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Observations & Thoughts on the Transformation of Supply Chains in East Asia & Their Reconstruction

By Guo Sizhi

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Introduction

There are active movements today to "reduce dependency on China" by major multinational companies faced with increased production costs, such as wages, due to the deteriorating Chinese economic situation, with stagnant domestic consumption and depression in the real estate market. In addition, some major developed nations are adopting a derisking strategy towards China during the prolonged US-China confrontation, which is accelerating those companies' shifting of production bases to ASEAN, in particular, Vietnam. This has resulted in a decreasing trend for global FDI in China and significantly reduced business operations in China. The consequent transformation of supply chains and their reconstruction has drawn global attention.

FDI in China & ASEAN

Chart 1 shows that worldwide FDI in China is decreasing. It was $33 billion in 2023, having recorded the biggest decline since 1993. With significant changes in the business environment (such as wage cost increases and stricter regulations, but also stagnant supply chain activities due to the US-China confrontation or geopolitical risks) as well as firmer US management of exports to China, a shift of production bases from China to third nations is under progress, mainly in high-tech industries. Among the newer destinations, Vietnam and other ASEAN states and India are the major ones.

Meanwhile, the major countries' FDI in ASEAN has been increasing. According to "ASEAN Stats", the world's FDI in ASEAN in 2022 exceeded $224.2 billion, a 5.5% increase from the previous year. It is increasing steadily, having exceeded $200 billion consecutively since 2021. *Table 1* shows that worldwide FDI in ASEAN hugely expanded in 2023 by 138% from 2019.

By sector, in manufacturing, the percentage of the world's FDI in ASEAN reached almost 30%, with finance and insurance business at 28.1%. Other figures of note are 10.0% in transportation and storage, 4.8% in information and telecommunication, 4.5% in real estate and 2.9% in professional services and science & technology services.

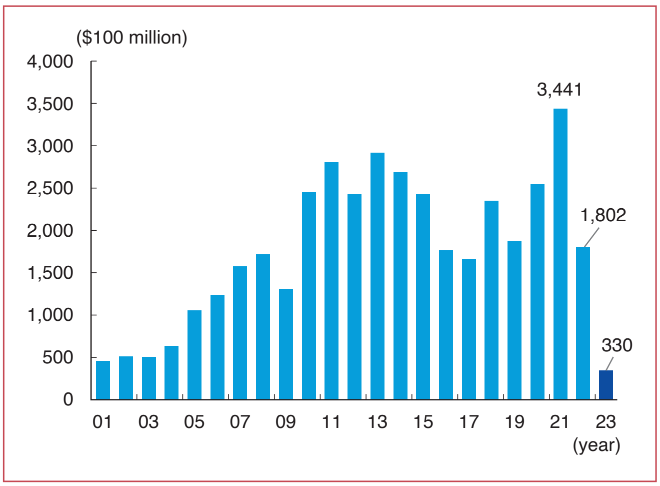
Among the major investing nations, 16% were from the United States, 12% from ASEAN, 12% from Japan, 11% from EU nations, 7% from China, 6% from South Korea, 4% from the United Kingdom, and 3% from Taiwan. In recent years, the major economies' business firms have been trying to reduce their FDI in China and expand it in ASEAN. They are trying to reduce their dependency on China and accelerating FDI in countries like Vietnam. However, most developed nations' multinationals based in China continuously consider China as one of the most important FDI destinations in the light of the Chinese market's potential growth, its enormous size, and its high labor productivity, though their business judgement in investment in China has been more cautious.

Incidentally, according to the "Survey on Japanese business companies' FDI policy in FY 2023" published by JETRO in February 2024, the largest proportion of the surveyed companies consider the US as their top priority for FDI, that is 28.1%. This is followed by Vietnam (24.9%) and China (22.6%). They still see China as the third most potential destination for their FDI and business operation expansion.

Japanese Businesses Reducing Dependency on China & Resulting Supply Chain Transformation

While high-tech sectors are increasingly important not only in terms of the economy but also national security, the US and China have been struggling for the hegemony in these sectors. As this is

CHART 1
World FDI in China declining



Source: Mizuho Research & Technology

TABLE

Trend of world FDI in ASEAN

Country/ Region	2019	2020	2021	2022			2023		
	$ million	$ million	$ million	$ million	%	rate of increase	$ million	%	rate of increase
ASEAN	166,057	119,754	212,426	224,202	100	5.5	229,838	100	0.3
Singapore	97,480	72,932	131,101	141,187	63	7.7	15,963	69.5	13.1
Indonesia	23,883	18,591	21,131	21,968	9.8	4	21,628	-14.8	-1.5
Vietnam	16,120	15,800	15,660	17,900	8.0	14.3	18,500	8.0	3.4
Malaysia	7,860	3,185	12,144	17,096	7.6	40.8	8,782	3.8	-48.6

Source: Compiled by the author based on ASEAN States, etc.

under progress, the US has been strengthening regulations against China, such as standards for next generation communication technology. Against this background, numerous companies from Japan and elsewhere with supply chains in China and Asia are now seriously affected by this US-China confrontation. According to a JETRO survey on the future business development of Japanese companies with subsidiaries in Asia, the proportion of companies responding positively in 2022 in expanding their business in the coming year or two was 27.7%, falling below 30% for the first time since 2007 when the survey started. But the percentages for India and Vietnam were more than 75% and nearly 70%, respectively, and more than 40% for Thailand, all high levels.

Recently, Japanese companies in China have started to step out in new directions. The percentage of Chinese products to total Mitsubishi Electric Corp. sales in the US is very high – such as 70% for electrical discharge machines and 30% for laser processing machines – and this is an example of the negative impact of the US-China trade confrontation on such Japanese companies, which also includes losses from prevented shipments from Japanese companies in China to the US, and additional tariffs imposed on their exports from China to the US.

So Japanese companies in China have been shifting production bases from China to ASEAN countries like Vietnam in order to mitigate the impact of US-China trade friction and political confrontation. In 2019, Mitsubishi Electric Corp. transferred its production base for industrial machines (more specifically two production items, electrical discharge machines used in manufacturing molds and laser processing machines for cutting metal plate) for the US market from Dalian in China to Japan. Kyocera Corp. will shift part of its production of electric tools in China to Vietnam and plans to produce goods for the US market in a multifunction device factory there and avoid expensive tariffs on exports from China to the US.

Meanwhile, according to a "Business Survey on Japanese companies' overseas business development in FY 2019" by JETRO, restructuring of supply chains has been underway in response to US-China trade friction and rising protectionism. This has taken the form of production base transfer, changed sources of procurement and different destinations of sales, mainly among large companies, with 159 cases, 170 cases, and 83 cases respectively *(Chart 2)*.

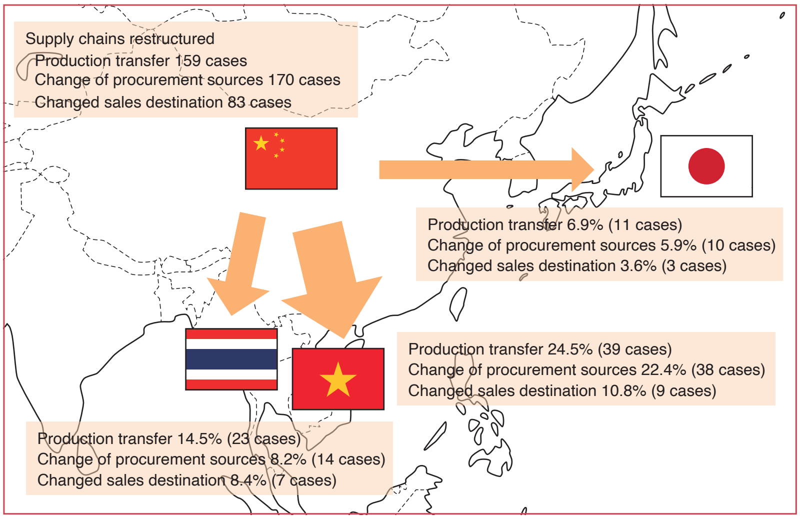
Transfers from China to Vietnam accounted for about a quarter of the total transfers of production bases from China to other places, the highest percentage, while ASEAN as a whole accounted for 60% of the total. Thus, new supply chains have been built up in adjusting to the changes of the international political economy surrounding Japanese companies. According to a survey by Kyodo News on Dec. 29 in 2020, more than 40% of 96 large Japanese companies with key technologies identified by the Japanese government as necessary to prevent their flow overseas are now reviewing their supply chains (parts and components procurement and provision networks) and diversifying their production bases and procurement sources to China's neighboring countries.

With these responses to the national security risks of concentrating production capacity in China due to the US-China confrontation over high technology or shortage of medical goods due to the pandemic expansion, the need for reduction of overdependency on China has become clear. In addition, 84.4% of 108 Japanese companies in the US who answered the questionnaire in this survey have moved their procurement sources from China. After this change, their principal procurement sources are now Japan (38.9%, 42 companies), the US (38.0%, 41 companies), Thailand (25.9%, 28 companies), Vietnam (24.1%, 26 companies) and Mexico (16.7%, 18 companies).

Besides Japanese companies, many Korean and Taiwanese companies, and US companies in China exporting to the US, are now actively working on adjusting their supply chains in response to the US-China confrontation. In 2020, Samsung Vina transferred most of the production line for PC monitors from China to Samsung Electronics Corp.'s complex in Saigon High Tech Park (SHTP) in Ho Chi Minh City. LG Electronics Inc. had already transferred all the production of premium refrigerators produced at its Taizhou factory for export to the US to Changwon in South Korea in June 2009. Not

CHART 2

Restructured supply chains



Source: JETRO (https://www.jetro.go.jp/biz/areareports/special/2020/0401/d798e2287994e498.html)

only in refrigerators, but also in mobile phones, automobiles, home electronics, cosmetics, and in all sectors, Korean makers have withdrawn from the Chinese market. Samsung Electronics withdrew from its mobile phone producing factory in Tianjin and telecommunication equipment production facilities in Shenzhen at the end of 2019. LG Electronics is now considering integrating its mobile phone producing factories in Yantai and Qingdao into one.

In August 2023, SGI (Star Group Industrial), a South Korean company active in Inner Mongolia and specializing in magnet production, announced it will transfer production to Vietnam. Together with SGI, a Chinese company, Baotou INST Magnetic New Materials Co. Ltd., is to transfer its production base to Vietnam, having been asked by clients to be prepared for risks associated with China.

Meanwhile, according to the Korean newspaper *JoongAng Daily News* on June 5, 2019, some South Korean businesspeople feel the South Korean government must actively work on policies to encourage repatriation of South Korean companies that have moved overseas. Samsung Electronics and SK Hynix Inc., having founded a large-scale semiconductor factory in China, are building up an advanced semiconductor production line within South Korea. According to a survey by the Federation of Korean Industries covering 34 among 93 South Korean companies in Hong Kong examined on “the impact of the US-China trade confrontation and Law of the People’s Republic of China on Safeguarding National Security in the Hong Kong Special Administration Region on their business and its outlook”, 20.6% of those companies’ overseas partners have either already retreated from Hong Kong or plan to retreat.

South Korean companies are also working to transfer production bases from China to Vietnam. Their affiliates and parts and components providers in some sectors including electronics are beginning to move jointly and build up bases in Vietnam. This has resulted in a rapid increase of South Korean companies’ FDI in Vietnam. In 2018, it increased by more than 60% over the previous year and in the first half of 2019 it increased 72.6%. By 2020 South Korea had become the second-largest FDI provider in Vietnam.

In the case of Taiwan, Taiwanese companies’ FDI in mainland China has decreased but their investment in ASEAN and European nations and the US has expanded. It is also noteworthy that Taiwanese production in mainland China accounted for around 50% of the total in 2016, the highest ever, but declined to less than 40% in 2022, while their domestic production and production in ASEAN have been expanding. In response to US sanctions on China in high-tech products, Taiwanese companies stationed in mainland China are beginning to return to Taiwan, and this trend has been increasing.

For example, Quanta Computer Inc., one of the world’s major EMS (electronics manufacturing service) providers, having started production in mainland China at the beginning of the 2000s and with three production bases there in Shanghai, Changshu and Chingqing, has recently relocated part of its production of components to Taoyuan in Taiwan and is planning to spend around 15 billion Taiwan dollars to supply servers for data centers of major US high-tech companies like Facebook and Google.

Also, Innolux Corp., a major provider of liquid crystal panels, transferred part of its assembly line from mainland China to Taiwan, spending more than 70 billion Taiwan dollars on factory construction. LITEON Technology, which produces electronic devices and LED-related goods, in May 2020 committed to raising its production ratio in non-Chinese regions or nations to 20% and is now expanding production in such regions. Taiwanese communication information equipment makers such as Pegatron, Delta Electronics Inc., and Flexium Inc. are also promoting their reshoring.

In 2023, Foxconn Technology Co., Ltd., Taiwan’s largest EMS provider, founded a company producing parts and components as well as chargers for EVs and parts for IT products, with total production worth $246 million, in Tinh Quang Ninh in the northern part of Vietnam. Also noteworthy is that TSMC, a large supplier of semiconductors and chips to Huawei, announced in May 2020 that it will construct a next generation production factory in Arizona, by spending $12 billion, as was commended by the Arizona State and US governments. Construction began in 2021 and the factory will start producing chips by using a new five-nanometer processing technology in 2024. TSMC Taiwan had been impacted by the

US-China struggle for technological hegemony – such as the US ban on Huawei's provision of high-tech semiconductors and components – and gave up Huawei, its largest buyer in Asia, and chose the US. From this, we can see that existing global supply chains are extremely vulnerable in the face of the geopolitical risks of US-China friction.

Meanwhile, Chinese companies have also recently been accelerating their production base transfers to Vietnam and other ASEAN countries. Chinese companies' FDI in Vietnam has widely expanded to a record $2.8 billion, with the manufacturing sector including processing and assembling accounting for more than 90% of the total. Among large-scale manufacturing projects that have drawn attention are the production facilities of tires for trucks and buses in Tay Ninh ($280 million cost), of rubber products including tires in Tinh Tien Giang ($214.4 million cost), and also electronic parts products and stainless steel processing.

Chinese companies are also active in Thailand. According to the Thai Embassy's investment department in China, China has recently become the largest investor with more 50% of the total. China's FDI has been concentrated mostly in the manufacturing sector, like transportation machinery, electric machinery, components and rubber.

In other words, Chinese companies have recently been promoting development-oriented FDI in ASEAN countries as part of a production shift policy, with India being another likely destination. Even in solar panels, of which Chinese companies have the largest share of production in the world, production in Vietnam is increasing. Trinasolar, the leading smart solar solution provider, has decided to invest $420 million in Vietnam, given that the US restricts imports of solar power generation-related products from China due to its dumping and human rights violations, but imposes no tariffs on imports from Vietnam.

US companies in China and Chinese companies on contract production with US firms are also shifting their production capacity from China. According to a survey in 2019 by the American Chamber of Commerce in China, of 239 Chinese-owning US companies, 22.7% are transferring supply chains from China and 19.7% of those are going to examine transferring their manufacturing process from China. Some 33.2% of those companies have postponed or will cancel their investment plans in China and only 2.9% will increase investments in China.

In 2022, the administration of US President Joe Biden introduced restrictions on their exports of advanced semiconductors or semiconductor production facilities to China, and so there is concern about the difficulty of making the newest products in China. In this light, Apple is promoting the shift of its supply network to Vietnam. According to an analysis by JP Morgan, reported in the *Nihon Keizai Shimbun* on Dec. 5, 2023, around 20% of iPads and Apple Watches, as well as around 65% of AirPods, will be produced in Vietnam.

So we can see how production transfer is proceeding from China to Southeast Asia. HonTeng 6088 Precision Technology of the HonHai Group specializing in producing the Apple iPhone's wiring, cable and connectors, in October 2018 acquired 880 million yuan of shares in New Wing Interconnect Technology, a Vietnamese company, and expanded its production in Tinh Bac Giang. Lens Technology, a supplier of glass for iPhone protection, Goertek, an AirPod maker, and Desai Battery, a supplier of batteries for Apple mobile phones have also established factories in Vietnam and increased their production lines there. Goertek invested $260 million in Tinh Bac Ninh in northern Vietnam and constructed a factory that started production in May 2020. In the second quarter of 2020, its AirPod production there accounted for around 30% of its overall production of AirPods, whereas previously it depended upon its bases in China for all its production of AirPods.

Conclusion

In responding to US-China trade friction and confrontation, Japanese, Korean, Taiwanese, and Chinese companies, and US affiliates in China, are more actively than ever working on the transfer of their production bases and capacity to ASEAN regions like Vietnam and Thailand to avoid total dependency on China. Thus, a big transformation in Asian global supply chains involving China has been created and reconstruction of supply chains is underway. This trend is likely to continue, with further challenges ahead.

In recent years, major countries have been trying to secure their supply chains against the background of US-China confrontation and the Russian invasion of Ukraine. On the issue of economic security, I think most G7 nations are pursuing selective derisking rather than decoupling from China in a wide range of sectors. But their major multinationals, while leaving production and sales functions for products with a "competitive edge" in the Chinese market in China, are reconstructing their supply chains by shifting their production bases for exports from China partly to their home countries and to ASEAN.

In response to changes in China such as wage cost increases, as well as increasing geopolitical risks, we should reconstruct diversified supply chains across Asia, including China, ASEAN or India, without solely depending upon a single nation or region. This will help the major nations' companies in their derisking strategy to cope with China.

Article translated from the original Japanese by Naoyuki Haraoka.

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