

Analysis on Foreign Trade Competitiveness of Tobacco and Tobacco Substitutes in China

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Abstract: With the development of economy and technology in China, consumers' demand for tobacco products is rising, and the import and export trade volume of tobacco and tobacco substitutes is gradually increasing. The trade of tobacco products occupies an important position in agricultural trade. This paper collects the import and export data of tobacco and tobacco substitutes at home and abroad by searching the United Nations Commodity Trade Statistics Database, the National Bureau of Statistics database and statistical yearbook, and analyzes the trade competitiveness of tobacco and tobacco substitutes in Chapter 24 of HS classification index from 1995 to 2020 by using Revealed Comparative Advantage Index (RCA), Revealed Competitive Comparative Advantage Index (CA), Revealed Competitive Index (RC) and Trade Competitive Index (TC), and puts forward some countermeasures and suggestions to improve the international trade competitiveness of tobacco products in China.

Keywords: China tobacco, International trade competitiveness, Influencing factors, foreign trade

1. Introduction

In 1995, China's exports of tobacco and substitutes accounted for 4.35% of the world's total. From 1995 to 2000, the proportion of export decreased to 1.28% in 2000, slightly increased in 2001 and maintained an average proportion of 1.84%. After the increase in 2009, it stabilized at 1.86% and rose to 2.16% in 2020. At present, the export of tobacco products in China is relatively low and tends to be stable.

The import volume of tobacco and its substitutes in China fluctuated greatly, with the import proportion reaching the lowest point of 0.42% from 1995 to 1999, and reaching the highest point of 2.55% in 2014, showing a downward trend after 2018. China's trade competitive advantage and comparative advantage are also weakening year by year. For China, the production and sales of tobacco products are mostly limited to domestic production and consumption. In terms of foreign trade, the trade competitiveness of tobacco and substitutes in China is at a disadvantage and the import and export share is low, so the situation of tobacco import and export trade is uncertain.

All countries in the world have implemented heavy tax policies for the tobacco industry, making the tobacco industry an important source of tax revenue for all countries in the world, which has great influence on solving employment and promoting economy. It is not a long-term solution for China tobacco industry to rely entirely on domestic production and consumption, and China has very generous resources and good development space. Therefore, it is very important to study the advantages and disadvantages of China tobacco trade, grasp the current foreign trade factors of China tobacco and improve the competitiveness of China tobacco foreign trade.

2. Literature review

Zekic Stanislav (2016) and others used RCA index to analyze the international competitiveness of Serbian tobacco and tobacco products, and concluded that Serbian tobacco has advantages in international competitiveness and its competitiveness level is constantly improving^[1]. Liliana Cimpoiu (2016) analyzed Moldova's agricultural products by using RCA index and TRA index, and concluded that Moldova's tobacco products have trade competitive advantages in the EU market^[2].

The research direction of China scholars is more focused on the trade dilemma, import and export

potential and trade barriers of China tobacco industry. Ma Shuang (2017) thinks that the foreign trade mode of China tobacco industry is relatively simple, and the lack of scientific and technological content and unreasonable organizational structure of enterprises lead to the lack of competitiveness of China tobacco trade [3]. Liao Yi and Zhou Invented (2012) that to improve the competitiveness of China tobacco trade, we should maintain the price advantage, strengthen brand building and promote the formation of technological innovation industries [4]. Zhang Jiaqing and Zhou Chao (2012) think that China should modernize tobacco planting, standardize market competition system and spread export risks to improve its competitiveness [5].

3. Concept definition and index introduction

3.1. International competitiveness and foreign trade competitiveness

The concept of international competitiveness is divided into two categories: the first category is based on the international market and thinks that international trade competitiveness is the ability to maintain trade surplus or trade balance; The second category is based on the domestic economy, that is, a country's ability to create added value and sustained growth of national wealth compared with other countries in the global economic environment, including the ability to introduce absorption and export expansion. International competitiveness can make systematic parity and feedback on the comprehensive competitiveness of a country's economic operation and development.

The competitiveness of foreign trade is based on the international competitiveness of a country or region and the ability to maintain the sustained growth of foreign trade. The competitiveness of foreign trade reflects a country's ability to gain share and profit in the international market, which is the ability of a country to increase its real income faster than other countries through trade.

3.2. Index introduction

3.2.1. Introduction of TC index

Trade competition index, TC index, refers to the proportion of a country's import and export trade difference in import and export trade:

$$TC = \frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}} \quad (1)$$

X_{ij} represents the export value of J-class goods in country I, and M_{ij} represents the import value of category J commodities in country I.

The value range of TC index is usually [-1,1]. When the TC index is equal to 1, it means that the product is only exported and not imported; When TC index approaches 1, the competitive advantage is very great; When TC approaches 0, it shows that the competitiveness of J goods in country I is small; If TC index approaches -1, the competitive disadvantage of J commodity in country I is very strong; When TC index is equal to -1, J goods are only imported but not exported.

3.2.2. Introduction of RCA index

The RCA index reflects the comparative advantage of a country's trade in an industry, which is expressed by the proportion of an industry's exports in a country to the proportion of exports in world trade:

$$RCA = \frac{X_{ij}/X_i}{X_{wj}/X_w} \quad (2)$$

X_{ij} is the export value of J commodity in country I, and X_{wj} is the export value of J commodity in the world; X_i is the total export value of country I, and X_w is the total export value of the world. X_w value is the proportion of J industry export in country I, and the greater the export volume of J products, the greater the RCA index and the more obvious the comparative advantage.

3.2.3. Introduction of CA index

CA index, put forward by Wollas, calculates the real comparative advantage by subtracting the import comparative advantage from the export comparative advantage, which can better reflect the real situation of a product's international competitiveness:

$$CA = RCA - \frac{M_{ij}/M_i}{M_{wj}/M_w} \quad (3)$$

M_{ij} and M_{wj} are the import volume of J goods in country I and J goods in the world respectively, M_i is the total import volume of country I and M_w is the total import volume of the world. The higher the CA index, the stronger the international competitiveness; On the contrary, the weaker the international competitiveness.

3.2.4. Introduction of RC index

On the basis of the import comparative advantage index and the export comparative advantage index, the CA index is logarithmically taken and then the difference is made to obtain the revealed competitiveness index:

$$RC = \ln(RCA) - \ln(RMA) \quad (4)$$

When $RC > 0$, the product has a competitive advantage, and when $RC < 0$, the product has no advantage. The symmetry of RC index is better, which can analyze the competitive advantage of a product or industry more comprehensively.

4. Competitiveness of China's Commodity Trade and Current Situation of Tobacco Industry

4.1. TC index of China commodity trade

The TC index of China's commodity trade can be obtained by sorting out and calculating the relevant values of the National Bureau of Statistics. Although the TC index fluctuated, it was greater than 0 from 1995 to 2000. China's commodity trade had a low competitive advantage and maintained a trade surplus for many years. It reached a low point in 2003, 2010 and 2018 respectively, and reached a peak in 1997, 2004 and 2015, showing an upward trend from 2017 to 2020.

4.2. Import and export status of tobacco and substitutes in China

From 1995 to 2020, the import volume of tobacco and its substitutes in China (million US dollars) and its growth rate. From 1995 to 2014, the import volume of tobacco in China showed an upward trend. After 2014, the import volume remained relatively stable, and in 2020 it fell to the import level in 2011. From 2000 to 2015, the growth rate of tobacco import in China was relatively stable, and it was negative after 2015.

From 1995 to 2000, the export of tobacco and its substitutes in China was in a downward trend, and it showed a steady upward trend from 2000 to 2013, and a relatively stable trend after 2014.

As for the net export of tobacco trade, China's net export value was positive from 1995 to 2007, China's tobacco trade showed a trade deficit from 2010 to 2019, and the deficit reached the maximum in 2013, which shows that the national trade trend showed a downward trend at this time. After 2019, it once again showed a state of trade surplus.

5. Analysis on the Trade Competitiveness of Tobacco and Substitutes in China

5.1. Analysis of Trade Competition Index

According to the calculation results, the TC index of China tobacco industry shows a downward trend, the trade competitiveness gradually loses its advantage, and the international competitiveness level drops. From 1995 to 2000, the TC index remained between 0.4 and 0.7, and reached the maximum value of 0.69 in 1998. During this period, the TC index was ideal. In six years, the export of China tobacco industry was significantly greater than the import, which had a strong trade competitive advantage. From 2001 to 2011, the trade competition index remained between 0 and 0.2, and the average TC index value was 0.13, so the competitive advantage of China tobacco industry was not obvious. From 2012 to 2019, the TC index of China tobacco industry showed a negative value, and its international competitiveness showed a disadvantage, but both remained within -0.3, and the competitive disadvantage was not obvious. In 2020, TC index will return to positive value, and the international competitiveness of tobacco industry will once again show its advantages.

5.2. Analysis of Revealed Comparative Advantage Index

The numerical value of RCA from 1995 to 2020 calculated by RCA index formula shows that the overall RCA index of China shows a downward trend. From 1995 to 1997, the RCA index of China tobacco industry exceeded 0.8, which had a strong comparative advantage. From 1998 to 2000, the RCA index of China showed a sharp downward trend, and experienced a brief increase in 2001, and then decreased to 0.2 in 2007. During this period, the comparative advantage of China tobacco industry was weak and its international competitiveness was insufficient. Since 2008, the RCA index of China tobacco industry has remained within 0.2, and the average RCA index is 0.155, which is relatively stable, indicating that China tobacco industry has almost no comparative advantage. From 1995 to 2020, China's revealed comparative advantage declined sharply, and its international competitiveness declined.

5.3. Analysis of Comparative Advantage Index of Explicit Competition

The results of CA index from 1995 to 2020 also reflect the downward trend of international competitiveness. Compared with RCA curve, CA curve is more volatile. From 1995 to 2000, the CA index showed a downward trend. In 1995, 1996 and 1998, the CA index was greater than 0.5, which had a strong competitive comparative advantage. From 1995 to 2006, the CA index was greater than 0, and China's tobacco industry had a low competitive comparative advantage. From 2006 to 2020, the average value of CA index is -0.039 less than 0, which shows that the competitive comparative advantage of China tobacco industry is low.

5.4. Analysis of Revealed Competitiveness Index

From 1995 to 2020, the RC index showed a strong fluctuation, but the overall trend showed a downward trend. From 1995 to 2000, the RC index was greater than 0.5, which was competitive. In 1998, the RC index reached the maximum value of 1.28, and from 1998 to 2000, the RC index was greater than 1, which was very competitive. From 2001 to 2006, the RC index was greater than 0, and the tobacco industry had a competitive advantage. From 2007 to 2020, RC index was mostly in a negative state, which indicated that China tobacco industry did not have competitive advantage and its international competitiveness was low. In 2020, the RC index rose to 0.093, and the competitiveness increased.

6. Conclusions and recommendations

The overall trade competitiveness of China tobacco industry's import and export trade is weak, and its international share is very small, and it does not have comparative advantages and good international competitiveness. Since 1995, the trade competitiveness, displayed comparative advantage, displayed competitive comparative advantage and displayed competitiveness index of China tobacco and tobacco substitutes all show that the comparative advantage of China tobacco industry is on the decline and the international trade competitiveness is not optimistic.

The different calculation methods of the four indexes make the results presented by the data different, and the results presented by the RC index are quite different from those of the other three groups, as shown in Figure 1. However, through the comparative analysis of the calculation process and results of the four indexes, we can find their consistency:

From 1995 to 2000, although the comparative advantage of tobacco trade in China showed a sharp decline, they all showed a strong comparative advantage and strong international competitiveness. From 2000 to 2008, the comparative advantage of tobacco trade in China slowed down. At this time, the tobacco industry in China showed weak international competitiveness. From 2008 to 2019, the comparative advantage of foreign trade of China tobacco industry showed a steady fluctuation, and the international competitiveness of tobacco trade was in a trade disadvantage. In 2020, every index shows that the tobacco trade is on the rise and the international competitiveness is improved.

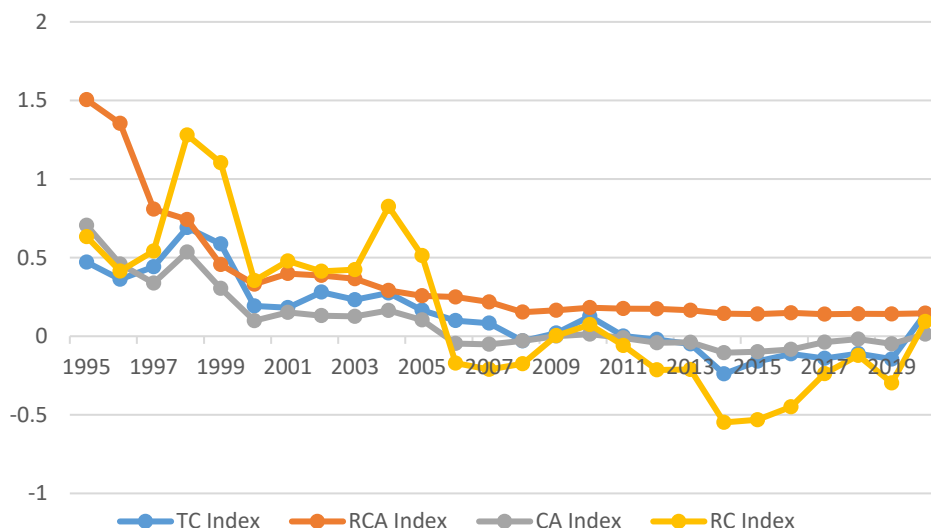


Figure 1: Summary of Four Indexes of Tobacco and Substitutes in China from 1995 to 2020.

After 2012, the import and export volume of China's commodity trade showed rapid growth, but the import and export volume of tobacco and tobacco substitutes did not show a trade growth rate that matched the growth of commodity trade. However, the tobacco production and planting area of China rank first in the world, but the trade competitiveness of tobacco products is far from that of other major tobacco trading countries, mainly because the quality of tobacco leaves in China is not high and the variety renewal is slow. For a long time, China's tobacco exports have been increased by reducing tobacco prices.

7. Suggestions on improving the competitiveness of tobacco industry

7.1. Promote technological innovation and improve product quality.

With the increasing demand for the quality of tobacco products in the tobacco industry in the world, the international competitiveness of China tobacco products has a huge room for improvement due to technical limitations and slow product renewal.

In this regard, China should attach importance to the modernization of tobacco agriculture, strengthen exchanges and cooperation with foreign countries, introduce foreign advanced technologies and excellent tobacco varieties to promote the development of China's core technologies, thereby improving the quality of tobacco products in China and increasing the amount of investment in tobacco agriculture innovation to promote the innovation and product renewal vitality of China's tobacco industry; The state should attach importance to the technical training of tobacco farmers and improve the utilization rate of technology. China tobacco industry should strengthen the research on "harm reduction" of tobacco products, and further improve the product quality level.

By improving the quality of China products, meeting the demand of China for different grades and types of tobacco products, reducing imports and promoting exports, the trade competitiveness of China tobacco products can be promoted. Some countries have set strict technical barriers to tobacco products, which also have a negative impact on China's tobacco exports. China should strengthen the formulation of product quality standards to promote the good development of high-end tobacco products industry^[6].

7.2. Explore the international market and increase trade.

To improve the competitiveness of tobacco products in China, we should first explore the international market and increase market share. From the previous analysis, it can be seen that the overall market share of tobacco and tobacco substitutes in China is relatively small. In addition to the problems of product quality and trade barriers, China lacks long-term trading partners, and buyers and sellers often only pay attention to short-term trading behavior and lack long-term cooperation concepts. Therefore, while strengthening trade development, enterprises should make longer-term trade cooperation plans and find trade partners who can maintain long-term cooperation and have equal

strength^[7].

China's tobacco trade has been affected by market fluctuation and market development difficulties for many years, so China must break the traditional low-level distribution mode and ignore the international trade of tobacco industry. At the same time, China should strengthen the export of tobacco products to countries with insufficient tobacco trade and large demand, and increasing the export volume to such countries can spread the risk of tobacco export to some extent.

7.3. Standardize the market competition system and optimize the trade structure.

Standardizing the competition system in the tobacco industry and the tobacco enterprise system is the most important thing in the reform. First of all, we should reform the relationship between taxation and local financial mechanism. Secondly, the organizational structure of some tobacco enterprises in China is not reasonable enough. Therefore, China should urge large tobacco enterprises to transform, stimulate the foreign trade of tobacco industry, enter the international market on the basis of maintaining the good development of China market, and strengthen the international competitiveness of China tobacco trade.

In terms of trade form, China tobacco trade started late. Compared with other tobacco trading countries, China tobacco industry has a simple foreign trade form, which limits the development of tobacco trade. The international market share of cigarette products with the highest foreign trade share in China is only 4%, which is not consistent with the production status of China tobacco countries.

It can be seen that China should learn from the experience of foreign tobacco trade, promote cross-border mergers and acquisitions, change from product-oriented to market-oriented, realize the diversification of M&A shares, go deep into the upstream and downstream industries, and finally achieve global market access. Due to the influence of many factors, the comparative advantage of China tobacco products is decreasing, which cannot completely ensure that vigorously promoting tobacco exports will have a positive impact on China's long-term economic development. Therefore, China tobacco must promote its products to cross the international market within a reasonable range and adjust its trade structure in order to have a longer-term development^[8]. China should seize the opportunity of promoting tobacco products to the international market and the opportunity of reform, vigorously promote tobacco product innovation and improve product quality, and promote the development of tobacco planting informationization, so as to improve the international competitiveness of tobacco and tobacco substitutes in China.

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