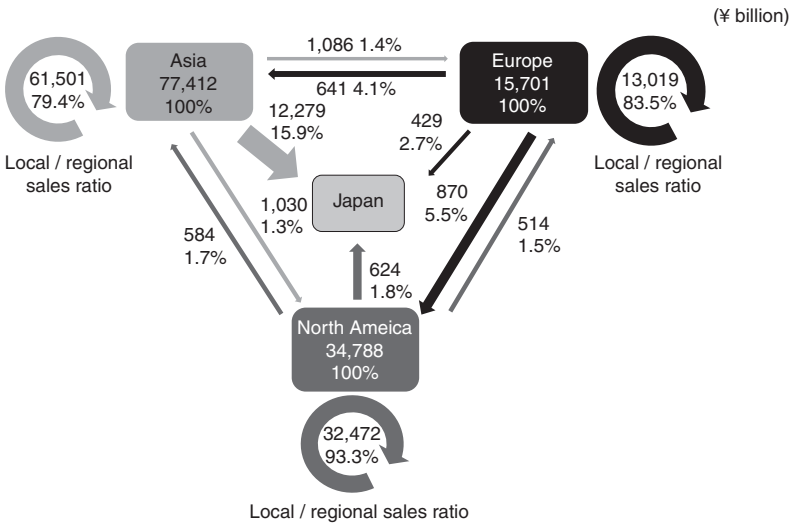
Compared with exports to Europe and North America, a high percentage of Japan's exports to Asia are exported to markets outside of the region. As we have already seen, this means that Japanese companies are using China and ASEAN countries as production bases for goods exported to Europe and North America, as well as to Japan itself. If analyze the markets in which the overseas affiliates of Japanese manufacturers sell their products, using data from the Basic Survey on Overseas Business Activities, we find that local/regional sales account for 79.4% of total sales in

Asia, which is lower than the corresponding ratios for North America (93.3%), and Europe (83.5%). This shows that many overseas affiliates in Asia are seeking markets outside of Asia (Fig.16). The fact that Japan is the market for 15.9% of sales indicates that Japanese companies are engaged in reverse importing from their production sites in Asia.

In Fig.16, Europe and North America are the destinations for only 1.4% and 1.3% respectively of the sales of the overseas affiliates of Japanese companies in Asia. This suggests that Asia is not necessarily being used as a base for exporting to these markets. As we will see later in this article, this appears to reflect the fact that Japanese manufacturers, especially in the electrical and electronic equipment industry, are functioning not as set manufacturers with global sales networks, but rather as suppliers of components, which they sell mainly to electronics manufacturing service (EMS) companies. If we analyze the sales of these companies according to final consumption locations, we are likely to find that the percentage of sales local and regional sales will be lower, and the percentages of sales to Europe and North America will be higher.

According to the Japan Electronics and Information Technology Industries Association (JEITA), which was cited earlier in this article, Japan's exports of electronic components were worth ¥4,026.1 billion in 2018. A breakdown by region shows China was the biggest destination for these products, accounting for ¥1,364.4 billion (33.9%), followed by Japan (¥940.6 billion, 23.4%), Asia (¥900.3 billion, 22.3%), the Americas (¥416.7 billion, 10.3%), and Europe (¥408.9 billion, 10.2%). Here "region" means the region where the electronic components are actually used in factories, and not the final consumption locations. Clearly Japanese manufacturers are not producing goods in Japan and shipping them worldwide, but rather using overseas production sites to produce and ship goods globally.

Fig. 16 Markets of Overseas Affiliates of Japanese Companies (Fiscal 2017)



Notes: Local/regional sales ratio = Local/regional sales ÷ Overall sales in each region × 100. The thickness of the arrows represents the percentage of sales in each locality/region.
Source: Compiled by JRI using data from Ministry of Economy, Trade and Industry [2018]

(3) Foreign-owned Companies Contributing to China's Emergence

Bilateral trade involving divisions of labor causes a significant divergence between the value of trade on a gross basis and a value-added basis (Tanaka [2014]). On a gross basis, China is the biggest market for Japan's exports, but on a value-added basis the United States is the biggest market. As shown in Fig.15 above, this is because some of the added value exported from Japan to China is ultimately exported on to the United States. On a value-added basis, the added value exported from Japan to the U.S. via China is counted as exports to the United States rather than China, which is why Japan's exports to China are higher on a gross basis than on a value-added basis.

We will now use these characteristics of the TiVA data to identify the industries that have been building GVCs in Asia. As shown in Fig.14 above, the value of Japan's exports to Asia appears much higher when calculated on a gross basis, compared with calculations on a value-added basis. By breaking these figures down by industry and subtracting transaction-based exports from exports calculated on a value-added basis, we can identify the industries that are using production sites in Asia as bases for exporting to other regions, or in other words, the industries that are playing a leading role in the establishment of GVCs in Asia. This approach is useful for identifying divisions of labor between Japan and Asia, and by applying it to Taiwan or Asia as a whole, we can also build an overall picture of GVCs in Asia.

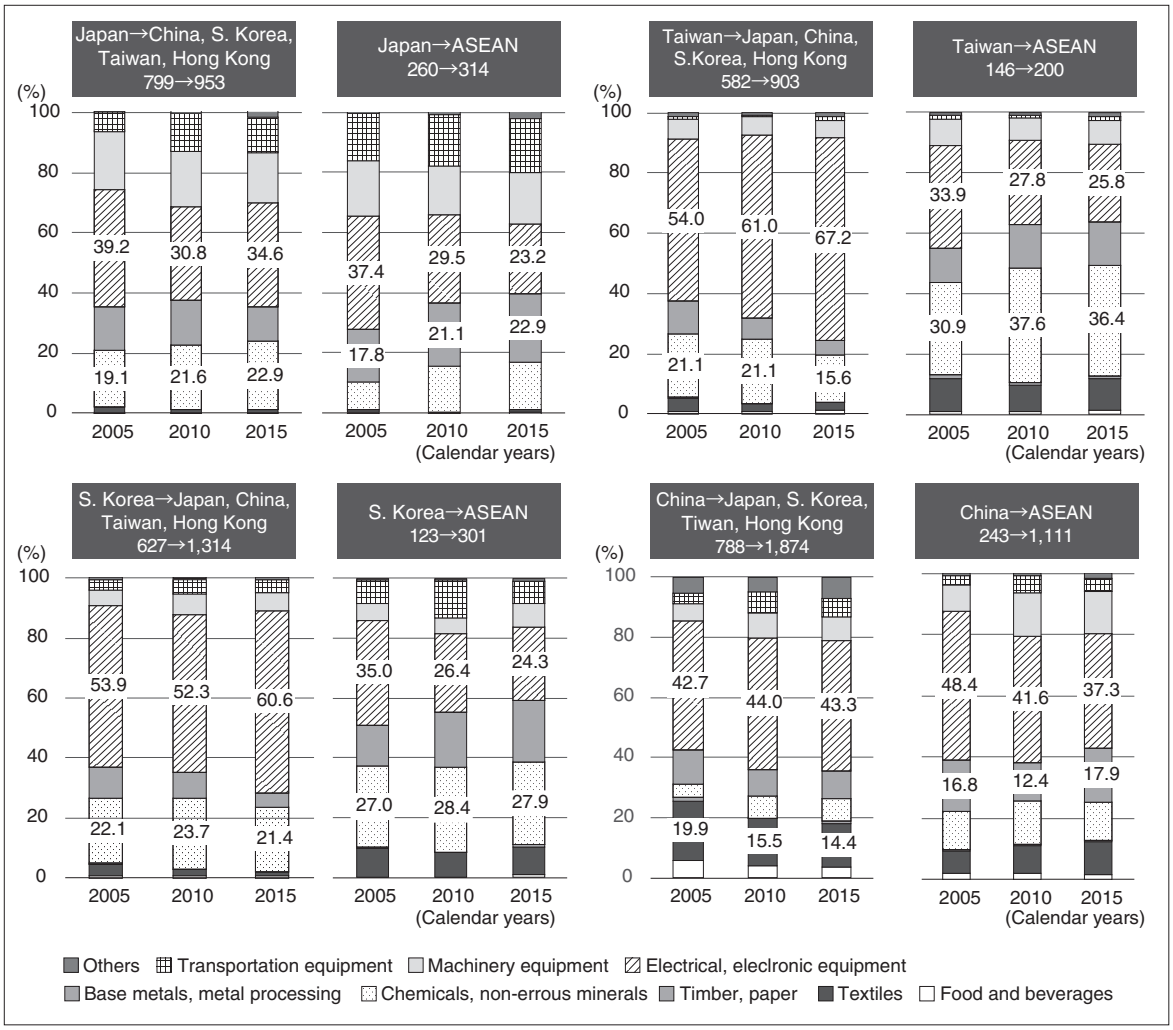
Fig.17 provides an industry-by-industry breakdown of the differences between gross-based exports and the exports calculated on a value-added basis. The TiVA statistics provide export values for the agriculture, forestry and fishing, mining and quarrying, manufacturing, and service industries, but the sector with the most conspicuous divergence between exports based on gross and value-added is manufacturing, and the breakdown in the graph is therefore focused primarily on that sector. The numbers shown in the bar graphs represent each industry's share when the total for all manufacturing industries is represented as 100. They indicate which manufacturing industries are engaged in divisions of labor between export source and export destination. The figures under the subtitles, such as "Japan→China/South Korea/Taiwan/Hong Kong", represent differences between 2005 and 2015 and can be used to gauge changes in the extent of the divisions of labor.

Fig.17 provides the following insights. First, the main industries building GVCs in Asia are the electrical and electronic equipment industries. Fig.17 shows divergence between gross based and value-added-based exports for eight countries and regions, from "Japan→China/South Korea/Taiwan/Hong Kong" to "China→ASEAN". With the exception of "Taiwan→ASEAN" and "South Korea→ASEAN", the electrical and electronic equipment industries account for the biggest shares of this divergence. In the case of "Taiwan→China/South Korea/Hong Kong" and "South Korea→China/Taiwan/Hong Kong", the ratios are over 60%. Since China has by far the biggest share in the China/South Korea/Taiwan/Hong Kong group, we can conclude that the industries that have been most active in building GVCs in Asia are electrical and electronic equipment industries that have developed divisions of labor with Taiwan, South Korea, and China (Miura [2019]).

Second, Japan is also developing well-balanced divisions of labor without extreme weighting toward particular industries with both China/South Korea/Taiwan/Hong Kong, and ASEAN. The high share of the transportation equipment industry is a characteristic not shared by Taiwan, South Korea, or China. However, the share of the electrical and electronic equipment industries is falling in Japan's trade with both China/South Korea/Taiwan/Hong Kong, and ASEAN. This is symbolic of the declining presence of Japanese companies in world markets for certain products, such as electrical appliances, memory chips, and smartphones. Yet it can also be seen as an indication that Japanese manufacturing industries are better able to withstand risk than their Taiwanese and South Korean counterparts, which are extremely depen-

Fig. 17 Industry Breakdown of Differences between Exports on a Gross Basis and Value-added Basis (all manufacturing = 100)

(Difference in 2005 → Difference in 2015, unit: $100 million)



Notes: In some industries in Japan and South Korea, the gap in the value of exports was negative. Since the percentages were extremely small, they have been disregarded in the graph.
Source: Compiled by JRI using data from OECD, TiVA December 2018

dent on both the electrical and electronic equipment industries and China.

Third, China's emergence in Asian GVCs has been remarkable. In the past, China was seen as a country that specialized in low-added-value processes based on investment from Japan, Taiwan and South Korea. However, the value of China's exports to Japan, South Korea, Taiwan, and Hong Kong increased 2.4 times in 10 years, from just $78.8 billion in 2005 to $187.4 billion in 2015, while its exports to ASEAN expanded by 4.6 times over the same period, from $24.3 billion to $111.1 billion. This growth momentum far exceeds increases in other countries' trade. Previously China's role in GVCs was as a base for exporting outside of the region, but today it is shifting to a role in which it uses Japan, South Korea, Taiwan, Hong Kong, ASEAN, and other countries as bases for exporting outside of the region.

However, this does not necessarily mean that Chinese companies have gained the real strength needed for them to take over the role of companies in other countries and regions. This is because the Chinese companies that are using Japan,

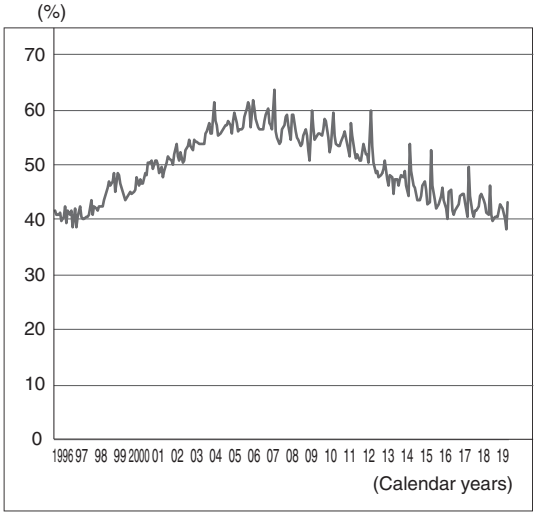
South Korea, Taiwan, Hong Kong, and ASEAN as bases for exporting outside of the region include foreign-owned companies established by parent companies in Japan, Taiwan, and South Korea. While the TiVA statistics do not divide Chinese companies into locally owned and foreign-owned companies, Chinese export statistics do make this distinction and provide evidence to support this view. According to Chinese export data, foreign-owned companies accounted for 44.1% of China's exports in 2015, which is only 14.2 percentage points below the 2005 figure of 58.3%, indicating that foreign companies still produce a large share of Chinese exports (Fig.18).

By comparing Fig.17 with Fig.18, we can reasonably conclude that Japan, South Korea, Taiwan, Hong Kong, and ASEAN are being used as bases for exporting outside of the region by foreign-owned companies established in China by companies from these countries and regions. China certainly has companies with world-class technology in fields such as ICT and AI, as evidenced by the fact that it not only holds 30% of patents relating to the latest "5G" communication standard[3], but is also ahead of the U.S. in the development of semiconductor chips for 5G smartphones (Hattori [2019]). However, if we focus just on cutting-edge technology, we can easily misjudge a country's overall technological capabilities.

For example, even Huawei Technologies Co. Ltd., which has earned the enmity of the U.S. government, procures only a small percentage of parts within China. Of Huawei's 92 core suppliers, only 25 are Chinese-owned companies. The rest are foreign-owned companies from the United States (33 companies), Japan (11) and Taiwan (10). These foreign-owned companies account for 72.8% of Huawei's total procurement[4]. Furthermore, while it was reported that the success of Chinese company HiSilicon Semiconductor Co., Ltd. (HiSilicon) in producing Chinese-made semiconductors has allowed its parent company, Huawei, to achieve a semiconductor self-sufficiency ratio of 50%, the semiconductors in question are in fact manufactured in the Chinese factory of Taiwan Semiconductor Manufacturing Co., Ltd. (TSMC), the world's largest semiconductor foundry. HiSilicon's own production facilities in China appear to be incapable of producing the semiconductors (Yunogami [2019]).

I do not disagree with those who see the fact that Japanese manufacturers do not have a firm footing in Asian GVCs as a situation that should be viewed with alarm. However, I cannot accept the simplistic view that the emergence of Chinese companies is evidence of the decline of Japanese manufacturers. The decline in Japan's share of world exports and the increase in China's share can be attributed to an increase in the number of Japanese companies that have expanded their operations into China, and to their efforts to increase their local procurement ratios in a fiercely competitive environment. The countless production bases established by Japanese companies in Asia have become so assimilated into local economies that we cannot gain a full picture of their activities even from value-added trade statistics.

Fig. 18 Foreign-owned Enterprises' Share of China's Exports



Source: Compiled by JRI using CEIC data (originally based on statistics from the PRC General Administration of Customs)

3. Japan as a Mature Creditor Nation Supported by Asia

Since many of the Japanese companies active in Asia were established through investment by their parent companies, we can build a picture of their activities using Japan's balance of payments statistics. In this section, we will first determine Japan's current situation based on the development stage theory of balance of payments. We will then show how income from direct investment in Asia is transforming Japan into a mature creditor nation.

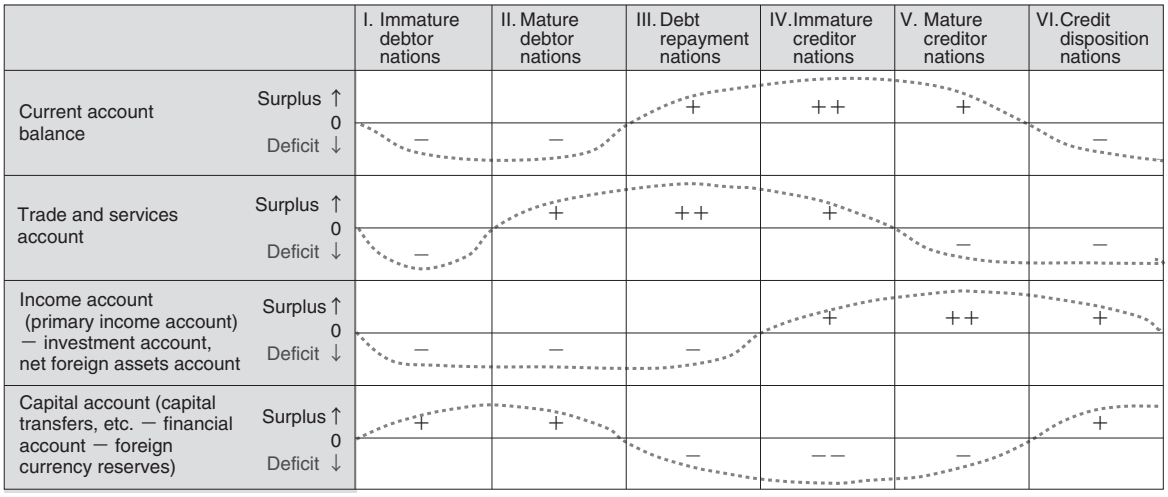
(1) Development Stage Theory of Balance of Payments

While the development stage theory of balance of payments is an old theory proposed by Geoffrey Crowther (Crowther [1953]) and Charles Kindleberger (Kindleberger [1953]) in the 1950s, it is still cited frequently today and is a valuable theoretical foundation for assessing how Japan went from consistent trade surpluses to trade deficits.

In essence, the development stage theory of balance of payments states that a country's balance of payments structure evolves according to its development stage, and in particular according to the competitiveness of its exporting industries, just as a household's income, debt, and assets change at each stage in its life cycle. The development stages are (I) immature debtor nation, (II) mature debtor nation, (III) debt repayment nation, (IV) immature creditor nation, (V) mature creditor nation, and (VI) credit disposition nation[5].

Fig.19 clarifies the ways in which surplus and deficit items in the international balance of payments change at each development stage. The current balance of payments combines (1) the goods and services account, (2) the income account, and (3) the current transfers account. The development stage theory of balance of payments focuses on the current account balance, the goods and services account, and the income account, and also on net foreign assets and the capital account. An analysis of trends in each of these items at each development stage shows that the current account balance and the capital account balance are two

Fig. 19 The Development Stage Theory of Balance of Payments



Notes: Category names are based on BPM5. New names based on BPM6 are provided in parentheses.
Source: Compiled by JRI using Ministry of Economy, Trade and Industry [2012] and Bank of Japan [2013]

sides of the same coin in bookkeeping terms and move along opposite paths, while the income account balance and net foreign assets follow the same path (Fig.19).

An immature debtor nation (Stage I) has weak export industries and insufficient domestic savings and must rely on external sources for both goods and capital. Its goods and services account and income account will be in deficit, while its capital account will be in surplus (capital inflows), since assets resulting from overseas borrowing exceed liabilities. A mature debtor nation (Stage II) will have developed export industries and have surpluses in its goods and services account, but these will not be big enough to reduce its debt assets. For this reason, its income account balance and current account balance will be in deficit, like an immature debtor nation, while its capital account balance will remain in surplus.

In a debt repayment nation (Stage III), exporting industries will be gathering strength, leading to a major expansion of the surpluses in the goods and services account, which will push the current account balance into surplus. At the same time, the capital account will shift into deficit (capital outflow) as debt assets are reduced. At this stage, the deficit in the income account and net foreign debt will also start to shrink. A immature creditor nation (Stage IV) is a country that has made the transition to a creditor nation with net foreign assets in countries that have net foreign debt. Specifically, its income account will shift into surplus as net foreign assets increase, causing both the current account surplus and the capital account deficit to expand.

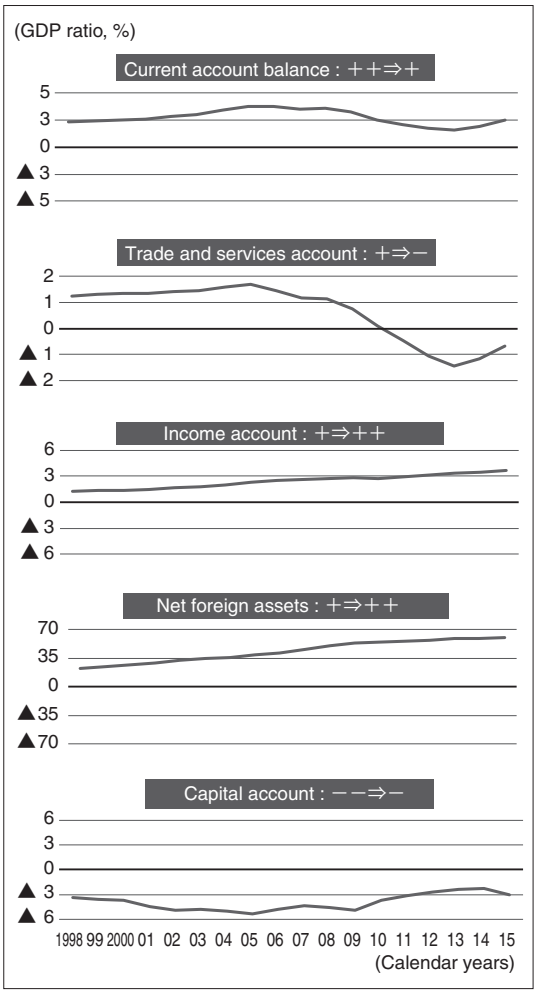
In a mature creditor nation (Stage V), the income account surplus will rise to a peak in response to a substantial increase in net foreign assets. However, competitiveness will weaken due to rising wages and other factors, and the goods and services account will shift into deficit, causing both the current account surplus and the capital account deficit to shrink. Japan is now clearly at this stage. At the sixth and final stage—credit disposition nation—the goods and services account deficit will expand due to consumption in excess of the income account surplus. The income account surplus will shrink as foreign assets are drawn down, causing the current account to shift into deficit. As in immature debtor nations, the capital account will be in surplus. The international balance of payments structure of a credit disposition nation is similar to that of an immature debtor nation. However, the United States continues to be a credit disposition nation by maintaining a surplus in its income account.

(2) Evolution from Immature Credit Nation to Mature Creditor Nation

There is a significant body of prior research pointing to the validity of the development stage theory of balance of payments. Japan's Cabinet Office conducted a study to identify changes in the international balance of payments structures of Japan, the United States, and the United Kingdom over an extremely long timeframe, including the prewar period (Cabinet Office [1984]). It found that despite the effects of the oil crises and the shift to floating exchange rate systems, the development stages and international balance of payments structures of the three countries fitted into the framework described in the theory. In addition, a Ministry of Economy, Trade and Industry study of 26 key developed and emerging countries during the second half of the 1990s similarly showed that changes in the international balance of payments structures of 26 key developed and emerging countries during the second half of the 1990s aligned with the theory (Ministry of Economy, Trade and Industry [2002]).

Japan has a trade account deficit and an expanding income account surplus. This situation is seen as evidence that Japan is in transition from immature creditor nation (Stage IV) to mature creditor country (Stage V). We will attempt to confirm this using international balance of payments statistics. Fig.20 traces structural trends in Japan's international balance of payments since the second half of the 1980s by calculating the five-year moving averages of each item (to include the two preceding and subsequent years) and dividing each by

Fig. 20 Japan's International Balance of Payments Development Stage



Notes: Five-year moving averages were calculated to include the two preceding and subsequent years.
Source: Compiled by JRI using World Bank and IMF data

GDP calculated on the same basis to obtain GDP ratios. In 2015, the goods and services account balance was minus 0.7% of GDP, while the income account balance was 3.7%, leaving a current account balance of 2.5%. Even if we include other items, it seems clear that Japan is moving from immature creditor nation (Stage IV) to mature creditor nation (Stage V).

This means that Japan is shifting from its traditional income model of earning its living through trade, to a new model based on earning a living through investment. In other words, it is in transition from trading nation to investing nation. The deficit in Japan's goods and services account has been shrinking since 2013, while its current account balance of payments surplus has again started to expand. This pattern seems to be at variance with the development stage theory of balance of payments, but this is explained first by the expanding surplus in the travel account due to increased inbound tourism, and second by the fall in energy prices, which has caused the trade account to shift into surplus.

Will Japan's balance of payments continue to show increasing evidence of a transition to mature creditor nation status? One of the characteristics of a mature creditor nation is the expansion of net foreign assets, and the growth of the income account with those assets as the source. In 2018, Japan's net foreign assets were the biggest in the world at $3,102.1 billion, compared with Germany's $2,448.4 billion, China's $2,000 billion, Switzerland's $897.9 billion, and Singapore's $812.0 billion. Japan's assets are equivalent to 62.4% of GDP. This is lower than the ratios for Singapore (224.9%), and Switzerland (127.6%), which are both smaller economies, but higher than the figures for Germany (58.7%) and China (15.9%). On this basis, Japan can be seen as one of the world's leading net external asset nations.

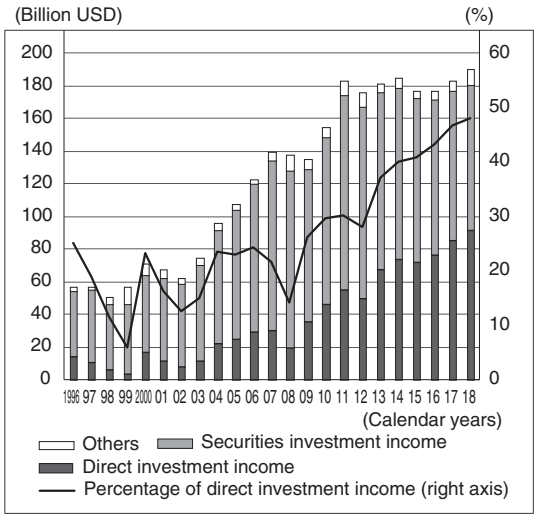
The substantial size of Japan's net external assets is reflected in the size of its current account surplus. In 2018, Japan's income account surplus was $189.1 billion. While this is smaller than the $244.3 billion surplus recorded by the United States, it is significantly higher than the figures for Germany ($107.8 billion), France ($66.2 billion), and Italy ($20.1 billion). If we exclude resource-producing countries with substantial net foreign assets based on oil money, Japan also leads in terms of the ratio of the income account surplus to GDP with a figure of 3.8%, compared with 2.7% for Germany, 2.4% for France, 1.5% for Sweden, and 1.2% for the United States. On this basis, Japan's foreign net assets and current account surplus appear to qualify it for mature creditor nation status. Japan can also be seen as the embodiment of an investment-based income model.

(3) Japan as a Mature Creditor Nation Supported by Asia

The income account can be divided into (1) direct investment income, (2) securities investment income, and (3) other items. The expansion of Japan's surplus is being driven by direct investment income. In 1999, direct investment income accounted for only 5.8% of Japan's income account surplus, but this figure has risen consistently since then, reaching 48.1% in 2018 (Fig.21). Japan's rate of return on foreign direct investment has been seen as low compared with that of the United States, but this has also been rising and has been higher than the figure for United States in six consecutive years since 2013 (Fig.22). The source of this high rate of return on investments is Asia, which provides a higher rate of return than North America or Europe and contributes 41.5% of Japan's direct investment income, despite accounting for only 28.8% of its direct investment balance (Fig.23).

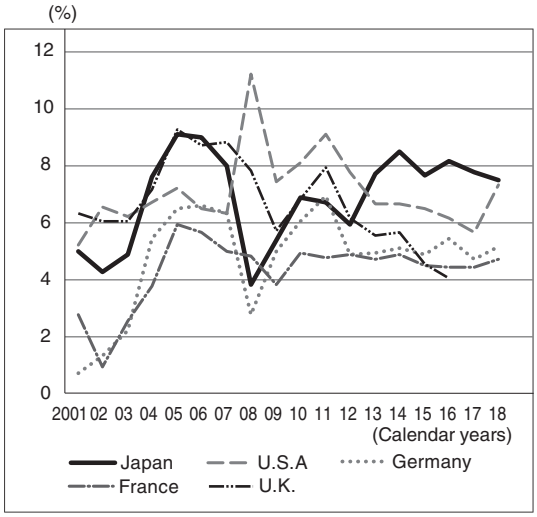
Asia has become a conspicuous presence in Japan's service account. As readers will be aware, Japan's travel account surplus has expanded with growth in the number of foreign visitors from China, South Korea, Taiwan, and elsewhere. In 2018, travel account receipts set a new record of

Fig. 21 Breakdown of the Income Account Surplus, Percentage from Direct Investment Returns



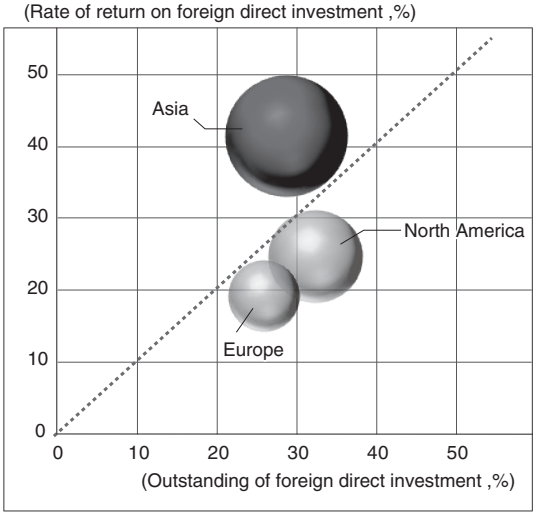
Source: Compiled by JRI using IMF data

Fig. 22 Comparison of Rates of Return on Foreign Direct Investment



Notes: Rate of return = returns from foreign direct investment ÷ outstanding of foreign direct investment × 100
Source: Compiled by JRI using IMF data

Fig. 23 Regional Shares of the Outstanding of Foreign Direct Investment and Returns on Direct Investment (2018)



Notes: The size of the bubbles represents the amount of direct investment.
Source: Compiled by JRI using Bank of Japan data

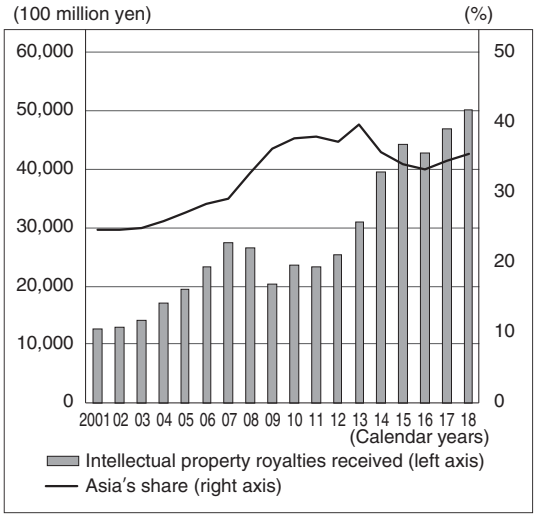
¥3,819.7 billion. Asia is also becoming an increasingly important contributor to intellectual property royalties, which are included in the service account under "other services". In 2018, royalty payments received exceeded travel account receipts at ¥5,022.5 billion because of the contribution from Asia (Fig.24). While net receipts of royalties are offset by net payments for other items, such as telecommunications, computer, and information services, which are included in the other services account, they are increasing rapidly and are expected to make an ongoing contribution to the reduction of the service account deficit.

Asia's growing importance is also apparent in the area of human resources. According to statistics compiled by the Ministry of Foreign Affairs on Japanese nationals living abroad, the number of long-term Japanese residents (excluding permanent residents) in Asia reached 282,000 in 2009. Asia overtook the United States (263,000) in that year and has been widening its lead ever since (Fig.25). In the Survey on Overseas Business Operations by Japanese Manufacturing Companies conducted by the Japan Bank for International Cooperation, China, India, Indonesia, Thailand, and Vietnam all ranked ahead of the United States as promising locations for the establishment of business operations in the medium- to long-term future. The fact that these five countries have consistently been in the top rankings suggests that the activities of Japanese companies are likely to continue shifting steadily toward Asia (Japan Bank for International Cooperation [2018]).

Conclusions—Japan as a Hybrid Trading/Investing Nation

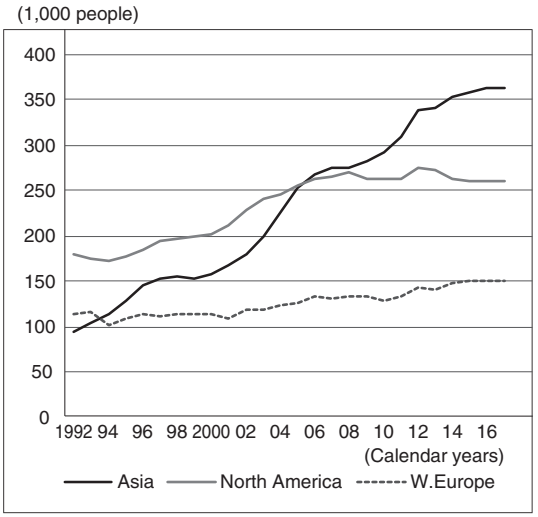
In this article we have used statistics, including foreign direct investment figures, the Trade in Value Added (TiVA) statistics, and international balance of payments data, to show that the argument that Japanese manufacturing is in decline fails to take GVCs created through foreign direct investment into account and therefore does not accurately reflect Japan's current situation. Asia, where the most extensive GVCs have evolved, is covered by a network of supply chains for parts and intermediate goods. As a result, it has become meaningless to talk about increases or decreases in the percentages of world GDP or trade contributed by individual countries or regions, including Japan, China, Taiwan, South Korea, or ASEAN.

Fig. 24 Intellectual Property Royalties Received, Asia's Share



Source: Compiled by JRI using Bank of Japan data

Fig. 25 Numbers of Long-term Residents



Source: Compiled by JRI using Ministry of Foreign Affairs data [2018]

The same is true of arguments that divide Asia into a declining Japan and emerging countries on the rise.

Foreign direct investment in Asia is transforming Japan from trading nation into investing nation. Given Japan's current trends toward population decline and demographic aging, this is the only way to avoid downward pressure on growth due to supply constraints. However, there is still room to debate whether or not Japan should relinquish its status as a trading nation. Even if Japan's exports as a country are in decline, it can still call itself a "trading nation" if the total exports of Japanese companies, including their overseas subsidiaries, are expanding. If that is the case, then Japan's evolution into an investing nation should be seen not as the next stage after the trading nation phase, but rather as the emergence of a new type of nation have status as investing nation and trading nation based on GVCs in Asia.

End Notes

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5. The development stages used in the development stage theory of balance of payments are different from development stages defined in terms of per capita GDP. For example, resource exporting countries such as Australia are classified as immature debtor nations (METI [2002]). We need to think of "development stages" as indicators of the competitiveness of exporting industries.

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