

**Impact of COVID-19  
on Supply Chains in the ASEAN Plus Three Region,  
with Policy Recommendations**

**ASEAN Plus Three Joint Study**

**- Sub-report of Japan -**

**Japan External Trade Organization (JETRO)**

**November 2020**

Neither this publication nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of JETRO. All information in this publication is verified to the best of the writers' and the publisher's ability. However, JETRO does not accept responsibilities for any loss arising from reliance on it.

## Contents

|  |    |
|--|----|
| Summary .....  | 4  |
| 1. Introduction.....   | 6  |
| 2. Policy Environment amid the COVID-19 Pandemic in the APT Region ..... | 15 |
| 3. Data-gathering and Methodology .....                                  | 20 |
| 4. Empirical Analysis .....  | 20 |
| 5. Summary of Key Findings .....   | 24 |
| 6. Policy Recommendations.....   | 25 |
| 7. Conclusion .....  | 34 |

## Summary

Japanese firms have expanded their business and supply chains in Asia, such as in the Association of Southeast Asian Nations (ASEAN), China, South Korea, and India. Many data points reveal that ASEAN Plus Three (hereinafter referred to as “APT”) with India is a critically important region for Japanese business. However, it is also true that Japanese firms in this region have been affected because of COVID-related matters. In the wake of difficulty in procuring raw materials and parts during the first quarter of 2020 and against the backdrop of economic deterioration in the region, far-reaching ramifications have occurred, especially for Japanese firms targeting the regional market.

In response to this situation, through interviews and questionnaire surveys, JETRO’s sub-report analyzes what COVID-19-related challenges Japanese firms have faced regarding supply chain management and what has caused those challenges. Based on the analysis, JETRO proposes policy recommendations as necessary for forthcoming external shocks similar to COVID-19 that could hinder supply chain connectivity (hereinafter referred to as “SCC”). The effects of COVID-19 as observed in the Japanese manufacturing industry in China, South Korea, and ASEAN are summarized as follows: (1) reduced orders due to economic contraction causing a decrease in production by final goods manufacturers, with the stoppage of production having an impact on suppliers; (2) production stoppage due to movement & travel restrictions and factory closures as imposed by governments and local authorities; (3) production efficiency declines due to infection control measures at factories; (4) employees being unable to commute due to the suspension of public transportation; (5) suspension of operations by suppliers handling raw materials and parts; (6) transport cost increases due to flight reductions, difficulties in delivery arrangements, and difficulties in importing & exporting due to flight suspension; and (7) increase in length of time spent on customs clearance and the movement of goods due to the minimization of numbers of customs officers.

It is most important that governments take infection prevention measures placing first priority on human life. At the same time, companies expect the government to take policies and measures that do not hinder and deteriorate the supply chain. From the perspective of maintaining SCC in any forthcoming external shock similar to COVID-19, the following policy-related issues and recommendations are elucidated. Such issues and recommendations are classified on a short-term and medium-/long-term basis.

The short-term policy issues and related main policy recommendations include: (1) restrictive measures that do not hinder supply chains in the region as much as possible; (2) continuous operation of customs as much as possible on the premise of implementing infection prevention measures (i.e., by having authorities conduct operations remotely); (3) special entry permits for necessary foreign engineers and managers; and (4) temporary liberalization of cross-border services by foreign companies.

Mid- to long-term issues and related main policy recommendations include: (1) digitization of trade and administrative documents, such as certificates of origin, with further penetration of the self-certification system; (2) digitalization of customs procedures; (3) enlightenment

activities and public-private partnerships for the digitalization of international trade and logistics processes, and the establishment of and collaboration for a platform for trade information; (4) expanding the Authorized Economic Operator (AEO) system and promoting mutual certification, making permanent the flexible measures to accept certificates of origin, promoting further trade facilitation measures, and reducing non-tariff barriers; (5) advancement of production and logistics through the use of digital technology and the formation of unified rules to facilitate data distribution within the region; (6) Technical and Vocational Education and Training (TVET) for the development of human resources and management toward allowing such to play a leading role in the digitalization era; (7) realization of supply chain resilience; and (8) promoting liberalization, standardizing rules, and reducing uncertainty by cooperating in the region-wide, early conclusion of Regional Comprehensive Economic Partnerships (RCEPs), moving forward the mega-FTAs.

## 1. Introduction

This sub-report aims to analyze the SCC of Japanese companies operating in the APT region, including those operating within ASEAN, Japan, China, and South Korea, along with the impact of COVID-19 on the supply chains in such regions. (Please see following “Background of this sub-report.”) The analysis is being made toward considering policy recommendations to avoid similar risks that could occur in the future (risks due to cases involving restrictions on the movement of people and goods). This paper first describes the operations of Japanese companies in the APT region, the actual situation of the supply chain, and the status and issues as pertaining to SCC before COVID-19. Then, based on interviews and surveys with Japanese companies in the APT region, we look at the impact of COVID-19 on Japanese companies and finally conclude the policy implications.

### Background of this sub-report

At the 21st ASEAN Economic Ministers (AEM) Plus Three Consultations held in August 2018, the APT Ministers agreed to carry out a joint study on “10+3 Cooperation for the Improvement of Supply Chain Connectivity (SCC).” ASEAN and the APT countries (i.e., China, Japan, and South Korea, or also known as “CJK”) announced the launch of this joint study during the sidelines of the 21st APT Summit in November 2018 and appointed research institutions such as the Economic Research Institute for ASEAN and East Asia (ERIA), Japan External Trade Organization (JETRO), Chinese Academy of International Trade and Economic Cooperation (CAITEC), and Korea Institute for International Economic Policy (KIEP), respectively, to undertake the study.

Early 2020 saw the beginning of the COVID-19 pandemic, disrupting supply chains, ways of life, and working norms in the APT countries. Recognizing the need to address the challenges posed by COVID-19, a special APT summit on COVID-19 was convened via video conference on April 14, 2020. The Joint Statement of the Special ASEAN Plus Three Summit on Coronavirus Disease 2019 (COVID-19) highlighted the need for the APT countries to strengthen the resilience and sustainability of regional supply chains and to maintain SCC in this time of crisis and uncertainty.

In light of the above, the 35th SEOM Plus Three Consultations on April 28, 2020 noted the urgency to move the joint study forward and China’s proposal for the joint study to take into account COVID-19 developments. On June 5, 2020, the four RIs, facilitated by the ASEAN Secretariat, agreed on the revised Terms of Reference (TOR). Based on the TOR, the objectives of the joint study are to: (1) provide insights on the resilience of supply chains in the region in the face of uncertainties such as COVID-19; and (2) put forward practical policy suggestions on improving supply chain resilience and the connectivity of the APT region, to be submitted to the AEM Plus Three Consultations and to the APT summit.

After five months of hard work, the four RIs completed the joint study. The public version of the joint study report is available on this website below.

[https://asean.org/?static\\_post=joint-study-103-cooperation-improvement-supply-chain-connectivity](https://asean.org/?static_post=joint-study-103-cooperation-improvement-supply-chain-connectivity)

This sub-report written by JETRO, based on available information and data as of September 2020, is part of the joint study report, submitted to the AEM Plus Three Consultations and to the APT summit in November 2020.

## 1.1 Activities and supply chains of Japanese companies in the APT region

In this section, we first confirm the status of the expansion of Japanese companies into the APT region, as a precondition for considering the impact of COVID-19 on Japanese companies in the APT region and for policy recommendations for the future. We also confirm the current status of the supply chain from the perspectives of both the procurement of parts and raw materials and exports. Additionally, we consider differences in supply chains according to location and industry, as well as the impact and risk-consciousness of supply chain segmentation as experienced by Japanese companies prior to COVID-19.

### 1.1.1 APT region: The most-important region for Japanese companies

Japanese companies are broadly rooted and have expanded their business into Asian markets, such as China, South Korea, ASEAN, and India. According to the *Basic Survey of Overseas Business Activities* by Japan's Ministry of Economy, Trade and Industry (METI), the number of overseas affiliates of Japanese companies increased by 48.6% over the past decade from FY2008 to FY2018 (Table 1). The number of overseas affiliates in the APT region rose 49.4% over the same period. In particular, expansion into ASEAN has increased by 82.8%, accounting for 30% of the total. ASEAN has become the largest share by country/region, surpassing that of Mainland China. In terms of the manufacturing industry, Mainland China has the top share, accounting for about 30% of the total. ASEAN has almost the same share, but when it comes to the growth rate from FY2008, the rate reaches 65.7%, which is higher than that of Mainland China (30.2%). India's share is small, but the number of overseas affiliates has tripled in 10 years.

**Table 1: Number of overseas affiliates of Japanese companies**

|                  | FY2008 |         |        |       | FY2018 |         |        |       | FY18/<br>FY08 |
|------------------|--------|---------|--------|-------|--------|---------|--------|-------|---------------|
|                  | Mfg    | Non-Mfg | Total  | Share | Mfg    | Non-Mfg | Total  | Share |               |
| APT Area         | 5,954  | 5,407   | 11,361 | 64.3  | 8,405  | 8,570   | 16,975 | 64.7  | 49.4          |
| China (Mainland) | 2,917  | 2,213   | 5,130  | 29.1  | 3,799  | 2,735   | 6,534  | 24.9  | 27.4          |
| South Korea      | 250    | 278     | 528    | 3.0   | 342    | 477     | 819    | 3.1   | 55.1          |
| Hong Kong, China | 240    | 677     | 917    | 5.2   | 205    | 1,015   | 1,220  | 4.7   | 33.0          |
| Taiwan           | 335    | 380     | 715    | 4.0   | 393    | 568     | 961    | 3.7   | 34.4          |
| ASEAN            | 2,212  | 1,859   | 4,071  | 23.1  | 3,666  | 3,775   | 7,441  | 28.4  | 82.8          |
| India            | 123    | 96      | 219    | 1.2   | 293    | 309     | 602    | 2.3   | 174.9         |
| Oceania          | 99     | 336     | 435    | 2.5   | 92     | 473     | 565    | 2.2   | 29.9          |
| U.S.             | 1,042  | 1,620   | 2,662  | 15.1  | 1,090  | 1,963   | 3,053  | 11.6  | 14.7          |
| EU               | 751    | 1,609   | 2,360  | 13.4  | 807    | 1,852   | 2,659  | 10.1  | 12.7          |
| All areas        | 8,147  | 9,511   | 17,658 | 100.0 | 11,344 | 14,889  | 26,233 | 100.0 | 48.6          |

**Note:** This paper compares the FY2018 results of the latest statistics published (as of June 2020) with the FY2008 results of statistics that can be traced back to the same classification by country, region, and industry.

**Source:** METI, *Basic Survey of Overseas Business Activities*

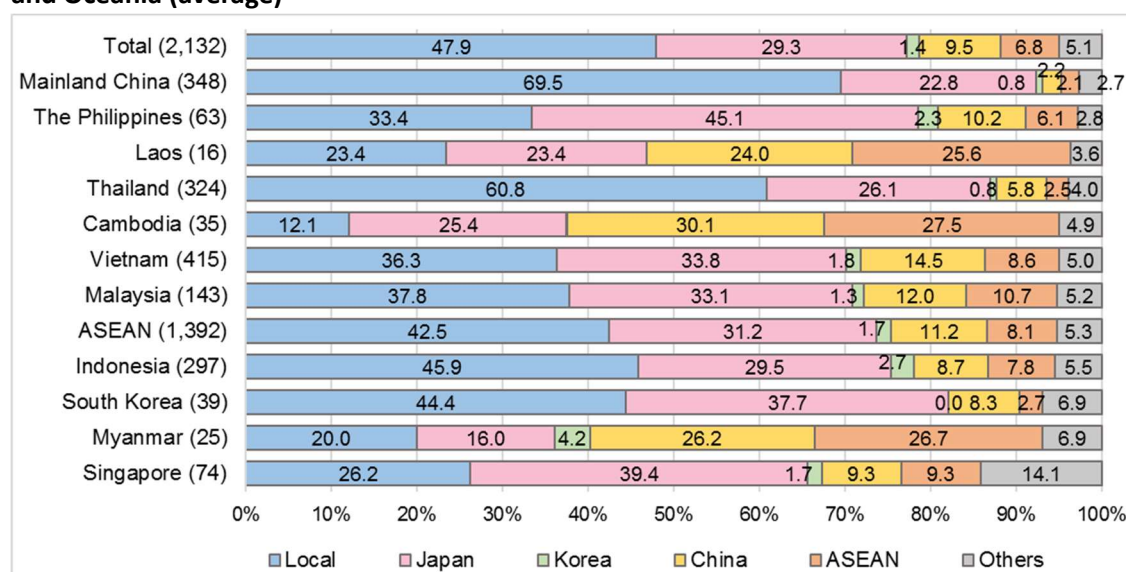
### 1.1.2 Japanese companies in Asia: Procuring more than 80% of their raw materials and parts from the APT region, on average

Currently, the procurement network of the Japanese companies that have expanded into ASEAN, China, and South Korea is centered on Asia. According to the *2019 JETRO Survey on*

*Business Conditions of Japanese Companies in Asia and Oceania* (hereinafter referred to as “JETRO Survey (2019)”), which is a questionnaire-based survey of Japanese-affiliated companies operating in 20 countries and districts in Asia and Oceania, the majority of raw materials and parts suppliers for Japanese companies operating in the Asia-Oceania region (manufacturers only) are located in the APT region. The percentage of procurement from the APT region (the sum of local, Japan, China, South Korea, and ASEAN) has reached to more than 90% in countries/districts other than Sri Lanka, Singapore, and New Zealand. The percentage of procurement from the APT region in the three countries is over 85%. (Figure 1)<sup>①</sup>

On the other hand, if we look at the proportion of the export destinations of Japanese companies, we find that the APT region accounts for 75% among Japanese companies in South Korea and Thailand, with nearly 100% among Japanese companies in Laos and Cambodia. In this way, the APT region is an important market as an export destination. In addition, as Japanese companies have expanded into India in recent years, supply chains linking the East Asian Regional Comprehensive Economic Partnership (RCEP) region, including India, Australia, and New Zealand, in addition to the APT region, are expected to deepen in the future. (Figure 2)

**Figure 1: Breakdown of raw materials and suppliers for Japanese manufacturing in Asia and Oceania (average)**



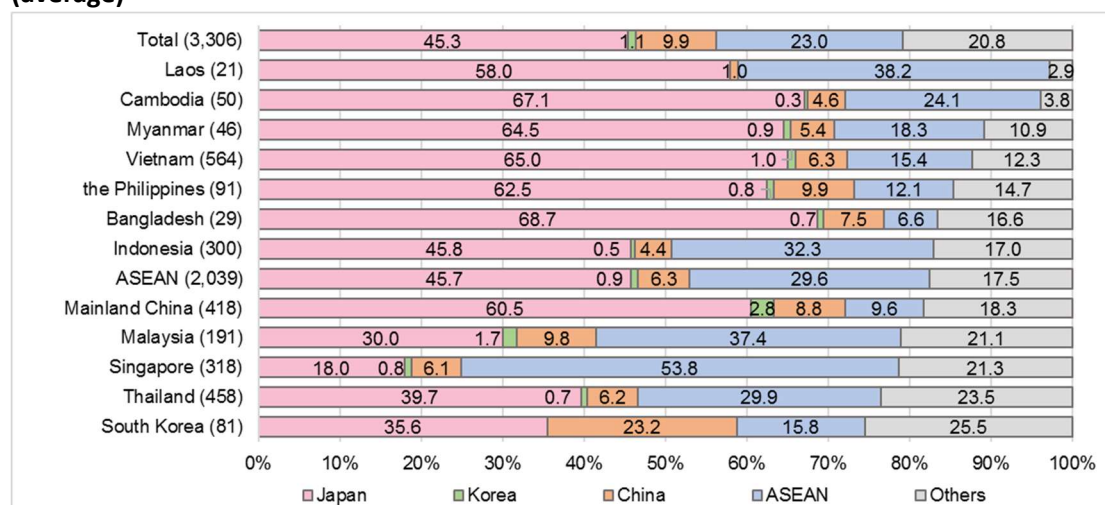
**Note:** Figures in (n) are valid responses. China includes Mainland China, Hong Kong, Macau, and Taiwan.

**Source:** JETRO Survey (2019)

<sup>①</sup> The target countries and districts are South Korea, Mainland China, Hong Kong, Macau, Taiwan, Thailand, Malaysia, Indonesia, Singapore, the Philippines, Vietnam, Cambodia, Laos, Myanmar, India, Bangladesh, Sri Lanka, Pakistan, Australia, and New Zealand. The survey was conducted from August to September 2019, with 5,697 companies responding.



**Figure 2: Breakdown of the export destinations of Japanese companies in Asia and Oceania (average)**



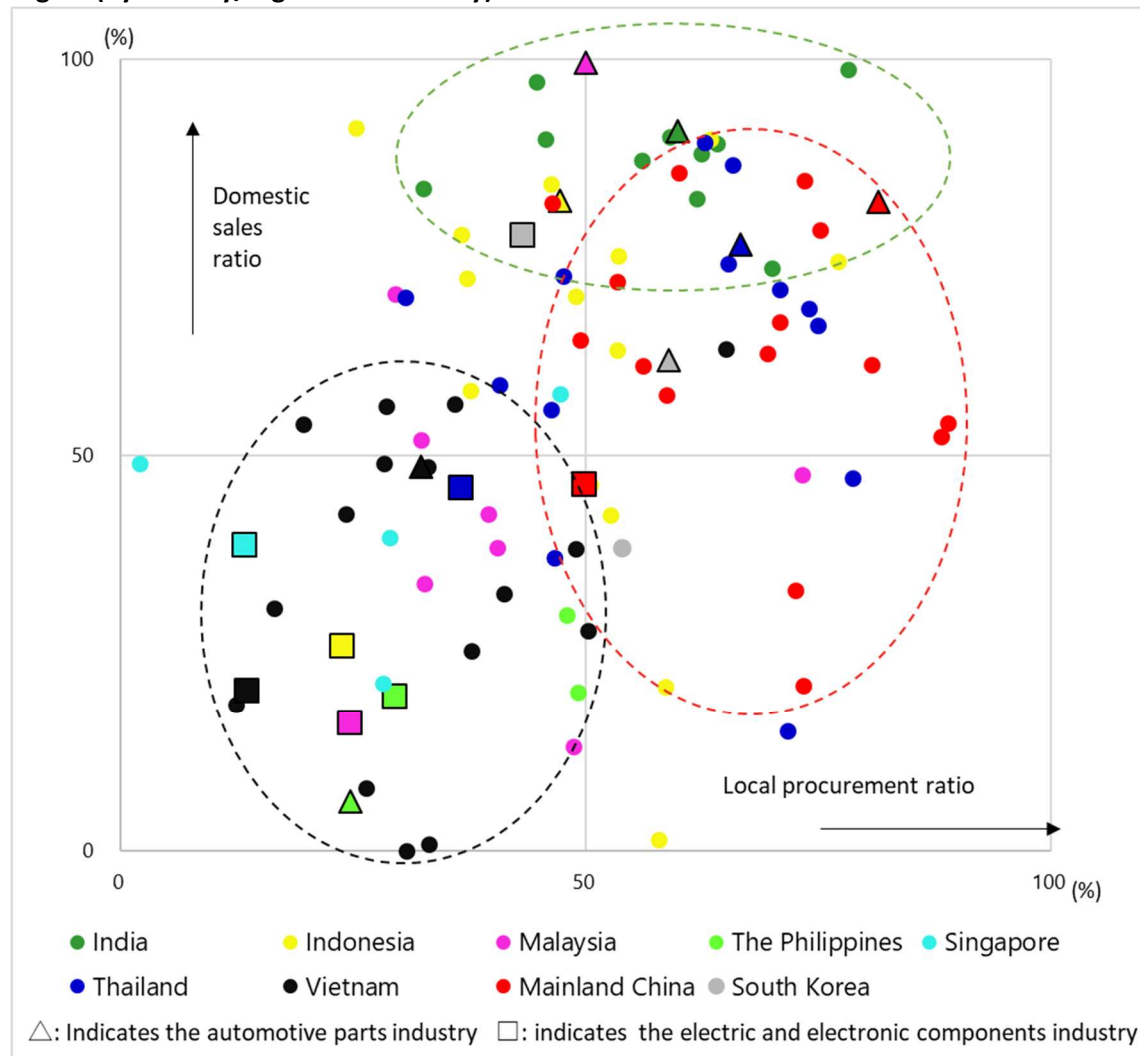
**Note:** Figures in (n) are valid responses. China includes Mainland China, Hong Kong, Macau, and Taiwan.

**Source:** JETRO Survey (2019)

While the APT region is important for international production networks including the procurement, production, and sales chains of Japanese companies, the situation of the supply chain built in this region is rich in variety. The situation differs based on the characteristics and industries of each country and region. Therefore, it is important to keep in mind that even if we consider the impact of various shocks, such as COVID-19, on the supply chain, the situation differs completely by country and industry.

JETRO Survey (2019) plots the ratio of the local procurement of raw materials and parts in the manufacturing industry and the ratio of domestic sales to total sales by industry in each country and district. If we look at primary suppliers and primary customers, we can see how much they depend on their non-domestic supply chains (Figure 3).

**Figure 3: Local procurement rate and domestic sales ratio of Japanese affiliates in each region (by country/region and industry)**



**Note:** Industries<sup>①</sup> with more than five valid responses are plotted by country and region. The number of valid responses was 1,780 companies for the procurement ratio and 1,804 companies for the sales ratio (only companies that completed all the breakdowns of sales regions were selected).

**Source:** JETRO Survey (2019)

For example, in Vietnam (in black), many industries tend to be concentrated in the lower left, which indicates that both the local procurement rate and the domestic sales ratio are low. Therefore, the procurement and sales network of Japanese companies in Vietnam is highly dependent on non-domestic networks. On the other hand, Mainland China (red) tends to be plotted on the right side, which shows that China's local procurement rate is high in all industries because of its industrial agglomeration. The domestic sales ratio varies by industry, and the level of dependence on non-domestic markets also varies by industry. However, the impact of disruptions on supply chains within Mainland China could be relatively large due to

<sup>①</sup> Automobiles/motorcycles, automotive parts and components, transport equipment parts (railway vehicles/ships/aircraft/transport vehicles), electric and electronic equipment, electric and electronic components, general-purpose and production equipment, precision equipment, medical equipment, metal products, steel, non-ferrous metals, pharmaceuticals, chemicals/petroleum products, rubber products, plastic products, ceramics/clay, paper/pulp, printing, wood products, furniture, apparel/textiles, fibers, food/agricultural and fishery products

high dependence on domestic suppliers. Among Japanese companies in India (green), the local procurement rate varies depending on the industry, but it is characterized by a high domestic sales ratio overall. As a result, the shrinkage of the domestic market is likely to have a much-greater adverse impact than the impact of the disruption of the domestic procurement network.<sup>①</sup>

Procurement and sales networks differ across industries as well. In Figure 3, □ indicates the electric and electronic components industry while △ indicates the automotive parts industry. □, which shows the electric and electronic components industry, tends to gather at the lower left of the chart, overall. This shows that the electric and electronic components industries have stronger connectivity with non-domestic supply chains than other industries. The large number of duty-free items under the WTO Information Technology Agreement (ITA) and the physically small volume of goods (high value of unit price, lower logistics cost in the share of cost breakdowns) enable the industry to reduce trade costs and construct the cross-border division of labor.

JETRO conducted in-depth interviews with Japanese-affiliated logistics companies that handle electronic components. According to these companies, a typical logistics system is employed in which electronic components such as semiconductors and integrated circuit systems produced in Japan, ASEAN, and other countries are collected in warehouses in Singapore and repackaged and shipped in accordance with the needs of the delivery destination (i.e., a consolidation service). "Local production for local consumption" is not necessarily considered important for the electric and electronic components industry. The concept of a horizontal division of labor is oriented. However, if COVID-19 or another shock occurs in any one country in the supply chain, it will have major impact on the same industry in other countries that are linked by the supply chain. In this sense, COVID-19 is likely to have major impact on the industry's global supply chain.

On the other hand, △ marks plotted on Figure 3, which shows the automotive parts industry, are gathered at the upper right. Compared to other industries, both the local procurement rate and the domestic sales ratio tend to be higher. For example, the domestic sales ratio of the automotive parts industry in Malaysia has reached 99.6%, which is unusually high compared to other industries domestically. In fact, Japanese automotive parts manufacturers in Malaysia are not aiming for markets in other countries, but are producing for domestic automakers. In Malaysia and other countries' automobile industries, governments tend to implement policies that force the increase of the local procurement rate or that use para-tariff measures, and this is one factor behind the formation of supply chains that differ from those of the electric and electronic components industries. Due to low dependence on non-domestic procurement and export sales, the impact of factory shutdowns and other measures in a certain country on other countries may differ from other industries.<sup>②</sup>

---

<sup>①</sup> As the results of this survey are available only to primary suppliers, even though a high proportion of Japanese companies in Mainland China procure locally, it is possible that suppliers purchase from outside Mainland China. In recent cases, even if China's electronic equipment manufacturers did not procure from the U.S., parts suppliers did procure high-performance semiconductors and other products from the U.S. As a result, the U.S. ban on the supply of certain manufacturers has had major impact.

<sup>②</sup> However, there were some cases in which production in the Thai automotive parts industry was affected by the shutdown of a plant in China in response to COVID-19. Attention should be paid to the breadth of the materials industry that supports the automobile industry and the linkage with the global supply chain.

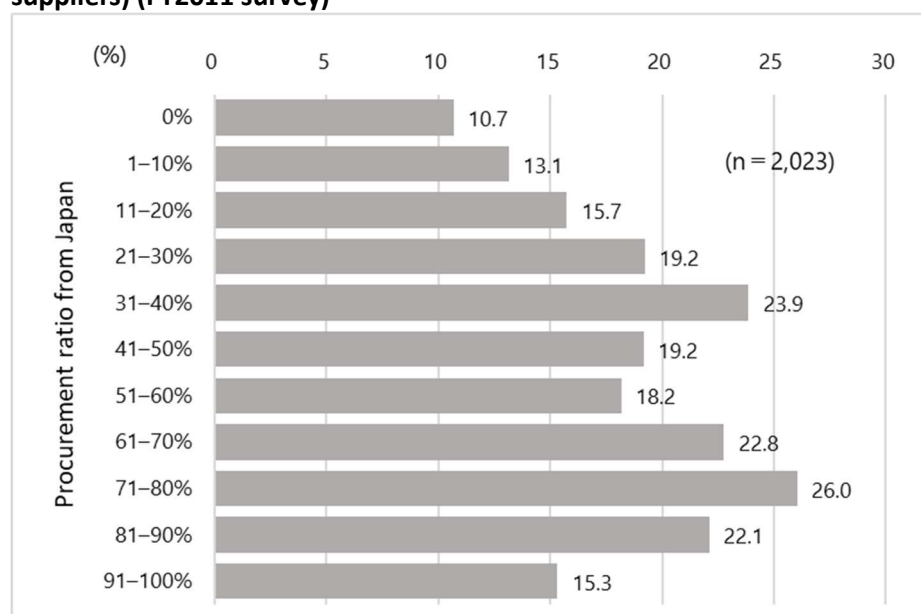
As mentioned above, the form of the supply chain differs depending on location and industry. Therefore, it is important to consider how much domestic and foreign industries would be affected prior to introducing domestic lockdown measures. It is necessary to thoroughly investigate and understand the status of the supply chain in advance.

### 1.1.3 Experience in supply chain disruptions as caused by the 2011 Great East Japan Earthquake and by flooding in Thailand

In March 2011, Japanese companies were given a crash-course experience in supply chain disruptions due to the 2011 Great East Japan Earthquake and the major flooding in Thailand that occurred between August and December of the same year. Therefore, they understood the risks of the overconcentration of their suppliers. A survey conducted from August to September 2011 asked about the impact of the 2011 Great East Japan Earthquake on the business of Japanese companies operating in Asia/Oceania. Regarding this question, when we look at the proportion of Japanese suppliers involved in raw materials and parts and how much impact such companies incurred due to the 2011 Great East Japan Earthquake, the more dependent companies were on procurement in Japan, the more seriously they were affected (Figure 4).

The concentration of production areas, suppliers, and customers might be reasonable in terms of cost and efficiency, but such a system is vulnerable to natural disasters such as earthquakes and floods. Since then, Japanese companies have become constantly aware of the introduction of business continuity plans (BCPs) and the diversification of supply chains.

**Figure 4: Percentage of companies that were "Seriously affected" by the 2011 Great East Japan Earthquake (as per the proportion of "Japan" in terms of raw material and parts suppliers) (FY2011 survey)**



**Note:** Only companies that responded to questions regarding suppliers of raw materials and parts were selected (manufacturing only).

**Source:** 2011 JETRO Survey on Business Conditions of Japanese Companies in Asia and Oceania

## **1.2 Situation of SCC before COVID-19 and the issues as seen from the perspective of Japanese companies**

In this section, we will examine the situation of SCC before COVID-19, particularly regarding the situation and issues in terms of trade facilitation, as a basis for examining the impact of COVID-19 on SCC, in Chapters II and beyond.

### **1.2.1 SCC and trade facilitation initiatives in the APT region**

One measure for evaluating SCC in the APT region is the World Bank's Logistics Performance Indicator (LPI). Looking at the LPI in 2018, out of 160 countries worldwide, Japan ranked fifth while Singapore ranked seventh, as APT-region countries. South Korea ranked 25th, China ranked 26th, and Thailand ranked 32nd, while Vietnam ranked 39th, Malaysia ranked 41st, and Indonesia ranked 46th, all within the top 50. The Philippines (60th), Brunei (80th), Laos (82nd), Cambodia (98th), and Myanmar (137th) were ranked slightly lower, and it is expected that their performance will improve in the future.

With regard to SCC, ASEAN is aiming to build "ASEAN Economic Community (AEC) 2025." As an action plan for this, the "Comprehensive Strategic Action Program (CSAP)" stipulates the themes of "strengthening the ASEAN Goods Trade Agreement (ATIGA)" and "accelerating and deepening trade facilitation enforcement" for trade in goods. The "ASEAN Framework for Trade Facilitation (ATFF)" was adopted in 2016, and the "Strategic Action Plan for Trade Facilitation in AEC2025" was adopted at the ASEAN Economic Ministers' Meeting in September 2017, with the aim of reducing trade transaction costs by 10% by 2020 through the implementation of the action plan. Based on ATFF, ASEAN has convened the "ASEAN Trade Facilitation Joint Consultative Committee (ATF-JCC)" and various subcommittees so as to promote the following projects aimed at improving SCC.

- ASEAN Single Window (ASW)
- ASEAN Trade Repositories (ATRs)
- Reduction of non-tariff barriers (NTBs) and the development of non-tariff measures (NTM) guidelines
- ASEAN Servicing/Investment/Trade Issue Resolution Framework (ASSIST)
- ASEAN Customs Transit System (ACTS)
- Authorized Economic Operator (AEO) System
- ASEAN Seamless Trade Facilitation Indicators (ASTFI) Development
- ASEAN e-commerce (EC) work programme

### **1.2.2 Trade facilitation measures expected by Japanese companies**

JETRO Survey (2019) asked Japanese companies in ASEAN, Oceania, and South Asia about the necessity of trade facilitation measures in their respective countries of operation. According to the survey results, the percentage of companies answering that trade facilitation measures are required in the countries where they are located was high for Indonesia (96.0%), India (86.8%), Cambodia (85.1%), and others. On the other hand, Singapore (50.0%) has low demand, and it became clear that many Japanese companies already enjoy smooth trade transactions.

When we look at the details of required trade facilitation measures, "Enhancement of information on trade systems and procedures" (42.1%), "Unification of interpretations on evaluation of customs classification among port authorities and persons in charge" (33.0%),

and "Introduction and operation for available advance teaching systems" (32.8%) were ranked in the top three categories. These problems are becoming universal obstacles to Japanese companies, regardless of country. "Introduction of electronic, paperless, and sophisticated ICT systems" was ranked fourth (30.9%). Due to COVID-19, the need for the digitalization of various procedures is considered to be increasing further, and it is desirable to proceed with initiatives immediately.

On the other hand, "Improvement of logistics to ports and borders" (10.7%) saw a low response rate. This can be attributed to the fact that the development of hard infrastructure, such as ports and roads, has been progressing in each country, thanks to the assistance provided through ODA by each donor country. In addition, the items of "Establishing opportunities for consultation with port authorities and governments on the introduction and operation of trade procedures, customs clearance systems, and inspections" (11.6%) were also low. As a background, many ASEAN member states (AMSs) have already established frameworks for dialogue (e.g., chambers of commerce and industry recommendations and public-private dialogues between Japan and the AMSs) in which Japanese companies request and discuss improvements to the investment climate with the governments of their respective countries of operation.

## **2. Policy Environment amid the COVID-19 Pandemic in the APT Region**

Since January 2020, the COVID-19 pandemic has expanded in many countries in the APT region. Governments in this region, including the government of Japan, have made efforts to maintain supply chains while preventing the spreading of infections. This chapter examines what policies and measures have been adopted in each country and what effects have been incurred by Japanese companies. Since January 2020, JETRO has been conducting interviews with Japanese companies by making use of JETRO offices in China, South Korea, and in nine countries in ASEAN (excluding Brunei). We will now consider the situation further based on interviews with more than 200 companies.

### **2.1 Impact of COVID-19 on Japanese supply chains, with information on the response measures taken by the government of Japan**

The first confirmed case of COVID-19 was identified in Japan on January 15. Thereafter, infections had been contained for a while. However, the spreading of infections rebounded after late March, and the government announced a state of emergency on April 7. Thereafter, the spreading of infections was stabilized, and the state of emergency ended on May 25.

#### **2.1.1 Outline of supply chain impact in Japan**

Regarding the impact of COVID-19 on the Japanese supply chain, the operation of automobile assembly plants in Japan was affected by the suspension of operations at automotive parts plants in China, due to the lockdown at the end of January 2020. Thereafter, successful infection control measures in China made it possible to resume automotive parts production from March to April. However, Japan's automobile production declined significantly due to the state of emergency in April in Japan.

According to Tokyo Shoko Research, Ltd., "Supply chain disruption" was the largest COVID-19-related impact on SMEs, accounting for 40% of total respondents. To give an example, this pertained to "Production of construction materials having stopped in China." As a result, construction was delayed, though orders were placed with manufacturers, and "Construction could not be completed due to difficulties in procuring housing materials and thus products could not be transferred to customers." In this way, supply chain disruption affected not only the manufacturing industry but also construction and real estate. On the other hand, according to a survey published by the same company in July, the percentage of respondents (by industry category) that said "Already affected by COVID-19" in terms of business activities increased by up to more than 90% for large companies in transportation, real estate, and retail. As for small and medium-sized companies in transportation, manufacturing, and wholesale, the percentage reached more than 80%. The effects of the decrease in demand had adverse impact on a wide range of industry types.

At the time of the 2011 Great East Japan Earthquake, some Japanese companies started to take measures to mitigate the risk of supply chain disruptions, such as via stockpiling, multiple production lines, and production in multiple countries. However, COVID-19 caused the stoppage of production activities throughout the world, and the impact of demand decline made the situation more serious.

#### **2.1.2 Measures by the government of Japan to maintain supply chains**

In January 2020, so as to prevent the expansion of COVID-19, the Japanese government took protective measures at ports and airports, such as by implementing entry restrictions. In April of the same year, the government submitted the first supplementary budget of 25.6 trillion yen to the Diet for the purpose of deterring the spreading of infections and of implementing economic measures. In this context, a budget for "Develop a resilient economic structure" was drawn up, including measures to maintain the international supply chains of various companies. This includes support programs for Japanese companies expanding into the APT region, such as in the "Supporting the diversification of the global supply chain" program.

### **2.1.3 ASEAN-Japan joint initiative on economic resilience**

Regarding measures to maintain the supply chains between ASEAN and Japan, the "ASEAN-Japan Economic Ministers' Joint statement on Initiatives on Economic Resilience" was agreed on at a meeting between Japan's Minister of Economy, Trade and Industry Hiroshi Kajiyama and Vietnam's Minister of Commerce and Industry Chang Unan Ain, as an ASEAN chair of AEM, on April 17, 2020. Further, METI announced a joint declaration on April 22. The initiative affirmed the following three policies.

1. Noting that they have enhanced economic relations for almost half a century and worked very closely on various crises, from natural disasters to the 1997 Asian financial crisis, ASEAN and Japan believe that they will overcome the economic challenges brought about by the COVID-19 pandemic through continued & close collaboration.
2. While prioritizing infection prevention, they express their commitment to make utmost efforts to prevent the stagnation of economic activities by ensuring the smooth flow of goods, encouraging the use of digital technology to overcome constraints caused by recent travel restrictions, and to make their best efforts to provide essential goods to the global market as pivotal suppliers in global supply chains.
3. Aiming to build resilient supply chains that will enable businesses to achieve a better balance between both risk management and cost competitiveness, ASEAN and Japan will promote the upgrading and diversification of production bases using digital technology.

### **2.1.4 ASEAN-Japan Economic Resilience Action Plan**

Based on the "ASEAN-Japan Economic Ministers' Joint Statement on Initiatives on Economic Resilience," the "ASEAN-Japan Economic Resilience Action Plan" was agreed on and issued during the Special AEM-METI Consultations on July 29. The plan includes more than 50 projects. Initiatives related to the supply chain and SCC are as follows.

- Financial support program for strengthening overseas supply chains
- Signing of the Regional Comprehensive Economic Partnership (RCEP) Agreement in 2020
- Facilitating the operation of existing ASEAN Mutual Recognition Arrangements (MRAs)
- Supporting regional digital trade transformation in ASEAN in contribution to the promotion of existing trade platforms and other regional mechanisms, such as the: ASW, Electronic Certificate of Origin system, ASEAN Digital Integration Framework (DIF), and ASEAN Framework on Digital Data Governance
- Improving and enhancing engagement between the public-private sector through dialogue mechanisms, including the dialogue between the secretary-general of ASEAN and the Federation of Japanese Chambers of Commerce and Industry in ASEAN (FJCCIA) and the ASEAN-Japan Business Council



- Digital strategies to protect businesses as they explore opportunities in digital trade and e-commerce
- Webinar and online matching services
- Organizing online workshops on trade promotion in the context of COVID-19
- Organizing workshops for identifying necessary ASEAN rules as per the “new normal,” for contributing to the AEC Blueprint mid-term review
- Knowledge-sharing and capacity-building regarding Global Value Chains (GVCs)

## **2.2 Impact of COVID-19 on Japanese companies in the APT region**

In this section, we examine the effects of COVID-19 and governmental measures on Japanese companies in China, South Korea, and ASEAN.

### **2.2.1 Impact of COVID-19 on Japanese companies operating in China**

In December 2019, COVID-19 was reported in China. The number of new infections in China peaked in early February 2020 and trended downward thereafter. From mid-March 2020, the number of imported cases from non-domestic pathways exceeded the cases of those caused domestically, and the center point of COVID-19 countermeasures shifted to the prevention of infectious inflows.

The spreading of COVID-19 also had significant impact on the business activities of Japanese companies expanding into China. In particular, movement restrictions and business activities were enforced in provinces and cities throughout China after January 23, 2020. From early February 2020, operations were gradually allowed to resume in each city and province. However, due to work restrictions, the problem arose such that even if operations were resumed, employees were unable to commute and were unable to operate at full capacity. In particular, the logistics industry, where human resources are required, resulted in a substantial shortage of drivers for trucks for land transport because of work restrictions. As a result, the operation rate declined significantly. In addition, transport restrictions and body temperature inspections on expressways were strengthened in various areas of China, causing transportation disruptions and time-consuming problems.

The turmoil in domestic logistics also had major impact on the supply chains of Japanese companies operating in China. Questionnaire surveys conducted from February 5 to 21 several times for Japanese companies operating in China revealed that there were comments about business obstacles, such as "Manufacturers shut down and logistics functions continued to be paralyzed. This result in an inability to provide a stable product supply" and "Inconvenient cross-city transportation and logistics caused negative impact on operations."

Restrictions on entry became an issue during the economic recovery period from April 2020 onward. On March 28, 2020, the Chinese government announced that it would temporarily suspend the entry of all foreign nationals with valid visas and residence permits. Moreover, the government announced the suspension of the 15-day visa exemption system applicable to Japanese nationals and others from March 31. As a result, employees that were temporarily returning to Japan, those who were scheduled to be newly assigned, and business travelers became unable to enter/re-enter China. Japanese companies experienced problems with accounting processing, installation and acceptance inspection of equipment at factories, and technical guidance. In addition, there were problems related to personnel changes. After predecessors were reassigned to Japan by personnel change in April, their successors were unable to take office because of restrictions on entry to China. As a result, Japanese companies

were forced to continue local business without Japanese expatriates or business travelers. However, since August 2020, visa applications for expatriates in China have resumed. In addition, the number of flights between Japan and China is recovering, and the problem regarding Japanese expatriates and business travelers is being resolved.

### **2.2.2 Impact of COVID-19 on Japanese companies operating in South Korea**

In South Korea, the first confirmed case of COVID-19 was reported on January 19, 2020. At the end of February 2020, a collective infection occurred at some religious facilities. On February 23, the government raised the COVID-19 alert level from "warning" to its highest level—"serious." Since mid-March, special immigration measures have been implemented for all immigrants. However, since April 1, quarantine control has been strengthened by requesting self-isolation measures for 14 days for all immigrants. Then, the number of new infections started to decline after passing a peak on February 29. The number reached double digits since April 2 (excluding July 24), and it was possible to see some success in curbing the spreading of infections.

When we look at the impact of COVID-19 on the supply chains of Japanese companies operating in South Korea, Japanese-affiliate suppliers delivering parts to major South Korean automobile manufacturers were negatively affected. Major South Korean automobile manufacturers procure wire harnesses and other parts from China. However, due to COVID-19, they were unable to procure parts and materials, and this caused the shutdown of production lines in South Korea. With the suspension of production at Hyundai Motor Company and other producers, Japanese manufacturers operating in South Korea that do business with these major automobile manufacturers were forced to suspend or adjust production. As a result, for some companies, sales in February 2020 were reduced by less than half of an average year. From late-February 2020, when infections were spreading within South Korea, a series of closures of major South Korean manufacturers, which are sales destinations for Japanese companies operating in South Korea, was a major blow to the performance of Japanese companies.

Although South Korea is now entering a period of economic recovery, travel restrictions in and out of the country's border remain a challenge. According to a questionnaire conducted in June 2020 for Japanese companies operating in South Korea, many of the problems faced by Japanese companies operating in South Korea involved regulations related to immigration management. First, the inability to dispatch engineers from Japan caused significant delays in deliveries to plants and projects in South Korea. South Korea and Japan are geographically close to each other and have the advantage of being easy to visit. However, the limitations on immigration due to COVID-19 significantly affected business negotiations and sales in both countries.

### **2.2.3 Impact of COVID-19 on Japanese companies expanding in ASEAN**

Since mid-March 2020, ASEAN countries had activated entry restrictions one after another in order to prevent the expansion of the COVID-19 pandemic. As COVID-19 expanded globally, entry restrictions started to apply to all foreign nationals with some exceptions, although at the beginning of expansion, the scope had been limited to those that had travel history to countries or regions where infections were expanding. At almost the same time, restrictions on business operations, such as the closure of workplaces, began to be imposed, and this affected the business operations of local Japanese companies. Those restrictions exempted

essential businesses, such as food sales and logistics. However, Japanese manufacturers and others that had expanded into ASEAN were forced to suspend production.

One of the most-directly affected industries by these measures would be retail and wholesale, restaurants, and automobile-related industries, which are oriented for domestic demand. Some Japanese companies said: "All orders since April have been cancelled. The reason is that there are no customers at Japanese restaurants or shopping malls, which have had to shorten or halt their operations" (Indonesian food manufacturers, late March 2020), "All restaurants have stopped operations because shopping malls have suspended business due to restrictions on going out, from March 17," (restaurants in the Philippines, early May 2020), "Due to production adjustments by finished auto manufacturers, domestic orders have decreased significantly. Although the production for exports has continued, the factory operation rate has become 30%" (automotive parts manufacturers in Thailand, late April 2020).

As the procurement of raw materials and parts from China became difficult from January to March 2020 and as the economic situation in each country trended downward, domestic sales-type businesses were heavily affected. In Thailand and Indonesia, for example, where automobiles is one of the key industries, major Japanese manufacturers cut production or ceased production, which affected suppliers. Supply chain disruptions were also observed due to restrictions on business operations and other measures. On the other hand, from questionnaires and interviews with Japanese companies, it is revealed that the decline in demand had bigger impact on their business than on impact from supply chain disruptions.

According to information from Japanese-affiliated companies, among ASEAN countries, the Movement Control Order by the Malaysian government seemed to be particularly severe for the manufacturing industry. During the period from March 18 to April 14, 2020, the category of businesses being allowed to continue operation was limited to manufacturing businesses involved in necessities for daily life, such as food and medical equipment. Electricity and electronics could be operated under the approval of the country's Ministry of International Trade and Industry (MITI). However, the scope for approval was limited. In addition, the restriction on the number of employees in an office working at the same time required a reduction of 50% or less, and this caused a low operation rate even if the company had the capacity to operate.

#### **2.2.4 Impact on the supply chains of Japanese companies operating in the APT region, with examples**

Based on the above, we can categorize the impact on the supply chain of COVID-19 and the restriction measures observed in Japanese companies in ASEAN, China, and South Korea (particularly in the manufacturing industry) into seven types.

- (1) Decreases in orders and sales due to economic contraction (production cuts by manufacturers of final goods/production stoppages affecting suppliers)
- (2) Production halts due to travel and movement restrictions by central and local governments
- (3) Decreases in production efficiency due to measures to prevent infections at industrial facilities
- (4) Employees being unable to commute or having difficulty in commuting due to the suspension of public transportation
- (5) Shutdown of raw materials and parts suppliers
- (6) Higher transportation costs due to a reduction in air flights, difficulties in arranging

- delivery, and the inability to import and export due to the suspension of air flights
- (7) Increases in customs clearance times and delays in the movement of goods, such as due to a minimum number of personnel engaged in customs duties

### **3. Data-gathering and Methodology**

In this survey, JETRO conducted a questionnaire survey and interviews so as to collect data from both quantitative and qualitative perspectives. In the interview, we asked six Japanese companies engaged in a wide range of businesses in the APT region about the impact of COVID-19 on their supply chain and made requests to governments in each country from a cross-regional perspective. The interviews were conducted from July to early August 2020.

The survey was conducted by JETRO from July 15 to 24, 2020 in cooperation with the heretofore mentioned FJCCIA (with the survey being hereinafter referred to as the “FJCCIA-JETRO Survey”). In order to ascertain the actual situation regarding COVID-19-related impact and issues on the business activities of Japanese companies operating in ASEAN (hereinafter referred to as “Japanese affiliates”), we conducted a questionnaire-based survey with the board members of each Japanese chamber of commerce & industry office in each AMS and received 220 responses from these companies.

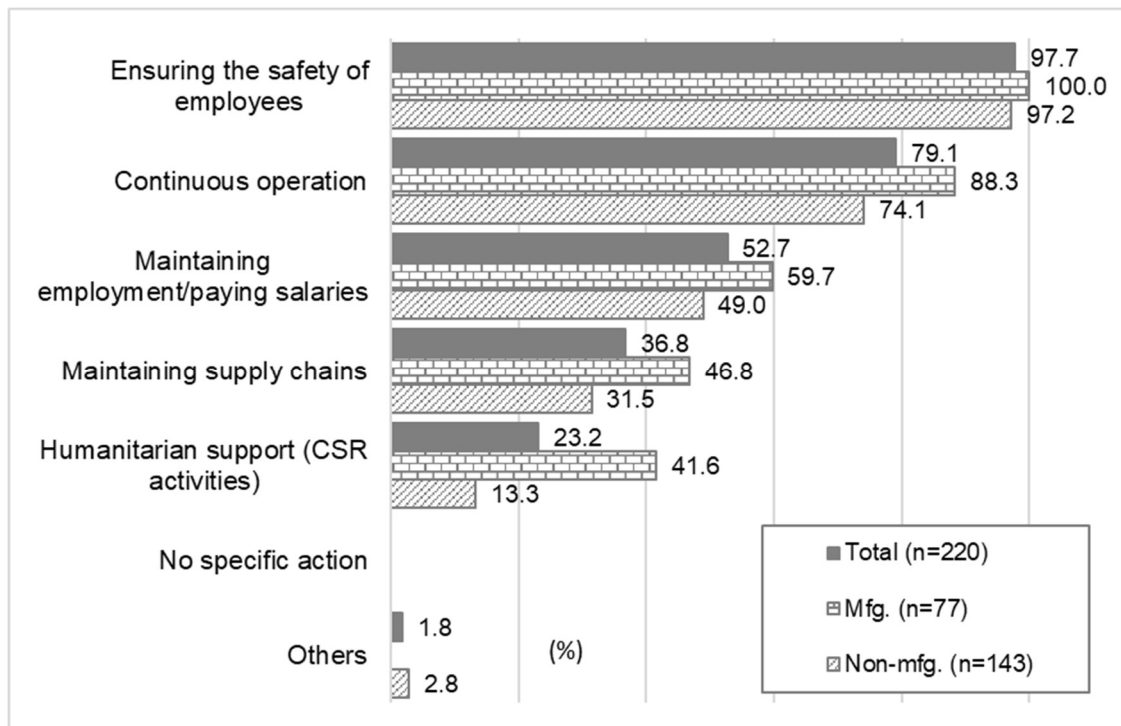
### **4. Empirical Analysis**

Based on the quantitative data obtained via the FJCCIA-JETRO Survey, this section will summarize the issues that Japanese companies faced and the government measures expected in each ASEAN country.

When we asked about points of attention regarding response to COVID-19, 97.7% of the 220 valid responses chose "Ensuring the safety of employees," and this was the largest number in both the manufacturing and non-manufacturing industries. While "Continuous operation" reached 79.1% overall, when it comes to the manufacturing industry, the percentage ran up to 88.3%. This indicates that the manufacturing industry has a more-conscious attitude toward maintaining operations. As the COVID-19 pandemic became more widespread, Japanese companies placed highest priority on ensuring the safety of their employees. However, at the same time, they struggled to maintain operations. Especially in the manufacturing industry, it is necessary to comply with the restrictions on business operations and with the guidelines for continuing operations at factories, to which they were forced to respond. (Figure 5)

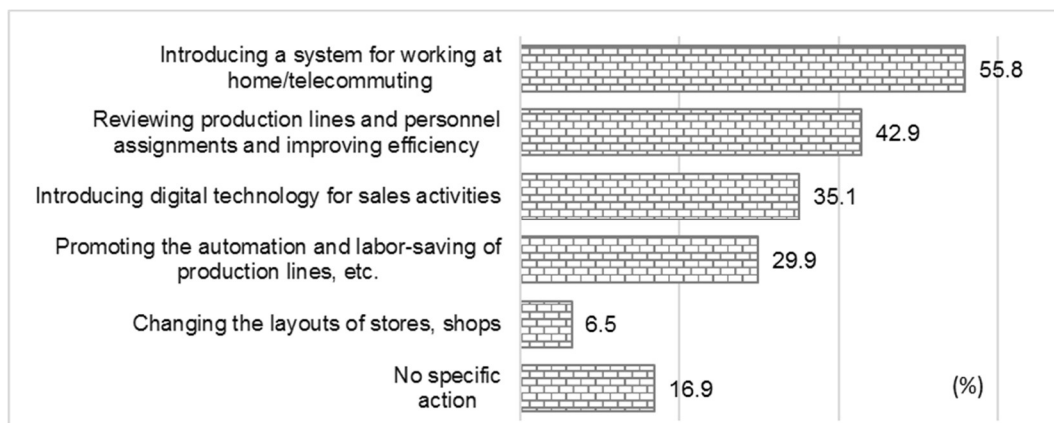
When we asked about the activities that plan to be strengthened over the next year or three years, related to social distancing, 42.9% of manufacturers answered "Reviewing production lines and personnel assignments and improving efficiency," while 29.9% answered "Promoting the automation and labor-saving of production lines, etc." (Figure 6)

**Figure 5: Points of attention in response to COVID-19 (multiple responses)**



Source: FICCIA and JETRO (2020), 1st FICCIA Business Survey

**Figure 6: Activities related to social distancing (activities to be introduced and strengthened over the next year to three years in response to COVID-19) (multiple responses)**

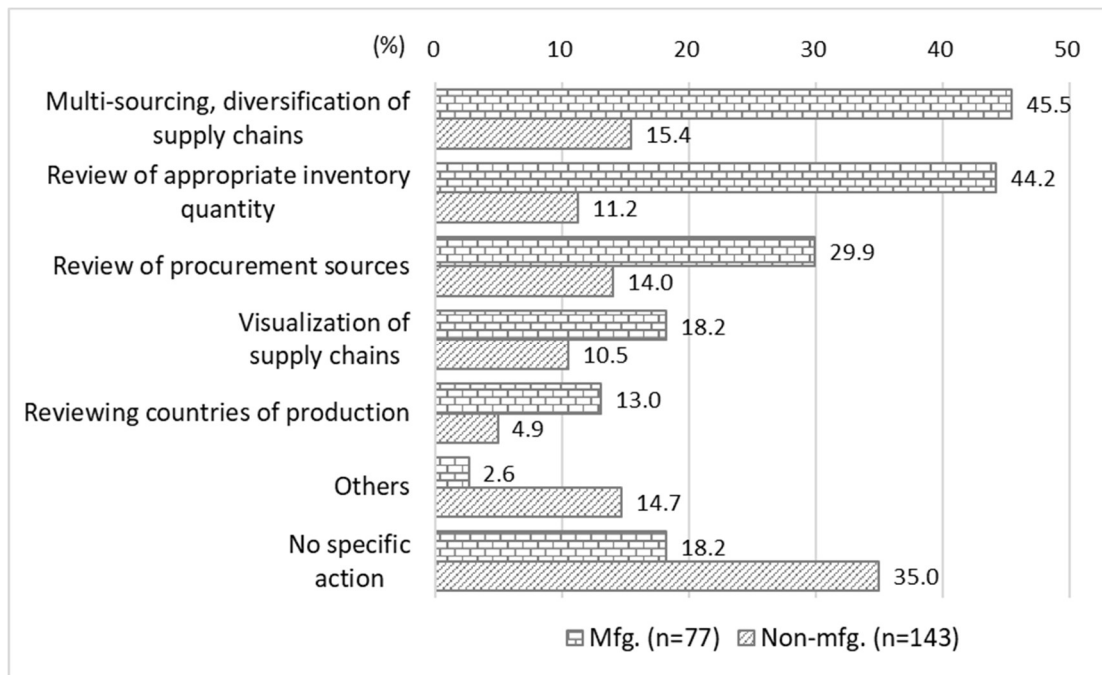


Note: Manufacturing industry only; 77 companies responded valid.

Source: FICCIA and JETRO (2020), 1st FICCIA Business Survey

Questions concerning "Review of procurement and management methods" for the next year to three years, "Multi-sourcing, diversification of supply chains" (45.5%), and "Review of appropriate inventory quantity" (44.2%) were significant among the manufacturers surveyed. The diversification of suppliers has the purpose of mitigating unexpected risks in the wake of COVID-19, and this can contribute to the strengthening of the supply chain. (Figure 7)

**Figure 7: Review of procurement/production control (efforts for introduction and strengthening over the next year to three years in response to COVID-19) (multiple responses)**



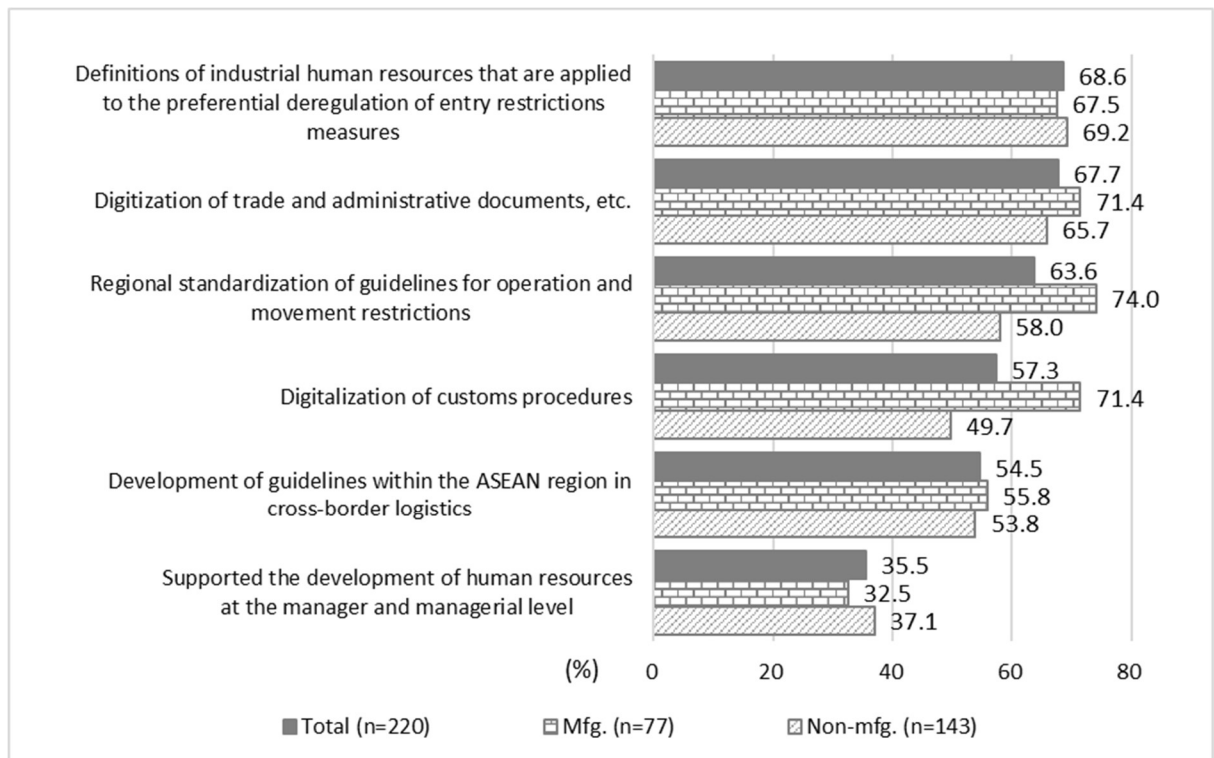
Source: FICCIA and JETRO (2020), 1st FICCIA Business Survey

Regarding the question pertaining to expected measures when doing business in ASEAN in anticipation of further waves of COVID-19 and the post-COVID-19 phase, the response rate was high for "Definitions of industrial human resources that are applied to the preferential deregulation of entry restrictions measures," accounting for 68.6%. As a result of the expansion of COVID-19, entry restrictions were imposed on foreign nationals in each country in ASEAN. The restrictions caused the stagnation of projects due to the absence of the authorized approver and engineers engaged in maintenance that were temporarily returning to ASEAN, and this disturbed smooth business activities. Against this backdrop, as many as 35.5% of companies responded that they "Supported the development of human resources at the manager and managerial level." This seems to have the intention of establishing a local system by promoting the localization of important posts, which enables resilient business continuity even when measures such as entry restrictions are put into place. (Figure 8)

Restrictions on entry and operations in countries around ASEAN reduced the predictability of the business continuity of Japanese companies. In order to increase the predictability of business, Japanese companies are increasingly expecting ASEAN to form uniform rules within the region. In particular, 63.6% of the respondents expect "Standardization of operating restrictions and movement restrictions guidelines within the region" (e.g., criteria for activating measures, methods of announcement and duration of the measures), while 54.5% of the respondents expect the "Development of guidelines within the ASEAN region in cross-border logistics" (common quarantine measures, adjustment of opening hours in customs, etc.). This indicates strong demand for the development of guidelines for unified measures, directly linked to the supply chains of companies in the region.

**Figure 8: Measures expected when doing business in ASEAN in anticipation of COVID-19**

**and subsequent waves of infection**



Source: FICCIA and JETRO (2020), 1st FICCIA Business Survey

In addition, there are growing expectations for the promotion of digitalization to maintain a smooth supply chain. With regard to the digitalization of trade procedures, more than half of the companies showed their expectations for digitalization, such as in "Digitization of trade and administrative documents, etc." (reduction of physical procedures associated with stamping and signatures) (67.7%) and "Digitalization of customs procedures" (57.3%). Discussions on the digitalization of trade procedures have long been underway, but the impact of COVID-19 has further highlighted the necessity.

## 5. Summary of Key Findings

What has been revealed from the interviews and questionnaire-based survey is that, given the prevalence of COVID-19, Japanese companies place top priority on human life. Almost all the companies that we interviewed said the same thing: "The safety of employees is top priority, and the maintenance of operations and supply chains is next to that." According to the results of the questionnaire, almost 100% of companies gave attention to "Ensuring the safety of employees," while "Continuous operation" came in second (80%). "Maintaining supply chains" came in fourth, at just under 40%. The human-life-first measures by APT governments for preventing COVID-19 should be respected, and Japanese companies also consider that the measures were necessary.

However, it is also true that the restrictions on the movement of people and goods caused economic activities and supply chains to stagnate, resulting in tremendous impact on corporate activities and on people's lives. As mentioned in Chapter 2, there was major impact on Japanese companies operating in the APT region, including in Japan. Under these circumstances, companies started to reconsider business activities from the perspective of securing social distancing and reviewing procurement and management methods.

When we focus on the manufacturing industry, issues such as the introduction of work-at-home schemes, reviews of production lines and staffing, the introduction of digital technology in sales activities, the promotion of automation and labor-saving in production lines, the diversification of suppliers (multiple sourcing), and the review of appropriate inventory levels are being considered by more than 30% of the companies surveyed.

Governments in the APT region are expected to adopt policies and measures that do not hinder or exacerbate supply chains in the APT region if external shocks such as COVID-19 occur in the future, but this will entail limitations on the movement of people and goods.

The survey asked about the measures expected when doing business in ASEAN in anticipation of the aftermath of COVID-19. More than half of the companies requested the following five points: (1) definitions of industrial human resources that are applied to the preferential deregulation of entry restrictions measures; (2) digitization of trade and administrative documents, etc.; (3) regional standardization of guidelines for operation and movement restrictions; (4) digitalization of customs procedures; and (5) development of guidelines within the ASEAN region in cross-border logistics. Requests are similar in both manufacturing and non-manufacturing industries and are probably not limited to Japanese companies.



## 6. Policy Recommendations

Based on the cases of Japanese companies and the results of questionnaire-based surveys, we would like to make the following policy recommendations from the viewpoint of strengthening supply chains. The recommendations are divided into short-term measures that should be adopted when external shocks such as pandemics occur and medium- to long-term measures that should be prepared in case other external shocks occur in the future. Here, we consider policy recommendations excluding unavoidable influences such as slumps in market economies.

### 6.1 Policy issues (short-term issues) and recommendations

#### (1) Restrictive measures that do not hinder supply chains in the region as much as possible

Shutdown orders and measures that did not take global supply chains into account affected not only the country in question but also other countries and regions linked to supply chains. As with food industries, medical products, and logistics, etc., which were regarded as exceptions to shutdown measures in each country, it is expected to be allowed to continue business operations under certain conditions for essential items and industries in terms of global supply chains.

For example, Japanese electrical and electronic equipment manufacturers in Singapore were unable to procure raw materials and parts from suppliers in Malaysia due to the movement restriction order imposed by Malaysia. Malaysia has many electronic component suppliers that are incorporated into the global supply chain. Not only Japanese companies but also multinational manufacturers in Europe, the United States, and other countries expressed their intention to remove Malaysian parts suppliers from their procurement network. This is expected to have an extremely negative impact on Malaysia in terms of its future industrial competitiveness.

In addition, some Japanese food manufacturers were unable to maintain production even though they could operate because the packaging material suppliers that delivered materials to the company could not operate. Similar cases were confirmed in the Philippines, Malaysia, and other countries. It has become clear that, even if downstream manufacturers of finished goods are permitted to operate, production activities cannot be carried out unless the suppliers of the upstream SMEs are permitted.

Essential items in the supply chain vary from each country. The manufacturing of food and medical equipment is recognized as an essential industry worldwide. However, the activities of finished product manufacturers cannot be achieved without the operation of supporting industries, which include suppliers of parts such as electronic parts and metal parts, processors such as surface treatment, metal processing, welding, and painting, maintenance and preservation of machinery, and secondary materials such as tools and packaging materials other than direct materials, security materials, and consumables.

Therefore, when each APT country imposes activity restrictions on each industry, it is necessary to investigate and grasp not only the influence on domestic industry but also on both domestic and non-domestic supply chains linked with domestic companies and the industry in question, in advance. The impact from restriction measures should not be considered from the perspective of a "single node" such as companies and industries, but it

should be captured as a "network" comprised of an enormous number of nodes and lines. In modern times, as complex supply chains have been structured, it becomes increasingly necessary to understand that the restrictions at a single "node" could affect the entire APT region and global business activities.

## **(2) Continuous operation of customs as much as possible on the premise of implementing prevention measures (remote operations of authorities)**

In order to avoid delays and stoppages in logistics, it is important to maintain the operation of customs procedures and logistics infrastructure such as ports as a nodal point of logistics. The expansion of COVID-19 caused delays in some logistics procedures due to a reduction in the number of officials in charge as an infection prevention measure for the pandemic. Solutions for these problems could be the promotion of the remote operation of the relevant government offices and the IT adoption and diffusion of procedures.

In late-January 2020, a Japanese manufacturer expanding into China sought to procure masks and sanitizers for 7,000 Chinese employees. The company tried to arrange support supplies from Japan. However, the efficiency of customs operations was declining, and arrival was delayed. According to a Japanese distribution company in Cambodia, the arrival of imported goods was delayed much more than usual due to congestion at the Vietnam border.

Taking Thailand as an example, there were cases in which customs procedures were delayed as applications for tax refunds or other applications at customs were not accepted due to customs officials working from home. Some port and airport inspectors also worked from home. While the impact was not significant because volume itself was declining, it is pointed out that capacity would be short if volume were to recover. Regarding international mail, some inspectors worked from home, and this caused cargo inspections that should be carried out in the first place not to be carried out. Working from home should be recommended for the safety of staff working in customs duties and in logistics infrastructure. However, it is necessary to build an adequate system that does not hinder corporate activities, and tax collection and examination should be properly conducted.

## **(3) Special entry permits for necessary foreign engineers and managers, with the temporary liberalization of cross-border services by foreign companies**

In order to prevent the expansion of the COVID-19 pandemic, the APTs adopted entry restrictions on foreign nationals. As the spreading of infections has been stabilized, the restrictions on factory operations and on offices have been relaxed in each country. However, one of the aspects highly demanded by Japanese companies pertains to cross-border business travel for engineers and managers. Managers that decide on business policies at overseas subsidiaries and engineers with technical expertise suddenly became unable to enter the country, and this had major impact on business operations.

When we interviewed Japanese companies, comments regarding the impact of entry restrictions against engineers was frequently reported. According to the major electrical equipment manufacturers interviewed this time, one company had to dispatch engineers from Japan in order to launch a new product, but the plan itself was scrapped because they were unable to travel. In the case of a major chemicals manufacturer, members in charge of maintenance at a Singapore plant were unable to commute from Malaysia. As a result, the plant could no longer be operated. In addition, a new factory project that required specialist engineers from abroad could not proceed with operations due to entry restrictions. Consequently, the plan of the entire factory was delayed.

There are some companies that depend on business travel to maintain their operations. It is desirable to have a mechanism that allows them to travel if they satisfy specific requirements (e.g., health checks). In order to increase predictability for business operations, immigration control measures that permit special entry based on certain standards is expected. According to the FJCCIA-JETRO Survey, the top measure requested by Japanese companies operating in ASEAN was "Definitions of industrial human resources that are applied to the preferential deregulation of entry restrictions measures" (68.6%). While the movement of people has been gradually resuming for limited eligible persons, it is highly expected that governments need to establish a system that allows companies to dispatch key industrial human resources on a preferential basis and that clearly defines the eligible human resources.

## **6.2 Medium-to long-term issues and recommendations for preventing external shocks associated with restrictions on the movement of people and goods**

### **(4) Digitization of trade and administrative documents, such as certificates of origin, and the furthered penetration of self-certification systems**

Amid the adoption of transfer restriction measures by the governments of APT countries, there were some problems that might not have occurred if digitalization had progressed with respect to trade practices and administrative procedures.

A typical example is the acquisition of the original copy of the certificate of origin (COO) and the submission to customs. COOs used in the use of FTAs/EPAs are being digitized via Form D (i.e., the e-ATIGA of the ASEAN Goods Trade Agreement [ATIGA]), etc. However, progress in other FTAs is so limited that basically it is required to submit the original COO. When exporting from a country that cannot obtain the COO until only after the port of shipment, the importing country's customs requires the submission of the original COO. Therefore, in trade with a neighboring country, the COO may not be sent in time before the time of import by the partner country, and excessive wait times and storage fees for the cargo could be incurred. Allowing electronic COOs makes it possible to reduce waste and cuts COO shipping fees.

In the case of a third-party COO issued by chambers of commerce and departments of commerce, a number of certificates that prove the originality of the article must be carried to the counter, and the issuer must also stamp the certificate. If the self-certification system as per ATIGA is generalized,<sup>①</sup> there will be no need for corporate managers to visit the counter of the COO-issuing organization, and the dispatching staff will no longer need to conduct operations via a face-to-face counter.

Over many years, there have been many calls for the digitization of trade documents, but this necessity increased after the expansion of the COVID-19 pandemic. In JETRO Survey (2019), conducted between August and September 2019, we asked about "Necessary measures to facilitate trade in countries and regions where they are located" (3,639 valid responses). The respondents that chose "Computerization, paperless, and introduction of sophisticated ICT systems" ran up to 30.9%, which was the fourth-highest item among various trade facilitation measures.

---

<sup>①</sup> From September 20, 2020, ASEAN-Wide Self Certification (AWSC) started in each AMS. Japanese companies desire to utilize AWSC smoothly and hope for customs procedure improvement.

In the FJCCIA-JETRO Survey conducted in July 2020 after the initial onset of the COVID-19 pandemic, "Digitization of trade and administrative documents, etc." (work mitigation such as signatures) reached 67.7%, which was second-highest item out of 30 items. In principle, the exchange of documents increases the number of actions involving infectious risks, such as the occurrence of face-to-face tasks for document issuance, the attendance of signatories, physical movement of staff to the counter, and the attendance of customs officials. Thus, the digitization of documents contributes to reducing the risk of infection and the burden on companies.

If all countries in the APT region were to join the WTO Information Technology Agreement (ITA), it would no longer be necessary to confirm originality, and IT-related products and parts could be imported and exported duty-free in each country without using the COO required by the FTA. We request non-member countries to join the ITA and the expanded ITA as soon as possible and to further expand the number of ITA-eligible products.

#### **(5) Digitalization of customs procedures**

If the digitalization of customs procedures and trade practices is promoted in addition to the digitization of documents, it can be expected that COVID-19 risk can be reduced and convenience can be improved. As part of the implementation of the WTO's Trade Facilitation Agreement (TFA), each country aims to introduce national single windows (NSWs) and e-payments in tax payments, and if these come to be fully operational, it would be possible to digitalize customs procedures.

However, the state of introduction of NSW and e-Payment differs from country to country. Looking at the implementation status of the TFA (as of August 2020) from the WTO TFA database, Vietnam, Laos, and Myanmar have not been able to achieve electronic payments as per Article 7-2 (Electronic Payment) in the APT region. Single windows under Article 10-4 have not been achieved by the Philippines, Vietnam, Cambodia, Laos, and Myanmar. As an example, Myanmar introduced the "MACCS" customs clearance system with Japanese support, but when we actually heard from Japanese companies, many commentators pointed out that "Despite the electronic system being in place, we print documents and submit proposals for signing within customs." The digitalization of customs procedures cannot be achieved even if only a system is introduced without the establishment of laws and regulations that would have the same legal effectiveness as the original document and with the capacity-building of human resources in customs duties, etc. Continued support for these countries will be sought by Japan, China, South Korea, Singapore, and other countries that have already achieved the 100% digitization of their trade facilitation agreements.

#### **(6) Enlightenment activities and public-private partnerships for the digitalization of international trade and logistics processes, and the establishment and collaboration of a platform for trade information**

It is desirable that customs clearance procedures related to COOs and administrative documents be computerized through various governments and intergovernmental negotiations. However, what companies really expect is a broad range of trade digitalization end to end. In other words, it is considered most desirable to have an environment in which all the parties involved—exporters (shippers), customs clearing agents, shipping company agents, port authorities, customs duties, banks, and importers—interact online and in which trade transactions are all completed in the online world.

For example, the processes of digitizing bills of lading (B/L), exchanging shipping goods with delivery orders (D/Os), and issuing letters of credit (L/C) are difficult to be digitalized by various governments. However, if a platform is established and penetrates the industry overall, paperless transactions could become the standard. Currently, the international exchange of marine transport letters (SWBs) is being digitalized toward using electronic marine transport letters (e-SWBs). Because SWBs are not negotiable paper, they are easy to be digitized.

On the other hand, electronic bills of lading (eB/Ls) are not penetrating because they are only allowed in some countries, such as Singapore and the United States. There are also high expectations from companies such that the widespread use of eB/Ls will contribute to the digitalization of trade. D/O exchanges are a process in which customs agents visit the counter of shipping agents to settle cash (checks) and receive D/O original books and receipts. If bank transfers/deposit checks between the two are made possible online, D/O-less transactions would become realized. This would contribute to avoiding physical contact, as well as to speedy transactions.

As for L/C issuance, the development of an electronic platform for trade procedures, called "TradeWaltz," is now advancing via consortiums of Japanese companies. Taking the L/C as an example, by creating an L/C on TradeWaltz, shipping companies and insurance companies, etc., can view it and bring the data into their own system. If these platforms for trade digitalization were to become compatible in each APT country, and if the interconnection among the platforms could be strengthened, seamless digitalized trade would be realized. Governments of the APT should support such company consortiums and support the establishment and interconnection of platforms.

**(7) Expanding the AEO system and promoting mutual certification, making permanent flexible measures to accept certificates of origin, promoting further trade facilitation measures, and reducing non-tariff barriers**

The promotion of trade facilitation is a valuable preventive measure against logistics and customs obstacles caused by shocks such as COVID-19. In the example of Japan, the import procedures of companies using the Authorized Economic Operator (AEO) system involve taking cargo first and filing tax returns after the fact. Thus, even if the issuance and submission of physical certificates of origin (COO) was delayed, many companies found no logistical problems. According to a report by the World Customs Organization (WCO), in addition to Japan, AEO systems are being implemented in China, South Korea, Singapore, Malaysia, Thailand, Indonesia, and Vietnam.<sup>①</sup>

At the ASEAN Economic Ministers' Meeting (AEM) held on August 25, it was announced that a reciprocal approval scheme for the AEO system within the ASEAN region would be established by 2023.<sup>②</sup> Enhancement of the system and the expansion of the number of accredited businesses would be required. In addition, Japan has agreed to mutual approval among South Korea, Singapore, Malaysia, and China for AEO, and the burden of document examination and inspection has been reduced with the countries concerned. The expansion of AEO mutual approval in the APT region is also expected.

In response to the expansion of COVID-19, many APTs have relaxed regulations on original COOs temporarily flexible in the APT region. If preferential tariffs were to be applied, the COO original would be required to be submitted at the time of import, in principle. However, a

---

<sup>①</sup> WCO (2019) "[Compendium of Authorized Economic Operator Programmes](#)"

<sup>②</sup> Targeting six countries: Brunei, Indonesia, Malaysia, Singapore, Thailand, and Vietnam

preferential tariff rate was also applied via a scanned copy of the COO on the condition that the original is to be submitted within one to three months from the date of cargo collection. Some countries also issued COOs via electronic methods, such as by assigning QR codes, or they have digitized their entire library of import declarations. These flexible measures should be highly evaluated in that they mitigated the impact of COVID-19 on the SCC of various companies. These responses are only a temporary easing of COVID-19 costs, but if they become permanently available, they will greatly contribute to SCC resilience.

According to JETRO Survey (2019), the top three trade facilitation measures most required by Japanese companies (3,639 valid responses) were "Enhancement of information on trade-related systems and procedures" (development of databases and information available online) (42.1%), "Unification of interpretations on evaluation of tariff classification, etc., among port authorities and persons in charge" (33.0%), and "Introduction of advance ruling systems and available operations" (HS code classification, customs evaluation, rules of origin) (32.8%). As mentioned earlier, based on the ASEAN Trade Facilitation Framework (ATFF), ASEAN has been promoting measures, including reducing non-tariff measures, at ATF-JCC and at the sectoral committees that comprise the council as mentioned. The steady implementation of these measures, including the harmonization of standards and certification systems, is required.

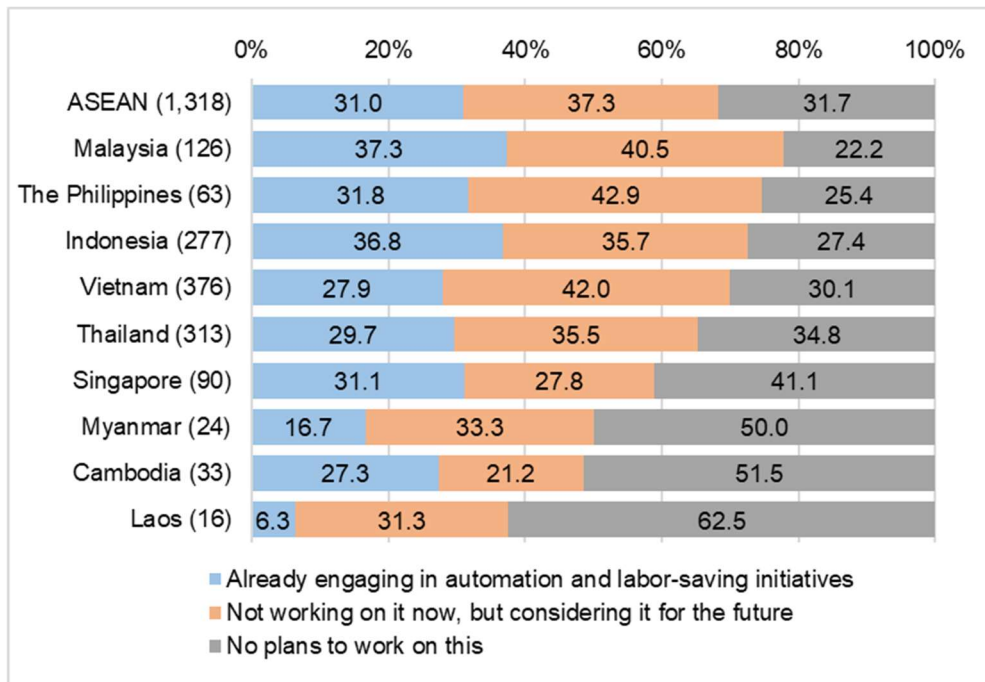
#### **(8) Advancement of production and logistics through the use of digital technology and the formation of unified rules to facilitate data distribution within the region**

After the expansion of the COVID-19 pandemic, there has been strong interest in remote communications and sales activities using digital technologies. However, social distancing has also become required at industrial facilities, and automation and AI introduction are required at manufacturing sites. With the implementation of 5G and the introduction of IoT and robotics within plants expected in the future, the liberalization of data distribution such as manufacturing data in the APT region and the formation of unified rules on data flows have become even more important.

Even before COVID-19 occurred, automation and AI introduction at industrial facilities has been examined by Japanese companies. However, comparing labor costs and the costs of introducing robots, capital investment was not necessarily accompanied by economic rationality, and in many cases, investment was not implemented in order to maintain corporate competitiveness. In JETRO Survey (2019), we asked 1,318 Japanese companies in the ASEAN region about their efforts toward automation and labor-saving. 31.0% of companies responded that they have been "Already engaging in automation and labor-saving initiatives," while 69.0% of companies did not take action (Figure 9). Asked about the reasons given by companies that did not take action, 71.5% replied "Introduction costs not commensurate with results." (Figure 10)

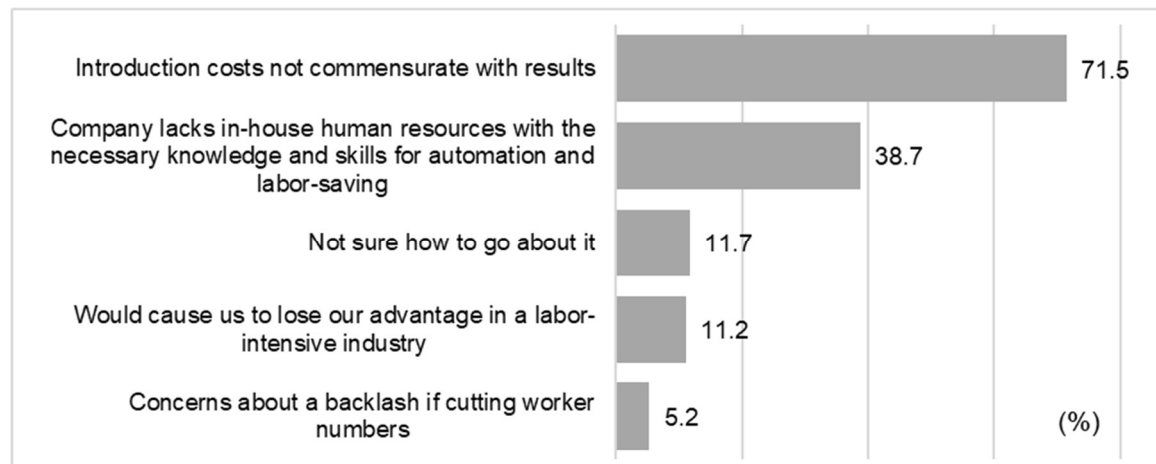
However, after the spreading of COVID-19, human life and securing social distancing has become a top priority, and thus the automation of manufacturing sites is becoming inevitable. The FJCCIA-JETRO Survey shows that, in manufacturing, 42.9% of companies responded "Reviewing production lines and personnel assignments and improving efficiency," while 29.9% responded "Promoting the automation and labor-saving of production lines, etc.," as responses to COVID-19. (Figure 6)

**Figure 9: Status of automation and labor-saving efforts by Japanese manufacturers in the ASEAN region (use of robots and other products in manufacturing lines)**



**Note:** Figures in (n) are valid responses.  
**Source:** JETRO Survey (2019)

**Figure 10: Challenges for Japanese manufacturers in the ASEAN region regarding tackling automation and labor-saving**



**Note:** Valid responses from 828 companies; the survey targeted companies that said "Not working on it now, but considering it for the future" or "No plans to work on this"  
**Source:** JETRO Survey (2019)

One concern about the introduction of IoT and robotics is whether the free distribution of manufacturing-related data can be secured. In the ASEAN region, for example, legal systems have been developed for the distribution of personal data in accordance with the ASEAN framework for protecting personal information and with European rules for protecting general data (GDPR). On the other hand, with regard to the handling of non-personal data, although

there are some cases that enact rules on non-personal data, such as server installation obligations in the financial industry and important security facilities from the viewpoint of cybersecurity, the formation of comprehensive rules has been delayed. Free distribution of non-personal data within the region is a key issue that forms the basis for business activities in response to COVID-19, such as in the provision of remote services. Regarding relations with existing laws, rules are necessary for the handling of information that infringes on privacy or that causes damage to the state and the public. However, if excessive regulations are abused and used for protectionist movements, there are concerns about adverse effects on corporate activities and industrial development.

According to JETRO Survey (2019), as for the manufacturing industry (1,673 valid responses), the percentage of companies that said "Sharing manufacturing-related data with the Japanese parent company" was 49.2%, while the companies that answered "In-house only" was 43.5%. In addition, 5.3% of companies said "Sharing with related companies within the region." According to the survey, 47.1% of the 4,073 companies point out the existence of policies that have large impact on handling information, and countries in the APT need institutional designs that do not place excessive restrictions on data distribution.

#### **(9) TVET for the development of human resources and management, toward playing a leading role in the digitalization era**

In order to upgrade production and logistics by utilizing digital technologies, and to promote digital transformation in each country of the APT region, it is necessary to develop human resources that can support this. As mentioned in this paper, the biggest challenge faced by Japanese manufacturers in the ASEAN region regarding efforts to automate and high productivity was "Introduction costs not commensurate with results." However, due to COVID-19, the amount of cost is no longer an obstacle to digitalization. The next issue for digitalization is "Company lacks in-house human resources with the necessary knowledge and skills for automation and labor-saving," which was the second highest, at 38.7% of the companies surveyed. (Figure 10)

Following the expansion of COVID-19 infections this time, Japanese companies are increasingly interested in developing in-house human resources. The idea of reviewing the system of Japanese involvement and human resources development is also becoming apparent. According to the FJCCIA-JETRO Survey, 72.7% of 220 companies answered "Strengthened in-house human resources development" (management, engineers, and digitalization personnel). By target layer, 57.1% of companies stated "Managers," while 53.2% answered "Engineers." In the non-manufacturing sector as well, 50.3% stated "Managers." Among 220 companies, 42.3% also said "Would review the number of expatriates and localize in-house human resources" (management, engineers, and digitalization personnel). By target layer: 31.2% of companies stated "Managers," while 27.3% stated "Engineers," in the manufacturing sector. In non-manufacturing industries, 24.5% of companies stated "Managers."

In the FJCCIA-JETRO Survey, questions arose about requests for AMS governments regarding the development of industrial human resources. The most-common request was "Support for human resources development at the management level" (manufacturing: 32.5%, non-manufacturing: 37.1%). Due to COVID-19, businesses stagnated due to the absence of Japanese management and engineers, who were unable to enter respective countries. In the long term, it is required to build sustainable business management regardless of the regulations on the entry of Japanese nationals into various countries, by switching managers and engineers to local human resources.



## **(10) Realization of supply chain resilience**

Interest in the review of production portfolio management and supply chain management was heightened by COVID-19. The manufacturing industry is oriented toward a diversification of suppliers. The diversification of production bases and procurement sources is expected to create a supply chain resilient to shocks such as COVID-19. In addition, the granting of investment incentives for basic support industries is desirable. This is indispensable for supply chain networks.

In January to February 2020, in the early days of COVID-19, factory shutdowns and logistics disruptions occurred in Mainland China, where these factories play a key role in the supply chain built into the APT region. The turmoil in Mainland China was resolved at an early stage, but subsequent disruptions in the supply chain were also confirmed in other countries, such as in Japan, South Korea, and in the ASEAN region. As a result, corporate interest in diversifying portfolios of production and procurement increased again among Japanese companies. According to the FJCCIA-JETRO Survey, the most-common perspective regarding procurement or production control in the manufacturing industry was "Multi-sourcing, diversification of supply chains," which accounted for 45.5%. Since there is high need for companies to diversify their suppliers and production locations within the global supply chain, it is desirable that not only governments in the investor's country but also governments in the invested-in countries adopt policies that promote diversification in line with these corporate needs. (Figure 7)

Local procurement and local production in the invested-in countries are effective options for the diversification of production bases and procurement sources. The development of supporting industries in the invested-in countries is a key factor of local procurement and local production. However, recent investment policies tend to have focused on attracting high-value-added industries and large-scale investment. Investment incentives are no longer granted for basic industries and technologies, such as in the production of small parts and metal processing, in which local small and medium-sized suppliers have strengths, especially. As discussed in this sub-report, large manufacturers in high-value-added industries and large-scale investments can operate business only after small and medium-sized suppliers support their operation. Investment policies should be reviewed to attract basic supporting industries.

## **(11) Promoting liberalization, standardizing rules, and reducing uncertainty via cooperation region-wide, with the early conclusion of RCEP and with moving the mega-FTAs forward**

The demands of companies and the policy recommendations as described so far cannot be realized by a single country alone. When planning movement restriction measures while maintaining supply chains, or in the continuation of the operations of customs, ports, and airports, consideration would be required not only for domestic companies but also for foreign companies. Reciprocal and multilateral cooperation is indispensable for the licensing of foreign engineers and managers to enter the respective countries.

From a long-term perspective, reducing non-tariff barriers (NTBs) and streamlining non-tariff measures (NTMs) should be realized through the process of the harmonization of similar measures across countries, such as in the cross-validation of standards (MRAs) progressing for particular items in the ASEAN region. Likewise, the harmonization process should be taken for the free flow of data distribution and for the digitalization of customs procedures including the declaration of origin. In addition, when considering the diversification of production bases and suppliers, if standards are unified in the region, raw materials and parts produced in other

countries can be used as urgent substitutes. This would improve convenience and would contribute to the diversification of production and procurement, as well as to risk-hedging.

From this perspective, in addition to factors such as: the reduction of customs duties within the regional trade of goods, unified rules of origin, the liberalization of investment and trade in services, customs procedures improvement, and trade facilitation, there are growing hopes for the early realization of the East Asian Regional Comprehensive Economic Partnership (RCEP), which includes e-commerce chapters and intellectual property chapters that specify data-related rules. The RCEP, including supply chains with India, where Japanese companies are increasingly clustered, will play a major role in the Asia-Pacific region.

## **7. Conclusion**

As of September 2020, there were countries where the control of COVID-19 infections had not yet been realized, along with countries where infections had rebounded. It is desirable to wait for COVID-19 treatments and vaccines to be developed in the near future. However, in case of encountering unknown viruses and natural disasters in the future, it is possible that governments around the world would prioritize human life and restrict the movement of people and supply chains.

To avoid similar risks that could occur in the future, mutual cooperation and concrete actions are necessary as soon as possible, particularly among the countries existing and working together in the same region and in the same economic activity area.

To this end, we emphasize that it is necessary to realize: the policies recommended in this report so as not to restrict global supply chains while prioritizing human life; the concrete measures that can realize contactless and remote business activity by utilizing digital technologies and data, as well as the regional rules that support such; and the policies that contribute to supply chain resilience.

Contact details for inquiries:

Asia and Oceania Division, Overseas Research Department,  
Japan External Trade Organization (JETRO)

1-12-32 Akasaka, Minato-ku, Tokyo 107-6006

TEL: 03-3582-5179

E-mail: [ORF@jetro.go.jp](mailto:ORF@jetro.go.jp)