

China's Textile Export Trade to Vietnam Based on RCA Index Analysis

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Abstract—In recent years, Vietnam's textile exports have been rising year by year, ranking among the top textile exports in the world. As Vietnam's largest trading partner, China has a long history of trade with Vietnam in textiles and related raw materials. The explicit comparative advantage (RCA) Index is mainly used to reflect the comparative advantage of a country's products. In this paper, an improved RCA index model is established to measure the competitive advantage of Chinese textile products in Vietnam. According to the index measurement based on Chinese customs data and data from the Vietnam Bureau of Statistics, the study shows that Chinese textile exports have a strong competitive advantage in Vietnam, but this advantage is on a declining trend.

Keywords- Textiles; China-Vietnam trade; Export trade; Index of Revealed Comparative Advantage (RCA).

1 INTRODUCTION

Both China and Vietnam are emerging market countries with a large primary labor force and similarities in many economic, political and social aspects, which has led to the labor-intensive textile and garment industry being a natural traditional strength of both countries. Nowadays, the textile industry is still one of the most important industries in the Chinese and Vietnamese economies, which contributes more to the development of both country's economies. In recent years, influenced by rising labor costs and trade frictions, the export advantage of Chinese textiles and garments has gradually weakened. Vietnam has become a major exporter of textiles and garments by its abundant and cheap labor resources and trade preferential policies. Although the two countries compete for this point, there is still long and stable cooperation between them in the textile industry.

In the global textile industry, both China and Vietnam have an influence that cannot be ignored, so it becomes meaningful to explore the textile trade between the two major textile exporters. In the context of the COVID-19 pandemic, the textile and garment industries of both China and Vietnam have been significantly hit by this crisis, directly due to the significant reduction in global demand caused by the economic recession in developed countries such as Europe and the United States. The textile trade between China and Vietnam is in order, and this paper will further analyze the international competitive advantages of Chinese textiles from the perspective of China's textile exports to Vietnam.

2 LITERATURE REVIEW

On the study of the textile trade between China and Vietnam, Chinese scholars have studied more comprehensively. Wang et al (2010) [1] explored the export situation of China and Vietnam under the financial crisis and emphasized that China's textile and garment industry should be promoted through the strategy of industrial inward migration. In the context of Vietnam's accession to the Trans-Pacific Partnership (TPP), Meng (2016) [2] expounded the evolution of the global value chain in the textile industry from the perspective of the global value chain and put forward suggestions on the construction of the Global value chain in the Textile industry of China and Vietnam. Zhan (2016) [3] pointed out that from the perspective of TPP, China's textile and garment export share will shift to Vietnam. From the perspective of competitiveness, Huang et al (2017) [4] analyzed the existing strategic cooperative relationship between China and Vietnam from the perspective of Competitiveness and prospects of Vietnam's textile industry. Using four competitiveness indices to compare the competitiveness of China and Vietnam in terms of textile exports and their variability from different perspectives, Fan (2017) [5] concludes that China is losing its comparative advantage in the textile industry. From the perspective of the overall trade situation between China and Vietnam, Cui (2020) [6] uses the trade gravity model to analyze the trade between China and Vietnam and proves that the trade between China and Vietnam belongs to the potential pioneering type. Le (2020) [7] analyzes the macro-level trade relationship in terms of the size, structure, and dependence of bilateral trade development between Vietnam and China. Chen et al (2020) [8] discussed the transformation and upgrading of the traditional textile industry in the post-epidemic era, and she encouraged the digital transformation of the textile industry. In addition, regarding the Index of Revealed Comparative Advantage (RCA, Balassa (1965) [9][10] proposed a more refined method of calculating comparative advantage, which provided a new approach for later scholars to study international competitiveness.

3 CURRENT STATUS OF CHINA'S TEXTILE EXPORTS TO VIETNAM

3.1 Vietnam textile import status

As one of the supporting industries of Vietnam, the national economy relies heavily on textile exports for support. The increase of Vietnam's exports brings the consequence that the demand for textile raw materials is also increasing. The most important importers of textile raw materials are represented by China and South Korea.

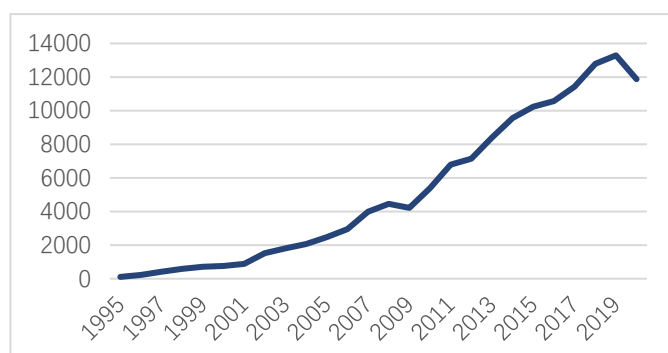


Figure 1. Trends of Textile fabric import in Vietnam from 2000 to 2020(Unit: Mill. USD)

20 years of Vietnam's textile fabric imports are on an upward trend, but there is a significant decline in 2020 due to the impact of the new crown epidemic. Fabric imports amounted to US\$11,880 million in 2020, as the decrease in apparel orders due to the epidemic and the decline in apparel exports led to lower demand for textile fabric imports. Fabric imports from the Chinese market alone account for more than 61.2% of total imports in 2020, or more than US\$7,270 million, down 5.9% from 2019. In 2020, global trade was hit hard by the COVID-19 pandemic, and Vietnam was no exception. Vietnam's garment and textile industries, as well as leather and footwear, have been among the hardest hit by falling demand for goods in the United States and European countries. But Vietnam's textile industry is in relatively good shape compared with Bangladesh, which Vietnam overtook to become the second-largest apparel export market in 2020.

From Vietnam's textile imports, China is still Vietnam's largest textile import market. Although the pandemic has led to a decline in Vietnam's overall textile and garment export, it still needs to import textile fabrics. Vietnam relies heavily on the Chinese market for textile raw materials, especially raw materials such as garment raw materials, yarns, and fabrics. In 2020, fabrics imported from the Chinese market alone accounted for more than 61.2% of total imports. According to the statistics of the World Trade Organization (WTO), China accounts for 44.33% of Vietnam's total textile imports and is the largest import market of Vietnam. Although Vietnam's textile industry is developing rapidly and its influence in the world is increasing year by year, its textile and garment exports are growing alarmingly, but it cannot do without China's raw material supply. Therefore, China's textile export to Vietnam largely affects Vietnam's textile and garment production.

3.2 Status of China's textile exports to Vietnam

Vietnam is located in the east of the Indochina Peninsula, bordering Guangxi province and Yunnan Province of China in the north. The natural geographical advantages of Vietnam and China have laid a foundation for the long-term development of China-Vietnam trade. China's textile and garment industry started earlier than Vietnam's. China has a large number of enterprises in the textile and garment industry, a large number of industrial workers, and more economies of scale in textile production than Vietnam. With the gradual disappearance of China's demographic dividend and rising labor costs, a large number of textile orders have shifted from China to Southeast Asian countries, especially Vietnam. In addition to cheap and

abundant labor resources, Vietnam has specialized textile and garment industrial zones, and various preferential tax treatments, which have prompted more foreign investors to come and invest. However, it still relies on imports for textile raw materials, of which the largest importer is China.

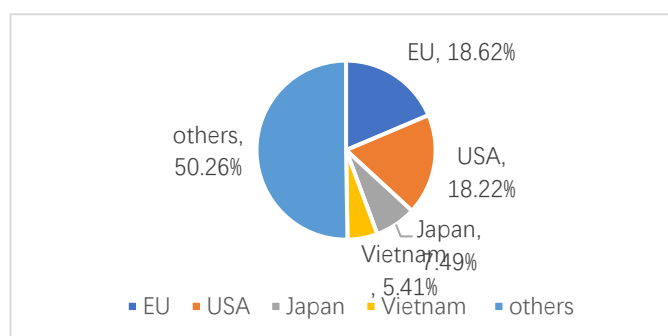


Figure 2. China's textile raw materials and finished products export market share.

China's exports of textile raw materials and manufactured goods have been relatively stable over the last 6 years, with an average export value of US\$265,117 million and an average import value of about US\$312,374 million. The main trading partners in 2020 were the EU (18.62%), the US (18.22%), Japan (7.49%), Vietnam (5.41%), and the UK (4.20%), compared to 2019 Vietnam's overall share decreased by 0.82% in 2019. Although Vietnam's share is small in terms of volume, but with its advantages of raw materials and semi-finished products for reprocessing, and finally in the export overseas. Nowadays, it occupies a certain influence in the world textile and garment market, which is worth thinking about.

In 2016-2020, the products that account for a relatively large share of China's textile exports to Vietnam are cotton, chemical fiber filaments, chemical fiber staple fibers, knitted and crocheted fabrics, and non-knitted or non-crocheted garments and clothing accessories. China Customs Import and Export Commodity Names and Codes (HS CODE) Catalog Classification Class 11 Textile Raw Materials and Textile Products mainly include the contents of Chapters 50-63, and the exports of the five products in Figure 2 account for about 80% of the overall textile exports.

The overall share of exports of knitted and crocheted fabrics remains above 20%, and the overall export trend shows an upward trend. 2020 Vietnam's total imports of items in the textile materials and accessories category are about \$19.7 billion, down 9.6% from 2019. The import of textile materials and auxiliary materials category all declined, with the largest decline in fiber imports. As shown in Figure 3 to see the greater fluctuations in the chemical fiber staple fiber, the export volume decline is more powerful, the other three exports accounted for 10%-15% of the overall textile exports. Overall, China has a greater influence on Vietnam's textile exports, and the bilateral trade relationship between China and Vietnam in textile and apparel is very close. It is for this reason that the competitive advantage of Chinese textile products in Vietnam will be discussed next based on the Index of Revealed Comparative Advantage.

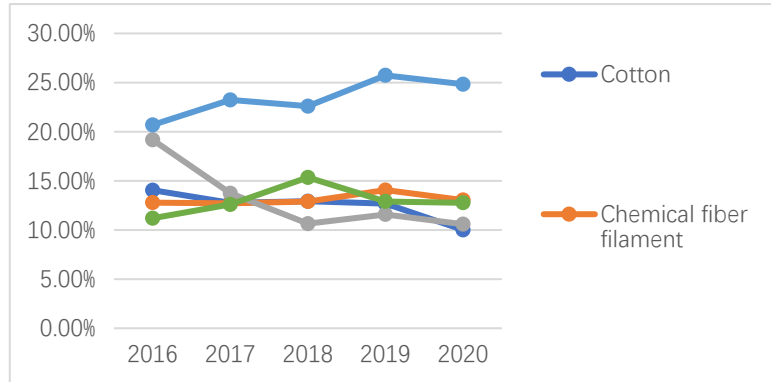


Figure 3. China's main exports of five types of textiles to Vietnam as a share of total textile exports.

4 CALCULATION OF COMPARATIVE ADVANTAGE OF CHINA'S TEXTILE EXPORT TO VIETNAM

4.1 Measurement methods and data sources

Among the methods to measure the comparative advantage of a country's industry, Balassa (1965) proposed the Index of Revealed Comparative Advantage (RCA) to measure the comparative advantage of trade in a particular industry in a country (region). RCA index can be used to determine which industries of a country are more competitive in export, thus revealing the comparative advantage of a country in international trade. Balassa's RCA index has so far been used more widely to calculate comparative advantage. In short, the coefficient describes the ratio between the share of a particular commodity in a country's total exports and the share of that commodity in the world's total exports. The EXPRESSION of the RCA index is as follows:

$$RCAX_{ij} = (X_{ij}/X_i) / (X_{wj}/X_w) \quad (1)$$

The formula denotes the dominant comparative advantage of the country I over product J, X_{ij} is the export value of product J from the country I to the world market, X_i is the total export value of country I to the world market, X_{wj} is the total export value of product J to the world market and is the total export value of the total product in the world market. The purpose of this paper is to analyze the comparative advantage of textile and apparel products between individual economies of China and Vietnam, so the RCA coefficients are revised, and the revised coefficients can reflect the issues explored in this paper in a more focused manner. The corrected RCA index is as follows:

$$RCAX_{ij} = (X_{ij}/X_i) / (V_j/V) \quad (2)$$

In the formula, X_{ij} is the export value of textile and garment products from China to Vietnam, X_i is the total export value from China to Vietnam, V_j is the total import value of textile and garment products from Vietnam, V is the total import value of products from Vietnam. It is generally believed that when the RCA value is greater than 1, the country's products have a

comparative advantage in the world market. Conversely, when the RCA value is less than 1, it means that the country's products have a comparative disadvantage in the world market. And the size of the RCA value means the significance of comparative advantage, combined with the problems analyzed in this paper to elaborate the size of international competitiveness expressed by the size of RCA value.

4.2 Empirical results

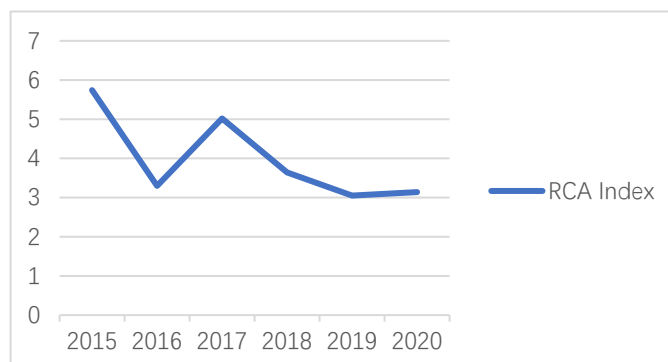


Figure 4. Measurement results of RCA index of China's textile exports to Vietnam.

From 2015 to 2020, the RCA index value has always been above 3, which indicates that China's textile and garment products have strong international competitiveness in Vietnam. In particular, the RCA index was close to 6 in 2015, but it declined in 2016 and did not return to the previous level even after a brief rise in 2017. In 2020, countries around the world were affected by the COVID-19 pandemic, and the global textile industry also suffered a big blow, with the demand for textiles and clothing in all countries falling sharply. Some countries implement the policy of suspension of production, which leads to the shrinkage of textile export. However, China and Vietnam have done a good job in the control of the pandemic, making the textile and garment export of the two countries still have a good performance.

It is worth noting that Chinese textiles in Vietnam for a long time have had significant international competitiveness. But in the long run, this comparative advantage is eroding. With the signing of free trade agreements with many countries, Vietnam has gained a lot of benefits in textile and garment export, which has greatly increased its export. However, it remains dependent on China for demand for textile materials. To improve its dependence on China, Vietnam has strengthened its textile and fabric imports from other countries, especially in its import and export trade cooperation with South Korea. At the same time, Vietnam has strengthened the optimization of the domestic textile industry and improved the technological level of domestic textile fabrics. In the short term, China's textile and garment industry has strong international competitiveness against Vietnam, but in the long term, the international competitiveness shows a declining trend.

5 CONCLUSION

Combined with the above analysis, China's textile export to Vietnam as a whole maintains a relatively strong comparative advantage. Textile exports are mainly concentrated in textile raw materials, but this advantage is gradually being weakened. With the continuous growth of labor costs and trade barriers to export, the growth rate of China's textile industry is gradually slowing down, thus affecting the competitiveness of China's textile industry in the international market. As a result of these problems, more and more textile orders are transferred to Southeast Asian countries, among which Vietnam is a representative one. Vietnam in recent ten years in the textile and clothing industry growth rate is very fast, the development of the textile industry is very good. Although the overall growth is fast, in the global supply chain, Vietnam's textile industry is at the lowest end of the supply chain, with low added value and mainly engaged in OEM processing work, which needs to be improved in product innovation. In addition to low value-added products, Vietnam's Labour productivity needs further improvement. Vietnam faces a big challenge in terms of labor productivity. The machine equipment is relatively old, and the technological process also needs to be further improved. Nowadays, most countries are trying to transform their industries digitally, and Vietnam should also seize the opportunity of digital transformation, which will greatly improve Vietnam's labor productivity.

From the global textile and garment market, China's market share is still the first. At present, the two countries have comparative advantages in the textile trade. Because China has more resources than Vietnam, more perfect textile equipment, and more mature production technology, China's production capacity is far greater than Vietnam's. However, in recent years, western countries to China's textile and clothing barriers, so that more and more Chinese enterprises will invest in Vietnam. Farsighted entrepreneurs actively take advantage of the international trade benefits enjoyed by Vietnam to build textile factories in Vietnam through foreign investment and export from Vietnam to other parts of the world. Vietnam should seize the opportunity to cooperate with Chinese textile and garment enterprises to optimize the textile industry. China and Vietnam in the textile and clothing bilateral trade are difficult to divide. The two countries should strengthen mutual assistance in the textile industry, actively alleviate trade frictions caused by market competition and promote the healthy development of textile products of the two countries.

In the post-COVID-19 era, China and Vietnam should seize the opportunity of digital transformation of the textile and garment industry. Issues related to industrial digital transformation should be considered. Global trade has been hit hard by the COVID-19 pandemic. In this situation, more and more people attach importance to digital transformation. Compared with China, Vietnam's digital transformation is lagging. Although the Vietnamese government has begun to attach importance to digital transformation, it still faces great challenges such as lagging in e-commerce regulations and a lack of digital human resources. As a traditional manufacturing industry, the textile industry should also grasp this opportunity. In the face of the epidemic, China has launched an online textile and fabric exhibition in Vietnam to promote the textile trade between the two countries through an online live streaming platform. The governments and businesses of China and Vietnam should uphold the concept of sustainability, closely cooperate and support each other.

Acknowledgment. Support by: The construction program of the innovation team at Beijing Institution of Fashion Technology (BIFTTD201901); The project of education & teaching reform at Beijing Institute of Fashion Technology (No.ZDJG1807).

REFERENCES

- [1] Wang B., Li Y., Comparative analysis of textile and garment industry exports between China and Vietnam during the financial crisis[J]. Lanzhou Academic Journal, 2010, 07:58-61.
- [2] Meng Q., Research on global value chain of China-Vietnam textile and garment industry based on value-added trade[J]. Reform of the Economic System, 2016, 02:172-177.
- [3] Zhan X. Q., Comparison of the international competitiveness of China and Vietnam's textile and garment industry from the perspective of TPP impact[J]. Journal of Ocean University of China (Social Sciences), 2016,06:59-67.
- [4] Huang D.C., Ruan Q. Z., The impact of China-Vietnam textile industry trade under the new situation and suggestions for countermeasures[J]. Economic and Trade Practice, 2017,05:54-55.
- [5] Fan Y. X., A comparative study on the competitiveness of textile exports between China and Vietnam [D]. Guangxi University, 2017.
- [6] Cui J. H., Study on the potential of bilateral trade between China and Vietnam--Empirical analysis based on gravity model[D]. Hebei University of Economics and Business, 2020.
- [7] Le Q. M., Study on the competitiveness and complementarity of bilateral trade between China and Vietnam [D]. Hebei University,2020.
- [8] Chen M. T., Wei S. Q. Exploring the transformation of textile and garment foreign trade enterprises in Shishi, Fujian after the new crown pneumonia epidemic [J]. Foreign Economic Relations & Trade, 2021,08:9-11,47.
- [9] Balassa B, Trade Liberalization and Revealed Comparative Advantage [J]. Manchester School, 1965, 99-123.
- [10] Balassa B, Comparative Advantage, Trade Policy, and Economic Development [M]. New York: Harvester Wheatsheaf, 1989,42-46.