Research Article

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An Empirical Study on the Impact of Tariff Reduction on China's Textile Industry under the Background of RCEP

Abstract: This article introduces the basic concept of the Regional Comprehensive Economic Partnership (RCEP) agreement and constructs the GTAP model based on the analysis of the current development status of the textile industry in China, the Chinese textile industry as the research object, and the simulation forecast RCEP agreement tariff reduction. The data come from gtap10 database, respectively setting regional tariff reduction to 60% and regional tariff reduction to 100% realize free trade two situations for empirical research. The reduction of tariffs has reduced the cost of international textiles, leading to an increase in imports from China. At the same time, the reduction of tariffs has reduced the export price of Chinese textiles, thereby increasing China's exports. However, the reduction of non-tariff barriers may increase the export price of Chinese textile products to a certain extent, thereby limiting the output of China's textile industry. Finally, RCEP has a positive impact on the development of China's textile industry, on the basis of the future development countermeasures of the Chinese textile industry.

Keywords: textile industry, RCEP, tariff reduction, GTAP model

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1 Introduction

After 8 years and 31 rounds of formal discussions, the Regional Comprehensive Economic Partnership (RCEP), the world's largest free trade agreement, was finally concluded at the end of 2020. Since the twentieth century, regional economic integration has emerged as the predominant trajectory in global economic development, with unabated momentum towards economic globalization. The primary objective of RCEP is to advance trade liberalization within the region, striving towards a tariff-free environment, and eliminating non-tariff barriers for the majority of goods. This study examines the potential impact of RCEP on the Chinese textile industry and analyzes the necessary structural adjustments within the sector. Additionally, recommendations are provided regarding the developmental trajectory of the Chinese textile industry within the scope of RCEP.

The RCEP reduces trade and investment barriers, creating a unified large market, which benefits Chinese textile and apparel enterprises in optimizing resource allocation within the region and expanding their international footprint. By strengthening industrial division of labor cooperation among member partners, we can promote the formation of a more rational and beneficial regional industrial chain, supply chain, and value chain that benefits all parties involved, thereby enhancing East Asia's position in the global textile and apparel industry competition.

Chinese textile and apparel enterprises will more effectively leverage the low-cost advantages of ASEAN countries, achieving complementary advantages and building stable industrial chains and efficient supply chains. In areas such as product design and development, international marketing networks, brand expansion, and cross-border e-commerce, Chinese textile and apparel enterprises will have the opportunity to leverage their own strengths, fully tap into the potential of regional markets, and elevate the value chain.

1.1 The Purpose and Motivation of the RCEP

The RCEP, known as the Regional Comprehensive Economic Partnership, was initially initiated by the ten ASEAN countries in 2012, and later invited China, Japan, South Korea, India, Australia, and New Zealand to join them. It is a regional economic integration cooperation led by ASEAN. The purpose is to establish a unified large market of 15 countries by reducing tariff and non-tariff barriers to promote economic development in the region.

The RCEP is based on WTO rules and higher-level free trade agreements. The RCEP agreement covers a large area, including the 15 members covering the world's second and third largest economies, covering an area of 22.51 million square kilometers, covering 2.3 billion people, and accounting for about 30% of the total global population. In 2020, the total GDP of RCEP members will reach 25.86 trillion US dollars. The signing of the RCEP marks the establishment of the world's most populous, largest free trade zone with the most development potential, where about one-third of the world's economy will become an integrated market, which will be a major change for the global economy.

For a long time, the European Union and the North American Free Trade Area have played significant roles in regional free trade. The establishment of RCEP will occupy an important position in the future development of economic globalization, with its agreement members covering most parts of the Asia–Pacific region. Faced with a vast and fragmented market, RCEP integration and the emergence of the Asia–Pacific market have streamlined 15 scattered and disorderly trade rules, while also balancing the global strategic position of the Asia–Pacific economy.

1.2 The Main Content of the RCEP

The RCEP agreement covers a wide range of contents, including market access for goods trade, market access for services trade, and other market access provisions, as well as trade facilitation, intellectual property, e-commerce, economic and technical cooperation in 20 chapters. The main goal of the RCEP State parties is to jointly establish a modern, comprehensive, high-quality, and mutually beneficial economic partnership and cooperation framework to promote economic growth within the region and contribute to global economic development. Chapter II of the agreement provides detailed provisions on goods trade and includes modifications to tariffs, market access, and import licensing. Chapter IV puts forward relevant administrative measures for customs procedures and trade facilitation. Chapter VI strengthens the implementation of the WTO Agreement on Technical Barriers to Trade among member states and reaches an understanding of technical regulations and standards of countries within the region.

Textile industry covers a wide range of tariffs, for example, the most direct result is that our country-to-Japan export costs greatly reduced, originally Japan imposed 8–11% of the textile and garment products tariffs, RCEP after part of the goods, the main export clothing products will gradually reduce to zero tariffs. This series of adjustments is very conducive to industrial upgrading and transformation and the optimization of resource allocation.

1.3 Import and Export Trade Scale of China's Textile Industry

The textile industry is a traditional pillar industry in China. It plays an important role in safeguarding foreign exchange reserves, adjusting international balance of payments, maintaining exchange rate stability, addressing employment issues, and improving people's livelihoods. Since ancient times, China has been using wild materials to produce rough and simple clothing. With the influence of reform and opening up, the modern textile industry joined the WTO. China has become one of the most prominent countries in the global textile field. In 2019, China's textile exports accounted for nearly two-fifths of the global total. According to the statistics of Figures 1 and 2, the results show that in recent years, the import and export scale of textiles and garments is stable, and China's textile industry occupies an important position in the world textile industry.

Due to the global spread of COVID-19 in 2020, the global textile industry has been affected to a certain extent, but according to the customs data, the export trade of China's textile industry shows a positive growth trend. As shown in Figure 3, in April, after the epidemic was first controlled in China, the export growth rate of China's textile industry rose rapidly, driven by epidemic prevention materials, which brought recovery to China's textile industry after the epidemic. According to the statistics of the Ministry of Commerce, in 2020, China exported 224.2 billion masks, worth more than 50 billion US dollars, accounting for 34% of the total textile exports; 2.31 billion protective clothing, worth more than US $6 billion.

Other RCEP member states have always been important trading partners of China and have close trade cooperation in the textile industry. Figure 4 shows that in 2019, China imported textile and garment from other RCEP countries to US $12.07 billion, which is 47.4% of China's total

Figure 1: Statistical table of China's textile industry (Source: China Free Trade Zone Service Network http://fta.mofcom.gov.cn/).

textile and garment imports. China's exports of textiles and garments to RCEP countries reached $76.19 billion, accounting for 27.1% of China's total textile and garment exports.

1.4 Adjustment of Tariff and Non-Tariff Measures under the RCEP Agreement

The RCEP agreement adjusts tariff and non-tariff measures, two of which are zero tariffs for more than 90% of the trade in goods in the region and reduce unnecessary technical barriers in the region to achieve trade facilitation. As shown in Table 1, the proportion of products between China and RCEP member countries.

The signing of the RCEP agreement makes the first free trade agreement between China and Japan. China has been the main source of textile and garment imports for Japan for a long time, so the textile tariff reduction measures between China and Japan will have a great impact on China's textile industry. As shown in Table 2, the tax reduction ratio of related textile products in Chapters 1150–1163 of the HS code between China and Japan.

ASEAN is the initiator of the RCEP agreement, and in recent years, it has undertaken a large number of labor-intensive industries in China's textile and garment industry. The implementation of measures related to the RCEP agreement will
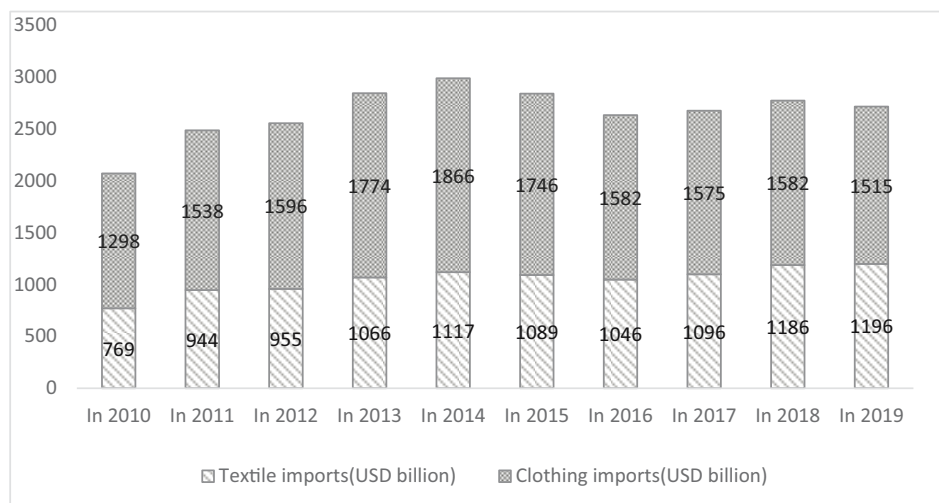

Figure 2: Export statistical table of China's textile industry (Source: China Free Trade Zone Service Network http://fta.mofcom.gov.cn/).
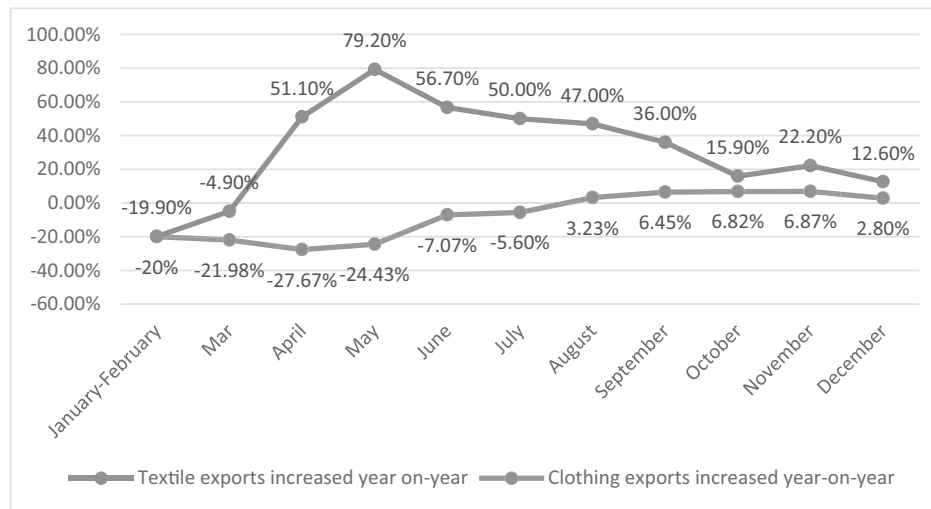
Figure 3: Statistical table of national textile industry export trade in 2020 (Source: China Free Trade Zone Service Network http://fta.mofcom.gov.cn/).
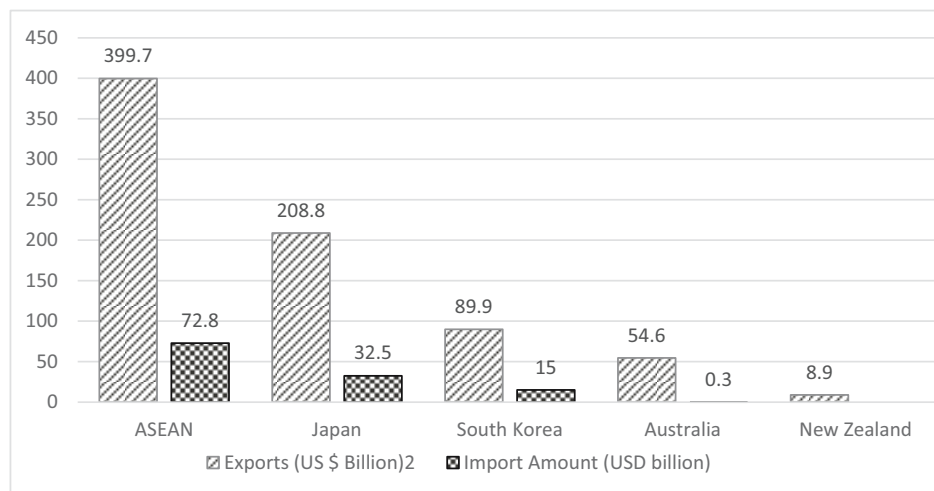

Figure 4: Statistical table of textile and garment import and export trade between China and other RCEP countries in 2019 (Source: China Free Trade Zone Service Network http://fta.mofcom.gov.cn/).

further promote the multi-party cooperation between ASEAN and China. As shown in Table 3, it is the tariff reduction of China on the ASEAN textile industry under the RCEP agreement.

In terms of exports, in 2020, China exported textiles and apparel worth $78.06 billion to 14 RCEP member countries, a year-on-year increase of 6.1%, accounting for 26.4% of China's total textile and apparel exports. Among the ASEAN ten countries, they represent China's third-largest market for textile and apparel exports and the largest market for textile exports. Japan is China's fourth-largest market for textile and apparel exports. In terms of individual countries, three RCEP members, namely Japan, Vietnam, and South Korea, are among China's top ten export markets.

Regarding imports, in 2020, China imported textiles and apparel worth $10.43 billion from 14 RCEP member

countries, a year-on-year decrease of 6.7%, accounting for 44.1% of China's total textile and apparel imports. Among the ASEAN ten countries, they represent China's largest source of textile and apparel imports. Japan is China's third-largest source of textile and apparel imports. In terms of individual countries, five RCEP members, namely Vietnam, Japan, South Korea, Indonesia, and Malaysia, are among China's top ten import sources.

2 Literature Review

The RCEP agreement was drafted in 2011 and has been formally studied since 2012. The earliest research on regional

Table 1: China and RCEP member states immediately have zero tariff ratio

RCEP member state	China immediately imposed a zero-tariff ratio on RCEP members (%)	RCEP members immediately imposed a zero-tariff ratio in China (%)
Japan	25	57
Korea; Republic of Korea	38.6	50.4
Australia; Aussie	64.7	75.3
New Zealand	65	65.5
Brunei	67.9	76.5
Cambodia; Kampuchea	67.9	29.9
(Name, located in the south of Indochina Peninsula in Southeast Asia)	67.9	65.1
Laos	67.9	29.9
Malaysia	67.9	69.9
Burma; Myanmar	67.9	30
the Philippines; Philippine Islands	67.9	80.5
Singapore	67.9	100
Thailand	67.9	66.3
Vietnam	67.9	65.8

Source: China Free Trade Zone Service Network http://fta.mofcom.gov.cn/.

Table 2: Proportion of tax reduction items for some textile products in China and Japan

HS Class XI, Chapter 50–63	China has cut its tariffs on Japan (%)	Japan has cut its tariffs on China (%)
Zero tariff immediately	33.7	10.0
Reduced to zero in year 11	37.6	73.3
Reduced to zero in year 16	28.0	7.4
Reduced to zero in year 21	0.0	1.1
Do not participate in tax reduction	0.7	8.2

Source: China Free Trade Zone Service Network http://fta.mofcom.gov.cn/.

economic integration was proposed by Viner (1950) in "On the Issue of Tariff Unions," which discussed the theory of tariff unions, as well as the trade creation and transfer of tariff unions, the welfare effects of tariff unions, and the expansion of export effects of tariff unions. Liu et al. (2021) pointed out that although there are differences in the impact of tariff cuts on different member countries in the short term, tariff cuts have a significant improvement effect on the macroeconomic benefits and output levels of most member countries in the long term.

In the study of the economic benefits of free trade zones, scholars mainly rely on general equilibrium analysis, and the GTAP model is one of the most commonly used predictive analysis methods by foreign scholars. Shagdar and Nakajima (2018) utilized the GTAP 9.0 model to analyze the trade scale and economic benefits of the establishment

Table 3: The proportion of tax reduction from China to ASEAN textile industry

HS Class XI, Chapter 50–63	The proportion of China's tax reduction items to ASEAN (%)
Zero tariff immediately	79.3
It ed to zero in year 10	9.3
The 15th was reduced to zero	2.4
Reduced to zero in year 20	5.6
Do not participate in tax reduction	1.5
Maintain after falling to 5% in year 1	0.2
Hold after falling to 3.8% or 7.5% at year 10	1.8

Source: China Free Trade Zone Service Network http://fta.mofcom.gov.cn/.

of the China Japan South Korea Free Trade Zone for regions such as China, Japan, and South Korea. Cui et al. (2019) employed the GTAP model to evaluate the economic impact of free trade agreements among China, Japan, and Korea. Therefore, using the GTAP model to analyze the economic effects of RCEP holds significant research value.

When researching the impact of RCEP on countries or regions, Li et al. (2017) explored the positive effects of commodity trade liberalization, service trade liberalization, and investment liberalization on China's foreign direct investment under the RCEP framework. Li and Moon (2018) mainly studied the potential effects of RCEP on trade and income of China, South Korea, and Australia. Ahmed et al. (2020) extended the study to all RCEP member countries, with South Korea having the greatest economic benefits; Australia, India, and Japan come second; Only ASEAN's economy has experienced a slight contraction. Ren et al. (2020) conducted a detailed analysis of the measures related to general goods trade, service trade, investment, and other aspects involved in the RCEP agreement, and studied the impact of the agreement on the integration of regional economic and trade rules and the upgrading of regional industrial chains. Qian and Yang (2023) concluded that after the implementation of RCEP, the division of labor in the global value chain has further deepened, and China's upstream degree in the global value chain has slightly increased, while the downstream degree has significantly increased. Huang and Chen (2023) believed that market size, economic volume, exchange rate of RMB against USD, geographical location, and signing of free trade agreements are important influencing factors for China's electrical product export trade. Wei and Yin (2023) simulated the trade impact of tariff reduction on China's manufacturing industry, and the results showed that tariff reduction will promote the expansion of China's manufacturing trade scale, but the export volume will slightly decrease. At the same time, after the RCEP takes effect, tariff revenue will inevitably experience a certain period of decline, but the overall social welfare improvement brought about by foreign trade can offset this impact and leverage the overall economic efficiency improvement brought about by trade integration. Yuan et al. (2022) conducted a rigorous quantitative analysis, believing that in industries such as machinery and petrochemicals, due to the reduction of domestic industry barriers caused by RCEP, their export volume will experience a certain decline, while industries such as textiles and clothing, agriculture, and electronic information will ride the fast train of RCEP implementation, and their export volume will significantly increase (Zhang & Liu, 2021).

Overall, the current academic research on the impact of RCEP is still focused on the macroeconomic level, and there is a lack of research on the impact on specific industries. In addition, due to the fact that RCEP was only signed at the end of 2020, the effective date of the agreement, as well as the various provisions and rules for its implementation, have not yet been determined. Therefore, existing research generally has two major problems: the base period selection of GTAP simulation prediction does not match the actual situation, and the degree of tariff or non-tariff trade barrier reduction is set too subjectively. Based on this, this article will strictly conduct GTAP simulation experiments based on the predictable effective implementation time of RCEP, and the tariff commitment table released. Based on the current development status of China's textile industry, the impact of RCEP tariff reduction on China's textile industry will be analyzed, and some countermeasures and suggestions for the future development of the textile industry will be proposed (Luong, 2020).

3 Methodology

According to the theory of customs unions, reducing tariffs can expand China's textile exports, promote economic growth, and improve China's welfare level. Reducing non-tariff barriers can lower textile costs and facilitate textile imports and exports. Maintaining an appropriate level of technical trade barriers can also improve China's welfare level. The reduction of tariffs and the reduction of non-tariff barriers all have a certain impact on China's textile industry (Zheng, 2020). Building on this foundation, this chapter conducts empirical research on the impact of RCEP on China's textile industry. The reduction of tariffs and the reduction of non-tariff barriers all have a certain impact on China's textile industry (Zheng, 2020).

3.1 Introduction of the GTAP Model

The empirical approach used in this article is the general model – GTAP model – and the GTAP (Global Trade Analysis Model) was developed by the Global Trade Analysis Program led by Professor ThomasW.Hertel of Pulton University.

The GTAP model is an international trade model designed based on the neoclassical economic theory and the general equilibrium theory. At the same time, the data in the model adopt the economic and trade data of various countries and industries around the world, which is more practical.

In the GTAP model, countries, firms, and private entities are considered "rational," with input–output in equilibrium. Firms aim to maximize cost and profit, while

private enterprises seek to maximize utility (Xue, 2017). The GTAP model establishes sub-models for the production, consumption, and government expenditure of each country (region), forming a general equilibrium model with multiple countries and sectors. The model assigns certain impact intensities to relevant variables and solves the model to obtain changes in production, trade, GDP, prices, social welfare, and other economic and trade indicators for different regions under different policy impacts. This model is commonly used for ex-ante prediction analysis or post-impact analysis of trade policies, tax policies, and energy policies. This article also examines the impact of RCEP trade policies on policies. Since RCEP has just been successfully signed, many measures have not yet been implemented. Therefore, this article belongs to RCEP predictive analysis and is suitable for empirical research using the GTAP model.

3.2 Model Construction Method

3.2.1 GTAP Version Introduction

This article conducts an empirical study, using the latest version of the GTAP model database GTAP10.0. GTAP10 includes the input and output data of 141 countries or regions in the world in 2014. Because the textile industry is an important industry of China's foreign trade, China is the world's largest producer and consumer of the textile industry. Therefore, this article will conduct in-depth research on the textile industry, explore the impact of RCEP on China's textile trade, and put forward reasonable suggestions for the empirical research results.

3.2.2 Division of Countries and Departments

In the national classification of the GTAP model, according to the research purpose of this article, the aim is to establish the impact of the RCEP Free Trade Area on China's textile industry (Xu, 2017). Therefore, this article classifies RCEP member states separately to classify the 141 countries or regions in the GTAP10 database as China, Japan, Korea, Korea, Australia, New Zealand, ASEAN, and other regions of the world.

In the department classification of the GTAP model, because the main research object is the textile industry, and the textile industry in the GTAP10 database includes textile and clothing. To explore the impact of RCEP on the entire textile industry in China, this article will classify the

textile industry, the 65 departments in the database into textiles, clothing, and other industries.

3.2.3 The GTAP Model Structure

The GTAP model assumes that the market is a fully competitive market, and the scale return of production remains unchanged. Under this assumption, the producer minimizes the production cost and maximizes the consumer utility, and all products and input factor markets are cleared (Li, 2017). At the same time, each country has only one account, and all the income from taxes, financial assets, capital, and labor income accumulate (regional sector in Figure 5). Suppose the country or the region of the country or region of the private sector and government spending and savings, savings into a virtual global bank, the bank decides to allocate investment flows, private expenditures, and government expenditures to two separate departments responsible for purchasing domestic products and importing foreign products, respectively. Product sales are divided into domestic and export two departments. The income in the account is divided into three parts: private consumption, deposit, and government consumption. The equation for private expenditures uses the fixed difference elasticity (constant difference of elasticity, CDE) utility equation. The utility equation of the government adopts the Cobb-One-Douglas equation:
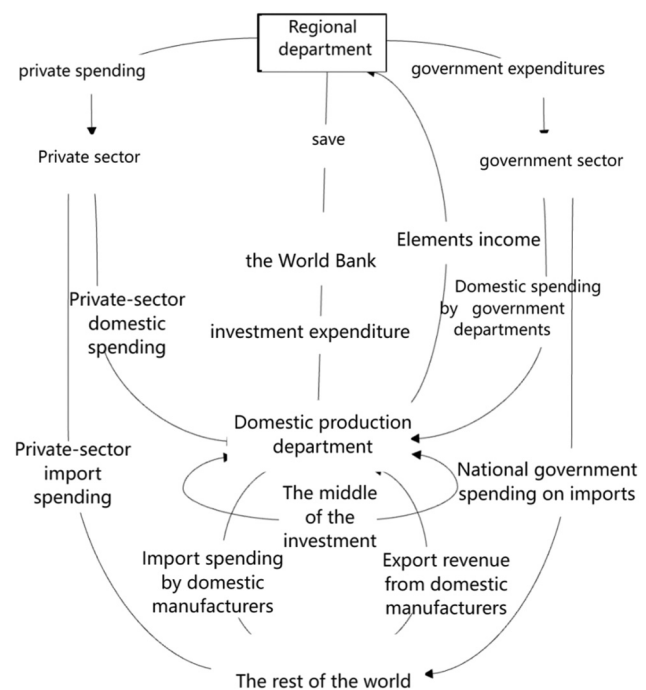

Figure 5: The GTAP model structure.

$$U = AX\alpha Y1 - \alpha$$

where U is the utility, A is the technical level parameter, X and Y are the product, and α is the share of X income in U.

GTAP model has a good effect on quantitative analysis of policies. With the continuous improvement of China's international status and the continuous development of global economic integration (Sang, 2020). Using the GTAP model to analyze China's foreign trade development is significant. Based on the tariff reduction and non-tariff reduction policies in the RCEP agreement, this article takes the Chinese textile industry as the research object to simulate and analyze the impact of RCEP on China's textile industry.

3.3 Empirical Scenario Design

2020 is the year of the outbreak of COVID-19, and the economies of the world have been impacted to varying degrees. The establishment of the RCEP Free Trade Zone is in the context of the outbreak. In order to stimulate their own economic growth, compensate for economic losses during the pandemic, and gradually restore their economies, all countries have actively negotiated and signed the RCEP free trade zone agreement. According to Table 1, the average immediate tariff ratio between China and RCEP member states is about 60%, and in the RCEP agreement, countries will achieve free trade of goods through tariff reduction. Therefore, based on the different degrees of tariff reduction in the RCEP free trade agreement, this article sets a regional tariff reduction of 60 and 100% for free trade. In addition, reducing unnecessary technical barriers to trade in the region is also an important measure emphasized in the agreement. Therefore, this article also simulated a scenario where non-tariff barriers in the region are reduced by 10% on the basis of achieving free trade. There are a total of three simulated scenarios in the empirical study:

Scenario 1: A 60% reduction in tariffs on all goods among RCEP members.

Scenario 2: 100% reduction of free trade on all goods among RCEP members.

Scenario 3: Free trade among RCEP members, while non-tariff trade barriers among members fall by 10%.

Given the dynamic nature of global trade and economic policies, it is essential to anticipate potential impacts and outcomes of the RCEP before its full implementation. By conducting scenario simulations using the GTAP model, we can better understand the potential economic effects of the agreement under different circumstances. This proactive approach allows policymakers, businesses, and stakeholders

to identify potential challenges and opportunities, thereby facilitating informed decision-making and strategic planning in anticipation of the RCEP's implementation.

As the RCEP has only recently been successfully signed, many measures have yet to be fully implemented. Therefore, this article constitutes a predictive analysis of the RCEP and is equally suitable for empirical research using the GTAP model.

3.4 Theoretical Model

In the GTAP model, sub-models between countries worldwide are linked through a global external trade network, and bilateral trade between countries is connected via trade prices between the two nations. From a theoretical perspective, when tariffs are reduced among RCEP member countries, the post-tax prices (pms) of sectors within these countries change, and the equation for pms is as follows:

$$\mathrm{pms}(i, r, s) = \mathrm{tm}(i, s) + \mathrm{tms}(i, r, s) + \mathrm{pcif}(i, r, s), \quad (3.1)$$

where pms represents the post-tax price of good i exported from country r to country s, tm is the import tax on good i in country s, tms is the import tariff on good i from country r to country s, and pcif is the CIF price of good i exported from country r to country s.

The tariff reductions among RCEP member countries lead to changes in pms, which in turn affect the bilateral trade volume qxs between RCEP member countries, as shown in equation (3.2):

$$\begin{aligned}
\mathrm{qxs}(i, r, s) = &-\mathrm{ams}(i, r, s) + \mathrm{qim}(i, s) - \mathrm{ESUBM}(i) \\
&\times [\mathrm{pms}(i, r, s) - \mathrm{ams}(i, r, s) \quad (3.2) \\
&- \mathrm{pim}(i, s)].
\end{aligned}$$

Here, qxs represents the export trade volume of good i from country r to country s, ams represents non-tariff trade barriers for good i exported from country r to country s, qim is the import volume of good i in country s, ESUBM is the Armington import substitution elasticity, pms is the post-tax price of good i exported from country r to country s, and pim is the import price of good i in country s.

To further study the impact of RCEP member countries' tariff reductions on China's textile industry, this article focuses on shocks to import tariffs (tms) and non-tariff trade barriers (ams) within the GTAP model. On the one hand, the reduction in tms leads to changes in the post-tax prices pms, which then affect bilateral trade volume qxs through equation (3.2). On the other hand, changes in non-tariff trade barriers (ams) also directly stimulate

changes in the bilateral trade volume qxs between RCEP member countries. Concurrently, the changes in bilateral trade between RCEP member countries directly impact China's textile import and export trade, and thereby affect domestic economic and social welfare through changes in import and export trade volumes. Thus, this article explores the impact of RCEP tariff reductions on China's textile industry's import and export trade prices, volumes, output, and the domestic macro economy at different stages of the RCEP free trade agreement.

4 Results and Discussion

The empirical research results of this article will first from the perspective of China's overall economic analysis of the overall impact on China's macro economy, second, from the industry level of Chinese textile industry import and export structure, output and price changes, from the perspective of economy and industry more comprehensively reveals the specific influence of RCEP on China's textile industry.

4.1 Analysis of the Impact of RCEP on China's Macro Economy

In the initial stage of the establishment of the RCEP FREE Trade Zone, when commodity tariffs among RCEP members were cut by 60%, there was a certain resource agglomeration effect, capital began to transfer to RCEP members, and China's investment also increased by 0.247% (Chen, 2021). At the same time, the sharp reduction in tariff and trade barriers among RCEP member countries has stimulated the development of foreign trade for each member nation. Therefore, China's total import volume and total export volume showed a growth trend. China's total import volume increased by 1.577%, the total export volume increased slightly smaller, and China's total export volume increased by 0.962%. From the empirical results (Table 4), China's export growth was less than the increase in imports, resulting in the decline of the domestic trade balance by $8.7686 billion. The resource agglomeration brought by the RCEP agreement is bound to stimulate the economic performance of the RCEP member states. Under the positive stimulus of export and investment, China's real GDP increased by 0.058%. On the other hand, GDP grows by 0.04%, and private consumption in China also increases by 0.066% as the economy expands. Therefore, overall, the country's overall social welfare has

Table 4: Impact of RCEP on economic changes in China

	Scenario 1	Scenario 2	Scenario 3
Reality GDP(%)	0.058	0.089	1.335
Flow of investment (%)	0.247	0.417	2.491
Government expenditures (%)	0.040	0.051	1.457
Private consumption of the (%)	0.066	0.097	1.681
Total import volume is (%)	1.577	2.749	10.301
Total export volume is (%)	0.962	1.696	6.008
Trade balance (USD billion)	−87.686	−153.382	−520.845
Social welfare (USD billion)	59.528	86.493	1489.523

Source: Organized from GTAP simulation results.

increased by $5.952.8 billion. Establish RCEP7 macroeconomic brought more positive stimulus, and with the further decline of tariff trade barriers, when all commodities between RCEP members after free trade, China's economic indicators were affected more obvious, due to further growth imports trade balance fell further, and investment, total imports and exports, government spending, private consumption, actual GDP and the overall social welfare changes are further increased, establish RCEP free trade area to our macroeconomic has brought a more profound positive impact. When non-tariff trade barriers among RCEP member countries also begin to decline, the overall policy impact on China becomes more pronounced. Actual GDP increased by 1.335%, the total import volume increased by more than 10%, the total export volume increased by more than 6%, and the overall social welfare level increased by 148.9523 billion US dollars. It can be seen that when the RCEP agreement is further deepened, China's macroeconomic development speed will also be further accelerated.

4.2 Analysis of the Impact of RCEP on the Import and Export Scale of China's Textile Industry

4.2.1 Impact on the Import Trade of China's Textile Industry

In-depth exploration of the impact of import trade on China's textile industry, insights can be gleaned from Table 5:

In the initial stage of the establishment of the RCEP free trade zone, China's textile and garment imports showed a growth trend. The growth rate of textiles was larger, with textiles increasing by 6.618% and clothing increasing by

Table 5: Impact of RCEP on Import Changes of China's Textile Industry (unit: %)

	Scenario 1	Scenario 2	Scenario 3
Dry goods; textile; textiles; dry goods; soft goods	6.618	12.254	31.927
Dress; clothing; costume; fashion; accouterments	5.722	11.701	34.191

Source: Organized from GTAP simulation results.

5.722%. This is because the RCEP free trade area greatly cut the textile industry import tariffs, which directly to domestic textile enterprises import trade more convenience. Therefore, while the international textile industry reduces costs, domestic textile enterprises will increase their efforts in importing textiles and clothing. Consequently, China's imports of textiles and clothing will also increase. The more the tariff is reduced, the lower the import cost of the domestic textile industry in scenario 2, and the greater the import growth rate of China's textile industry increases. At the same time, after the decline of non-tariff trade barriers among RCEP member states, the change range of import trade in China's textile industry has further increased, which means that the establishment of an RCEP free trade zone has a greater impact on the import trade of China's textile industry.

4.2.2 Impact on the Export Trade of China's Textile Industry

From the perspective of the impact of export trade in China's textile industry (see Table 6), in the initial stage of the establishment of RCEP Free Trade Zone, the decline of textile tariff trade barriers between RCEP members also stimulates the import demand of RCEP members for China's textile industry. Therefore, China's textile and garment exports will increase. Among them, China's clothing growth rate is greater, textile increased by 1.302%, while clothing increased by 3.04%. When the free trade among RCEP

members was fully realized, the export cost of the domestic textile industry was further reduced, and the growth rate of China's textile industry. the garment export increased by 5.271% and the textile export increased by 2.281%. At the same time, when the RCEP member states between non-tariff trade barriers fell, China's textile exports to further increase, but China's garment industry export trade growth declined; garment exports grew only 1.66%. Hence, reducing RCEP non-tariff trade barriers to China's textile export trade is more unfavorable to our garment export trade.

4.3 Analysis of the Impact of RCEP on the Output and Price of China's Textile Industry

4.3.1 Impact on the Export Price of the Textile Industry

From the perspective of the export price of China's textile industry (see Table 7), when the commodity tariffs among RCEP member states were reduced, the export price of textile and clothing changed in the opposite direction. The export price of textiles decreased by 0.01%, while the export price of clothing increased slightly, and the export price of clothing increased by 0.002%. However, after the realization of free trade among RCEP member states, the export price of textiles and clothing in China showed a downward trend, with the price of textiles decreased by 0.028% and the export price of clothing decreased by 0.008%. At the same time, when the non-tariff trade barriers between RCEP member states decreased, the export prices of China's textiles and clothing showed a growth trend, and the export price of textiles increased by 0.51% and the export price of clothing increased by 0.629%. This means that the decline of tariff trade barriers will help to reduce the export price of the textile industry, while the decline of non-tariff trade barriers will increase the export price of the textile industry.

Table 6: Impact of RCEP on export volume of China's textile industry (unit: %)

	Scenario 1	Scenario 2	Scenario 3
Drygoods; textile; textiles; dry goods; soft goods	1.302	2.281	2.759
Dress; clothing; costume; fashion; accouterments	3.040	5.271	1.660

Source: Organized from GTAP simulation results.

Table 7: Impact of RCEP on Export Price Changes of China's Textile Industry (unit: %)

	Scenario 1	Scenario 2	Scenario 3
Dry goods; textile; textiles; dry goods; soft goods	−0.010	−0.028	0.510
Dress; clothing; costume; fashion; accouterments	0.002	−0.008	0.629

Source: Organized from GTAP simulation results.

Table 8: Impact of RCEP on Import Price Changes in China's Textile Industry (unit: %)

	Scenario 1	Scenario 2	Scenario 3
Dry goods; textile; textiles; dry goods; soft goods	−0.037	−0.041	−0.277
Dress; clothing; costume; fashion; accouterments	−0.229	−0.387	−1.189

Source: Organized from GTAP simulation results.

4.3.2 Impact on the Import Price of the Textile Industry

From China's textile industry import price point of view (see Table 8), when the RCEP members between commodity tariffs are cut, this directly greatly reduces the Chinese textile enterprises' import costs; therefore, China's textile and clothing import prices are downward trends, textile import prices fell 0.037%, clothing import prices fell more, clothing export prices reduced by 0.229%. After the abolition of commodity tariffs among RCEP member states, the import cost of China's textile industry was also further reduced, so the import prices of China's textiles and clothing were further lowered (Jiang, 2022). At the same time, when the non-tariff trade barriers between RCEP member states decreased, it also brought more convenience to the import trade of China's textile industry, and the import price of China's textiles and clothing showed more decline. The import price of textiles decreased by 0.277%, and the import price of clothing decreased by 1.189%. It can be seen that both tariff trade barriers and non-tariff trade barriers have driven the reduction of the import cost of China's textile industry and brought a downward trend to the import prices of textiles and clothing (Chen, 2013).

4.3.3 Impact on the Textile Industry Output

From the perspective of the overall output impact of China's textile industry (Table 9), in the initial stage of

Table 9: Impact of RCEP on output changes in China's textile industry (unit: %)

	Scenario 1	Scenario 2	Scenario 3
Dry goods; textile; textiles; dry goods; soft goods	0.444	0.729	−1.621
Dress; clothing; costume; fashion; accouterments	1.254	2.147	0.443

Source: Organized from GTAP simulation results.

the establishment of the RCEP Free Trade Zone, the decline of tariffs brought development opportunities to China's textile and garment industry, and the output of China's textile and garment industry increased, among which the garment output benefited more significantly, and the garment output increased by 1.254%. This is because garment export is the main export commodity of China's textile industry, and China's garment industry benefits the most when the tariff barriers fall. When the tariff trade barriers are further reduced, China's textile and clothing output also further increased, the growth rate expanded, textile output increased by 0.729% and clothing output increased by 2.147%. However, when the non-tariff trade barriers between RCEP decreased, the output of China's textile industry began to be impacted to a certain extent. The textile output decreased by 1.621% and the garment output increased by 0.443%. It can be seen that the establishment of an RCEP free trade zone to reduce tariffs is beneficial to the development of China's textile industry, but the reduction of non-tariff trade barriers will limit the development of China's textile industry to a certain extent.

5 Conclusion

Through empirical research in this chapter, we find that the Regional Comprehensive Economic Partnership (RCEP) is beneficial for the macroeconomic development of our country, with the actual GDP increasing by 1.335%. This leads to overall societal welfare growth, and with the reduction of tariffs and non-tariff barriers, investments, imports, exports, government spending, and private consumption in our country will all further increase (Li, 2022; Xu, 2023). For China's textile industry, lower import costs in the domestic textile industry lead to a larger increase in import volume. The reduction in tariffs lowers the cost of international textile products, leading to an increase in imports in our country. Simultaneously, the reduction in tariffs lowers the export prices of textile products in our country, thereby increasing China's exports. However, the reduction of non-tariff barriers may to some extent raise the export prices of China's textile products, reducing the competitiveness of our products and adversely affecting the export of textile and apparel products, thereby limiting the output of China's textile industry.

Overall, RCEP has a positive impact on the development of China's textile industry. Therefore, measures related to the implementation of the RCEP agreement should be accelerated. Both industry enterprises and the government need to work together, actively adapt to and address the new

market environment, and achieve sustainable development in the textile industry.

Funding information: Authors state no funding involved.

Author contributions: All authors have accepted responsibility for the entire content of this manuscript and consented to its submission to the journal, reviewed all the results and approved the final version of the manuscript. JZ formal analysis; LW data curation; QH methodology; HC resources.

Conflict of interest: Authors state no conflict of interest.

Data availability statement: The data comes from the gtap10 database. The pre-impact and post-impact data are obtained through impact. The change rate and change amount are obtained after comparison. The data that support the findings of this study are available on request from the corresponding author.

Article note: As part of the open assessment, reviews and the original submission are available as supplementary files on our website.

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