

# Triangular Cooperation of China-Japan in ASEAN Countries: Empirical Analysis and Path Selection

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## Abstract

In the post COVID-19 Era, ASEAN countries continue to focus on alleviating the impact of the pandemic and supporting an economic recovery. The active promotion of triangular cooperation will be of great significance to the economic recovery and regional integrated development. The paper analyzed trade complementarity between China, Japan with ASEAN countries, estimated revealed comparative advantage index of China and Japan in comparison to ASEAN countries. Based on the empirical result, the paper put forward several suggestions to promote TC of China-Japan in ASEAN, which including to improve regional supply chain, strengthen financial cooperation, and promote local governments and association's cooperation.

**Keywords:** China, Japan, ASEAN countries, triangular cooperation, path selection

## I. Introduction

The external economic environment has deteriorated since 2008 with the US economy going into recession and the global economy slowing down (Haass,2020) . Led by robust growth in China and India, Asian economies have so far managed to avoid a threat of serious recession (Kumar,2009).As the COVID-19 outbreak has spread since 2020, the disruption of supply chains and a sudden stop in global demand have a huge negative impact on those ASEAN economies (AMRO, 2021). ASEAN achieved a GDP of US\$ 3.08 trillion in 2020 to contract by 4.8%. The region was hit by the even more transmissible Omicron variant at the end of 2021, bringing more than half of its economies back to depression in economic activity and the increase in unemployment (AMRO, 2022). To improve international cooperation in ASEAN could play an important role in recovery of the Asia economy from the slow down.

Over the past two decades, both China and Japan have maintained a close and in-depth cooperation relationship with ASEAN in various fields such as finance, energy, regional integration, and small and middle-sized enterprise services. Chinese and Japanese enterprises have separately developed their cooperation regarding many projects such as building materials, power, and energy in ASEAN countries. Chinese and Japanese also carried out cooperation by mutual subcontracting or joint bidding, technology transfer and joint R&D, mutual shareholding and joint investment in Thailand, Vietnam and Indonesia. In April 2018, the 4<sup>th</sup> economic dialogue between the senior leaders of China and Japan was held in Tokyo, Japan, where the two countries reached an agreement on the necessity of promoting triangular cooperation (TC) and made in-depth discussion on the establishment of an exchange platform for both officials and citizens. In May 2018, both China and Japan reached the Memorandum on China-Japan Third-Party Market Cooperation, which agreed to strengthen their triangular cooperation unanimously and boost the working mechanism for promoting China-Japan third-party market cooperation (Li, 2020). The Japanese Prime Shinzo Abe visited to Beijing in October 2018, and the two countries signed over 50 agreements on economic cooperation (Yan, 2019).

In the context of high complementation between ASEAN countries and China-Japan in terms of industrial structure and economic structure, the active promotion of TC will be of great significance to the economic recovery and regional integrated development in the post COVID-19 Era. The purpose of this paper aims to analyze trade complementarity between China, Japan with ASEAN countries, estimate revealed comparative advantage index of China and Japan in comparison to ASEAN countries. Based on the empirical result, the paper will put forward suggestions to promote triangular cooperation of China-Japan in ASEAN countries.

## 2. Literature Review

The deterioration in the global economy with the US economy going into recession in 2008 has paradoxically created new opportunities for South-South cooperation (SSC), as partner countries are looking for innovative cooperation mechanisms to facilitate economic recovery (Kumar,2009,UN-LDC,2011). A relatively new trend reinforcing SSC is of triangular cooperation with Northern countries and multilateral agencies supporting the programs of cooperation between developing countries (Kumar, 2009; Zahran et al., 2011; Farias, 2015; Lengfelder, 2016; Santander and Alonso, 2017; Zhang, 2020; Li, 2020; Alonso and Santander, 2022). As the new mechanisms of development cooperation, TC often involves three actors: usually a developed country (or international organization) partnering up with a “pivot” developing country in order to aid a developing country (Farias, 2015).

TC can be seen as an effective way to overcome the North–South division typical of traditional Official Development Assistance (ODA), representing a new model of cooperation based on plural partnerships, in line with what Sustainable Development Goal 17 suggests. TC could play a transformative role anticipating features on which the future development cooperation system should be based and promote synergies between traditional and non-traditional donors. It could reduce transaction costs and engage in mixed modalities that combine capacities, know-how and resources from the North and the South (UN-LDC, 2011). Moreover, it can establish ties of trust and collaboration between countries, generating alliances that can endure beyond the time-frame of a specific intervention (Piefer-Söyler and Pelechà, 2020). As certain developing countries assume the role of substantive providers, TC does not respond to the classical structures of North–South cooperation, and because traditional donors operate as partners, TC does not fit with the canonical structure of South-South Cooperation. In fact, it represents a hybrid model (Alonso and Santander, 2022). There were three types of TC according to the role of developed and developing countries (Zhang, 2020). Developed countries played the key role in the first type, in which a country or international organization from the North provides technical and financial assistance for South countries in their industrial cooperation. In the second type, developed and developing countries have the same positions, and focuses on knowledge sharing based on the experience of both developed and developing countries (Fordelone, 2019). The third type involved cooperation among developing countries. There has gradually been more cooperation among developing countries within the South–South cooperation framework for capacity building and communication, such as the India–Brazil–South Africa (IBSA) Dialogue.

One feature of immediate note is that 66% of TC projects have been provided by country governments, with international organizations responsible for 20% and the remaining 14% jointly provided by several other actors (Alonso and Santander, 2022). As a matter of fact, two-thirds of member countries of OECD had already engaged in triangular cooperation projects (Zahran et al., 2011). For example, Canada and Brazil signed a Memorandum of Understanding (MOU) to improve international development cooperation, joint policy research and enhance institutional linkages, and technical cooperation activities in third countries (Dosman, 2012). Japanese International Cooperation Agency (JICA) put forward the Third Country Expert Dispatched Program (Honda, 2014). According to JICA, this program aimed at improving the impact of its bilateral technical cooperation, drawing on the expert knowledge of other countries in the South that act as suppliers in areas where Japan has no comparative advantage. As the world’s largest developing country, China has conducted TC to provide other developing countries assistance in eliminating poverty and developing economy (SCIO, 2019).

## 3. Empirical Analysis of Trade Complementarity between China—Japan and ASEAN Countries

The trade complementarity index (TCI) can be used to reflect the trade pattern between the two economies. If TCI is greater than 1, it means that the trade between the two economies is dominated by inter-industry trade. If, however, TCI is smaller than 1, it means the trade is dominated by intra-industry trade. The calculation formula for TCI can be expressed as:

$$C_{ij} = \sum_k [(RCA_{xik} * RCA_{mjk}) * (\frac{W_k}{W})]$$

Wherein,  $RCA_{xik}$  is the comparative advantage of country i for exporting Category k products, and  $RCA_{mjk}$  is the comparative disadvantage of country j for importing Category k products. Table 1 showed the TCI between China-Japan and ASEAN countries during 2011-2020.

The data was sourced from ASEAN Statistical Database, and UN Commodity Trade Statistics Database. The table 1 gives the revealed comparative advantage (RCA) of China-Japan and ASEAN countries for the period 2011 and 2020. The mean RCA is above one for China with Singapore, Philippines, Malaysia, Thailand, Brunei, Vietnam, and Cambodia, and below one for Indonesia, Laos and Myanmar. The mean RCA is above one for Japan with Philippines, Thailand, Brunei, Vietnam, Laos and Myanmar. Especially, The RCA is above one for China with Singapore,

Philippines, Malaysia, Vietnam, and Cambodia in 2020, meanwhile the RCA is below one for Japan with all ASEAN countries in 2020.

Inferences from the trade indices computed for understanding the trade structure between China-Japan and ASEAN revealed that there are complementary sectors and products available for enhancing trade cooperation between the trading partners. ASEAN countries are indifferent stages of economic development, China and Japan can have trade cooperation with some of them in all product categories. Therefore, through China-Japan triangular cooperation with ASEAN countries, the regional resources could be optimally allocated to promote the sustainable development of the regional economy.

Table 1. TCI of China-Japan and ASEAN Countries during 2011-2020

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Singapore	0.98 / 0.92	0.99/ 0.93	1.01/ 0.90	0.97 /0.88	1.01/ 0.91	1.04 /0.94	1.01/ 0.90	1.01/ 0.89	1.02 /0.91	1.06 /0.93
Philippines	0.75 /1.16	0.99 /0.93	0.98/ 0.91	0.94 /0.89	1.07/ 0.97	1.04/ 1.03	1.01/ 1.00	1.05/ 0.99	1.03 /0.98	1.34 /0.94
Malaysia	1.13 1.08	1.11 /1.07	1.08/ 1.04	1.05/ 0.99	1.07 /0.97	1.11 /0.97	1.10 /0.96	1.09 /0.94	1.05 /0.93	1.05 /0.94
Thailand	0.98 /1.03	1.02 /1.09	0.97 /1.03	1.00 /1.01	1.01 /1.00	1.04 /1.00	1.00/ 0.97	0.99 /0.95	1.00 /0.96	0.99 /0.97
Brunei	1.22/ 1.27	1.15 /1.09	1.11 / 1.10	0.99/ 1.12	1.05 /1.06	0.95 /0.94	1.02 /1.01	1.14 /1.08	0.80 /0.83	0.72 /0.73
Indonesia	0.93 /0.96	0.93/ 1.03	0.92/ 1.00	0.91 /0.94	0.96/ 0.95	1.00/ 0.94	0.99 /0.93	1.01 /0.95	0.85 /0.67	0.76 /0.65
Vietnam	1.15/ 1.01	1.23 /1.05	1.30/ 1.07	1.28 /1.06	1.26 /1.04	1.29 /1.00	1.31 /1.00	1.29 /1.01	1.31 /1.00	1.26 /0.98
Cambodia	1.61 /0.83	1.54/ 0.89	1.60/ 0.88	1.80 /0.87	1.59/ 0.92	1.59 /0.83	1.27 /0.74	1.20 /0.74	1.60 /0.89	1.40 /0.83
Laos	0.91 /1.09	0.89 /0.92	1.06 /1.27	1.14 /1.18	1.03 /1.05	0.90 /1.05	0.98 /1.03	0.93/ 1.01	0.94 /0.89	0.97 /0.96
Myanmar	0.89 /1.00	0.86 /1.15	0.98 /1.35	0.81 /1.29	0.90 /1.27	0.86 /1.03	0.89/ 0.94	0.96/ 0.89	1.03 /0.89	0.99 /0.91

Source: Calculated based on data from the UN Commodity Trade Statistics Database

#### 4. Empirical Study of China and Japan's Comparative Advantage in Manufacturing and Service Industry

The empirical study of China and Japan's comparative advantage is to estimate revealed comparative advantage index of manufacturing and service industries, and comparative advantage industries of China and Japan in comparison to ASEAN countries. The revealed comparative advantage (RCA) index expresses the proportion of a certain category of goods in a country's total exports to the proportion of the world's total exports, as:

$$RCA_{xik} = \left( \frac{X_{ik}}{X_i} \right) / \left( \frac{W_k}{W} \right)$$

Wherein,  $RCA_{xik}$  represents the RCA index of country  $i$  on  $k$  products,  $X_{ik}$  represents the amount of  $k$  products exported by country  $i$ ,  $X_i$  represents the amount of all commodities exported by country  $i$ , and  $W_k$  represents the total amount of  $k$  products exported by the whole world.  $W$  represents the total export amount of all commodities worldwide. It is generally accepted that if the RCA index is greater than 2.5, it means that country  $i$  has a strong comparative advantage in the production of such products; if, however, the index is smaller than 2.5 but greater than 1.25, it means a high comparative advantage; if it is smaller than 1.25 but greater than 1, it means a general comparative advantage.

The data was sourced from ASEAN Statistical Database, Trade Database of International Trade Center Organization (ITC). ITC provides the import and export of services industries by services group and across 200 countries and

territories, which containing 98 categories of exported goods and 13 items of exported services under the two-digit HS code classification.

#### 4.1 Comparative Advantages of China and Japan in Manufacturing Industry

China has high comparative advantages in manufacturing Industry. Table 2 shows the RCA index of China's finished products during 2011-2020. As shown in Table 2, the RCA indexes of five kinds of finished products are greater than 1.25 since 2011. The five kinds of finished products are: (1) explosives, pyrotechnic products, matches, pyrophoric alloys, certain combustible preparations; (2) machinery, mechanical appliances, nuclear reactors, boilers; parts thereof; (3) electrical machinery and equipment and parts thereof; sound recorders and reproducers, television; (4) railway or tramway locomotives, rolling stock and parts thereof, railway or tramway track fixtures; and (5) ships, boats and floating structures. It is obviously that the comparative advantage has decreased for the railway or tramway locomotives, rolling stock and parts thereof, railway or tramway track fixtures since 2010.

Table 2. China's RCA index of Finished Products during 2011-2020

Product Category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
36.Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	1.75	1.76	1.67	1.22	1.57	1.52	1.52	1.69	1.50	1.26
84. Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	1.64	1.64	1.57	1.51	1.37	1.39	1.43	1.46	1.41	1.46
85. Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television	1.89	1.99	2.02	2.08	1.94	1.86	1.83	1.84	1.85	1.78
86. Railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures	3.19	2.61	2.33	2.37	2.33	1.59	2.29	2.53	1.74	1.96
89. Ships, boats and floating structures	2.16	2.20	1.67	1.45	1.51	1.36	1.32	1.50	1.50	1.42

Source: Calculated based on the Trade Database of ITC

It could be concluded from the empirical results that Japan's comparative advantages are mainly in seven kinds of finished products. Table 3 is the RCA index of Japan's finished products during 2011-2020. As shown in Table 3, Japan has strong comparative advantages in three products, which including (1) photographic or cinematographic goods; (2)ships, boats and floating structures; and (3) vehicles other than railway or tramway rolling stock, and parts and accessories thereof. Especially the RCA index of photographic or cinematographic goods has increased from 2011. In 2011, RCA index of photographic or cinematographic goods was 5.82, and reached 9.02 in 2020. There are four kinds of finished products, whose RCA index are greater than 1.25. The four kinds of products are (1) tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring; (2) miscellaneous chemical products; (3) machinery, mechanical appliances, nuclear reactors, boilers; parts thereof; and (4) optical, photo-graphic, cinematographic, measuring, checking, precision, medical or surgical.

Through comparing the RCA index of the two China and Japan' manufacturing industry, it can be found that the two countries have high comparative advantages in machinery, mechanical appliances, nuclear reactors, boilers and parts thereof. Except this kind of finished product, comparative advantages of the two countries are quite different. ASEAN countries mainly have comparative advantages in such aspects as agricultural products and mineral resources. As a result, China and Japan boast huge investment potential for the investment in capital intensive products and technology intensive products in ASEAN countries.

Table 3. Japan's RCA Index of Finished Products during 2011-2020

Product Category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
32. Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring	1.42	1.47	1.42	1.43	1.41	1.44	1.49	1.52	1.51	1.60
37. Photographic or cinematographic goods	5.82	6.18	6.90	7.25	7.10	7.22	7.69	8.11	8.30	9.02
38. Miscellaneous chemical products	1.59	1.54	1.45	1.43	1.41	1.37	1.37	1.47	1.53	1.48
84. Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	1.83	1.77	1.71	1.69	1.61	1.63	1.68	1.70	1.64	1.57
87. Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	2.56	2.87	2.90	2.80	2.66	2.59	2.54	2.62	2.64	2.61
89. Ships, boats and floating structures	2.98	3.23	2.77	2.52	2.17	2.54	2.29	2.57	3.01	2.76
90. Optical, photo-graphic, cinematographic, measuring, checking, precision, medical or surgical	1.89	1.90	1.88	1.92	1.74	1.65	1.73	1.76	1.69	1.71

Source: Calculated based on the Trade Database of ITC

#### 4.2 Comparative Advantages of China and Japan in Service Industry

Table 4 shows the two countries' RCA index of service industry during 2011-2020. It could be found that the China's RCA index of manufacturing services on physical inputs owned by others, and construction has greater than 2.5 since 2011. It shows that China has high comparative advantages in these two areas, especially the RCA index of construction has enhanced its comparative advantage dramatically since 2013 and reached 5.55 in 2019. The RCA index of maintenance and repair service has greater than 1.25 since 2016 and reached 2.08 in 2019, while the RCA index of telecommunications, computer and information services has increased from 0.91 in 2011 and reached 1.53 in 2020. Thus China has strong comparative advantages in the maintenance and repair service, and telecommunications, computer and information services. As for the other business service, the mean RCA index is higher than 1.25, but the RCA index has decreased during 2011-2020. RCA index of the other business service was only 1.03 in 2020.

Japan has strong comparative advantages in two areas, including construction and charges for the use of intellectual property. The RCA indexes of these two service industries are higher than 2.5. The RCA index of government goods and services is higher than 1.25 but lower than 2.5, thus Japan has high comparative advantages in the government goods and services. Through comparing the RCA index of the two China and Japan' service industry, it can be found that the two countries have high comparative advantages in construction. Except the construction, competitive advantages of the two countries are quite different from each other. Therefore, China and Japan can exert their different comparative advantages to develop TC in ASEAN countries. For example, China has comparative advantages in telecommunications, computer and information services, while Japan has comparative advantages in government goods and services, so the two countries can join hands to provide services to improve the ASEAN's government.

Table 4. RCA Index of China's and Japan's Service Industry during 2011-2020

Country	Classification of Service Industry	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
China	1.Manufacturing services on physical inputs owned by others	7.13	7.08	6.35	5.21	5.14	4.80	4.34	3.56	3.41	-
	2. Maintenance and repair service	-	-	-	-	1.08	1.48	1.58	1.64	2.08	-
	5. Construction	3.70	2.98	2.66	3.36	3.88	3.30	5.55	5.55	5.63	4.77
	9.Telecommunications, computer and information services	0.91	1.01	1.01	1.03	1.25	1.31	1.25	1.72	1.74	1.53
	10.Other business services	1.47	1.27	1.37	1.46	1.24	1.25	1.23	1.24	1.15	1.03
Japan	5. Construction	3.93	4.15	3.69	3.32	3.35	2.90	2.92	2.67	2.9	2.59
	8. Charges for the use of intellectual property	3.55	4.03	4.08	3.46	3.27	3.19	3.18	3.43	3.31	3.42
	12.Government goods and services	1.29	1.40	1.29	1.92	1.87	2.15	1.99	2.05	1.75	1.78

Note: “-” means that ITC has no data source in the year.

Source: Calculated based on the Trade Database of ITC

## 5. Path Selection of TC for China-Japan in ASEAN Countries

The profound and complex change of international situation, slowdown of the world's economic growth and deteriorated protectionism nowadays all bring new risks and challenges to the development of ASEAN countries. To promote TC in ASEAN countries, both China and Japan should enhance cooperation by improving regional supply chain, strengthening financial cooperation, promoting local governments and association's cooperation so as to alleviate negative impacts of the pandemic and support the economic recovery

### 5.1 Improving Regional Supply Chain

ASEAN achieved the total trade in goods of US\$ 2.66 trillion in 2020 to contract by 5.5%. China and Japan have maintained close trade relations with ASEAN countries. China has been ASEAN's largest trading partner since 2009, and ASEAN has become China's third largest trading partner after the EU and the United States for eight consecutive years. In 2020, the trading volume between China and ASEAN reached US\$ 516.9 billion, and Japan had a trade volume of US\$ 204.0 billion as ASEAN's fourth largest trading partner. Moreover, encompassing the 13 ASEAN+3 nations plus Australia and New Zealand, the Regional Comprehensive Economic Partnership (RCEP) is the world's largest trade bloc and a strong statement of the region's commitment to openness. The RCEP Agreement updates the coverage of ASEAN's existing bilateral free trade agreements (FTAs) with China and Japan.

China, Japan and ASEAN become increasingly integrated post-pandemic, closer cooperation and collaboration in building a regional post-pandemic view of essential supply chains. China has comparative advantages in manufacturing industry, such as machinery and mechanical appliances, electrical machinery and equipment and parts, railway or tramway locomotives, and ships, boats and floating structures. Meanwhile Japan has comparative advantages in photographic or cinematographic goods, ships, boats and floating structures, miscellaneous chemical products, optical and photo-graphic products. As a result, both countries can complement each other with their industries with comparative advantages. For example, China's electrical machinery and equipment industries can work with Japan's optical and photographic industry to provide ASEAN countries with advanced digital emerging industries and international logistics services. Japan's automobile manufacturing can join hands with China's railway construction to provide ASEAN countries with high-quality transportation infrastructure services. Both China and Japan can collaborate in various ways, including through the exchange of technological know-how, goods, and services for infrastructure development. It will be critical along with understanding their interrelationships and risks to supply and future-proofing them against shocks.

### *5.2 Strengthening Financial Cooperation*

To meet the electricity needs of 52 million people, safe drinking water needs of 61 million people and sanitation needs of 200 million people by 2030, ASEAN countries have been expected to spend 210 billion US dollars a year on infrastructure since 2018. Public investment in the ASEAN has not declined overall during the COVID-19 pandemic, and emerging and developing ASEAN economies face a huge investment needs in both traditional and new infrastructure. (AMRO, 2022). In addition, spending on digital infrastructure will also be necessary to close the sizeable digital gaps in these economies.

The projects carried out by China and Japan in ASEAN mostly cover energy, transportation, communications, water, etc., all of which are generally featured by huge capital investment, long construction period and high risks. Both China and Japan have carried out TC practices in the financial field. China Development Bank signed a cooperation agreement with Japan Bank for International Cooperation (JBIC) at the 1<sup>st</sup> China-Japan Third-Party Market Cooperation Forum. China Export & Credit Insurance Corporation signed a third-party market cooperation agreement with Japanese Mizuho Financial Group. In November 2019, China-Japan-South Korea-ASEAN Bank Alliance (10+3 Bank Alliance) was established, where Kasikorn Bank and China Development Bank served as the Alliance's chairing banks which would provide financing services for key projects in the China, Japan, South Korea and ASEAN countries.

For the cooperation between China and Japan in ASEAN, financial institutions and even third-country financial institutions of both economies can explore cooperation to expand financing channels and strengthen risk control. Japanese financial and insurance institutions have long explored the financial market of ASEAN with profound involvement. They have strong competitive advantage in obtaining overseas business licenses. Chinese financial and insurance institutions have strong financial strength and are privileged to strong policy support. Therefore, financial institutions of two economies can work together to provide ASEAN projects with financing and risk management and control services, and fully exert their professional advantages so as to expand ASEAN financing channels and minimize default risks effectively.

### *5.3 Promoting Local Governments and Associations' Cooperation*

TC of China-Japan with ASEAN countries cannot be separated from the active promotion of government authorities as well as the initiative and creativity of local authorities, and associations of commerce. The cooperation between Chinese local governments and ASEAN countries has maintained an active momentum over the past decade, particularly since the construction of the "Belt and Road" initiative. For instance, Guangxi government has hosted China-ASEAN Expo successfully for 16 years. Jiangsu worked together with Cambodia to build Sihanoukville Port Special Economic Zone. Yunnan and Guangxi have taken an active part in the development of "Bangladesh-China-India-Myanmar Economic Corridor" and "Pan-Beibu Gulf Economic Cooperation". Japanese local governments have strengthened international cooperation with ASEAN cities actively. Thailand's Chonburi City and Japan's Yokohama City made investment in the construction of the integrated smart industrial park through cooperation. The multinational city network ANMC21 platform built under the leadership of Tokyo Prefecture has intensified the contact with the cities of Bangkok, Hanoi, Jakarta, Kuala Lumpur and Manila. Therefore, both economies could improve cooperation and obtain favorable achievements by fully exerting the role of local governments and using each other's advantages,

Cooperation among chambers of commerce and associations can enhance enterprises' communication on cooperation experience and achievements, so as to further consolidate and promote their cooperation. China Council for the Promotion of International Trade (CCPIT), the Japan External Trade Organization and the Thailand EEC Office held a China-Japan TC seminar. China Chamber of Commerce for Import and Export of Machinery and Electronic Products and Japan-China Economic Association co-organizes a TC meeting for Chinese and Japanese enterprises in Beijing, which enriches the model and opens up channels for China-Japan TC in ASEAN countries. Therefore, the establishment of a multi-faceted docking network actively such as chambers of commerce could strengthen information exchange and improve cooperation efficiency.

## **6. Conclusions**

In the post COVID-19 Era, ASEAN countries continue to be focused on alleviating the impact of the pandemic and supporting an economic recovery. The proactive and exceptionally large stimulus and support programs introduced to counter the economic fallout of the pandemic in 2020 were followed by a more targeted and cooperation approach in ASEAN economies. Under this situation, TC could reduce transaction costs and engage in mixed modalities that combine capacities, know-how and resources among China, Japan and ASEAN countries. Moreover, it can establish ties of trust and collaboration, generating alliances that can endure beyond the time-frame of a specific intervention.

The paper analyzed trade complementarity between China, Japan with ASEAN countries, estimated revealed

comparative advantage index of China and Japan in comparison to ASEAN countries. Based on the empirical result, the paper will put forward several suggestions to promote TC of China-Japan in ASEAN, which improving regional supply chain, strengthening financial cooperation, promoting local governments and association's cooperation so as to alleviating the impact of the pandemic and supporting an economic recovery. The findings of the study provided an empirical support to how to strengthen the TC of China-Japan in ASEAN countries. The findings of this study also have implications for management practice. Specifically, the result of this research may be useful for government authorities, financial institutions, and associations of commerce who are involved in the TC experience and achievement. The synergies between China-Japan and ASEAN need to be further identified for future research cementing the economic cooperation and deepening the relationship.

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