

Research on the Export Competitiveness of China's Mechanical and Electrical Products to ASEAN Countries

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Abstract

Mechanical and electrical products are must-haves for the infrastructure construction of countries along "The Belt and Road", after China and ASEAN entered into a free trade area agreement, the deal scale between the two sides continued to rise, ASEAN passed the European Union in 2020 to become China's largest trading partner, mechanical and electrical products are important goods exported to ASEAN, accounting for a decisive proportion of China's export trade structure with ASEAN, moreover, the Belt and Road Initiative also brings greater development space for China to export mechanical and electrical products to ASEAN countries. Therefore, in the construction of "The Belt and Road", the research on the competitiveness of China's mechanical and electrical products plays an extremely important role in the export to ASEAN countries. This paper analyzes the export situation of China's mechanical and electrical products to ASEAN countries from export scale, export product structure and export market structure, etc., studies the impact of the Belt and Road Initiative on the export of mechanical and electrical products, proposes relevant countermeasures in order to enhance the trade development of mechanical and electrical products between China and ASEAN countries.

Keywords

Mechanical and Electrical Products; Competitiveness; ASEAN Countries; The Belt and Road Initiative.

1. Analysis of the Trade State of China's Export of Mechanical and Electrical Products to ASEAN Countries

(1) Analysis of Export Scale

China has pragmatically cooperated with ASEAN on various economy and trade in the decade from 2012 to 2019, which further highlights the important place of bilateral trade. The proportion of mechanical and electrical products in China's close trade with ASEAN countries is the highest, and its rapid development has brought a new growth momentum of China's foreign trade. After General Secretary Xi Jinping proposed the Belt and Road Initiative in 2013, China's exports of mechanical and electrical products to countries along "The Belt and Road" maintained a growth trend, but in 2015 and 2016, there was negative growth due to the sluggish demand in the international market. With the recovery of market needs and the positive adjustment of the export structure of China's mechanical and electrical products, the growth trend continued after 2017. The development of China-ASEAN Free Trade Area is continually being improved, and the effect brought by the Belt and Road Initiative is also growing. In these years, mechanical and electrical products are the main products exported from China to ASEAN, and China's mechanical and electrical products to ASEAN is on the rise.

(2) Structural Analysis of Exports

The structure of China's exports of mechanical and electrical products to ASEAN is single, in which nearly 80% of the products mainly focus on mechanical equipment and electrical and electronic products. The share of exports of electrical and electronic products rose from 36.92%

in 2017 to 43.11% in 2020, the growth is faster, and it is the first major category of exports of mechanical and electrical products in 2020. Second-placed exports is mechanical equipment, but it has been the largest exports before, the export volume began to gradually decline after 2018, becoming the second largest type of exports of mechanical and electrical products. The share of metal products ranked third, gradually rose from 8.43% in 2017 to 9.2% in 2020, although the growth in 2020 is not very fast, with the inclusion of metal products in infrastructure construction supply, it shows strong development momentum. The developing ASEAN economy is boosting the demand for these products. Similarly, transportation is generally decreasing year by year, from 9.44% in 2017 to only 7.95% in 2020. This is because ASEAN countries' demand for related products has changed with the development of economy, reduce the demand for related products and increase the demand for other products to adapt to the needs of their development; the demand for transportation has largely shifted to local production. The number of instrument and apparatus products was also decreasing year by year, the share of instrument and apparatus products was only 5.09% in 2020, which became the product with the smallest export volume this year.

(3) Structural Analysis of Export Market

The distribution of mechanical and electrical products in the ASEAN market is relatively grouped, mainly sold to Malaysia, Vietnam, Singapore and Indonesia, accounting for more than half, while the proportion of export to other countries is low. Vietnam has become the country with the largest import volume of mechanical and electrical products from China, and it is likely to rank first in the next three years. From \$6.804 billion of our imports in 2018 to \$16.486 billion in 2021, an increase of nearly 2.5 times, a leapfrog growth. Vietnam, as a developing country, does not have a high GNP per capita among the ten ASEAN countries, ranking seventh. Vietnam's imports increased from 6804 billion dollars in 2018 to 16486 billion dollars in 2021, increased nearly 2.5 times, achieving a leapfrog growth. As a developing country, Vietnam's per capita GDP is not high among the ten ASEAN countries, ranking seventh. Since most mechanical and electrical products serve infrastructure construction, there is high Vietnamese demand for mechanical and electrical products. China exports a large number of mechanical and electrical products to Vietnam, first, due to our favorable geographical location, second, because both sides are actively pursuing mutually beneficial trade policies. Indonesia, Thailand and Malaysia will become China's second, third and fourth markets in ASEAN in 2021. Malaysia and Indonesia are not highly industrialized, but there is also high demand for imports of mechanical and electrical products. The overall trend of imports of mechanical and electrical products from China in the three countries is growing. Malaysia and Indonesia are less industrialized and have huge demand and trade potential.

2. Problems in China's Exports of Mechanical and Electrical Products to ASEAN Countries

(1) Unstable Export Growth

From 2012 to 2021, China's exports of mechanical and electrical products to ASEAN basically were on the increase, declined in 2016, later the export volume continued to rise. From 2012 to 2016, the export volume of mechanical and electrical products increased, but the export growth declined year by year, the momentum of trade growth was significantly insufficient, because the economic situation of around the world is relatively poor, growth momentum is insufficient, and the growth is decline sharply. [4] In the context that the leaders of Vietnam, the Philippines and Malaysia came to China one after another, China and the aforementioned three countries achieved agreed targets in economy, trade, cultural tourism, and infrastructure construction in September 2016, while easing the tensions of the South China Sea issue, the political relationship between China and ASEAN has rapidly recovered, promoting cooperation

in their economic and trade relations. Since 2017 the world economy has gradually recovered, the foreign trade situation has also improved, the growth is on the increase, and the export volume has also increased year by year. Thus, we can see that the growth of China's exports of mechanical and electrical products to ASEAN is highly volatile, and is greatly affected by the political and economic situation, the rise and fall trends are very obvious.

(2) Relatively Single Export Structure

The main types of China's exports of mechanical and electrical products to ASEAN are "mechanical equipment" and "electrical and electronic products". The ratio of the export value of these two types of products reached 75% in 2020, while "metal products" accounted for 9.20% of the export value of other products; followed by "transportation" (7.95%); finally, "instruments" accounted for 7.95%. The proportion of "metal products" in the export value of other products reached 9.20%; "transportation" followed by the proportion of 7.95%; finally, "instrument and apparatus" products with the lowest proportion of only 5.09%. Thus, we can see that China's exports of mechanical and electrical products are relatively single, and the category grouping is higher. Further research suggests that among the various types of mechanical and electrical products exported to ASEAN countries, products with high clustering have lower added value, while products with lower clustering have higher added value. This determines that in China's exports to ASEAN countries, labor-intensive products account for a large proportion, the proportion of capital-intensive products in the export is small, and profit is also relatively small. This shows that we must focus on technological innovation in order to increase the added value of mechanical and electrical products, in this way, we can increase the added value and profitability of China's mechanical and electrical products, enhance the core competitiveness of exports and relatively reduce the substitution probability of trade. [1].

(3) Uneven Distribution of Export Countries

China's export market with mechanical and electrical products to ASEAN countries is concentrated in Vietnam, Indonesia, Thailand, Malaysia, the Philippines five countries. Singapore's export value is not as high as the above five countries, but the export value is more than 4 billion dollars, trade development space is still very large. The trade value of Cambodia, Myanmar, Laos and Brunei is less than 1 billion dollars, and the export performance of mechanical and electrical products is not ideal, the overall value is low, and there is big gap between them and Vietnam, Indonesia and other countries. As can be seen from the export volume of some mechanical and electrical products, there is clear difference in the distribution of Chinese mechanical and electrical products in the ASEAN region. According to the total export trade volume of China to ASEAN countries, the proportion of trade volume of six countries: Vietnam, Indonesia, Thailand, Philippines, Singapore and Malaysia, is 96.30% in 2020, and the proportion of trade volume of four countries: Cambodia, Laos, Myanmar and Brunei, is only 3.70%, there is a big difference. After analysis, the country distribution of exports of mechanical and electrical products has a certain significant relationship with a country's economic development level. The GDP of the importing country reflects the importing country's potential demand for mechanical and electrical products.

3. Countermeasures and Suggestions for Improving the Competitiveness of China's Exports of Mechanical and Electrical Products to ASEAN Countries

(1) Building New Bilateral Trade Pattern and Improving Export Growth

The height of economy freedom of exporting countries also has a greater impact on export trade, so China should further strengthen economic ties with ASEAN countries, improve the mutual open level with ASEAN countries in economy, and promote the open degree of mutual market. Thus, it can reduce the factors of trade barriers and promote the openness of trade. In particular,

China and ASEAN countries can improve bilateral trade openness by lowering trade tariffs, reducing non-tariff barriers, and signing free trade agreements. [4] Along with the deepening of "The Belt and Road" construction, the trade cooperation between China and ASEAN countries is increasing, and the cooperation of infrastructure construction is also developing gradually. The Chinese government and ASEAN countries should seize this strategic opportunity, build new pattern of interconnected transportation network, strengthen political and economic exchanges, build long-term partnerships, hold more mechanical and electrical products forum between China and ASEAN, exchange and cooperate, and transmit information, drive ASEAN countries' demand for imports of China's projects, and gradually stabilize the growth of imports. [6].

In addition, the United States, the European Union, Germany and so on are also China's strong rivals in the ASEAN market. China's mechanical and electrical products can conduct technological research around low carbon, green, efficient energy conservation, information technology, automation, raise the profile of China's mechanical and electrical products, enhance the international competitiveness of China's mechanical and electrical products, various enterprises should increase the scientific and technological research and development funds, promote the research and application of technological innovation methods, enhance product safety and reliability, accelerate the realization of product intelligence and digitalization, undertake large-scale production, reduce the cost of products, meanwhile, improve quality, achieve product energy saving, consumption reduction and emission reduction. Raising the profile of mechanical and electrical products is also an effective way to increase the export volume and rate. [13].

(2) Adjusting the Structure of Mechanical and Electrical Products, Exporting Products for Demand

From the situation analysis of product structure at present, China's exports of mechanical and electrical products to ASEAN are mostly low value-added labor-intensive goods, and few exports of precise instrument and other high-value-added goods. This situation is because the overall technical level of China's mechanical and electrical products is low, the advantages are concentrated in the labor force, natural resources and other low value-added aspects, the competitiveness of technology, innovation, technology and so on is weak, as a result, the share of high value-added products exported in export trade is relatively low, therefore, in order to promote further cooperation of trade in mechanical and electrical products between China and ASEAN, it is necessary to seek more reasonable and stable export structure, moreover, promote the optimization and improvement of structure, consolidate and enhance the existing advantages, furthermore, we should make adaptive adjustments to our exports based on the actual consumption demand of ASEAN, and promote the improvement of product structure. China and ASEAN countries should also strive to expand the cooperation field of mechanical and electrical products between the two sides, improve the product category and enrich the trade structure while maintaining the original trade types of mechanical and electrical products, [1] Finally, China can strengthen the scientific research investment in mechanical and electrical products, import high-tech mechanical and electrical products to obtain the technology reproduction dividend, strengthen the governmental subsidies for the research and development of mechanical and electrical products, introduce high-tech products and other ways to improve the technological added value of mechanical and electrical products, drive the optimization of export structure, and promote the optimization and enhancement of product structure. [4].

Moreover, China must also be based on the market needs, natural resources, geographic location and different development level of ASEAN countries, and find relevant mechanical and electrical products suitable for ASEAN countries to export. For example, Singapore, Brunei and so on belong to foreign trade-driven type, they are rich in natural resources, major source of

income is the exports of oil, natural gas, so the export of mechanical and electrical products suitable for Singapore, Brunei should start from the petroleum processing, transportation equipment; Thailand and Malaysia are rich in natural resources, Thailand's sylvite ranks first in the world, Malaysia also ranks first in the world in exports of rubber and palm oil, so relatively speaking, it is proper to export processed mechanical and electrical products to Thailand, while mechanical and electrical products involving mechanical transportation equipment are suitable for export to Malaysia; Philippines, Indonesia, Cambodia, Laos are largely agricultural areas, there is relatively large demand for mechanical and electrical products of industrial infrastructure. The strategic cooperation in "The Belt and Road" has contributed a lot to the construction of infrastructure in ASEAN countries, which has increased the demand for industrial machinery and mechanical and electrical products in the relevant countries. Vietnam and Myanmar have favorable mineral resources, they are rich in coal, iron, aluminum, gemstones, jade and other minerals, and the demand for mechanical equipment and components, processing machinery and other mechanical and electrical products is increasing. [8].

(3) Combining the Market Features of Different Countries and Promoting the Diversity of Export Market

We should combine the market features of different countries, deeply and sensitively divide the exports of various mechanical and electrical products. On the one hand, we should make corresponding trade strategies for the different industrial structure features of each country. For example, for the trade partners with strong alternative and fierce competition, mechanical and electrical products represented by Singapore, China should be committed to improving the export structure of mechanical and electrical products, and strengthen the vertical differentiation of products by research innovation.; on the other hand, for countries with great trade potential, represented by Brunei, we should be based on its market features and existing economic foundation, develop products in line with the goal and expand the space for economic and trade cooperation. Meanwhile, China's more mature technology can gradually expand exports to ASEAN and other countries to achieve shared benefits and win-win, increase cross-border investment and mergers in order to reduce the market distance and promote the diversified development of export markets, while effectively reducing the risk of trade friction. The Belt and Road Initiative is based on 'infrastructure connectivity, financial connectivity, industrial connectivity, and resource introduction', with regional economic integration and common prosperity at its core, which brings excellent opportunities for industry chain extension. In the future, China should strengthen infrastructure construction, expand mechanical and electrical products related to the construction industry (construction and infrastructure engineering), equipment manufacturing industry (equipment manufacturing and supporting equipment, etc.), infrastructure materials (steel, building materials and non-ferrous metals), reduce the dependence on traditional mechanical and electrical products at present. Not only that, with the development of science and technology, ASEAN countries have much development space and growth space in electricity consumption in the future, which can further stimulate the power investment to these countries, thus increasing the demand for power equipment exports. Led by the Belt and Road Initiative, as a whole the mechanical and electrical product industry "go globally", broaden the diversity of market needs, and deepen the division of labor and cooperation of the China-ASEAN industrial chain.

4. Conclusion

Mechanical and electrical products are the important objects of bilateral trade between China and ASEAN, and also the first major category of China's exports to ASEAN. This paper mainly studies the state of China's exports of mechanical and electrical products, analyzes the export

impact on ASEAN from three aspects: the export scale of mechanical and electrical products, the structure of exports and the structure of export markets, analyzes the problems in the exports of mechanical and electrical products to ASEAN countries, and gives corresponding countermeasures and suggestions. Since the Belt and Road Initiative, the trade scale of China's exports of mechanical and electrical products to ASEAN countries has increased, but there is still huge potential, and the research on product competitiveness is of great significance. ASEAN countries are rapidly integrating into the construction of "The Belt and Road", the long-term goal of "The Belt and Road" construction is to equalize the trade among countries, make different trade policies for the situation of various countries, as a result, huge market opportunities emerge. We believe that in future the Belt and Road Initiative will bring a greater and more positive impact on the China's exports of mechanical and electrical products to ASEAN.

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