Exploring the Formation of Sino-Japan Third-Party Market Cooperation Through the Lens of Industrial Strengths

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Abstract. With the intensification of the wave of anti-globalization and the prevalence of unilateralism, multilateral economic cooperation is urgently needed, due to the delicate bilateral relations between China and Japan, the field and strength of cooperation are limited, in this case, the third-party market cooperation has been explored. This paper focuses on the establishment of Sino-Japan third-party market cooperation, the impact of comparative advantages of different industries on the establishment of cooperation between the two sides, calculates the RCA indices of SITC classified products and some typical industries in recent years, searches for the complementary zone of the two countries' advantages, and evaluates the expected benefits of Japan; At the same time, it compares and discusses the trade and industrial structure of ASEAN countries as third-party market partners, and concludes that third-party cooperation is in line with the economic development needs and cooperation strategy of ASEAN. Finally, the article concludes that the establishment of Sino-Japan third-party market cooperation is in line with Japan's expected benefits and ASEAN regional development strategy, so it is necessary to make full use of the advantages of cooperation, take advantage of the industrial strengths of different regions to carry out a new type of industrial cooperation, and also reduce the negative competition in cooperation, so as to contribute to the recovery of the world economy.

Keywords: Sino-Japan Third-Party Market Cooperation; Comparative advantage; ASEAN; Economic Cooperation.

1. Introduction

Since the inception of the "Belt and Road" initiative by China in 2013, several countries and international organizations have joined it. As of 2021, China has inked over 200 cooperation agreements with 145 countries and 32 international organizations encompassing a wide array of domains including infrastructure, energy, commerce, transport, finance and more [1]. On the contrary, Japan, which has close geographical proximity to China and is an essential trading partner, has not responded to this initiative. As a consequence, information exchange has been blocked, and economic cooperation in the East Asian region has been impeded, leading to a harmful effect on the promotion of multilateral cooperation and maintenance of multilateralism.

Against this backdrop, China introduced a novel third-party market cooperation model that distinguishes itself from the "Belt and Road." It was first put into practice through collaborations with EU countries, and in 2015, China and France jointly issued the inaugural statement on third-party market cooperation. Consequently, this has garnered significant global interest. Third-party market cooperation combines the advantageous industries of China and developed countries with the actual needs of third countries. It facilitates cost-effective and efficient economic cooperation through the industrial alignment of the three parties, thereby significantly aiding third-country infrastructure development and industrial technology levels. As a result, the mutually beneficial outcomes of "1+1+1>3" are achieved. Thus far, China has formed third-party market collaborations with the European Union, Japan, and other nations. Among these, the third-party market collaboration between China and Japan holds the most notable position.

Scholars around the world have extensively researched the accomplishments, history, and examples of Sino-Japan third-party market cooperation. The primary focus of this paper is the creation of Sino-Japan third-party market cooperation, and it holds pragmatic value to examine and scrutinize the thought process of Japanese policymakers incorporating distinct industrial strengths as variables. The initial section examines how third-party collaboration in the market affects Japan's national interests and negotiation tactics by assessing the comparative advantages of various industries according to SITC and HS standards that meet Japan's international collaboration requirements. The second section evaluates the possibility of establishing this cooperation by investigating it from the standpoint of ASEAN. After analyzing the process, factors can be identified for successfully implementing third-party market cooperation and the favorable conditions for continuing the cooperation.

2. Method

The article presumes that China consistently promotes active cooperation whilst Japan formulates negotiation strategies based on national interests. Therefore, this paper will examine what interests influence Japan's strategic choices in international cooperation. The RCA index displays a country's comparative advantage in a particular product by comparing its share of domestic exports to its share of world exports. The formula is presented below. X_{ij} denotes the value of country j's exports of product i, X_{tj} denotes the value of country j's total exports, X_{iW} denotes the value of world exports of product i, and X_{tw} denotes the value of total world exports (equation 1).

$$RCA_{ij}=(\frac{X_{ij}}{X_{tj}})/(\frac{X_{iW}}{X_{tw}}) \quad (1)$$

The following section compares the RCA indices of China and Japan for different products in the period after the emergence of third-party market cooperation using the RCA indices calculated from the China Customs Platform and the United Nations Trade Database, supplemented by an analysis of the industrial structure of ASEAN, which is a third-party player in third-party market cooperation. If there is a big difference in the areas of comparative advantage between China and Japan, and the ASEAN industrial structure is suitable for the development of cooperation between China and Japan, it can be considered that Japan's cooperation with China has obvious expected benefits.

3. Result

3.1. Comparison of areas of comparative advantage between China and Japan

Table 1. RCA Index of SITC Classified Products in China from 2016 to 2022[2]

Category	Type of Industry	2016	2017	2018	2019	2020	2021	2022
SITC0	Resource-intensive	0.46	0.42	0.42	0.42	0.36	0.39	0.39
SITC1		0.20	0.19	0.18	0.17	0.12	0.12	0.13
SITC2		0.19	0.19	0.21	0.20	0.16	0.18	0.22
SITC3		0.15	0.17	0.17	0.19	0.18	0.22	0.19
SITC4		0.05	0.06	0.09	0.10	0.10	0.12	0.27
SITC5	Capital-intensive	0.53	0.57	0.58	0.59	0.54	0.80	0.81
SITC7		1.30	1.31	1.34	1.31	1.34	1.63	1.64
SITC6	Labor-intensive	1.39	1.34	1.37	1.41	1.43	1.54	1.64
SITC8		2.05	2.06	2.04	2.01	1.95	2.26	2.29
SITC9	Unclassified	0.05	0.04	0.04	0.09	0.19	0.32	0.31

Table 2. RCA Index of SITC Classified Products in Japan from 2016 to 2022 [2]

Category	Type of Industry	2016	2017	2018	2019	2020	2021	2022
SITC0	Resource-intensive	0.12	0.11	0.13	0.13	0.14	0.19	0.18
SITC1		0.14	0.15	0.17	0.18	0.21	0.31	0.31
SITC2		0.40	0.39	0.40	0.37	0.38	0.46	0.49
SITC3		0.17	0.16	0.16	0.19	0.16	0.22	0.25
SITC4		0.05	0.05	0.07	0.07	0.07	0.07	0.12
SITC5	Capital-intensive	0.89	1.01	1.05	1.08	1.09	1.35	1.10
SITC7		1.64	1.65	1.70	1.68	1.60	1.92	1.90
SITC6	Labor-intensive	0.93	0.88	0.90	0.90	0.89	1.11	1.17
SITC8		0.69	0.59	0.60	0.57	0.59	0.68	0.82
SITC9	Unclassified	0.98	1.01	0.98	1.11	1.12	1.79	2.07

In table 1 to table 4, the SITC classification is a UN Statistical Commission standard for product classification, with resource-intensive products, including foodstuffs, tobacco, and mineral raw materials, dominating categories 0-4. Chemical products and machinery and equipment, which are capital-intensive, fall under categories 5 and 7, while textile and rubber products and furniture and instruments, which are labor-intensive, fall under categories 6 and 8. Category 9 comprises unclassified products. Based on the information presented in Tables 1 and 2, it is evident that China and Japan have a similar level of competitiveness in resource-intensive industries. However, China's significant advantage in labor-intensive industries and Japan's relative disadvantage in capital-intensive industries can complement each other. It is also noted that the gap between China's and Japan's competitive industries is narrowing, thanks in large part to economic interdependence with different countries, and the possibility of economic cooperation between the two sides to continue to make up for the shortcomings of their disadvantageous industries is greatly enhanced.

Table 3. RCA Index of Some International Trade Products in China from 2016 to 2022[3]

Category	2016	2017	2018	2019	2020	2021	2022
Ships, Boats and Floating Structures	1.36	1.32	1.50	1.59	1.37	1.31	1.66
Electrical Machinery & Equipment and Parts	1.83	1.84	1.87	1.80	1.67	1.76	2.21
Railway Locomotives, Rolling Stock, Track	1.59	2.29	2.53	1.75	1.86	3.16	2.62
Optical, Photographic, Cinematographic etc	0.95	0.94	0.90	0.82	0.81	0.96	0.81
Furniture, Bedding, Cushions, Lamps etc	2.85	2.84	2.86	2.79	2.72	2.87	3.21
Aircraft, Spacecraft, and Parts Thereof	0.07	0.08	0.10	0.08	0.07	0.09	0.16
Inorganic chemicals	0.98	1.14	1.30	1.12	0.96	0.98	1.40

Table 4. RCA Index of Some International Trade Products in Japan from 2016 to 2022 [3]

Category	2016	2017	2018	2019	2020	2021	2022
Ships, Boats and Floating Structures	2.54	2.29	2.57	3.12	2.77	2.28	2.73
Electrical Machinery & Equipment and Parts	1.06	1.05	1.04	0.99	0.99	1.03	1.26
Railway Locomotives, Rolling Stock, Track	2.59	2.54	2.62	2.58	2.57	2.96	2.65
Optical, Photographic, Cinematographic etc	1.65	1.73	1.76	2.00	2.06	1.86	2.16
Furniture, Bedding, Cushions, Lamps etc	0.10	0.11	0.12	0.11	0.09	0.09	0.10
Aircraft, Spacecraft, and Parts Thereof	0.37	0.32	0.33	0.34	0.37	0.21	0.21
Inorganic chemicals	0.99	1.15	1.27	1.47	1.74	1.73	1.77

The comparative advantages of China and Japan are more prominent in specific sectors. Tables 3 and 4 present selected typical industries coded according to HS from both countries, compared with the RCA index. It is evident that there are significant discrepancies in the comparative advantage of most processed goods industries between China and Japan, such as furniture, bedding, prefabricated buildings, ships, boats and floating structures, while some industries share similar competitive advantages, such as inorganic chemicals, aerospace vehicles and parts. Moreover, the labor and technological factors involved in these industries are distinct. Therefore, from a third-party market cooperation perspective, collaborating in industries that share advantages or possess them singularly could effectively utilize those advantages and foster a virtuous cycle of competition. Similarly, supporting industries lacking advantages would further encourage the formation of multi-industry international comparative advantages. From this perspective, third-party market cooperation between China and Japan can expedite the development of their respective industries by leveraging complementary infrastructure and basic manufacturing industry strengths [4]. Furthermore, it can create positive competitive advantages and serve as an effective driver of collaboration.

3.2. The Adaptability of ASEAN Industrial Structure and Sino-Japan Third-party Market Cooperation

Although ASEAN has maintained a stable annual economic growth rate of about 5% since its establishment and has risen to become the third largest economy in Asia. However, the economic structure of the region has always had some problems, making ASEAN countries more vulnerable to changes in the investment or production environment, as evidenced by the economic setbacks in ASEAN since the COVID-19 Epidemic. In third-party market cooperation negotiations between China and Japan, Japan will consider the economic factors of ASEAN to fortify its economic structure through multi-party cooperation. This will enhance the international level of the game based on the Asia-Pacific Economic Co-Prosperity Sphere concept and promote expected benefits of further expansion.

Table 5. Top 10 ASEAN Import and Export Products to China in 2022[5]

Resource-intensive	Mineral fuels, oils and distilled products; bituminous substances Iron or steel products Iron; steel
Labor-intensive	Plastics and products Organic chemicals Chemical products Rubber and products
Capital-intensive	None
Technology-intensive	Electrical machinery and equipment and parts; television image, sound recorders and replicators Nuclear reactors, boilers, machinery and components Optical, Photographic, Cinematographic etc

Table 6. Top 10 ASEAN Import and Export Products to Japan in 2022[5]

Resource-intensive	Mineral fuels, oils and distilled products; bituminous substances Iron or steel products Iron; steel
Labor-intensive	Pearls; precious stones; precious metals; coin Plastics and products Rubber and products
Capital-intensive	None
Technology-intensive	Electrical machinery and equipment and parts; television image, sound recorders and replicators Nuclear reactors, boilers, machinery and components Vehicles; Excluding railway or tramway vehicles Optical, Photographic, Cinematographic etc

Based on Tables 5 and 6, ASEAN's imports and exports with China and Japan are primarily in technology-intensive industries, while China and Japan each have higher economic ties with ASEAN in resource-intensive and labor-intensive industries. Therefore, it is evident that ASEAN's rich resources and skilled workforce are exclusive advantages that contribute to its attractive regional economy [6]. However, these advantages have also resulted in a limited market for capital and technology-based trade, while China and Japan's complementary industries have yet to reach their full potential in this area. Additionally, the growth of service trade in the ASEAN region is disproportionately distributed, with Singapore representing over 50% of the total trade in services in ASEAN, while Brunei, Cambodia, Laos, and Myanmar combined constitute only approximately 2%. This significant imbalance in service trade levels has resulted in the instability of the regional trade structure.

Meanwhile, the industrial structure of ASEAN member nations varies significantly. The share of services in Singapore's GDP exceeds the world average (around 65%) and remains at 70%, while in Thailand and Malaysia, the share of services in GDP is roughly 55%. In all nine countries except Singapore, the share of industrial value-added in GDP surpasses the world average (around 25%). Except for Singapore and Brunei, the agricultural value-added in GDP of the other eight countries is significantly higher than the global average (approximately 3.6%), with agricultural value-added in Cambodia and Myanmar even reaching as high as 23% of GDP. Consequently, due to the instability in trade and industrial structure, ASEAN persistently seeks external reliance, which has emerged as a pivotal factor that affects the third-party market cooperation between China and Japan.

In terms of ASEAN's regional strategy, the strengthening of economic and political cooperation among members of the region has always been a goal pursued by the ASEAN region, and the failure of the implementation of the "import-substituting heavy industrialization" of the countries of the region referred to in the ASEAN Declaration, as well as the decline in the status of the Japanese yen, has prompted ASEAN to form an "export-oriented industrialization" that is mainly based on the attraction of foreign capital [7]. ASEAN member states aim to achieve enhanced connectivity and extensive mutual cooperation through the continuous development and progress of regional economic partnership initiatives. Japan has played a significant role in the economic integration of ASEAN, leveraging FTAs to evade tariffs and reorganize production systems in the region. Furthermore, Japan's investment strategy in ASEAN has led to increased integration and productivity in ASEAN countries, which has made ASEAN not to reject the multilateral cooperation mechanisms in which Japan participates [8]. Meanwhile, in response to the trend of counter-globalization, ASEAN has participated in initiatives like AFTA, EAFTA, RCEP, APEC and so forth. Similarly, China has been engaged in the EAFTA, CEPEA, RCEP, and APEC projects. Additionally, ASEAN has pledged to support China's Belt and Road, the 3+x collaboration framework, and Japan's Indo-Pacific Strategy. This will closely integrating its own interests with those of its partners and working towards a win-win situation. ASEAN will continue to develop in order to achieve a win-win situation [9]. Based on the complementary advantages of trade and investment between China and Japan in ASEAN and the huge development potential of the ASEAN region, Japan will be more optimistic about the prospects of Sino-Japan third-party market cooperation, which will enable Japan to gain absolute benefits and effectively prevent the cooperation from being dominated by a single country [10].

4. Conclusion

Summarizing the above research, the expected benefits of cooperation between Japan and China are confirmed by the comparative advantage data, and the ASEAN industrial trade structure is also suitable for China and Japan to carry out third-party cooperation. Therefore, in promoting that cooperation, it is necessary to make full use of the advantageous conditions, and on the basis of consolidating the original industry, we should carry out new industrial cooperation, establish a closer and more convenient economic and trade chain, give full play to the advantages of the characteristic industries, and realize the mutual benefits and complementarities to open up the third-party market cooperation with a new prospect, and inject a new kinetic energy into the existing cooperation, and also provide a model of cooperation in a wider range of fields and a reference significance.

Third-party market cooperation can become a link between the economies of China and Japan, encourage more state-owned enterprises, foreign-funded enterprises and social institutions to participate in it, fully magnify the unique advantages of third-party market cooperation, and continuously improve political and economic benefits, so as to realize a virtuous cycle of trilateral economic cooperation among China, Japan and ASEAN. Respecting the will of the ASEAN countries to build a regional order, maintaining and promoting the process of developing regionalism, relying on the economic cooperation arrangement of connectivity, and leading by example to realize synergistic regional economic development. It can also bring more social benefits to ASEAN countries and take a step further in safeguarding the trend of globalization and the process of regional multilateralism. In the process of cooperation, adhere to the status of the main body of enterprises and create a good model for third-party market cooperation through government guidance. Partner countries will design the cooperation from easy to difficult and form a replicable model to provide more expected benefits.

This study focuses on the industrial advantages of China and Japan at the time of the establishment of the third-party market cooperation, and does not conduct an in-depth study on the content and effectiveness of the cooperation. At the same time, under the complex and changing international situation, the impact of historical and economic factors between China and Japan on the development of cooperation cannot be predicted. In view of the above shortcomings, future research should focus on analyzing the successful cases of cooperation, finding the key factors of cooperation through the study of typical cases, and applying the practice in multiple areas of cooperation. With the help of this study, Sino-Japan cooperation can be further developed so that the two countries can become defenders of multilateralism and advocates of economic cooperation, expand the scope of third-party market cooperation, broaden the field of third-party market cooperation, and reduce negative competition in cooperation, so as to inject new energy into the global economic recovery.

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