
Mizuho Economic Outlook & Analysis

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Is supply chain restructuring good news for ASEAN?

*Import dependence on Chinese parts growing behind
rising ASEAN exports*

< Summary >

- ◆ ASEAN's export values have surpassed those of Japan, South Korea, and Taiwan, and are now closing in on the United States. Behind this rise is a push to decentralize export bases from China to ASEAN amid global supply chain restructuring that aims to break away from dependence on China.
- ◆ ASEAN's import dependence on parts and materials from China has increased simultaneously with export growth. While supply chain restructuring will generate opportunities for ASEAN's economic development, it also entails such risks as supply disruptions from China and trade friction with Europe and the United States.
- ◆ The move for ASEAN to become an export hub is expected to continue, providing further growth opportunities in the region. On the other hand, if dependence on China for parts and materials remains unchanged, the risks mentioned above cannot be avoided. ASEAN's future challenge is to increase the in-house production rates of parts and materials.

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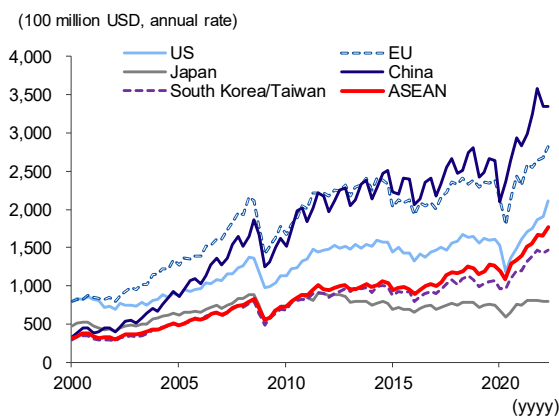
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1. ASEAN has increased its presence as an export base driven by global supply chain restructuring

(1) ASEAN's exports are approaching the value of US exports

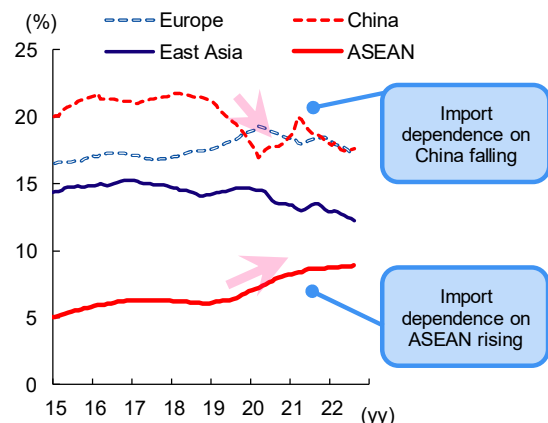
ASEAN exports are growing. In the past, export growth was mainly fueled by the tailwinds of expanding global free trade and globalized supply chains. Export growth has continued in recent years, even if the free trade system has turned the corner and the trend to reconsider current supply chains is spreading. If we compare the exports of major regions bound for outside the regions, we can see that ASEAN exports have accelerated since around 2016 and reached a level close to US exports in 2020 onward (**Chart 1**). On the other hand, from the import side, the US, the world's largest market, is becoming less dependent on imports from China while its dependence on ASEAN increases. This suggests that ASEAN's share of the export market is rising on the back of China's declining share (**Chart 2**).

Chart 1: Exports of key regions to outside the regions



Source: Made by MHRT based upon the IMF and the statistics of various countries.

Chart 2: US import dependence by region (imports by region/total imports)



Note: East Asia = Japan, South Korea and Taiwan
Source: Made by MHRT based upon the IMF and the statistics of various countries.

(2) Background: Global supply chain restructuring aims to break the dependence on China

ASEAN's export growth may be driven by the China factor, given that ASEAN is taking share in the US market away from China. Amid the global trend to eliminate supply chain dependence on China, firms are relocating their production bases in China to ASEAN countries (production transfer) and setting up new production bases in ASEAN instead of China (China plus one), moves that are pushing up ASEAN exports.

Looking back on past developments, China took the opportunity of its accession to the WTO in December 2001 to steer the country toward further opening up to the outside

world. In the 2000s, the number of companies expanding their business in China grew sharply, partly due to the country's abundant, low-cost labor force, and this created huge supply chains that made China the "world's factory." Nonetheless, as worker costs rose in tandem with China's economic growth, more companies started to consider dispersing their production bases concentrated in China.

The decentralization of production from China accelerated triggered by US-China trade friction that intensified in 2018-19. The introduction of additional tariffs on Chinese imports by the former US Trump administration forced companies to move their production sites for products exported to the US outside of China, and this resulted in increased attention on ASEAN as a new production base. A survey conducted by the Japan External Trade Organization (JETRO) targeting Japanese companies in 2019 showed that ASEAN, led by Vietnam, was a popular candidate as a production transfer destination in the wake of US-China trade friction (**Chart 3**).

Furthermore, it seems that after 2020 China's stringent COVID-19 policy motivated companies to eliminate their dependence on China. As the coronavirus pandemic spread in Shanghai in late March 2022 and the Chinese government locked down Shanghai to contain the infection, Taiwanese electronics manufacturing service (EMS) companies and other firms were forced to suspend operations in Shanghai. In addition to companies operating locally, many firms that procured parts and materials from China also began to experience procurement difficulties, which led many companies to revisit their supply chain policy dependent on China, not only to avoid trade friction but also to ensure stable supplies.

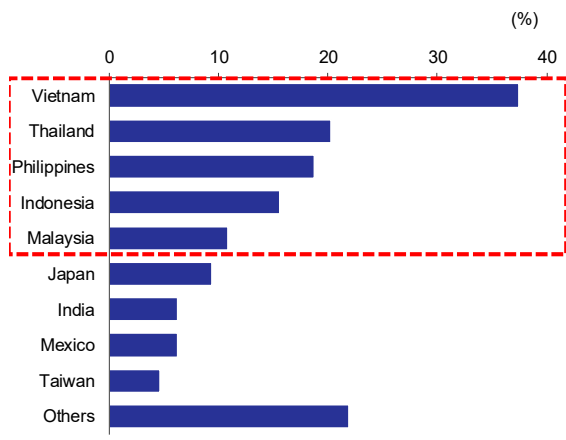
Under these circumstances, ASEAN becoming the recipient of supply chains with exports expanding has turned into a major positive factor from the perspective of ASEAN's economic growth. Meanwhile, due to the nature of global supply chains, export growth also affects the flow of imports. In order to comprehensively understand the impact of supply chain restructuring, the following section focuses on ASEAN imports.

2. ASEAN's dependence on imports from China is also deepening

(1) ASEAN's dependence on intermediate goods imports from China is remarkable

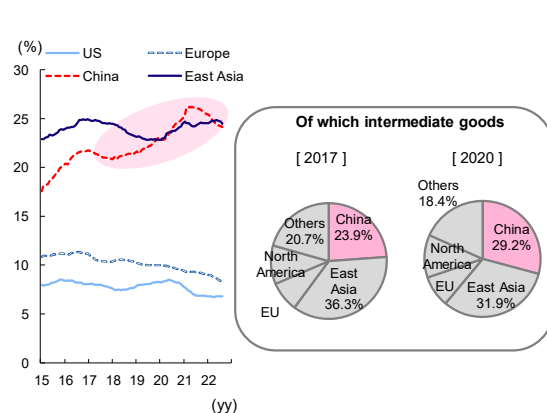
ASEAN's import dependence on China has been increasing, especially in intermediate goods, since the outbreak of US-China trade friction (**Chart 4**). This section will review item-specific trends and discuss the background.

Chart 3: Production transfer destination of Japanese companies due to US-China trade friction



Note: The survey period is August 26 to September 24, 2019. The survey targets Japanese companies that responded they will transfer production from China due to the impact of US-China trade friction. Multiple responses were allowed.
Source: Made by MHRT based upon JETRO.

Chart 4: ASEAN's import dependence on major regions (imports by region/total imports)



Note: East Asia = Japan, South Korea and Taiwan
Source: Made by MHRT based upon the IMF, RIETI-TID, and the statistics of various countries.

Let's look at some specific changes in the procurement structure. **Chart 5** shows the change in intermediate goods imports from China from an ASEAN perspective at two points in time (2017 -> 2021) before and after the rise in US-China trade friction, by industry. Each industry is plotted with import dependency (China's share of import value) on the horizontal axis and import value on the vertical axis. The deepening of dependence on China is particularly noticeable in "electronic and optical equipment," where both the degree of dependence on imports from China and the value of imports have risen sharply. Looking at a more detailed classification in **Chart 6**, integrated circuits, batteries, and smartphone components stand out, mainly for Vietnam, Malaysia, and the Philippines. It seems that in these countries, the supply chains for electronics products are expanding with greater reliance on components made in China.

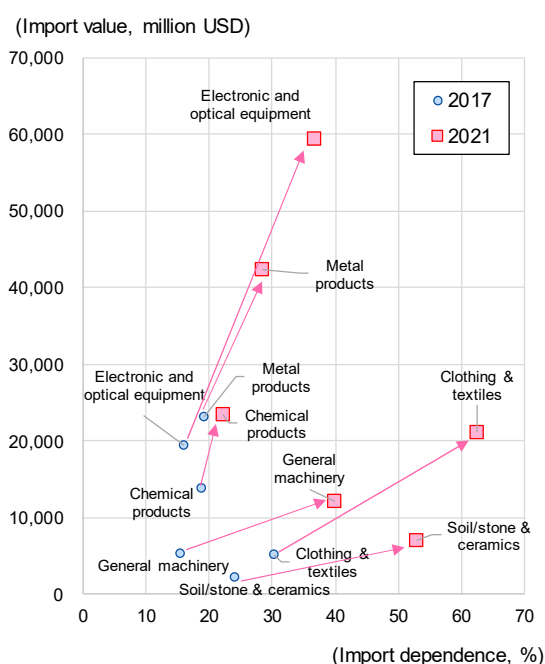
Looking at **Chart 5** again also reveals the growing dependence on China for intermediate goods in "metal products" and "clothing and textiles." In the processed goods category, iron products and metal products such as sheet metal for Thailand and cotton fabrics for Vietnam also rank among the top items of increased imports (**Chart 6**), consistent with movements by industry sector.

(2) China remains competitive in parts and components, while ASEAN's in-house production rate is inferior

This deepening dependence on China suggests that growing supply chains in ASEAN are strongly linked to Chinese component products. As China has abundant mineral and

agricultural resources, as well as a huge production capacity in capital-intensive industries such as metals and chemicals, it boasts outstanding competitiveness in material-based industries. In the machinery industry, China has an advantage over latecomer countries like Vietnam in terms of its ability to produce relatively high value-added components such as integrated circuits. Therefore, it is not easy for ASEAN to replace China's functions in the production process of these components, or upstream in the supply chain, overnight.

Chart 5: ASEAN's dependence on China (import of intermediate goods)



Source: Made by MHRT based upon ADB.

Chart 6: Intermediate goods with a noticeable rise in import value from China

Parts		Processed goods	
Country	Products	Country	Products
Vietnam	Electronic integrated circuits; processors and controllers	Indonesia	Vaccines, for human medicine
Vietnam	Electronic integrated circuits; memories	Malaysia	Petroleum oils and oils from bituminous minerals
Vietnam	Electric accumulators; lithium-ion, including separators	Thailand	Iron or non-alloy steel; flat-rolled, plated or coated with zinc
Vietnam	Electric motors and generators; parts suitable for use	Philippines	Petroleum oils and oils from bituminous minerals
Vietnam	Telephone sets and other apparatus for transmission or reception of voice, images or other data; parts	Vietnam	Ceramic sinks, wash basins and similar sanitary fixtures; of porcelain or china
Vietnam	Reception and transmission apparatus; for use with radios, televisions, radar, etc.	Philippines	Vaccines, for human medicine
Philippines	Electronic integrated circuits	Thailand	Vaccines, for human medicine
Malaysia	Electronic integrated circuits; processors and controllers	Vietnam	Fabrics
Vietnam	Circuits; printed	Malaysia	Vaccines, for human medicine
Malaysia	Electronic integrated circuits	Thailand	Iron or non-alloy steel; flat-rolled, painted, varnished or coated with plastics
Vietnam	Electronic integrated circuits; memories	Vietnam	Lamps and light fittings; electric
Vietnam	Electrical apparatus for switching or protecting electrical circuits	Vietnam	Cotton fabrics
Malaysia	Circuits; printed	Vietnam	Vaccines, for human medicine
Malaysia	Electronic integrated circuits	Vietnam	Aluminum, plates, sheets, alloys
Philippines	Telephone sets and other apparatus for transmission or reception of voice, images or other data	Vietnam	Mountings, fittings and similar articles, suitable for furniture of base metal
Indonesia	Telephone sets and other apparatus for transmission or reception of voice, images or other data; parts	Thailand	Copper; refined, unwrought, cathodes and sections of cathodes
Vietnam	Electrical apparatus; photosensitive, light-emitting diodes (LED)	Vietnam	Plastics; sheets, film, other flat shapes thereof, self-adhesive
Vietnam	Electronic integrated circuits	Vietnam	Seat (wooden); parts
Vietnam	Machinery; parts and accessories of automatic data processing machines	Indonesia	Petroleum oils and oils from bituminous minerals
Thailand	Circuits; printed		

Note: The classification of "parts" and "processed products" is based on RIETI-TID.
Source: Made by MHRT based upon UN Comtrade.

On the other hand, downstream production processes such as assembly that require low-cost labor are now more attractive in ASEAN due to lower wages than in China, and this is causing asymmetry in the supply chains where the downstream is more likely than the upstream to flow into ASEAN. This asymmetry is thought to be the background of ASEAN's deepening dependence on Chinese-made components observed in recent years. In addition, from a geographical point of view, it is rational to organize supply chains based on proximity and optimize the transportation routes of parts and materials.¹ ASEAN's

¹ The trend toward the regionalization of supply chains is particularly pronounced in the automotive industry, which is heavy and subject to high transportation costs. For more information, refer to Mizuho Economic Outlook & Analysis, "Automotive industry suffers from parts procurement" (October 1, 2021).

geographical proximity to China has always placed ASEAN under conditions that are likely to strengthen its interdependence with China.

In sum, supply chain restructuring will incorporate ASEAN into the wide supply chains of Asia (“Factory Asia”) with China at its core, and in ASEAN, which is located downstream in the supply chains, China’s presence in the upstream will become stronger together with export growth outside the region. ASEAN’s emergence as an export hub and its growing ties to global supply chains are inextricably linked to its deepening dependence on China.

3. For ASEAN, becoming an export base following supply chain restructuring entails both growth opportunities and risks

As we have seen, ASEAN’s position in the global export market is improving thanks to increasing trade volumes throughout the ASEAN region driven by supply chain restructuring. There is no doubt that expanding exports are an important “opportunity” in terms of ASEAN’s economic development.

It must be noted, however, that the “risk” of inflows from abroad has also grown at the same time. As we pointed out in Section 2, ASEAN’s dependence on China is rising, which suggests that supply chain restructuring has not fundamentally resolved the original issue of production concentration in China. To make things worse, it seems that ASEAN’s exposure to China risk has become even more pronounced. We describe in the following section the risks that are thought to be increasing.

(1) Risk of instability in procuring parts and materials dependent on China

First, we can point to the risk of stagnation in the procurement of parts and materials from China. ASEAN’s growing dependence on China in the upstream of production processes has increased the risk of supply chains bogging down in the event of stagnating Chinese supplies. The risk of supply disruptions caused by the pandemic is seen by some to have receded with the Chinese government’s decision to relax its zero-COVID 19 policy in December 2022. However, the risk of supply instability from China due to geopolitical and other factors suggests the need for continued vigilance.

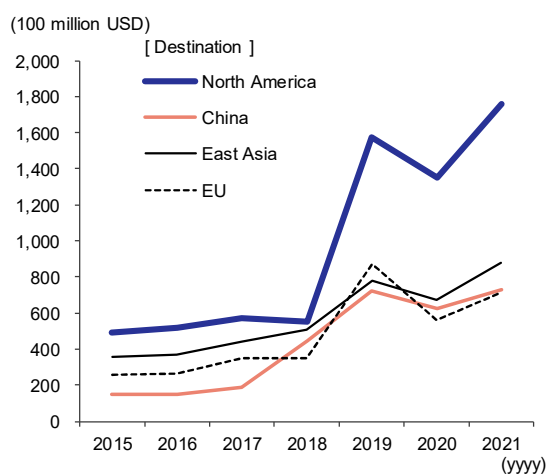
(2) Risk of ASEAN being affected by Western countries’ moves to exclude China

Second, there are concerns that moves by Western countries to exclude China could have a negative impact on ASEAN. The US is the fastest-growing destination for final goods exports from ASEAN (**Chart 7**). In addition, China has a large presence in the upstream supply chain for products exported from ASEAN. In other words, supply chains where components are transported from China to ASEAN to undergo final processing

before being shipped to the US market have expanded under US-China trade friction.

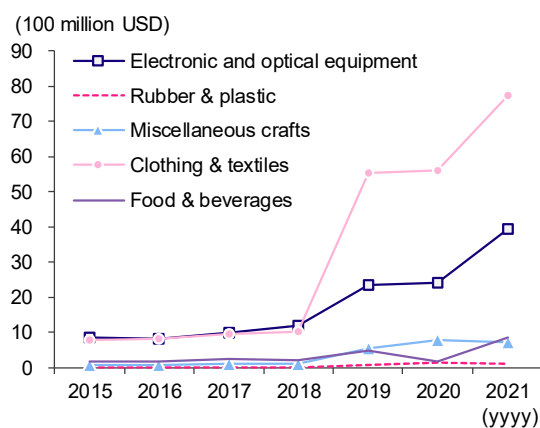
Chart 8 shows the estimated value of China’s exports to ASEAN (intermediate goods) whose final demand destination is the United States, and the change in value by industry. Comparing 2021 to 2017, the year before the outbreak of trade friction, we see a marked increase of about eight times higher in “clothing and textiles” and roughly four time higher in “electronic and optical equipment.” By country, Vietnam, which has been the recipient of a large number of production shifts from China, made a large contribution.

Chart 7: ASEAN’s final goods exports (by region)



Source: Made by MHRT based upon ADB.

Chart 8: China’s intermediate goods exports to ASEAN (of which final demand is in the US)



Note: Calculated based on Wang et al. (2013).
Source: Made by MHRT based upon ADB.

However, the structure that relies on China upstream in the supply chains may create problems in the future. Against the backdrop of the growing awareness of the threat of China and human rights issues, the US Biden administration declared it would exclude China from its supply chains. While the current administration is more moderate in its policies than the previous Trump administration, there are already moves to separate the US market from Chinese products, including components. For example, the Uyghur Forced Labor Prevention Law, which went into effect in June 2022, prohibits, in principle, the import of products from the Xinjiang Uyghur Autonomous Region in China. In December 2022, the Senate Finance Committee sent letters to eight major global automakers, identifying “50 international parts and auto manufacturers that source parts produced under forced labor conditions in Xinjiang, China. Cars containing such parts should not be sold in the United States.” In the light of the US government’s stance, US companies are also moving to eliminate Chinese products, with Dell announcing in January of this year that it aims to stop using Chinese semiconductors by 2024.

Similar to the US, the European Commission enacted a bill in September 2022 that prohibits the sale, etc. within the EU region of goods for which forced labor has been confirmed in the manufacturing process. The bill is thought to have been drafted taking into account human rights abuses in China.

If the movement to eliminate China becomes more radical in the US and Europe going forward, production bases in ASEAN may be forced to change their component suppliers. In that case, costs may increase following supplier changes because of the difficulty of procuring from countries other than China. At the same time, we cannot deny the possibility of the worst case scenario where ASEAN products may be totally excluded from Western markets if they fail to respond to changes in procurement sources.

4. ASEAN is expected to remain an export base, but it faces the challenge of increasing the in-house production rate of components

(1) The trend of ASEAN becoming an export base will continue with further growth opportunities expected

As global interest in reassessing supply chain dependence on China and decentralizing supply chains expands, it is highly likely that the trend of supply chain restructuring will continue. Accordingly, the current trend of ASEAN becoming an export base is also expected to continue, and growth opportunities in ASEAN will likely swell.

Among developed countries, supply chain decentralization has already become a common policy. In a policy paper released for the G7 meeting in March 2021, the OECD cited supply chain disruptions caused by natural disasters and COVID-19, as well as heightened geopolitical risks due to the concentration of rare metal and semiconductor suppliers, and recommended that global supply chains be made more resilient through the decentralization of production sites.²

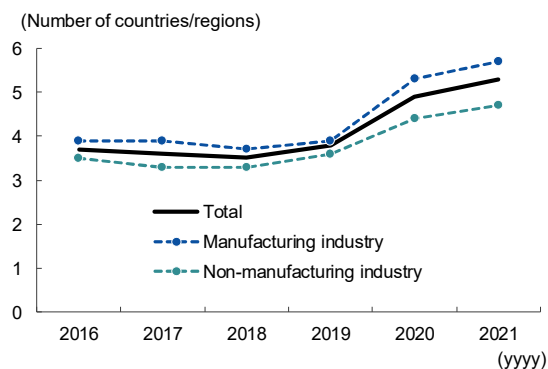
Specific policy examples drawing people's attention currently include the Indo-Pacific Strategy announced by the US in February 2022. It proposed to strengthen cooperation in the Indo-Pacific region, including ASEAN countries, Japan, Australia, and India, with a focus on competition with China. As part of this effort, the United States launched the Indo-Pacific Economic Framework for Prosperity (IPEF) in May of the same year to expand economic partnerships in Asia based on US principles. The Canadian government also announced its own strategy for the Indo-Pacific in November 2022, in line with the US, and plans to contribute approximately C\$2.3 billion (about 236.9 billion yen) to the region over the next five years.³

² OECD (2021), "Fostering Economic Resilience in a World of Open and Integrated Markets."

³ <https://www.international.gc.ca/transparency-transparence/indo-pacific-indo-pacificue/>

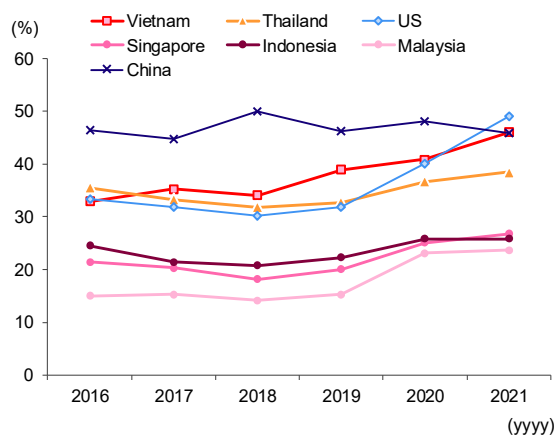
In parallel, company interest in supply chain decentralization remains strong. According to a survey of Japanese companies conducted by JETRO in 2021⁴ (“2021 JETRO Survey on Business Conditions of Japanese Companies Operating Overseas (Asia and Oceania)”), the average number of countries where Japanese companies are expanding has increased since 2020 for both manufacturing and non-manufacturing sectors (**Chart 9**). The need for firms to have more operation bases and suppliers seems to be increasing after the experience of chaotic supply chain disruptions caused by the pandemic. As potential business expansion destinations, China’s popularity has declined slightly while ASEAN countries, led by Vietnam, are attracting more attention (**Chart 10**). In addition, the American Chamber of Commerce in Singapore surveyed 149 US companies based in ASEAN in August 2022,⁵ and according to the survey results, 89% of companies responded that “trade and investment prospects in the ASEAN region over the next five years will expand,” a sudden jump from 2018-2021 when the percentage was about 75%. The Chamber said the IPEF concept mentioned above may be driving the expectations of US companies toward ASEAN.

Chart 9: Average number of countries/regions where Japanese companies are expanding their business



Note: The survey covered 1,871 Japanese companies that responded they “plan to expand overseas offices in the future” or “would like to newly expand overseas in the future,” and indicated the functions they plan to expand. Calculated by dividing the total number of responding countries/regions by the number of responses.
Source: Made by MHRT based upon JETRO.

Chart 10: Countries where Japanese companies are expanding



Note: The survey covered 1,871 Japanese companies that responded they “plan to expand overseas offices in the future” or “would like to newly expand overseas in the future,” and indicated the functions they plan to expand.
Source: Made by MHRT based upon JETRO.

⁴ The survey period is November 4 to December 7, 2021.

⁵ The American Chamber of Commerce in Singapore (2022), “2022 ASEAN Business Outlook Survey.”

(2) ASEAN must increase the in-house production rates of parts and materials to avoid risks associated with supply chain restructuring

However, even if production bases shift to ASEAN, as long as the region continues to rely on components of Chinese origin, it will not be able to eliminate the risks of supply instability and trade friction with Western nations, as pointed out in Section 3. On the ASEAN side, going a step further, supply chain management to address bottlenecks hidden upstream in the production process is essential.⁶ To procure components from sources other than China, companies may rely on developed countries such as Japan and the US, but this would halve the growth opportunities anticipated from supply chain restructuring. Rather, the challenge in the future is for ASEAN to increase the in-house production rate of components.

Reference

Refer to the original Japanese report by clicking the URL below for the reference material.
<https://www.mizuho-rt.co.jp/publication/report/2023/pdf/insight-as230222.pdf>

⁶ In recent years, with the development of AI and other technologies, there are now services that can grasp the entire supply chain, including secondary suppliers and beyond.