Mizuho Economic Outlook & Analysis

October 16, 2019

Dependence on trade with China growing globally

Transitions in the past 20 years and the future under US-China rivalry

< Summary >

◆ The rising US vigilance over the expanding global presence of the Chinese economy underlies the US-China rivalry. With the economic dependence on China and the US of regions other than the two countries as a clue, it is of significance to measure the changes in China's influence.

◆ The transitions in the degree of dependence on trade with China and the US ("trade dependency" on China and the US) in the past 20 years show that many regions are seeing the trade dependency on China rise and surpass that on the US. These developments are being affected by the expansion of the size of the Chinese economy and the development of supply chains centering around China.

◆ Going forward, if the review of the supply chains goes ahead in the wake of the US-China rivalry and the improvement of the investment environment and the accumulation of relevant industries make progress particularly in Southeast Asia, the potent candidate destination of relocation of production bases, the degree of dependence on imports from China may decline.

Mizuho Research Institute Ltd.
Yoshino Tamai, Senior Economist
Research Department Europe and the Americas, Research Department Asia
03-3591-1283
yoshino.tamai@mizuho-ri.co.jp

1. Introduction

A sense of uncertainty over the future of the US-China rivalry is continuing to smolder. The two countries reached a "partial agreement" at ministerial negotiations held October 10-11, with the US temporarily putting on hold an increase in the tariffs on Chinese imports planned for October 15. However, they have yet to finish drawing up an agreement. Moreover, the latest partial agreement does not cover structural issues, such as China's industrial subsidies, over which the two countries remain wide apart. The US hopes to bring the bilateral talks up to the next stage to urge China's reform.

The rising US vigilance over the expanding global presence of the Chinese economy appears to underlie the US-China rivalry. The US administration and Congress have recognized that China has enhanced its economic presence by driving the US and other countries into disadvantaged positions through unjust measures such as the coercion of technological transfers and the theft of intellectual property. Thus, the US is trying to counter the Chinese threat by strengthening regulations against Chinese investment in the US and export controls in addition to the tariff hike on Chinese imports.[1] Also, it has been pointed out that China has been enhancing its economic and military influence, particularly in emerging countries and regions through its foreign policy such as "One Belt, One Road Initiative," and this has led to the mounting US vigilance over China.[2] Some observers point out that the rivalry between the US and China will go beyond the trade war, where the two countries mutually impose high tariffs, into a long-term confrontation over technological hegemony and security, even reaching the stage of "decoupling" of the US and Chinese economies.

Then, has China really enhanced its economic presence to the extent that it threatens the US? If so, what sort of changes are taking place in which regions in particular?

As a starting point of considering such issues, this paper examines how the economic relations with China and the US have changed in recent years from the perspective of third countries/regions other than the US and China, and what factors have brought those changes. Specifically, in order to measure the presence of China and the US in the economies of other countries/regions, we analyze changes in their dependence on trade with China and the US ("trade dependency" on China and the US). We also focus on developments in supply chains, which are expected to serve as a key to see through future changes in the trade dependency on China and the US, and study changes in the trade relationship with China and the US in Southeast Asia, which is drawing attention as a main relocation destination of production bases from China.

---

[1] The Hudson Institute (2018), U.S.- China Economic and Security Review Commission (2018).

[2] U.S.- China Economic and Security Review Commission (2018).

2. Transitions of the dependence on trade with China, US in the past 20 years

(1) Method of calculation of the degree of dependence on trade

First, this paper presents the method of calculating the degree of dependence on foreign trade ("trade dependency"), the subject of analysis in this paper. In this paper, in order to measure the presence of China and the US in the economies of other countries/regions, the ratio of exports to China (or the US) to gross domestic product (GDP) is defined as the "export dependency on China (or the US)" and the ratio of imports from China (or the US) to domestic demand (gross fixed capital formation + household consumption) is defined as the "import dependency on China (or the US)."[3] We also use the "trade intensity index," an indicator to show how much trade between a certain region and China (or the US) is larger than the "standard" amount of bilateral trade.[4] Trade intensity index above 1 indicates that an amount of trade with that trading partner is larger than the standard amount of trade.

The UN Comtrade database is used for data on an amount of trade and the UN database is used for gross domestic product (GDP), gross fixed capital formation and household consumption. The classification of countries/regions is also based on the UN classification.[5] Due to data limitation, the periods subject to the analysis is up to 2017.

(2) Dependence on China rising in many regions to outpace dependence on US

With regard to exports, looking at changes in the export dependency on China and that on the US by region (all five regions: Africa, North America/Latin America, Asia, Europe and Oceania),[6] the export dependency on China has been increasing in all regions, while

---

[3] We used McKinsey Global Institute (2019) as a reference for the method of calculating the degree of dependence. In calculating the degree of dependence on exports, we used data on the part of importers, deemed as more reliable than data on the part of exporters, by following Kumagai (2011), and treated it as data on exporters by reversing exporting and importing countries. As for the degree of dependence on imports, McKinsey Global Institute (2019) calculates it as "the ratio of imports to domestic consumption." In consideration of the fact that imports include investment-related goods, however, we termed the dependence on imports as the ratio of imports to a total of gross fixed capital formation and household consumption.

[4] According to Kumagai (2011), the trade intensity index is defined as follows (in the case of the degree of intensity of exports of Country *i* with Country j):

$$I_{ij} \equiv (\frac{X_{ij}}{X_{i\cdot}})/(\frac{X_{\cdot j}}{X_{\cdot\cdot}})$$

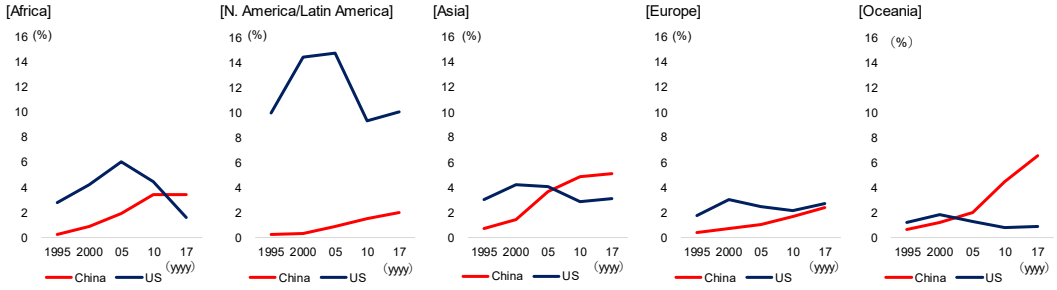
In this formula, X_{ij} means exports of Country *i* to Country *j*, $X_{i\cdot} \equiv \sum_j X_{ij}$(total exports of Country *i*), $X_{\cdot j} \equiv \sum_i X_{ij}$ (total exports to Country *j*), $X_{\cdot\cdot} \equiv \sum i \sum j X_{ij}$(total exports of the world). The denominator of the right-hand side shows the share of exports to Country *j* in the world's total exports. This is regarded as the hypothetical standard share of exports to Country *j* in exports by Country *i*. On the other hand, the numerator of the right-hand side shows the actual share of exports to Country *j* in total exports by Country *i*. The degree of trade intensity (I_{ij}) is the index to measure to what extent an actual amount of trade between Country *i* and Country *j* exceeds the standard amount of trade calculated from the two countries' shares in the world's trade. The index in excess of 1 shows the amount of bilateral trade exceeds the standard amount of trade.

[5] UN Statistic Division, *Standard Country or Area Codes for Statistical Use (M49)*

[6] These five regions represent the broad classification, and there are the following sub-regions under each region: Africa: North Africa and sub-Sahara Africa; North America/Latin America: the Caribbean, Central America, South America and North America; Asia: Central Asia, East Asia, Southeast Asia, South Asia and West Asia; Europe: Eastern Europe. Northern Europe and Western Europe; and Oceania: Australia, New Zealand, Melanesia, Micronesia and Polynesia.

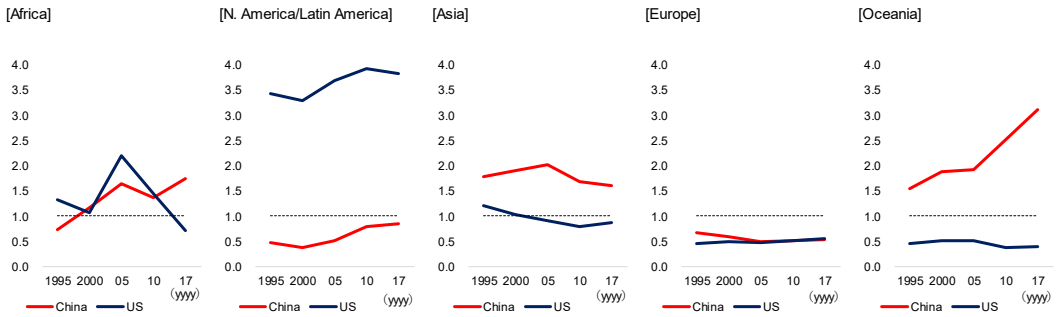
the export dependency on the US has been declining in North America/Latin America and Africa and has almost leveled off in Asia, Europe and Oceania (**Chart 1**).

Chart 1 Export dependency on China, US by region



Note: “North America/Latin America” excludes the US. “Asia” excludes China.
Source: Made by MHRI based on UN Comtrade

Chart 2 Intensity of exports to China, US by region



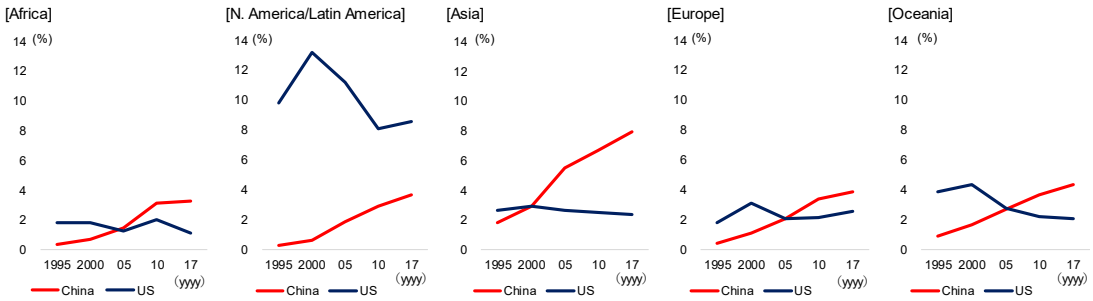
Note: “North America/Latin America” excludes the US. “Asia” excludes China.
Source: Made by MHRI based on UN Comtrade

Comparison between the levels of the export dependency on China and that on the US shows that the export dependency reversed between China and the US for the three regions of Africa, Asia and Oceania, with the export dependency on China turning higher than that on the US for Oceania since 2005, for Asia since 2010 and for Africa since 2017. By sub-region, the dependence on China surpasses the dependence on the US for sub-Sahara Africa, South America, East Asia, Southeast Asia, West Asia, Eastern Europe and Northern Europe. Meanwhile, looking at the trade intensity index, the intensity of exports to China is over 1 and higher than the intensity of exports to the US for Africa, Asia and Oceania (**Chart 2**). On the other hand, the intensity of exports to the US remains overwhelmingly high for North America/Latin America.

As for imports, looking at changes in the import dependency on China and that on the US by region, while the import dependency on China is on the rise in all regions, the import dependency on the US has been either flat or declining (**Chart 3** on the following page). Comparison between the levels of the import dependency on China and that on the US shows that the import dependency reversed between China and the US for the regions other than North America/Latin America, and that even for North America/Latin America, the

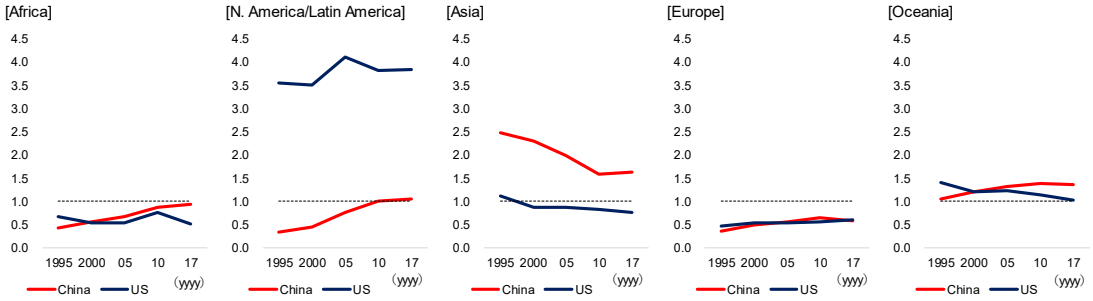
import dependency on China came to surpass that on the US for South America in 2017. As for the trade intensity index, the intensity of imports from China has exceeded the intensity of imports from the US for Asia and Oceania, rising above 1 for both regions (**Chart 4**). In Africa, the intensity of imports from China remains below 1 but is still above the intensity of imports from the US and rising. For North America/Latin America, while the intensity of imports from China is rising, the intensity of imports from the US has been consistently higher.

Chart 3 Import dependency on China, US by region



Note: “North America/Latin America” excludes the US. “Asia” excludes China.
Source: Made by MHRI based on UN Comtrade

Chart 4 Intensity of imports from China, US by region



Note: “North America/Latin America” excludes the US. “Asia” excludes China.
Source: Made by MHRI based on UN Comtrade

Given the above, it is obvious that China’s presence as an export destination and the source of import is increasing in many regions. In Africa, Asia and Oceania, the linkages with China are becoming stronger than that with the US in terms of both the trade dependency and the trade intensity index. Meanwhile, in North America/Latin America, the situation is somewhat different from other regions. While the dependency on China is rising for both exports and imports, the trade dependency on the US remains higher, and the degree of trade intensity with the US continues to stay at a high level.

(3) Trade dependency on China rising, trade dependency on the US falling for almost all goods

In order to examine details of the changes in the trade dependency degree on China and that on the US by region, we analyze the changes in the dependence on China and the US by goods and by region.

Goods were classified into five categories based on the classification of the UN Broad Economic Categories (BEC): materials, processed goods, parts, capital goods and consumer goods.[7] The ratio of exports of each type of goods to domestic production is defined as the export dependency, and the ratio of imports of each type of goods to domestic demand (gross fixed capital formation + household consumption) is defined as the import dependency.

In terms of exports, from 2000 through 2017, the export dependency on China has risen by region/goods for almost all regions and goods. The increases are particularly large for (1) Oceania/materials (iron ores and coal from Australia), (2) Asia/processed goods (chemical raw materials, petroleum and rubber from East Asia and Southeast Asia), and (3) Africa/materials (crude oil, iron ores and chrome ores from Angola, South Africa and Congo) (**Chart 5** on the following page).[8]

On the other hand, the export dependency on the US has declined for almost all regions/goods. The decreases are particularly large for (1) Africa/materials (crude oil and iron ores from Nigeria and Angola), (2) North America/Latin America/consumer goods (automobiles and wooden furniture from Canada), and (3) North America/Latin America/processed goods (lumber and newsprint from Canada) (**Chart 6** on the following page). For example, regarding (1), looking at changes in the value of exports of ores/mineral fuels (HS Codes 26/27) from sub-Sahara Africa to China and the US, exports to China surpassed exports to the US in 2015.

Looking next at imports, the import dependency on China has risen for almost all regions and goods. The increases are remarkably large for intermediate goods (processed goods/parts) and capital goods, notably in Asia, particularly in East Asia and Southeast Asia (**Chart 7** on the following page). The increases in the value of imports from China are significant in the electronic/electric equipment and general machinery manufacturing industries, such as telephone equipment parts, integrated circuits, and general machinery parts among intermediate goods, and mobile phones, notebook personal computers (PCs) and memory devices among capital goods.

---

[7] See Table 5 of the Ministry of Economy, Trade and Industry (2014) for the classification of goods.

[8] We make a specific analysis of goods by converting BEC codes to Harmonized System (HS) codes. The same applies to the analysis of exports to the US, imports from China and imports from the US.

Chart 5 Changes in export dependency on China by goods/region

	Africa	N. America/Latin America	Asia	Europe	Oceania
Materials	**1.61**	1.19	0.59	0.19	**3.93**
Processed goods	0.99	0.34	**1.69**	0.77	0.94
Parts	0.00	0.01	0.52	0.17	0.01
Capital goods	0.00	0.03	0.58	0.25	0.00
Consumer goods	0.03	0.11	0.19	0.32	0.48

Note: The degree of dependence in 2017 minus the degree of dependence in 2000 (unit: % point). "North America/Latin America" excludes the US. "Asia" excludes China. The maximum value is shown in deep red and the minimum value in white.
Source: Made by MHRI based on UN Comtrade

Chart 6 Changes in export dependency on US by goods/region

	Africa	N. America/Latin America	Asia	Europe	Oceania
Materials	**- 1.92**	- 0.54	- 0.08	- 0.06	- 0.20
Processed goods	- 0.60	**- 1.02**	0.18	- 0.04	- 0.30
Parts	- 0.03	- 0.79	- 0.59	- 0.17	- 0.07
Capital goods	- 0.01	- 0.52	- 0.37	- 0.15	- 0.03
Consumer goods	- 0.05	**- 1.24**	- 0.27	0.07	- 0.28

Note: The degree of dependence in 2017 minus the degree of dependence in 2000 (unit: % point). "North America/Latin America" excludes the US. "Asia" excludes China. The maximum value is shown in deep blue and the minimum value in white.
Source: Made by MHRI based on UN Comtrade

Chart 7 Changes in import dependency on China by goods/region

	Africa	N. America/Latin America	Asia	Europe	Oceania
Materials	0.03	0.00	- 0.05	-0.00	- 0.01
Processed goods	0.89	0.73	**1.77**	0.67	0.81
Parts	0.44	0.73	**1.45**	0.45	0.30
Capital goods	0.89	1.02	**1.98**	1.09	1.19
Consumer goods	0.43	0.49	- 0.21	0.55	0.38

Note: The degree of dependence in 2017 minus the degree of dependence in 2000 (unit: % point). "North America/Latin America" excludes the US. "Asia" excludes China. The maximum value is shown in deep red and the minimum value in white.
Source: Made by MHRI based on UN Comtrade

Chart 8 Changes in import dependency on US by goods/region

	Africa	N. America/Latin America	Asia	Europe	Oceania
Materials	- 0.05	0.18	- 0.01	0.01	-0.00
Processed goods	0.08	- 0.55	0.15	0.17	- 0.54
Parts	- 0.04	**- 2.46**	- 0.47	- 0.38	- 0.72
Capital goods	- 0.24	**- 1.21**	- 0.15	- 0.32	- 0.74
Consumer goods	0.03	**- 0.72**	- 0.02	0.10	- 0.14

Note: The degree of dependence in 2017 minus the degree of dependence in 2000 (unit: % point). "North America/Latin America" excludes the US. "Asia" excludes China. The maximum value is shown in deep blue and the minimum value in white.
Source: Made by MHRI based on UN Comtrade

On the other hand, the import dependency on the US has dropped for almost all regions and goods (**Chart 8**). The decreases are particularly large in imports of parts, capital goods and consumer goods for North America/Latin America, notably for North America. The value of imports from the US fell significantly for automobile parts and PC parts among parts, and PCs, washing machines and refrigerators among consumer goods.

(4) Rise in trade dependency on China mainly stems from China's economic expansion and the supply chain development

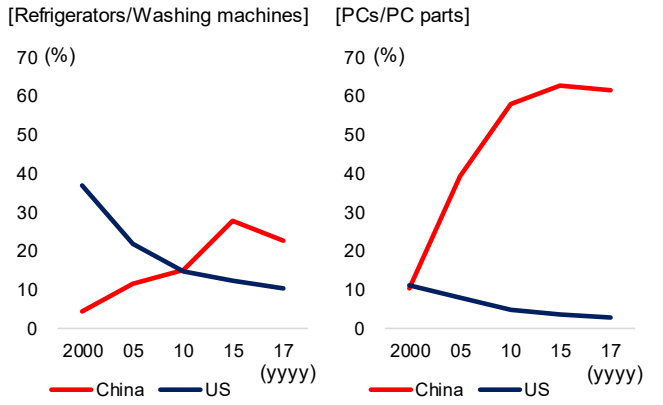
The main factors behind the changes discussed above are believed to include (1) China's economic expansion, (2) the development of the supply chain centering around China, (3) trade policies, and (4) others, including factors in the US.

The factor (1) points to developments where China's imports of resources increase in line with rising demand for energy associated with the expansion of the size of the Chinese

economy. As discussed in 2(3) above, this factor is apparently responsible largely for the higher export dependency on China for materials from Africa, Asia and Oceania as well as the fact that Africa's exports of resources to China exceeded those to the US.

The factor (2) shows that China's expansion of its role as a production base has boosted trade in intermediate goods, and exports of final goods from China have expanded. The World Trade Organization (WTO) report on the global value chain analyzed changes in international production networks in the past 20 years or so and pointed out that China has come to play a central role in place of the US in both aspects of supply and demand.[9] This is deemed to have led to the rises in the trade dependency on China and the degree of trade intensity with China in many regions. It is inferred that this factor contributed to the rise in the export dependency on China for intermediate goods in Africa, Asia and Oceania and the rise in the import dependency on China for electronic/electric equipment and general machinery in East Asia and Southeast Asia. The significant drop in imports of PCs/PC parts and home appliances from the US in North America/Latin America can also be explained mainly by the factor (2), given that the share of imports from the US has declined, while that from China has increased (**Chart 9**).

Chart 9 Shares of imports from China, US for North American region



Note: "North American Region" excludes the US. HS Codes for "Refrigerators/Washing machines" are 8418/8450, and HS Codes for "PCs/PC parts" are 8471/8473.
Source: Made by MHRI based on UN Comtrade

The factor (3) means that open-door trade policies, including China's accession to the WTO and the conclusion of free trade agreements (FTAs), have resulted in lower transaction costs and encouraged the development of supply chains. Since China joined the WTO in 2001, the trade dependency on China has further increased in many countries/regions, and the trade dependency has risen particularly in Asia where many countries/regions have concluded FTAs with China (countries/regions with FTAs with China: member states of the Association of Southeast Asian Nations (ASEAN), South Korea, Singapore and Pakistan, etc.) and Oceana (Australia and New Zealand). It is

[9] Li, Meng and Wang (2019). The authors also pointed out that "China has emerged as an important hub in traditional (trade only in final goods, with the production process completed domestically) trade and simple GVC (Example: imports of intermediate goods to produce goods for domestic consumption) networks, but the United States and Germany remain the most important hubs in complex GVC (Example: imports of intermediate goods to produce goods for exports to other countries) networks."

inferred that trade policies have had the effect of promoting the development of supply chains.

Finally, regarding the factor (4), the decline in exports of resources to the US from sub-Sahara Africa was apparently influenced by the US moves to raise its energy self-sufficiency through the development of shale gas and oil. It is also possible that the fall in imports of automobile parts from the US in North America/Latin America has been caused by the relocation of production from the US to Canada and Mexico in North America/Latin America.

3. Future course of trade dependency on China, US: Case of Southeast Asia

(1) Supply chain development is the key to see through future changes in the trade dependency

In the preceding section, we looked at the changes in the trade dependency on China and the US for all regions of the world. In this section, we examine the future course of the trade dependency on China and the US.

Of the factors that are considered to affect the trade dependency, as indicated in the preceding section, the factor (1), "China's economic expansion," is likely to continue to function in the direction of raising the trade dependency on China going forward. While the Chinese economy is slowing down after ending the era of high double-digit growth, the World Bank and the Development Research Center of the State Council of China forecast that China can still maintain the annual average real GDP growth of around 5% between 2020 and 2030 if it can carry out structural reforms, albeit moderately, to enhance productivity.[10] With an expansion of the size of the Chinese economy at a faster pace than the US economy, the export dependency on China for final goods may surpass the export dependency on the US for final goods, which is currently higher than the export dependency on China for final goods.

As for the factor (3), "trade policies," as the Chinese government is aggressively building FTAs with many countries/regions, this factor is also expected to work to increase the export dependency on China. Also, as possible developments related to China's foreign policy, the import dependency on China may increase as infrastructure construction picks up speed under the "One Belt, One Road Initiative" pushed hard by China, prompting an increase in imports of intermediate goods and capital goods from China.

Meanwhile, regarding the factor (2), "the development of the supply chain centering around China," as it is affected by the US-China rivalry, there are a lot of uncertainties over how it will change in the future and how it will affect the economic relations with

[10] World Bank Group and the Development Research Center of the State Council, P. R. China (2019).

China and the US. Therefore, this factor is a key to see through future changes in the trade dependency.

Of particular note is the relationship with Southeast Asia. As supply chain-related actual developments, some Chinese companies and foreign firms operating in China are beginning to consider the relocation of production bases out of China to avoid high tariffs imposed on products manufactured in China and exported to the US market. Southeast Asia is the major candidate as the relocation destination of production bases. According to questionnaire surveys conducted by the American Chamber of Commerce in China and the American Chamber of Commerce in Shanghai on US member firms, to the question asking them "whether they have relocated or are planning to relocate the manufacturing bases in China in the wake of the US-China trade tensions," the largest proportion of respondents said they have "no plans for relocation." As the candidate destination of possible relocation, however, the biggest number of respondents chose Southeast Asia, followed by Mexico and the Indian subcontinent (India, Bangladesh, Pakistan and Sri Lanka) (**Chart 10** on the following page).[11]

Therefore, if the review of supply chains develops, particularly significant changes may occur in Southeast Asia, which, as seen in the preceding section, has the strong supply chain links with China and is drawing keen attention as the potent candidate destination of relocation of production bases. The following discussion focuses on Southeast Asia's future economic relations with China and the US.

(2) Degree of dependence on China rising for both exports and imports of many goods in Southeast Asia

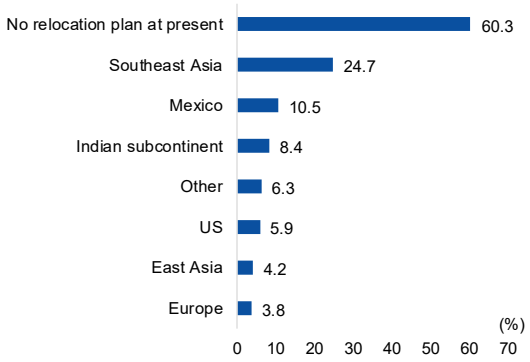
First, let us provide an overview of the past changes in the trade dependency on China and the US in Southeast Asia. As for exports, the degree of dependence on China has been rising for all goods, but the degree of dependence on the US has been declining for goods other than processed goods (**Chart 11** on the following page). Looking at imports, while the dependence on China has been rising for all goods other than materials, the degree of dependence on the US has been on the decline for all goods.

A comparison of the levels of the degree of dependence shows that Southeast Asia's dependence on China has risen for many goods for both exports and imports. As for exports, the degree of dependence on the US remains high for capital goods and consumer goods, but the degree of dependence on China turned higher than the degree of dependence on the US for materials and intermediate goods (**Chart 12** on the following page). Regarding imports, while the degree of dependence on the US remains high for materials, the degree

[11] AmCham China and AmCham Shanghai (2019).

of dependence on China turned higher than the degree of dependence on the US for goods other than materials (**Chart 13** on the following page).

Chart 10 Destination of relocation of US firms' manufacturing bases in China



Note: Multiple answers allowed.
Source: AmCham China and AmCham Shanghai (2019)

Chart 11 Changes in dependence on China/US in Southeast Asia

[Exports]

	China	US
Materials	0.74	- 0.25
Processed goods	2.75	0.27
Parts	0.22	- 3.67
Capital goods	0.65	- 2.43
Consumer goods	0.47	- 1.59

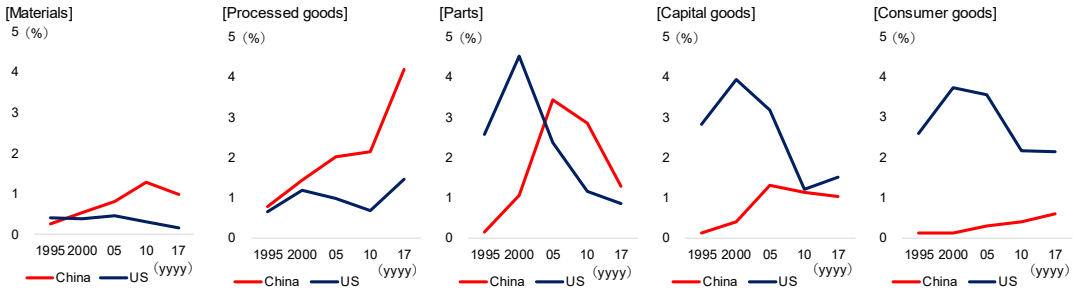
[Imports]

	China	US
Materials	- 0.19	- 0.13
Processed goods	2.37	- 0.82
Parts	1.35	- 4.37
Capital goods	1.36	- 1.39
Consumer goods	0.29	- 0.37

Note: The degree of dependence in 2017 the degree of dependence in 2000 (unit: %pt).
Source: Made by MHRI based on UN Comtrade

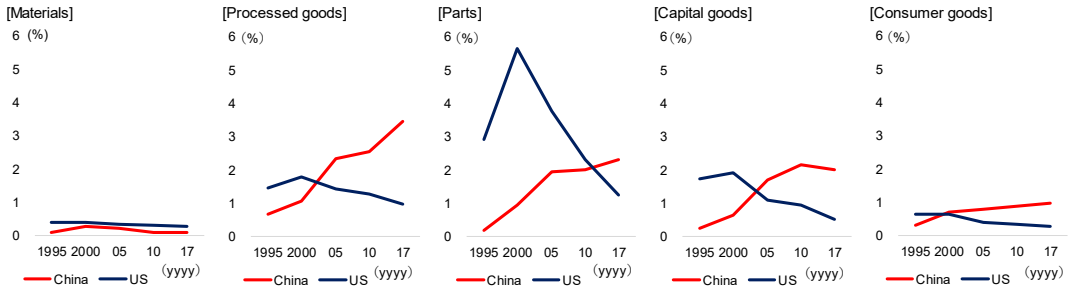
Furthermore, the closer examination by goods and by country indicates that the supply chain involving China, the US and Southeast Asia has been developed in the electronic and electrical machinery industry. First of all, Vietnam's imports of mobile phone parts from China and its exports of mobile phone handsets to the US increased significantly, potentially pointing to the existence of the supply chain where "Vietnam imports key parts from China → assemble mobile phone handsets in Vietnam → Vietnam exports final goods to the US." Also, given the significant increases in exports of integrated circuits and mobile phone parts to China from Malaysia and Vietnam and in exports of mobile phones and notebooks PCs to the US from China, it is inferred that the supply chain has evolved to assemble parts imported from Southeast Asia in China and export part of finished products to the US.

Chart 12 Export dependency on China/US in Southeast Asia (by goods)



Note: "North America/Latin America" excludes the US. "Asia" excludes China.
Source: Made by MHRI based on UN Comtrade

Chart 13 Import dependency on China/US in Southeast Asia (by goods)



Note: "North America/Latin America" excludes the US. "Asia" excludes China.
Source: Made by MHRI based on UN Comtrade

(3) Review of the supply chain may bring down Southeast Asia's dependence on trade with China

Now, following the US-China rivalry, how will the supply chain across China, the US and Southeast Asia change down the road and what sort of changes will occur in Southeast Asia's trade dependency on China and the US? Below, by focusing on the electronic and electrical machinery industry, we consider potential changes in the two kinds of the supply chain discussed above: (1) China imports parts from Southeast Asia → China procure intermediate goods and assemble final goods in China → China exports final goods to the US; and (2) Southeast Asia, mainly Vietnam, imports high-value-added parts from China→ assemble them in Southeast Asia → Southeast Asia exports final goods to the US.

The supply chain (1) is expected to go under review to avoid the high tariffs, which has been affected by the tariff hikes as a result of the US sanctions on China. As the need to transfer product assembly bases from China to Southeast Asia rises, Southeast Asia's import dependency on China for intermediate goods and its export dependency on the US for final goods are likely to increase. However, the import dependency on China for intermediate goods may not rise so much if alternative intermediate goods can be procured within the region, because Southeast Asia can expect cheaper costs and better delivery terms than the case of importing intermediate goods from China.

While the supply chain (2) is not so much vulnerable to the tariff hikes in US-China trade, it is also likely to go under review in light of the prolongation of the US-China rivalry, including tougher export controls designed to prevent an outflow of technologies. Here, the battle between the US and China for technological hegemony may develop into the "decoupling" of the two economies, a situation that would force the same manufacturer to build the two completely separate supply chains for China-bound products and US-bound products. For example, if the US tightens export controls[12] (including controls over

[12] According to the he Japan External Trade Organization (JETRO) (2019), the US administration enacted the Export Control Reform Act of 2018 (ECRA) in August 2018 as part of the National Defense Authorization Act (NDAA) for Fiscal Year 2019, indicating its policy of more strictly controlling an outflow from the US of technologies important to US national security. The US

re-exports), there is a risk that high-value-added parts produced by US companies in China for exports to Southeast Asia may be targeted for the tighter US export controls. In anticipation of such risks, Southeast Asia may move to import intermediate goods from other countries/regions or procure intermediate goods within Southeast Asia by producing them in the region instead of importing intermediate goods manufactured in China. As a consequence, the import dependency on China for intermediate goods is expected to decline.

However, in the review of either supply chain, it is expected to require some time if the procurement of substitute intermediate goods, particularly the procurement within Southeast Asia, is to be increased. Southeast Asia is faced with problems such as the shortage of infrastructure and human resources and insufficient industrial clusters. Thus, the common view is that even if companies decide to relocate their production bases from China to Southeast Asia, it would require a considerable amount of time before production activities actually starts.[13]

Given the above, the changes in the degree of dependence on China and the US stemming from the review of the supply chain are likely to depend much on the pace of improvement in the investment environment and the extent of the accumulation of relevant industries in Southeast Asia. For the time being, therefore, Southeast Asia is expected to remain dependent on imports of intermediate goods from China, and the import dependency on China is likely to remain at a high level. However, if the improvement in the investment environment and the accumulation of relevant industries move ahead in Southeast Asia and Southeast Asia establishes its status as the manufacturing base for goods to be exported to the US, the region's import dependency on China may decline while its export dependency on the US may increase. That said, as seen in 3(1) above, the degree of dependence on China appears on course to increase in regions other than Southeast Asia due to factors such as the expansion of the size of the Chinese economy and trade policies, the US vigilance over an expanding economic influence of China is likely to continue for the time being. In order to deepen the discussions, it is necessary to sort out the trends in the supply chain review in regions other than Southeast Asia as well as the transitions of the degree of their dependence on China and the US in non-trade economic relations such as investment and finance. We intend to address these issues for future analysis.

plans to extend its export control to cover "emerging and foundational technologies," which has previously stayed outside of export controls.

[13] Kobayashi and Matsuura (2019), Li and Fang (2019).