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ЭКОНОМИЧЕСКАЯ ИНТЕГРАЦИЯ: СОЗДАНИЕ ЗОН СВОБОДНОЙ ТОРГОВЛИ НА ПРИМЕРЕ РОССИИ И КИТАЯ

ПОЯСНИТЕЛЬНАЯ ЗАПИСКА К ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЕ ЮУрГУ–38.04.02.2021.478. ПЗ ВКР

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ABSTRACT

Mao Kyesin Economic integration: the creation of free trade zones on the example of Russia and China: SUSU, EM-224, 101 p, 4 tables, 17 pictures, references – 52 names.

China and Russia have a long history of trade. After entering the 21st century, China and Russia joined the World Trade Organization successively, and China-Russia trade has entered a new stage. In 2019, China-Russia bilateral trade continued to grow, surpassing 110 billion U.S. dollars. The construction of the China-Russia Free Trade Area is conducive to exploring the trade potential between the two countries and enhancing the previous trade cooperation between the two countries.

Based on the data from 2012 to 2019, this paper conducts research on the characteristics of each stage of China-Russia trade development, the structure of China-Russia trade products, and the status of China-Russia trade in their respective countries trade. The study found that the construction of the China-Russia Free Trade Area is currently in the initiation stage. Through analysis, it is concluded that the trade between China and Russia is highly complementary, and the establishment of the China-Russia Free Trade Area is highly feasible. Through empirical analysis using the trade gravity model, it is concluded that the main factors affecting the bilateral trade between China and Russia are the gross domestic product of the two countries, the direct investment between the two countries, and the signing of the free trade agreement will also affect the bilateral trade between China and Russia. Trade has a driving effect. Based on related issues, it is proposed that China-Russia trade development should optimize the trade structure, promote energy cooperation and improve trade, service system and other related suggestions.

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INTRODUCTION

Research Background

The free trade zone is a new development opportunity for China and Russia to promote economic cooperation. There are currently more than 1,200 free trade zones in the world, of which 425 have been established by 15 developed countries, accounting for 35.4% of the total, and 775 have been established by 67 developing countries, accounting for 65.6% of the total [1]. China and Russia are friendly neighbors linked by mountains and rivers. At the same time, as important members of the BRIC countries, the two emerging economies play important roles in the world's political, economic, and military fields. At present, China has achieved trade liberalization with more than ten countries or regions including ASEAN, Singapore, and Costa Rica, and is negotiating with South Korea, Australia, Norway and other countries to establish zones. However, Russia has not achieved trade liberalization with its key partner with the most market potential. Based on the above background, this article takes the creation of a China and Russia free trade zone as the research theme, analyzes the development of China and Russia bilateral trade in the past ten years, and the economic effects that will be produced by the establishment of a China and Russia free trade zone, and proposes to accelerate the construction of China The process of the Russian Free Trade Area and the countermeasures and suggestions to promote the growth of bilateral trade between China and Russia are hoped to play a certain role in promoting the process of trade liberalization between the two countries.

Significance

First, to study the general situation of China and Russia trade development and the complementarity of economic structures in recent years will help China and Russia to adjust the industrial structure, optimize the commodity structure, expand new trade cooperation methods, enhance industrial competitiveness, and promote bilateral trade. The amount of growth.

Second, study the feasibility and obstacles faced by China and Russia in

establishing a free trade zone, and strive to eliminate the tangible constraints on the establishment of a free trade zone. Only by fully recognizing the current opportunities and constraints for the establishment of a free trade zone and taking reasonable and effective measures in a targeted manner can the process of building a free trade zone between China and Russia be promoted.

Third, studying the necessity and economic expectations of the establishment of a free trade zone between China and Russia will help strengthen the awareness of trade liberalization between the two peoples and increase the confidence and motivation to establish a free trade zone. As an important organizational form of regional economic integration, free trade zones can effectively establish a standardized and reasonable trade and investment cooperation mechanism.

Doctrine research

Research on China and Russia bilateral trade. Vishal Perrie Park (2005) analyzed the border trade between China and Russia and suggested that China and Russia can strengthen border trade exchanges [2]. Kellerhals and Merle David Jr (2009) concluded that China and Russia are complementary in trade based on the cooperation agreement and cooperation outline between China and Russia [3]. Ann F. Ostrovsky (2012) believes that relying on the China and Russia border, the Russian Far East and Siberia should vigorously promote trade cooperation with Northeast China and promote regional economic integration [4].

Research on China and Russia investment cooperation. Ann F. Ostrovsky (2000) pointed out that Russia should improve the investment environment in the Far East and Siberia, continue to open up to the outside world, and increase cooperation with China[4]. Terry Sicular (1998) pointed out that China and Russia have poor ability to attract foreign investment and should change the investment environment of the two countries and promote the economic development of both sides.

Research on the China and Russia trade policy system. Vishal Perrie Park (2003) mainly studied the trade policies of China and Russia, and proposed trade policies that are beneficial to the border trade between China and Russia [5].

Michael A. Hitt and David Ahlstrom (2004) studied the economic models and institutional effects of China and Russia, and pointed out that China and Russia should cooperate in order to achieve rapid economic development [6].

Research on the construction of China-Russia free trade zone. Titarenko (2005) pointed out the four favorable conditions for establishing a China and Russia free trade zone, namely, stable political relations, complementary trade exchanges, convenient border trade, and both membership of the WTO [7]. Waschik (2009) used the general equilibrium method to study how much tariffs member states should levy on non-member states after the establishment of a free trade zone so that the interests of both parties will not be reduced [8].

Research on the trade effect of China-Russia Free Trade Area. Yu Zhen and Chen Jiyong (2014) used a model to study the effects of trade, tariffs, and welfare after the establishment of the China-Russia Free Trade Area [9]. The results show that the establishment of the China-Russia Free Trade Area will reduce the tariffs of the two countries and increase the welfare of the two countries. Chen Shuhua (2008) studied the positive effects of the China-Russia Free Trade Area after the establishment [10].

Goal and Objectives

This article takes the construction of the China and Russia free trade area as the research object, and first analyzes the development of China-Russia bilateral trade in the past ten years. The purpose is how to better promote China and Russia, and promote the development of trade between the two countries through bilateral trade exchanges. By integrating trade data from 2012 to 2019, explore the factors that hinder the establishment of a free trade zone between China and Russia. Through data and theoretical analysis, it pointed out the possible opportunities and challenges in economic and trade cooperation between the two countries, and put forward countermeasures and suggestions for the establishment of a China-Russia free trade zone.

Research methods

Literature analysis method. By consulting a large number of related journal

articles, master and doctoral papers, literature books and other materials. Read it, sort it out, extract and condense the views related to the research content of this article to summarize and summarize.

Model analysis method. Use the gravity model to make an empirical analysis of the influencing factors of China and Russia trade, so as to make a quantitative analysis of the trade effect of the China and Russia free trade area.

Research structure

This research contains an introduction, three chapters, conclusions and references.

Introduce the research background and research significance of this article, summarize the research status and research results at home and abroad, and introduce the research methods, research objectives and main content of this article.

The chapter 1 is the definition and theoretical basis of the free trade zone concept. Define the concept of free trade area, point out the meaning of free trade area discussed in this article; expound the theoretical basis of this article on customs union theory, big market theory, and free trade area trade effect theory.

The chapter 2 analyzes the overall situation of China-Russia bilateral trade. It focuses on the analysis of the development status of China and Russia trade, investment, commodity structure, and trade policy from 2012 to 2019, and provides a basis for argumentation for the construction of the China and Russia free trade zone.

The chapter 3 is an empirical analysis of the trade effect of building a China and Russia free trade zone. Use the gravity model to make an empirical analysis of the trade effect after the establishment of the China and Russia Free Trade Area, introduce relevant variables, and analyze the main factors affecting the volume of China and Russia trade. It also analyzed the problems in China-Russia bilateral trade, and put forward its own suggestions on the establishment of a China-Russia free trade zone.

The conclusion is a brief summary of the above content, and all references are listed at the end of the article.

1 THEORY AND CONCEPTION OF CHINA-RUSSIA FREE TRADE AREA

1.1 The concept of a free trade zone

A free trade zone refers to an economic integration organization formed by two or more countries or administratively independent economies through an agreement to mutually cancel import tariffs and other measures that have the same effect as tariffs. Regarding the concept of a free trade zone, there has not yet been a unified expression in the international arena. At present, the more representative concepts are as follows: The International Convention on Simplification and Coordination of Customs Business Systems signed by the International Customs Council in 1973 China's conception of a free trade zone pointed out: a free trade zone refers to a certain area of a country, as long as the goods enter the area, they enjoy import tariffs and other tax preferences, and are not subject to customs supervision of ordinary goods.

The U.S. Tariff Commission described the free trade zone in this way: the free trade zone is an independent and closed area. Within the scope of the free trade zone, as long as the goods do not flow into the domestic market, the re-exported goods can be exempted from tariffs [11].

At present, both the free trade zone and the free port are special areas for a country's foreign trade. The functions of the two are basically the same. However, the free trade zone is an extension of the free port. In the free trade zone, products for export can be produced and further Develop supporting consulting, finance, insurance and other industries. With the development of free trade zones, the areas involved are becoming more and more diversified, including not only ordinary goods trade, but also trade liberalization in investment, service trade, and intellectual property rights. Free trade zones have gradually become A means for multiple countries to implement changeable strategies. The main features of the free trade zone:

1. State-led

The free trade zone is located in a country and is led and invested by the host

country's government. The purpose of a series of preferential policies implemented in the zone is to promote foreign trade and accelerate the country's economic development. It is part of the host government's macroeconomic policy. Economic activities within the country are subject to the supervision and management of the host country's government. In a free trade zone, whether it is legislation to regulate economic activities or the establishment of a competent authority to perform economic supervision and administrative functions on behalf of the national government, it reflects the national will of the country where it is located. It is a national behavior. This is the first priority of the free trade zone. Features.

2. Convenient transportation

The free trade zone has an advantageous geographical location, generally connected to seaports, land border ports or large airports with large throughput, complete transportation and other infrastructure facilities, and developed domestic and foreign logistics industries. Convenient transportation and linkage to Hong Kong are essential conditions for a free trade zone.

3. Policy preferences

In the free trade zone, the government will implement more preferential policies in the zone to attract enterprises to enter the zone, such as tax reduction or exemption, provision of low-interest credit, lease of low-priced land, accelerated asset depreciation, and protection of investment safety. In the zone, the customs clearance procedures for people and goods are simple and fast, the government is efficient and efficient, and financial institutions provide strong financial support.

4. Domestic and foreign customs

A free trade zone is a non-customs jurisdiction. It is located inside the country but outside the customs. On the boundary line between the free trade zone and abroad, foreign goods can freely enter the free trade zone without customs supervision, and the goods in the free trade zone can also be freely transported abroad without customs supervision; but in free trade On the boundary line between the zone and the customs border, when goods enter the customs border from the free trade zone, or enter the free trade zone from the customs border, the

customs must strictly supervise, collect tariffs, and combat smuggling. This is the most basic feature of a free trade zone [12].

5. Freedom in the zone

In the free trade zone, goods can be manufactured, assembled, processed, stored, exhibited, circulated, and sold in any form. These activities do not need to be approved by the customs and only need to be filed. In addition, the operation of the financial market and import and export control are all It has the characteristics of a high degree of openness, and the freedom of the zone is embodied in trade freedom, financial freedom, investment freedom, and freedom of personnel entry and exit.

The role of free trade zones in economic development: In order to achieve complementary advantages and common development of two or more countries or economies, in accordance with relevant WTO rules, certain binding agreements have been negotiated to eliminate tariffs and other trade restrictions and establish free trade zones. In this area, the government generally does not carry out administrative intervention in the operation of the regional economy. The main difference from other regions is that free trade zones have greater and broader freedoms in services, finance, and trade. It can be seen that with the establishment of a free trade zone, the country's economic development will surely be promoted, and the specific manifestations are as follows:

- the competitiveness of domestic production enterprises will be improved,
 thereby attracting foreign investment;
- increase domestic export trade, and domestic export commodities are diversified;
- the country's technological innovation capabilities will be improved accordingly;
 - foreign exchange reserves and national income will be greatly increased;
- solve the employment problems in the country, and at the same time
 accumulate a wealth of experience in opening up policies.

Related concepts of regional economic integration.

1. Customs Union Theory

In 1950, the American economist Wiener published the book "The Question of Customs Union", which proposed the theory of customs union and elaborated the theory in detail. The theory pointed out that two or more countries signed agreements, Cancel or reduce tariffs among member countries, realize the free flow of goods, and implement uniform tariff rates and foreign policies for non-member countries.

Customs union refers to the alliance between two (or more) countries (economy) on the basis of a free trade zone and an agreement between member countries to reduce or exempt tariffs, while for other non-member countries (economy)) But implement other consistent tax rates. Therefore, we can see that the main difference from the free trade area is that within the customs union, each member country is not allowed to implement tariff reduction or exemption or preferential tariffs, while for non-member countries, the policy of high tariffs is implemented. Member states can realize the free flow of products without considering the certificate of origin. That is to say, the so-called customs union refers to an alliance in which member states completely eliminate tariffs or non-tariff barriers, allow free flow of goods internally, and implement uniform tariffs and common trade regulations externally. The free circulation of commodities in the full sense can be achieved within the alliance, including commodities produced in the region as well as commodities imported by a country from a third country.

The Customs Union and different free trade zones mutually cancel tariffs. It also requires the member states within the Customs Union to implement uniform external tariff rates. This means that the Customs Union has also realized the transfer of power, that is, the power to set tariffs. The economic integration organization can also be seen from here that the customs union is more binding than the free trade zone.

The customs union theory points out that whether a country can obtain greater benefits after joining a customs union mainly depends on the following points: First, after forming a customs union, the cost difference between the member states in the union is less than that of the countries outside the union. Second, countries with higher tariff barriers will gain greater benefits if tariffs are reduced after forming a customs union; third, countries within the customs union and countries outside the customs union have lower tariff barriers. The member states can still trade with external countries, and it is easier to obtain greater benefits; fourth, if there are more member states in the alliance and more low-cost member states, the more trade that occurs, the greater the gains. Benefits; Fifth, if the products between member states are more competitive and less complementary, the production cost will be lower and lower, and more benefits will be obtained. Sixth, the closer the geographical location is, the more convenient the transportation [13]. The lower the transportation cost, the more benefits. Seventh, the member states have close trade exchanges when they have not formed a customs union. After the customs union is formed, there will be greater trade creation, and you can get Greater good. The theory of customs union includes dynamic effects of trade and static effects of trade.

2. Big market theory

The representatives of the big market theory are Sitovsky and De Niu. The theory believes that unifying the segmented narrow market into a big market and continuously extending the domestic market will bring a fierce competition environment for manufacturers. When manufacturers start mass production, economies of scale are formed and economic benefits are realized. The big market theory is proposed for the common market. The so-called common market refers to two or more countries or economies that have signed agreements to reduce or abolish trade barriers between each other and have common foreign trade barriers, which not only achieves the free flow of goods, but also realizes services ,capital, labor and other factors of production.

The degree of integration of the common market is one step further than that of free trade areas and customs unions. Although the big market theory is proposed for the common market, it is also applicable to free trade areas. The theory believes that the formation of a large market will promote a virtuous cycle of the economy:

first, the expansion of the market will bring a fierce competition environment for manufacturers, which will inevitably bring about the survival of the fittest, poorly managed companies will close down, and companies that win the competition There will be large-scale production, resulting in economies of scale. Secondly, fierce competition among manufacturers and large-scale production will bring down production costs and commodity prices, which will increase the purchasing power of consumers and increase their actual income. Finally, the increase in consumption and income will promote the increase in investment, thereby once again realizing the expansion of the scale of commodity production, the reduction of prices, and the increase of consumer income. The economy thus formed a "snowball-like" expansion and continued to flourish.

The main points of the big market theory are:

- the large market is generally shared by all countries, and this can also be extended to the internal market of a country, forming domestic market competition, and achieving "survival of the fittest" to promote domestic economic growth. According to the market economy plan, we know that good competition can eliminate some small-scale, low-efficiency small enterprises, promote the door-to-door production of some large enterprises, and then realize specialized division of labor;
- under the background of the expansion of production scale and fierce market competition, enterprises in various countries must reduce the production and sales costs of goods. Similarly, if the price of goods drops, it will increase the purchasing power of consumers and make people's lives Quality and living standards have been effectively improved;
- with the continuous improvement of the quality of life and living standards of the people, it will further stimulate consumers to increase consumption, and promote enterprises to increase production and expand investment. It can be said that the establishment of a unified large market can not only promote the economic development of the member states in the large market area, but also further stimulate the economic development of the participating countries.

3. Comparative advantage theory

The comparative advantage theory mainly includes two theories of comparative cost and factor endowment. The logical analysis of comparative cost theory is the core content, and the factor endowment theory is developed on the basis of comparative cost theory. It analyzes the causes of comparative advantage. An important sign of the final formation of the comparative advantage theory.

Adam Smith's absolute cost theory is the starting point for the comparative advantage theory. He believes that free trade can produce international division of labor. Superior natural endowments and advanced production conditions are the basis for international division of labor. These factors are conducive to international development among countries. Trade makes full use of the labor, resources and capital elements of all countries, reduces production costs, vigorously increases labor productivity, brings welfare to the country, and increases wealth. David Ricardo put forward the comparative cost theory in his book "Political Economy and Taxation Principles" in 1817. The main content is that due to differences in labor productivity between countries, a certain commodity in one country is comparable to that in another country. The two countries have a comparative advantage. The two countries implement professional division of labor based on the principle of "Choose the least of two evils and the best of two options."

Ricardo believes that the basis of international division of labor and trade is comparative advantage. Even compared with other countries, the two products in production are still at an absolute disadvantage, but as long as the product with a lower cost disadvantage is concentrated in production, the other has an absolute advantage in producing two products and a product with a higher cost advantage in the national concentration. , Can also increase output and social wealth, and achieve a win-win situation. In other words, the international division of labor and trade are carried out in accordance with the principle of "two advantages take the best, and two disadvantages take the next inferior" principle. It can also be said that when the cost of producing a certain product in a country is lower than that of

other countries, under the conditions of scarcity of resources, when the number of additional products to be given up by increasing the production of one unit of that product is small, this country With the comparative advantages of this product, if each country can professionally produce and export products with comparative advantages and import products with comparative disadvantages, trade will benefit both countries. Ricardo uses the example of the exchange of English woolen and Portuguese wine to illustrate this point.

Table 1.1 – Examples of comparative cost theory [14]

	Country	Wine production (unit)	Number of labor required (Person/year)	Woolen output (unit)	Number of labor required (Person/year)
Before the	United Kingdom	1	120	1	100
division of	Portugal	1	80	1	90
labor	Total	2	200	2	190
After the	United Kingdom	0	0	2.2	220
division of	Portugal	2.125	170	0	0
labor	Total	2.125	170	2.2	220
International	United Kingdom	1		1.2	
exchange	Portugal	1.125		1	

It can be seen from the table that the production cost of wine and woolen cloth is higher than the two products of Portugal. In contrast, the disadvantage of Britain in woolen production is relatively small, and Portugal has a comparative advantage in wine production. In accordance with the principle of "two advantages, whichever is more important, and two disadvantages, whichever is less", the United Kingdom and Portugal should separately produce woolen and wine professionally and carry out international exchanges, so that they can save labor and increase products. Yield and gain benefits.

4. Factor endowment theory

Ricardo's comparative cost theory analyzes the benefits of international exchange through division of labor between countries with different labor productivity, but fails to explain the source of comparative advantage and the fundamental reason for the formation of international exchange. Therefore, the factor endowment theory is comparing costs. Produced on a theoretical basis.

Economists Olin and Heck Schell proposed the factor endowment theory in the 1930s. They proposed that factors of production are important factors affecting labor productivity and production costs. Different products require different configurations of production factors. Labor-intensive products require abundant human resources; capital-intensive products require higher production technology, a large amount of machinery and equipment, and capital investment. In addition, the production cost of goods is also determined by the ratio of production factors. Generally speaking, in countries with abundant labor resources, labor costs are relatively low, so that it is easier to produce labor-intensive goods. For countries, the cost of obtaining capital is lower, so that capital-intensive goods are more likely to be profitable. Therefore, a country should make full use of its various resource advantages and specialize in the production of goods with comparative advantages. Imports have comparative disadvantages. The products of the two countries enable the two countries to realize the optimal allocation of resources and adjust the industrial structure to obtain maximum welfare.

1.2 Major free trade areas in the global economy

The main purpose of a free trade zone is to achieve regional trade liberalization between countries, and the main restrictions are tariffs and trade barriers in goods trade between countries. At present, more than 30 regional economic integration organizations have been established in the world, including more than 90% of countries. Even a few countries that do not participate in any regional economic integration organization have established close economic ties with these organizations, and the degree of integration of these countries varies greatly depending on the way of cooperation. Among these regional economic integration organizations, the main models of the world free trade area established are: the European Union, the ASEAN and the North American Free Trade Area.

1. European Union

The EU has now formed a multi-faceted common economic and trade policy

and social policy, including a common agricultural policy, a common fiscal and budget system, currency integration, building a common European transportation network, and a common competition policy.

Table 1.2 – The development history of the European Union [15]

Period	Stage of development
May 1950	French Foreign Minister Schumann proposed the European Coal and Steel
	Community plan, which was intended to restrain Germany
July 25, 1952	The European Coal and Steel Community was formally established
June 1955	The foreign ministers of the member states of the European Coal and Steel
	Community held a meeting in Messina, Italy, to deepen cooperation in the economic
	fields of power, transportation, and atomic energy, and to establish a European
	customs union and common market
March 1957	6 foreign ministers of the European Coal and Steel Community signed a treaty
	establishing the European Economic Community and the European Atomic Energy
	Community in Rome, the "Rome Treaty."
April 1965	Six countries signed the "Brussels Treaty", unifying the European Economic
	Community and the European Atomic Energy Community, collectively referred to
	as the European Community
December 11,	The head of the European Community signed the "Maastricht Treaty", the
1991	"European Union Treaty" in Maastricht, the Netherlands
February 7,	The foreign ministers of 12 European entities signed the treaty
1992	
From January	The European Community was renamed the European Union
1, 1993	
October 2004	The heads of the 25 EU countries signed the "EU Constitutional Treaty in Rome"
June 2007	The heads of the 27 EU countries reached an agreement in Brussels to replace the
	EU Constitution Treaty with the EU Constitution

Common agricultural policy: The European Union has established a common agricultural price, including upper limit prices, lower limit prices and threshold prices. Among them, the upper limit price refers to the highest price that agricultural practitioners can hope to obtain, and practitioners can formulate production plans based on the upper limit price; the lower limit price means that if the price of agricultural products is lower than the lower limit price, the EU is obliged to purchase agricultural products until the price of agricultural products Restored to the range acceptable to agricultural practitioners; the threshold price refers to the import price of agricultural products, and the EU will charge a certain price difference tax if the imported agricultural products are below the threshold price.

Common budget system: The EU member states have established a common

fiscal budget system. The EU's fiscal revenue was originally apportioned according to the proportion agreed by the countries, and later supported by its own fiscal revenue. The EU's fiscal revenue is mainly concentrated in three areas: one is the price difference tax and sugar tax on some imported agricultural products; the second is the tariff levied by the EU's common tariff rate; the third is the value-added tax of a small part of the member states. The fiscal expenditure budget is mainly concentrated on subsidies for the common agricultural policy, as well as administrative expenditure, regional development and overseas development funds.

Currency integration is one of the most important achievements of the European Union. Euro coins and banknotes began to circulate in 2002. As of July 31, 2018, there are 19 member states in the European. At present, the European Union has established the European Central Bank, unified currencies in the 19 member states, and established a unified currency exchange rate.

2. North American Free Trade Area

Background: With the continuous development and growth of the Southeast Asian Emerging Economic Cooperation Organization and the European Union, the economic status of the United States has been greatly challenged. The current US economic entity has been unable to cope with this dilemma, so it has begun to promote a cross-regional cooperation alliance centered on its own interests to counter current challenges and establish its own leadership position. Therefore, in the early 1990s, the United States, together with Mexico and Canada, established the free trade cooperation agreement negotiation, which was later upgraded to the North American Free Trade Agreement. After that, the world's first regional cooperation alliance composed of countries of various levels The announcement of the organization has also brought significant results to the economy of North America.

Table 1.3 – Development history of the North American Free Trade Area [16]

Period	Stage of development
In 1979	the US Congress proposed to President Bush the elder a resolution to build the
	North American Free Trade Area
In the 1980s	the United States and Mexico met the Bilateral Agreement Committee to study the
	bilateral trade relationship between the United States and Mexico
On January 1,	the United States and Canada signed a free trade agreement that took effect, laying
1989	the foundation for the North American Free Trade Area
In June 1990	President Bush and President Salinas of Mexico formally expressed their intention
	to establish a US-Mexico free trade zone
On February	the United States, Mexico, and Canada began negotiations on the construction of a
5, 1999	free trade zone
On August 12,	the negotiations ended and the "North American Free Trade Agreement" was signed,
1992	which entered, into force on January 1, 1995.

The concept of the North American Free Trade Area: The purpose of the North American Free Trade Agreement is mainly reflected in the following aspects: removing barriers from internal countries; forming an economic atmosphere for fair development; ensuring opportunities for cross-regional cooperation; protecting the intellectual property rights of member states; establishing a Set up a mechanism to enforce regulations and resolve disputes; promote the integration of the three major North American countries with other countries.

The North American Free Trade Zone has the following characteristics:

Leading by major powers: In the North American Free Trade Zone, major powers play a pivotal role in economic development. Therefore, major powers are also the core force leading the North American Free Trade Area. Specifically, the United States leads the entire North American Free Trade Area through its absolute right to speak in the economic and political fields. As a superpower, the United States is not only the leader of North America, but also the economic leader of the entire world. Relatively speaking, Mexico and Canada are inferior. Although Canada has also entered the list of developed countries, its level of development is far less than that of the United States. Mexico is only an ordinary member of developing countries, and it often depends on the US economy for its development. It can be seen that the United States is at the absolute core position in the North American Free Trade Zone and is leading the development direction of the

economic cooperation organization.

North-South cooperation: Developed countries have absolute advantages in many aspects of the economy, but developing countries and underdeveloped countries also have very large development potential. Once effective cooperation, this advantage and potential can form complementarity and enable many parties to Form a win-win situation. Differences in industrial structure, overcapacity and insufficiency, employment rate issues, market saturation, and technological level can all be effectively integrated to drive the common development of the North and South economies[16].

Tariff reduction and exemption are not synchronized: Although tariffs are gradually eliminated in the region, due to the real existence of economic differences between member states, especially the institutional and economic levels are not at the same level, the phenomenon of asynchronous tariff reduction and exemption has been difficult to completely eliminate. Especially for the three major countries in the region, the tariff reduction and exemption among the United States, Canada and Mexico have been out of sync, and it will take a long time to digest and transition until they become synchronized.

Covering a wide range of areas: conventional free trade zones cover industries such as daily necessities, agriculture, chemicals, energy, textiles, and automobiles, while the North American Free Trade Zone also includes industries such as finance, services, and technology. Later, it even extended to areas such as environmental protection, system innovation, dispute resolution mechanisms, and intellectual property protection.

3. ASEAN Free Trade Area

Background: In the era of economic globalization, various cross-regional cooperation organizations and alliances have gradually become popular, and developed countries, developing countries and underdeveloped countries are no longer completely closed and opposed, and they have gradually established Free trade area, ASEAN Free Trade Area is gradually developed under this background. The original ten ASEAN countries and China were both developing countries.

Affected by the global economic structure, they have gradually begun to move towards cooperative and coordinated development.

Table 1.4 – The development history of the ASEAN Free Trade Area [17]

Period	Stage of development
In 1968	the Philippines put forward the idea of building a free trade zone
In 1975	the ASEAN Economic Ministers' Meeting considered the establishment of a free
	trade area, but to no avail
In 1982	the ASEAN Economic Ministers' Meeting expanded the total number of
	commodities enjoying preferential tariffs among countries to 8,562, and granted
	20%-25%1 tax cuts for items with a value of 10 million U.S. dollars between
	countries
In 1987	the Third ASEAN Heads of Government signed many agreements, laying the
	foundation for the construction of the ASEAN Free Trade Area
In 1991	the 23rd Conference of Ministers of Economy approved the reform of the original
	preferential trade system, increasing the number of commodities enjoying
	preferential trade to 20,000, and implementing a uniform standard of preferential
	tariffs for member countries, which is lower than the world's preferential tariff rates
In January	the Fourth ASEAN Heads of Government signed the "Commonly Effective
1992	Preferential Tariff Agreement". Starting from 1993, ASEAN was established as a
	free trade area within 159, reducing tariffs to 0%5%
In December	different tax reduction plans were formulated at the Jakarta meeting
1992	
On January 1,	the ASEAN Free Trade Area was officially launched to achieve the goal of zero
2002	tariffs by 2010; the new member states 20159 achieved the goal of zero tariffs

The ASEAN Free Trade Area implements the basic principle of regional openness and attention, which is gradually advanced and treated differently. Really establish a regional country cooperation organization, and then promote the process of a free trade zone within the framework of this organization.

Compared with the EU and NAFTA's regional closure, exclusivity, and trade and investment discriminatory characteristics, ASEAN and its major trading partners and investment partners outside the region still maintain a higher degree of freedom; the second is that ASEAN has formed a 10+ with other countries 1 forms of new free trade areas, such as the ASEAN-China Free Trade Area, the ASEAN-Japan Free Trade Area, and the ASEAN-Korea Free Trade Area.

Summary: Through the analysis of the current influential economic cooperation organizations, it can be found that although the various free trade zones are very different, there are certain commonalities.

- The participants in the free trade zone are all countries or regions, and the free trade zone has also established corresponding rules and regulations to define

member states' violations in economic cooperation and resolve differences between member states.

- Free trade zones have regional characteristics, usually based on countries in a region.
- There are certain differences among the member states in the region. Through the use of comparative advantages for complementary economic cooperation, the international competitiveness of the entire region is improved.
- The free trade zone first considers the interests of its own member states, and has a certain degree of exclusivity. Since each free trade zone is quite different, its degree of exclusion from external economies is also different.

Through the above-mentioned research and analysis on the European Union, North American Free Trade Area, and China-ASEAN Free Trade Area, the following experience can be obtained for the construction of a China-Russia Free Trade Area:

1. At present, the trend of economic globalization is becoming more and more intense, and regional economic integration is also becoming more and more popular. Free trade zones are a more effective way to deal with the above two trends. Especially at present, regional economic cooperation is developing rapidly. Regional economic exchanges and cooperation in North America and the Asia-Pacific region have entered a period of steadily rising. Northeast Asian countries should also be awakened to follow the development direction of the general trend, grasp the opportunity, and be proactive. Participate in economic exchanges and cooperation within the region and promote the development of regional economic integration. Northeast Asia covers a wide range, mainly in Northeast China, North China, and eastern Russia. It also includes South Korea, Japan, North Korea, and Mongolia. At present, the countries in Northeast Asia are very different, mainly reflected in politics, economy, and culture. This difference also indirectly indicates that economic cooperation in the region is still in its infancy, and the conditions for cooperation are not yet mature. As the core powers in Northeast Asia, China and Russia have always had a relatively stable relationship and have developed well in border trade. Coupled with the international influence of the two major powers, if China and Russia start to build a China and Russia free trade zone, both It can realize the aspiration of China and Russia for common development, and it can also promote the development of regional economic integration in Northeast Asia.

- 2. The establishment of relevant rules and regulations is particularly important. It is recommended that the two governments should negotiate to formulate a set of effective and binding rules and regulations. This is a prerequisite for the successful establishment of the China-Russia Free Trade Area.
- 3. The core of borderless free trade is to eliminate the influence of tariffs and trade barriers. Therefore, the first step in the construction of a free trade zone is to eliminate tariffs and trade barriers and allow free trade of goods in the region without borders. In this regard, the two major countries of China and Russia can refer to the relevant experience of the China-ASEAN Free Trade Area and the North American Free Trade Area to jointly make concessions on tariffs and trade barriers, and also agree on the terms of choice in certain special areas. As for the previous principles of national treatment and most-favored-nation treatment, they are also of great significance to the China-Russia Free Trade Area and can be used for reference. The degree of freedom in finance, energy, technology, and communications can also be gradually liberalized. Through negotiations between the two governments, a more flexible model can be negotiated so that the relatively weak industries of the two countries can transition smoothly.
- 4. Political mutual trust is the prerequisite of the China-Russia Free Trade Area. At the same time, a comprehensive dispute settlement and settlement mechanism can be formulated to properly resolve the frictions and disputes formed in bilateral free trade. In the process of building a free trade zone, China and Russia can learn from the successful experience of many other regional economic cooperation organizations. Since this is the first time that a free trade zone has been established in Northeast Asia, and the two big countries still have essential differences in political, economic, and cultural systems, we will face many difficulties and problems at this stage, which need to be summarized in practice. Experience, while

constantly learning the advanced free trade zone experience, optimizing the various software and hardware facilities of the China-Russia free trade zone, and at the same time constantly adjusting the cooperative relationship with other countries in Northeast Asia, conforming to the general trend of world economic development, and integrating the Chinese and Russian economies Advance the development of industrialization to a new height [18].

1.3 Conditions for the establishment of a free trade zone between China and Russia

Consider the prerequisites and conditions for the creation of a free trade zone between China and Russia.

1. Geographical Choice of Russia-China Free Trade Zone

Regarding the choice of free trade area, Russia and China can first establish a small free trade area as a pilot. From the current situation alone, the establishment of a free trade zone between the Russian Far East and Northeast China is the first choice. In recent years, Russian scholars have put forward the idea of establishing a free trade zone between the three northeastern provinces of China and the Russian Far East, and some Chinese scholars have also put forward similar suggestions. Northeast China is located in the center of regional economic cooperation in Northeast Asia, bordering Russia, Mongolia, and North Korea geographically, and across the sea from Dongben and South Korea. It has a border of 4637 kilometers and a mainland coastline of 2,178 kilometers[18]. The Far East of Russia borders the Pacific Ocean in the east, borders China and North Korea in the south, and faces the United States and Japan across the sea. In addition, the Harbin-Dalian line and the Beijing-Harbin line connect the border ports of Heilongjiang and Jilin Provinces and Liaoning Province along the Yellow Sea, The open ports in the Bohai Sea are connected and connected to all parts of the country.

On the 4,300-kilometer border between China and Russia, there are already

more than 20 open port cities, as well as railways, highways and other facilities jointly built by the two countries, which provide convenient transportation for the economic and trade ties between the two countries. In order to strengthen the ties between the people of China and Russia and develop the border transportation system, China's Heilongjiang Province and Russia's transportation departments have jointly put forward goals, plans and rectifications in response to the current status and problems of roads, waterways and other transportation areas in the border areas. A few days ago, the road port from Suifenhe on the Chinese side to Bigranicny on the Russian side is undergoing reconstruction and construction of the highway. In particular, at the Pogranic Port, it is estimated that after normal operation, the 20 entry and exit channels will be uninterrupted 24 hours a day. It is estimated that the annual passenger volume will reach 5 million and the cargo volume will reach 5 million tons. In order to match the Pogranicny Port, China's Suifenhe Port is also under construction. It is estimated that the customs clearance capacity will increase by 9 times after completion. It is estimated that the annual passenger volume will reach 6 million passengers and the cargo volume will reach 5.5 million tons. This provides more efficient and convenient hardware facilities for the transportation capacity of the two countries. The geographical advantages of China and Russia provide an important geographical environment foundation for China-Russia cooperation.

In the context of the strategic decision of Russia to develop the Far East, Siberia and China's revitalization of the Northeast's old industrial base, these two countries first strive to achieve regional economic cooperation in the Far East Siberia and the Northeast. The two regions have unique geographical advantages. It reaches 3270 kilometers, accounting for more than 95% of the Russian-Chinese border. The two countries should concentrate their efforts on developing cooperation in the region and invest in petrochemical, oil exploration, natural gas extraction, transportation infrastructure, and pipeline construction projects. It is necessary to carry out extensive cooperation in the fields of science and technology, tap the potential for economic development, and promote the vigorous

development of regional economic and trade.

In addition, Russia and China can list important border trade cities as the core areas of the free trade zone. China's Suifenhe, Manzhouli, Heihe, Harbin, Hunchun, and Russia's Vladivostok will form the key border cities as the leader and border cities. The region is the forward position, and the entire northeast and Siberia of Russia are the rear positions.

In the areas bordering China's Xinjiang and Russia, transportation is very inconvenient due to geographical restrictions and other factors. Russia-China trade often goes through Central Asian countries, and is limited by the limited level of economic development in China's Xinjiang, and trade volume is not prominent. With the continued advancement and strengthening of China's western development strategy, Russia and China should also pay full attention to free trade cooperation in the region.

2. Industry selection in Russia-China Free Trade Zone

A free trade zone is an important diplomatic tool and one of the trends in the world's economic development today. After fully considering their long-term and stable economic interests, most countries have chosen alliances and cooperation, which has promoted the vigorous development of regional economic integration. As world powers, China and Russia have important influence in the international community, but there are few economic cooperation organizations that they participate in together. This is not commensurate with the status of China and Russia as major powers. Moreover, fewer economic cooperation organizations will inevitably constrain the development of foreign trade between the two countries and restrict their development potential. At present, Russia has joined the World Trade Organization, which is a new meeting point for China and Russia. If China and Russia can seize the opportunity of Russia's accession to the WTO, sign a free trade agreement and build a free trade zone as soon as possible, it is the need to deepen regional economic integration and at the same time seek greater profit space and development space for the companies of the two countries.

First of all, Russia and China in the free trade zone should strive to further

leverage their respective advantages in products and make full use of the complementarity of the economic structures between the two countries. Russia's heavy industry, military industry, and energy industry are all well-developed, and there is also a good momentum of development in timber, petroleum, steel, and chemical industries. However, the backwardness of light industry is a problem that cannot be ignored. In agriculture, due to geographical restrictions and cold The climate of China has led to high prices of food, vegetables, and meat, and high external dependence. Northeast China has a good foundation for heavy industry, and light industrial products can also obtain sufficient supply from the southern region of the country, and the Northeast Plain is a world-famous food production base, which is highly complementary to Russia. Therefore, the key areas of cooperation between the two countries, such as resource and energy industry and agricultural product trade, should continue to be focused.

Second, the free trade zone between Russia and China should address the limitations of the single product structure. The two countries should combine their own conditions, draw on the mature experience of developed countries, and focus on improving trade with technological content as the main direction, such as promoting the development of high-tech products, increasing investment in technological transformation of high-tech products, and adjusting the use of technological transformation funds. Efficiency, improve its quality.

In addition, free trade zones should gradually develop in the direction of the trinity of goods, services, and investment. Trade in goods is inseparable from services and investment. The Russia-China Free Trade Area should start with the most basic liberalization of trade in goods, and after the completion of the corresponding system and the mature development of internal economic entities, it will gradually promote the liberalization of bilateral services and investment and realize the integration of the functions of the free trade area. As far as investment and service cooperation are concerned, Russia's Far East has sparse personnel and poor infrastructure, while Northeast China has a large number of funds and engineering and technical personnel. Russia and China can start from the project

contracting cooperation, etc., for service industry and investment cooperation. Of exploration. Russia's Far East currently has 24 projects involving Chinese investors with a total value of 2 trillion rubles[19].

Economic Expectation Analysis

In the era of economic globalization, regional economic prosperity and development, trade protectionism will inevitably decline. No country can rely on trade protection to obtain long-term economic benefits and competitive advantages. As an important form of regional economic integration, free trade zones have very obvious advantages and are the trend of world economic development. The North American Free Trade Area and China-ASEAN Free Trade Area are good examples. If China and Russia can successfully build a free trade zone, this will be of great benefit to the development of foreign trade between the two countries.

1. Tariff reduction

Before participating in regional economic organizations, various countries had many trade barriers. Excluding the cost of the commodity itself, plus various operating and management expenses, this has brought a great economic burden to the exporting country's enterprises. After the establishment of the largest free trade area in the world, the North American Free Trade Area, it is stipulated that the import tariffs and non-tariff barriers of the three countries of the United States, Canada and Mexico should be gradually eliminated within ten years. The United States and Canada lifted Mexico's quota restrictions on its textile and clothing exports, and reduced tariffs by nearly 20%. The United States and Mexico cancelled tariffs on each other's auto products. Overall, after the United States, Canada and Mexico signed a free trade agreement, the United States' import tariffs on Mexico have dropped by an average of 84%, and Mexico's import tariffs on the United States have dropped by an average of 43%. Similarly, we suggest that the China-Russia Free Trade Zone to be built in the future adopts a preferential policy of annual tax reduction in a closed area. After the trade liberalization between China and Russia, production factors such as commodities, labor services,

personnel, and capital in the region will realize a reasonable flow, and various transportation and transaction costs will be greatly reduced. This will help China and Russia reduce each other's high tariffs and unnecessary non-compliance. Tariff barriers, which also increase the profit margins of Chinese and Russian companies, are very beneficial to their long-term development.

The reduction of tariffs will produce trade creation effects and trade diversion effects. As far as the European Union is concerned, the economic integration of the European Union has had a huge impact on the European member states themselves and the world. The economy of the European Union is stable. In 2012, the GDP of the European Union reached 16.1 trillion U.S. dollars, which is more than 1/4 of the total global product, which shows that its trade creation effect is significant. There are differences between China and Russia in terms of economic development level, domestic demand preferences, and economic industrial structure. The industrial division of bilateral trade is horizontal, coupled with the complementary features of economic structure, which is more conducive to obtaining trade creation effects. China has comparative advantages in industries such as mechanical and electrical products, textiles and raw materials, metals and products, and Russia has greater competitiveness in industries such as mineral products, chemical products, wood and products. In addition, the trading partners of China and Russia are quite different, and the structure of import and export commodities is also different. It is difficult for some commodities to be replaced by other non-member countries.

2. Reduction of non-tariff barriers

Non-tariff barriers are more flexible and concealed than tariff barriers. At present, both China and Russia have joined the World Trade Organization. After China's accession to the WTO, it fulfilled its commitments as planned. Three years after its accession to the WTO, the import license requirements and bidding requirements for more than 400 tariff lines were cancelled; all import quotas were also cancelled in 2005. Russia will also strictly fulfill its commitments in recent years to gradually abolish export subsidies for industrial products, and subsidies

for special commodities cannot exceed 30% of non-special commodities. In addition, export subsidies for agricultural products will be completely eliminated, and some agricultural products will be exempted from value-added tax. In the favorable international environment where both China and Russia have joined the WTO, non-tariff barriers in the future China-Russia Free Trade Area will be greatly reduced. This will not only improve the efficiency of China-Russia exports and reduce export costs, but also increase the welfare of the people in the region.

3. Stimulate investment

After the completion of the North American Free Trade Area, investment in the three countries of the United States, Canada and Mexico has increased substantially. The most significant increase was from 1994 to 2000. In these seven years, the United States increased from 45.1 billion US dollars to 314.1 billion US dollars, an increase of nearly 6 times; Canada increased from 8.2 billion US dollars to 66.8 billion US dollars, an increase of seven times; Mexico increased from 15.1 billion US dollars to 26.8 billion US dollars, an increase Overall, the total investment in the region increased from 68.4 billion US dollars to 397.4 billion US dollars, a five-fold increase, which shows that the investment effect is very obvious. In recent years, China and Russia have seen steady growth in investment. In 2019, China and France tied for second in the ranking of the most active investors in the Russian economy. Specifically, China invested in 22 projects in Russia last year, a year-on-year increase of 16%. This also means that the number of Chinese investment projects in Russia is steadily increasing. In this context, the cooperation between China and Russia is showing a good momentum. In the first quarter of 2020, the scale of bilateral trade between China and Russia increased by 3.4%, and the bilateral trade volume reached US\$25.35 billion. Among them, Russia's exports to China increased by 17.3%, reaching 16.2 billion US dollars. It can be seen that the development potential of the China and Russia investment field is great, and there is still room for improvement. If China and Russia can achieve trade liberalization, then a huge market with 1.5 billion people will be formed. The future free trade zone will have strong demand, and the market risk

and instability faced by Chinese and Russian companies will be reduced, which will help increase corporate investment. At the same time, the huge market and strong demand will increase the attraction of foreign investment, and investment outside the zone will also increase.

4. Increasing competition

Part of the reason that the EU has grown and has achieved today's fruitful results is due to increased competition. Before a country participates in regional economic organizations, there are monopolies in all walks of life. Generally, several large companies carve up the domestic market and obtain huge profits[20]. Such a market is closed and inefficient, and the production cost is high. Due to lack of competition, industry technological innovation is slow. After the establishment of the China-Russia free trade zone, the market in the zone has become more open and transparent, and the monopoly structure has been broken. All enterprises enjoy the same treatment. Trade activities are carried out under the conditions of fewer trade barriers. The flow of production factors has accelerated and resources have been optimized. Configuration. In the face of increasing competition, enterprises will continue to improve their innovation capabilities and product competitiveness in order to survive and the market. Such a market is conducive to technological progress and industrial innovation, and is conducive to the formation of a positive and positive competitive situation. After the completion of the free trade zone, the market of the original China and Russia monopoly companies will be destroyed. However, in the long run, companies with competitive advantages will flourish, and companies at a competitive disadvantage will be eliminated, so that the real survival of the fittest can be achieved. After the completion of the China-Russia Free Trade Zone in the future, with the expansion of the market and the increase in demand in the region, the production factors such as manpower and material resources between China and Russia will be rationally distributed, which will promote production specialization and new industrial division of labor, and realize the realization of various industries. Economies of scale provide favorable conditions.

Summary of Chapter 1

The first chapter is an introduction to the relevant theoretical basis. The article explains the main features and functions of free trade zones. It also enumerates the related concepts of customs union theory, big market theory, comparative advantage theory and factor endowment theory related to regional economic integration. Through the analysis of the establishment process, operation mode and characteristics of the three major free trade areas in the world, the European Union, ASEAN and North America Free Trade Area, it has concluded that the free trade area has the characteristics of difference, regionality and exclusivity. It analyzes the basic rules of the region and industry for the construction of the China-Russia Free Trade Area, and briefly analyzes the expected economic effects, such as lowering tariffs, reducing trade barriers, and stimulating consumption.

2. BASIC ANALYSIS OF CHINA-RUSSIA TRADE

The history of trade between China and Russia can be traced back to the Soviet era. This article selects the development history of China-Russia trade after 1992 to analyze the competitiveness and complementarities of the China-Russia trade structure. The bilateral trade between China and Russia has certain characteristics at all stages, especially China and Russia have joined the WTO successively, opening to the outside world has further deepened, and the scale of China-Russia trade has emerged with new characteristics. By summarizing the status quo of China and Russia's economic and trade development, it mainly studies the structural characteristics and reasons of China-Russia import and export merchandise trade [21].

2.1 History of China-Russia Trade Development

In the development of Sino-Russian trade, two stages of its formation can be distinguished from 1992 to 2008. Read more about the features of these periods below.

1. The tortuous development stage of China-Russia bilateral trade (1992 to 2000).

During this period, the development trend of bilateral trade between China and Russia was wavy, and the growth rate of trade volume fluctuated greatly. According to Figure 2.1, the China-Russia double-standard trade volume peaked in 1992, 1996 and 2000, which were 7.67 billion US dollars, 6.84 billion US dollars and 8 billion US dollars respectively. The most important feature of the China-Russia commodity structure during this period is that China's exports to Russia are mainly labor-intensive products, and Russia's exports to China are mainly primary raw materials, and the types of exports from both sides are single and stable. After the adjustment of China-Russia economy and trade, the trade order has improved,

and complementary factors that can play a positive role have promoted the continuous development of China-Russia bilateral trade within a certain level.

A complete economic and legal foundation and foreign economic system are the prerequisites for the development of commodity trade between the two countries. In 1992, the Russian Federation was established and signed the "Agreement on Economic and Trade Relations between the Governments of China and the Russian Federation" and the "Agreement on Encouraging and Mutual Protection of Investment" with China, laying a good foundation for the development of bilateral trade between China and Russia. The Chinese and Russian governments attach great importance to the economic and trade cooperation between the two sides. With the joint efforts of both sides, after the disintegration of the Soviet Union, China and Russia have formed the characteristics of multi-channel and wide-field cooperation in which countries, localities and enterprises participate in economic and trade cooperation. In 1992, the bilateral trade volume between China and Russia was 5.86 billion U.S. dollars, and Russia also became the sixth largest trading partner country after China, namely Hong Kong, Japan, the United States, Taiwan, and Germany. In 1993, the bilateral trade volume between China and Russia was 7.67 billion U.S. dollars, and China became Russia's second largest trading partner.

After the disintegration of the Soviet Union, China and Russia constantly adjusted their trade policies in accordance with the international situation and the economic and trade conditions of China and Russia, decentralized foreign trade authority, and broke through the government's foreign trade monopoly model under the highly planned economic system of China and the Soviet Union. The gradual rise of border trade and direct trade between enterprises played a very important role in the growth of the scale of China-Russia trade from 1992 to 1994. During this period of China-Russia border trade, after China announced the development of the four border cities of Heihe, Suifenhe, Manzhouli, and Hunchunbei as open cities, the region and Russia have engaged in commodity trade, cooperative joint ventures, labor export, tourism, land lease and other fields.

Carried out extensive cooperation and signed thousands of orders. The rapid development of local and border trade between China and Russia has changed the dual-standard trade pattern based on national trade. The reason for the rapid development of China-Russia economic and trade during this period was mainly due to the adjustment of China-Russia economic and trade strategies. After the end of the Cold War, Russia comprehensively adjusted its foreign trade strategy, focused on the development of economic and trade relations with neighboring countries, and put forward the concept of "China-Russia constructive partnership", sending a friendly signal to the development of China-Russia economic and trade relations. At the same time, the results of China's reform and opening up have begun to appear, China's market economy has further developed, and its closely related economic and legal systems have been continuously improved, which has laid a solid foundation for good China-Russia trade cooperation.

However, since 1994, the scale of China-Russia trade has fallen sharply. Compared with 1993, the growth rate of bilateral trade volume between China and Russia fell to -34%, and the total trade volume fell from US\$7.67 billion in 1993 to US\$5.08 billion in 1994. The scale of China-Russia trade has shrunk sharply. This sharp decline is not a structural decline in a single commodity and a single trade situation, but a general decline in all traded commodities and all forms of trade. However, the decline in bilateral trade during this period was not due to political factors. It was mainly due to the important turning point in the economic development of China and Russia. Taken together, there are several reasons for this trade decline:

First, Russia's domestic economic conditions have undergone major changes. From 1993 to 1994, Russia faced a severe economic crisis. Through the high inflation rate, the GDP declined severely. Russia has implemented an export quota and license system for major raw materials, petroleum, non-ferrous metals and other resource commodities, which has increased the non-tariff costs of China-Russia trade;

Second, Russia has re-emphasized its oil and gas trade with Western countries,

especially the trade links with Nordic countries. This has diversified Russia's imports of light industrial goods, and the complementarity of China-Russia trade has been further weakened[23]. The dominance of the Russian consumer goods market no longer exists;

Third, Russia's China-Russia visa-free system was also suspended in 1994, which imposed great restrictions on the business contacts between China and Russia, and indirectly hindered the development of China-Russia trade.

Fourth, since 1994, China's domestic economic policies have changed. In order to prevent the economy from overheating, the Chinese government has adopted fiscal austerity policies to reduce the scale of infrastructure construction. The demand for light metals and raw materials has further declined, which has affected Russia's raw materials for China. And export of machinery and equipment.

Fifth, the China-Russia trade during this period was extremely complementary, but the trade structure had a low tolerance for single risks. The establishment of the Russian Federation did not change the deformed economic structure of the Soviet Union. Russia's main export products were still resource products, which accounted for more than 75% of exports on average during this period. Imports were mainly food and daily necessities, with average imports. It accounts for 50%, and China's imports from Russia are mainly steel, mineral metals and raw materials, which account for more than 80% on average, followed by animal and vegetable oils and fats, which account for more than 11% on average.

In this period, the complementarity of the China-Russia trade structure inevitably faces the problem of fragility. Once the basic economic environment and foreign trade regulations of the two countries change, it will bring great instability to China-Russia trade.



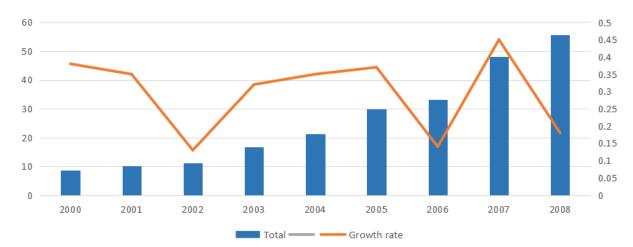
Picture 2.1 – 1993-2000 China-Russia bilateral trade volume and growth rate chart (unit: billion US dollars) [22]

In 1996, China-Russia bilateral trade rebounded, the scale of trade rebounded to 6.84 billion U.S. dollars, with an average growth rate of 25.3%. From 1997 to 2000, the overall trade volume between China and Russia showed a downward trend, mainly due to factors such as the single restriction of the China-Russia trade structure, the lack of stamina caused by the primary trade, and the adverse effects of changes in bilateral policies. This situation changed after Putin came to power in 1999. The previous China-Russia strategic cooperative partnership is more embodied in politics, military and diplomacy. Putin emphasized that China-Russia economic and trade cooperation should become an integral part of China-Russia strategic cooperation. Therefore, China-Russia bilateral trade has entered a new stage.

2. The rapid development stage of China-Russia bilateral trade (2000 to 2008)

After entering the 21st century, bilateral trade between China and Russia has developed rapidly. According to Figure 2.2, before the economic crisis from 2000 to 2008, although the growth rate of China-Russia trade volume fluctuated, but both were above 11%, the bilateral trade volume showed a clear upward trend from USD 8 billion in 2000 to 2008. In the year, 56.9 billion US dollars, an increase of more than 611%. From the perspective of the development of China-Russia trade during this period, it took ten years to achieve the first ten billion U.S. dollars [24].

The third and fourth ten billion U.S. dollars were only It took two years and one year. At the same time, there was no substantial change in the structure of China-Russia bilateral trade during this period. Among China's imports from Russia, energy and resource products still account for an important part, while China's exports to Russia are mainly electromechanical products, light industrial products, and electronic information technology products. In 2005, crude oil and refined oil, steel, logs, paper pulp, ore and other products together accounted for about 70% of China's total imports from Russia, while China and Russia's oil exports to China still accounted for 50% of the total increase in trade between the two countries.



Picture 2.2 – 2000-2008 China-Russia bilateral trade volume and growth rate chart (unit: billion US dollars) [22]

The reasons for the rapid development of China-Russia trade during this period are as follows:

First, the political mutual trust between China and Russia has a positive impact on bilateral trade between China and Russia. In July 2001, China and Russia signed the "China-Russia Good-Neighborly and Friendship Cooperation Agreement." The further deepening of the political mutual trust between the two countries provided a good political foundation for the consolidation and development of the economic and trade cooperation between the two countries, and also contributed to the promotion of China-Russia bilateral trade[25]. A precious historical opportunity.

Second, the China-Russia border trade has revived. During this period, China-

Russia border trade was mainly carried out in Xinjiang, Inner Mongolia and the three provinces of Northeast China, and border trade accounted for about 20% of the total trade. The prosperity of border trade has also greatly promoted the development of China-Russia bilateral cooperation.

Third, the rapid economic development of China and Russia has laid a material foundation for China-Russia bilateral trade. After the reform and opening up, China's economy has developed rapidly and foreign cooperation has continued to deepen. It has become an important global import and export trade market. After 1999, Russia has controlled the deterioration of the domestic economy and entered a period of slow recovery, with domestic GDP returning to positive growth. The stability of the macroeconomic environment of China and Russia provides new potential for the development of China-Russia bilateral trade.

Fourth, economic globalization and regional economic integration provide new opportunities for China-Russia bilateral trade. The geographical connectivity between China and Russia makes China and Russia exchange ports in China, and the transportation conditions are better. The two countries have natural advantages in regional economic and trade cooperation. With the development of economic globalization, the Asia-Pacific region has gradually become an important world market, and its unique advantages have provided a good opportunity for bilateral trade between China and Russia during this period.

Since the beginning of the 21st century, with the continuous deepening and development of China-Russia strategic cooperation, China-Russia bilateral economic and trade has developed rapidly, and economic and trade cooperation has become the core content of the China-Russia strategic cooperative partnership. On August 23, 2012, after nearly 20 years of struggle and negotiation, Russia was finally approved to become the 156th member of the World Trade Organization (WTO). According to the relevant agreements reached between the WTO and Russia, after joining the WTO, Russia will gradually lower the trade threshold and further increase the level of trade facilitation [26]. This will provide good conditions and opportunities for the development of China-Russia economic and

trade relations, especially for the export of Chinese enterprises' products. Beginning in 2016, the growth rate of bilateral trade in 2016 was small, reaching US\$66.1 billion, a year-on-year increase of 2.2%. The China-Russia trade began to grow again. In 2017 and 2018, China-Russia merchandise trade volume was 84 billion U.S. dollars and 108.28 billion U.S. dollars, with growth rates of 20.8% and 27.1%, respectively. It maintained rapid growth for two consecutive years and exceeded 100 billion U.S. dollars for the first time. The total trade volume between Russia and China has been on the rise in the ups and downs. After the disintegration of the Soviet Union, Russia-China economic relations have become closer and closer. Based on Tables 2.1 and 2.2, it can be seen that the trade between Russia and China has mainly had a positive trend in the past 20 years. However, the development of trade throughout the 1990s was not outstanding. Except for a large increase from 3.9 billion U.S. dollars in 1991 to 5.87 billion U.S. dollars in 1992, it remained volatile until the end of the twentieth century. In 1993, Russia and China increased by 30.8% year-on-year. Due to the transitional period of the Russian economy and Russia's large demand for primary commodities, the growth rate during this period was quite rapid.

After President Vladimir Putin took office on May 7, 2000, he strengthened trade with China, which has gradually increased from US\$8 billion in 2000 to US\$568 in 2008. Affected by the 2008 financial crisis, the trade volume dropped sharply in 2009, although the economy continued to strengthen from 2007 to 2009. Between 2010 and 2012, the volume of trade between Russia and China increased significantly. In 2010, China ranked first among Russia's foreign trade partners (ranked third in 2009), with exports ranking sixth and imports ranking first. Russia also occupies the 13th place among China's foreign trade partners. In 2010, Russia and China signed 15 bilateral cooperation agreements. The trade volume between Russia and China in 2012 was 75.09 billion U.S. dollars. Although the level of trade has increased, the development speed of bilateral trade has declined. The year-on-year increase in trade volume dropped from 46.6% in 2010 to 3.8% in 2013. In 2013, the total trade volume reached 68.33 billion U.S. dollars, and

Russia-China trade dropped 9% year-on-year. Since 2013, Russia has experienced new volatility that has affected the country's economy. A series of challenges to the depreciation of the Russian ruble, serious exchange rate imbalances, and the Ukraine crisis. In 2014, China became Russia's main trading partner, and the bilateral trade volume reached US\$88.4 billion. The trade volume in 2014 was 20 billion U.S. dollars higher than that in 2013. Russia's exports to China increased to 37.51 billion U.S. dollars, and Russia's imports from China decreased by 1.5%. China's share in Russia has increased to 17.79%.

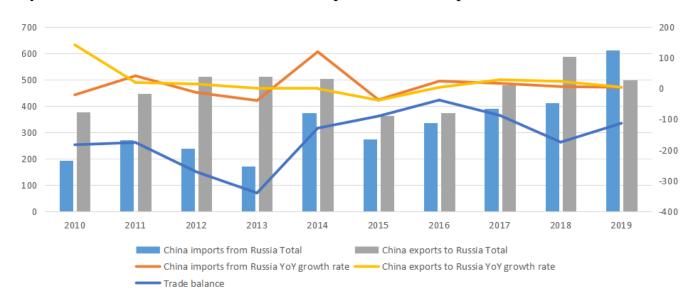
2.2 The current situation of China-Russia trade

From 2016 to 2017, the Russian economy began to recover, and trade with other countries began to increase. In 2016, the trade volume increased by 11.7% year-on-year. In 2016, the total trade volume between Russia and China increased, and the import and export trade also increased steadily. China has become Russia's largest export market for goods and the largest source of imports. In 2018, Russia-China trade volume exceeded 100 billion U.S. dollars for the first time, reaching 100.06 billion U.S. dollars. The trade volume between Russia and China mainly showed an increasing trend from 1992 to 2018. In addition to the impact of the international financial crisis in 2008-2009, the total trade volume between the two countries in 2008 was 57.01 billion U.S. dollars, and the trade volume dropped sharply. In 2009, the bilateral trade volume was 39.02 billion U.S. dollars, a decrease of 46.1%. From 1992 to 2018, Russia's exports to China increased by nearly 17 times, from 5.69 billion U.S. dollars to 10.006 billion U.S. dollars. This sign shows that the trade relationship between Russia and China has been strengthening. Although the trade volume between the two sides fluctuates, it is generally developing in a positive direction and has great potential.

Table 2.1 - 2010-2019 China-Russia bilateral trade scale (unit: 100 million U.S. dollars, %) [27]

years	Import ar	nd export	China	imports from	China	exports to Russia	Trade
			Russia				balance
	Total	YoY growth rate	Total	YoY growth rate	Total	YoY growth rate	
2010	569.7	46.1	193.2	-21.2	376.5	141.2	183.3
2011	719.3	26.3	271.7	40.6	447.6	18.9	175.9
2012	749.8	4.2	239.3	-13.5	510.5	14.1	271.2
2013	682.6	-9.8	171.4	-39.6	511.2	0.2	339.8
2014	879.1	28.8	374.9	118.7	504.2	-1.4	129.3
2015	636.7	-37.9	273.2	-37.2	363.5	-38.7	90.3
2016	711.5	11.7	336.7	23.2	374.8	3.1	38.1
2017	870.3	22.3	391.1	16.2	479.2	27.9	88.1
2018	1000.6	14.9	412.9	5.6	587.7	22.6	174.8
2019	1107.6	3.4	610.5	3.2	497.1	3.6	-113.4

Table 2.1 shows the total volume of China and Russia's previous imports and exports from 2010 to 2019, as well as the specific values of imports and exports. From Table 2.1, it can be seen that the trade balance between Russia and China from 2010 to 2019 was mostly a deficit. In 2010, due to the rapid changes in the ruble exchange rate, Russia's trade with China experienced a deficit, which was 18.33 billion U.S. dollars in 2010. In 2011 and 2012, due to the rise of the Russia-Kazakhstan-Belarus Customs Union, there was a deficit again. In 2013, due to the sanctions imposed by the United States on Russia, the Russian economy deteriorated sharply. Therefore, Russia's exports to China declined. China's imports to Russia were 35.05 billion U.S. dollars, and the import level increased. In 2013, due to various sanctions against Russia, the scale of trade in these countries decreased, so the indicators have declined. Russia began to actively seek new markets, which caused the volume of goods and exports to China to increase. Due to the instability of the ruble exchange rate from 2015 to 2016, China's exports to Russia declined, and the domestic sales of goods imported into Russia became more expensive. The decline in oil costs also led to a decline in import costs. The deficit in 2016 reached 3.81 billion U.S. dollars, and the deficit increased in 2017, reaching 8.81 billion U.S. dollars. Normally, the trade balance between Russia and China means that imports from China to Russia exceed Russia's exports to China. Russia's limited export potential limits the development of bilateral trade: China mainly imports oil and coal from Russia, as well as some other raw materials and weapons. It has shown a surplus for a long time in 2018, with a surplus of US\$17.48 billion in 2018. Russia's surplus indicates that the Russian economy has begun to stabilize and improve its position in trade cooperation. The instability of the Russian economy has affected the volume of trade between Russia and China, and only in 2015 bilateral trade relations began to recover. Since 2016, the Russian economy has begun to recover from the strong blows by Western countries, which has promoted the improvement of Russia's economic conditions and trade volume. Therefore, the trade cooperation between Russia and China has the potential for further development and deepening. A graphic display of the dynamics of the Chinese-Russian trade is presented in the picture 2.3.



Picture 2.3 – 2010-2019 China-Russia bilateral trade scale (unit: 100 million U.S. dollars, %) [22]

From 2011 to 2015, the development of China-Russia bilateral trade slowed down. The main factor leading to the decline in Russian exports to China was the short-term international oil price market, and the sharp drop in the prices of energy commodities. The main reasons for the decline in Russia's imports from China are twofold: First, Russia's economy has experienced a sharp decline, its purchasing power has fallen sharply, and market demand is insufficient; second, Russia's domestic inflation has intensified in 2015, and Chinese goods have lost their price advantage in the Russian market. In the long run, this does not indicate a decline in

the level of economic and trade cooperation between China and Russia. The structure of economic and trade cooperation between the two countries will be stable for a long time [28]. The two countries have achieved cooperation in energy cooperation, infrastructure construction, financial investment, and high-tech research and development. Significant progress has been made.

In 2014, Russia fell into an energy crisis due to the Ukraine crisis, which caused Russia's economic development to be subject to economic sanctions from Western countries. This led to a slowdown in economic growth and a sharp depreciation of the ruble. Russia-China trade was also affected by this. Waterloo appeared. But as Russia shifts its foreign trade market to Eastern countries, Russia-China trade cooperation has once again ushered in a new spring. In 2017, it resumed its steady growth. This also shows that the stability of the bilateral strategic cooperative relationship between Russia and China has laid a good foundation for the breakthrough progress in trade cooperation between Russia and China. In 2018, the bilateral trade volume between China and Russia surpassed the peak in 2014 and became a new historical record. At the same time, Russia and China are currently working together to build a new international trade order and maintain the multilateral trade cooperation system. With the in-depth implementation of the "Belt and Road" initiative and Russia's positive response, it can be predicted that the bilateral trade cooperation between Russia and China will gradually deepen. Level expansion.

According to Russian customs statistics, the bilateral import and export volume of goods between China and Russia in 2016 was 71.15 billion U.S. dollars. China has become Russia's second largest export market and largest source of imports. Than 14.1%. In addition to China, Russia's top ten trading partners are Germany, the Netherlands, Belarus, the United States, Italy, Japan, Turkey, South Korea, and France. From 2007 to 2018, Russia's trade with China maintained a long-term deficit.

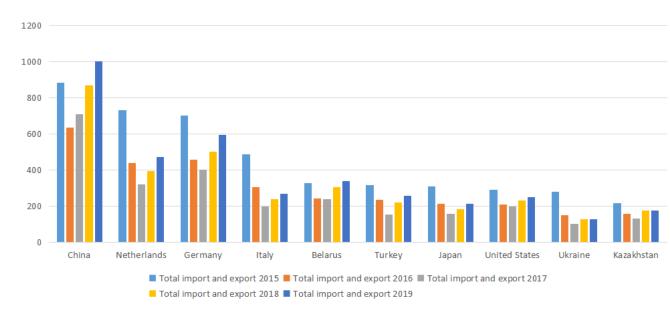
Table 2.2 – 2015-2019 Russia's main trading partners (unit: 100 million US dollars) [27]

Countr			Expo	:t				Import		
у	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
China	375.1	286.1	335.7	389.2	779.7	208.9	349.5	373.5	480.4	590
Netherl ands	680	408	291	356	434.7	52.9	31	29.8	38.9	36.9
German	371	254	210	257	341	330	204	192	242	255.1
y										
Italy	352	223	119	138	164	127	83.2	76.8	101	105.8
Belarus	200	154	142	186	218.1	126	90.1	96	120	121.8
Turkey	249	193	134	187	213.4	66.4	40.6	21	33.9	43.2
Japan	199	145	92.6	104	124.5	109	68.1	65.4	77.6	88.2
United	106	94.3	90.3	106	125.1	185	115	105	126	125.1
States										
Ukraine	171	92.9	62.7	79.4	95.2	107	56.7	38.1	49.1	54.8
Kazakh	143	108	95.1	125	129.2	74.5	48.1	35.1	50.2	53
stan										

From Table 2.2, we can see the situation of Russia's main trading partners. Since 2014, China has ranked first among Russian partners (88.4 billion U.S. dollars), the Netherlands is second (73.3 billion U.S. dollars), Germany is third (70.1 billion U.S. dollars), Italy (48.5 billion U.S. dollars) and Belarus (327 Billion U.S. dollars), but since 2017, there have been changes in this chain. China ranks first among export partners. This is due to the deepening of the trade relationship between the two countries. The Netherlands has moved to second place and Germany is ranked first. two. In terms of imports, China takes the lead, with Germany in second place and the United States in third place. Although the United States has imposed sanctions on Russia, Russia still relies heavily on some American goods (transportation equipment, chemical products, base metals and products, etc.). The influence of the "Belt and Road" initiative, the stability of the ruble, and other factors. Therefore, Russia's unstable economic situation affects trade with all countries.

In 2018, the situation of Russia's trading partners did not change much, but the scale of Russia's trade with other countries has decreased. In 2018, Russia's top five main partners are: China (China's trade with Russia accounted for 15.7%),

Germany (8.6%), the Netherlands (6.8%), Belarus (4.9%), Italy (4.1%), the United States (3.9%)), Turkey (3.7%), Japan (3.1%), the United States (3.6%), Ukraine (2.2%), Kazakhstan (2.9%).



Picture 2.4 – 2015-2019 Russia's main trading partners (unit: 100 million \$USA)[22]

Figure 2.4 shows that the trade volume of Russia's main trading partners increased significantly in 2018. China is still Russia's most important trading partner, occupying the first place with a bilateral trade volume of US\$100.07 billion. Germany ranked second in Russia's trade in 2018, an increase of 8.66% over 2017. The third place is the Netherlands. The amount is 47.16 billion U.S. dollars. The ranking of the trade volume between Belarus and Italy and Russia has changed [29]. The trade volume between Russia and Belarus reached 33.99 billion U.S. dollars, ranking fourth, and the trade volume between Italy and Russia ranked fifth, an increase of 3.92% year-on-year. The increase in trade between Russia and China shows that the trade cooperation between Russia and China has increased and deepened, and China's trade status in Russia has been continuously improved.

The conflict between Russia and Ukraine, all these factors have greatly affected Russia's trade with all partner countries. From 2014 to 2018, China has been

Russia's main trading partner. The share of trade between China and Russia has increased year by year, but the volume of trade between Russia and China still accounts for a relatively small proportion of the total foreign trade between the two countries.

Table 2.3 – China's trade proportion in Russia (unit: %)[30]

						/ L		
Years	2012	2013	2014	2015	2016	2017	2018	2019
Proportion	10.28	10.54	11.29	12.08	14.13	14.89	15.7	19.1
of total								
trade								
The	6.82	6.76	7.55	8.33	9.82	10.9	12.5	16.1
proportion								
of exports								
The	16.27	16.88	17.79	19.33	20.9	21.17	21.9	25.1
proportion								
of imports								

It can be seen from Table 2.3 that from 2012 to 2019, China's trade share in Russia has increased year by year, and China's share in Russia's exports and imports has increased significantly. It fully shows that the trade exchanges between the two countries are constantly developing in a positive direction. The proportion of total trade in 2012 increased from 10.28% to 19.1% in 2019. In 2012, China's exports to Russia accounted for 6.82%, rising to 16.1%. In 2019, the proportion of China's exports to Russia was relatively large, and the proportion of exports from 2012 to 2019 has nearly doubled. The importance of China's exports to Russia is increasing. The proportion of imports has also continued to grow, from 16.27% in 2012 to 25.1% in 2019.

The scale of China's direct investment in Russia is showing an expansion trend. Before 2012, the flow of China's direct investment in Russia has not exceeded US\$1 billion. The investment scale fluctuated greatly from 2013 to 2018. In 2015, the investment amount reached a peak of US\$2.962 billion. As of 2018 At the end of the year, the stock of Chinese investment in Russia was US\$14.21 billion, which was 5.1 times the stock of investment in 2010. The shrinking scale of Russia's direct investment in China is mainly due to the overall poor economic situation in Russia in recent years and the shortage of funds. In recent years, the areas of

China-Russia investment cooperation have continued to expand, not only involving traditional mining, agriculture, forestry, animal husbandry, fishery and other resource development industries, but also covering food processing, small household appliances, automobiles and other manufacturing construction, wholesale and retail, and financial industries., Transportation, warehousing and postal industry, scientific research, technical service industry. Investment methods have also developed from traditional greenfield investment to equity participation and mergers and acquisitions. From the perspective of the distribution of investment industries, investment in agriculture, forestry, animal husbandry and fishery is relatively stable, mainly in the form of the establishment of overseas agricultural parks and timber processing parks; after the Ukraine crisis, China-Russia energy cooperation has become closer. From 2015 to 2017, the scale of direct investment in the mining industry was rapid The expansion is mainly due to the equity investment of Chinese companies in Russian energy companies; the scale of investment in the manufacturing industry is showing an expansion trend.

China-Russia bilateral trade methods: trade methods are mainly divided into the following types, general trade, compensation trade, processing and assembly trade with supplied materials, processing trade, border small trade, lease trade and barter trade. The bilateral trade between China and Russia is mainly through direct trade, small-scale border trade and processing trade.

1. General trade

General trade refers to goods imported and exported by enterprises with import and export rights in their own country. Import and export goods aided by goods payment, foreign-invested enterprises selling imported material processed products in the country, foreign-invested enterprises and domestic material processed products export, or self-purchasing products, hotel food imports, domestic fuel supply materials and spare parts for foreign ships or aircrafts In the overseas labor service cooperation project, the goods imported by the counterparty's physical products to compensate the wages of domestic laborers (such as steel, imported goods, wood, fertilizers, seafood, etc.), and the equipment and materials brought

out by domestic enterprises in the overseas investment part are all According to general trade statistics. It can be seen from Table 2.4 that China-Russia general trade accounted for the highest proportion, from 2014 to 2018, the proportion was from 52.9 to 58.1, accounting for nearly 60% of the China-Russia trade method [31].

2. Small-scale border trade

The second highest proportion of China-Russia investment is border small trade. Border small-value trade refers to enterprises that have been approved to operate border small-value trade in border counties and border cities that are open along the border. At the border ports designated by the governments of the two countries, enterprises in the border areas carry out foreign exchange trade and spot foreign exchange trade. China has established enterprises authorized by the Ministry of Foreign Economic and Technical Cooperation to engage in the export of contracted projects and project equipment and materials for foreign labor service cooperation, as well as the acquisition of equipment and materials shipped back to China from abroad. In 2018, the small-scale trade at the China-Russia border accounted for 32.3%, basically the same as four years ago, and in 2014 it accounted for 32.6%. The total amount decreased slightly, from USD 5.51 billion in 2014 to USD 4.28 billion in 2018. However, the growth rate of the past two years is obvious.

3. Processing trade. Processing trade is the third largest trade method between China and Russia, accounting for about one-tenth.

Processing trade refers to the import of all or part of the raw materials and auxiliary materials, parts, components, and packaging materials (hereinafter referred to as raw materials and auxiliary materials) and finished products after reprocessing or assembly, including the processing of incoming materials and processing passes into the material. Processing trade is a re-export business characterized by processing. It refers to a method of importing raw materials, materials or parts in various ways, using domestic production capacity and technology, processing them into finished products and then exporting them to

obtain additional value reflected in foreign exchange. According to the characteristics of the business undertaken, the common processing trade modes are: processing with imported materials, processing with supplied materials, assembling operations and collaborative production.

The processing trade between China and Russia accounted for 8.9% in 2014 and 7.5% in 2018. The total processing trade in 2018 was US\$990 million.

2.3 Analysis of China-Russia Trade Structure

Analyzing the China-Russia bilateral trade structure will help to fully understand the commodity structure of China-Russia import and export trade, which will help to analyze the complementary advantages of the two countries in the commodity structure in more detail, and more clearly the reality of the establishment of a free trade zone between China and Russia basis[32]. The following figures analyze the structure of Russia's main imports and exports to China and the comparison of Russia's foreign imports and exports with China's imports and exports.

Russia's economic development has long been in a mode of unbalanced industrial structure development. Due to geographical and political factors, the mining and export of Russian mineral products (crude oil) is an important part of its foreign trade. Since 2010, Russia's mineral exports accounted for about 2/3 of the total export value, highlighting the inherent shortcomings of Russia's economic development: the economic system is fragile and the economic structure is deformed. This keeps Russia's foreign trade in an unstable growth mode of industrial structure for a long time.

According to the data in Table 2.4, from 2012 to 2019, among the top ten commodities exported from Russia to China, the top three products were mineral products, wood and wood products, and chemical products. In 2018, Russia's exports to China did not change much: it still ranked first in mineral products, with an increase of 77.9% year-on-year, wood and products ranked second with an

increase of 6.5%, and third was mechanical and electrical products, with a total export increase of 2.9%.

Table 2.4 - 2012-2019 Russia's main imported goods composition (unit: million US dollars) [27]

Commodity	2019	2018	2017	2016	2015	2014	2013	2012
category (%)								
Electronics	30.2	31.9	32.9	32.4	31.1	30.9	30.4	29.8
Chemical	13.7	12.9	12.7	13.3	13.3	12.4	16.6	10.5
Products								
Transportation	11.5	11.1	11.1	10.3	9.6	11.3	11.1	18.1
Equipment		<u> </u>						
Base metals and products	7.8	7.4	7.1	6.5	6.4	6.9	6.6	6.6
Plastic, rubber	6.1	5.9	5.6	5.9	5.8	5.5	5.1	5.2
Textiles and raw materials	5	4.9	4.9	5.3	5.6	4.8	4.6	3.8
Plant products	4.7	4.8	4.7	4.8	4.9	4.7	4.5	4.3
Food, beverage,	4.3	4.5	4.4	4.8	4.7	4.5	4.2	4.1
tobacco								
Optics, clocks, medical equipment	3.1	3.1	3.3	3.4	3.8	4.4	4.2	3.3
Live animals; animal products	2.9	2.8	3	3.1	3.1	3	3	4.2
Furniture, toys, miscellaneous products	2.6	2.6	2.6	2.6	2.8	2.9	2.8	2.7
Mineral products	2.2	2.1	2	1.8	2.7	2.5	1.6	1.5
Light Industrial Products	1.7	1.6	1.5	1.6	1.6	1.6	1.6	1.5
Cellulose pulp; paper	1.3	1.4	1.3	1.4	1.4	1.4	1.3	1.5
Ceramic; glass	1.2	1.3	1.2	1.2	1.3	1.3	1.1	1.2
Others	1.8	1.8	5.1	5.3	4.5	4.9	1.5	1.5

The export of live animal products has increased, an increase of 2.8% over 2017.

Among them, the export value of mineral products declined in 2014-2016. From 28,891 million U.S. dollars in 2014 to 17,862 million U.S. dollars in 2016. However, in 2017, exports of mineral products began to rise again to reach US\$25,263 million. Mineral products have always played a relatively important

role in Russia's export commodity structure. Russia's exports of timber and wood products to China increased slightly. From USD 2511 million in 2014 to USD 3265 million in 2017. The export value of chemical products was 1,468 million U.S. dollars in 2014 and 1,099 million U.S. dollars in 2017. The export value of chemical products has decreased, and the proportion of exports has decreased. In 2018, Russia's exports of live animals and animal products to China increased by 37.7%. Exports from Russia to China exceeded 800 tons of frozen fish, crustaceans and shellfish. After 2014, Russian pork and poultry exports began to grow, reaching US\$286,000 in 2015. In 2016, it was US\$644,000, in 2017 it was US\$926,000, and in 2018 it was US\$790,000.

To sum up, in Russia's export structure to China, timber and wood products, mineral products and other raw materials still dominate. The export product structure is relatively simple, but it has gradually begun to develop in a more optimized direction.

Russia's exports are mainly mineral products, base metals and products, and chemical products. In 2019, Russia's exports of three products accounted for 62.3% of total exports, 10.7%, and 5.3% (see Table 2.4). It can be seen that Russia is rich in mineral resources, leading to the development of heavy industry, but the backwardness of light industry. Take crude oil as an example. Under the dual effects of the Russian economic crisis in 2008 and the plunge in international crude oil prices, the economy regressed significantly and lost the trade initiative.

Russian imports are mainly electromechanical, chemical products, and transportation equipment. The total amount in the past three years has reached more than 50% of the total imported goods. However, the lack of independent upgrading of industrial technology has led to aging equipment and a shortage of agricultural products, which is difficult to meet domestic demand (See Table 2.5).

Table 2.5 - 2012-2019 Russia's main export commodities composition (amount unit: million U.S. dollars) [30]

C 111	2012	2012	2014	2015	2016	2017	2010	2010
Commodity	2012	2013	2014	2015	2016	2017	2018	2019
category (%)								
Mineral products	68.7	65.7	68.8	61.7	57.3	58.3	62.7	62.3
Base metals and	11.9	12.6	9.5	11.5	12.1	12.3	11.7	10.7
products								
Chemical Products	5.8	6.1	4.9	6.3	5.8	5.4	5	5.3
Electronics	2.3	2.8	3.3	4.2	4.5	4.2	3.6	3.7
Precious metals	2	2.4	2.8	2.7	3.7	3.6	3.2	3.4
and products								
Plant products	1.8	1.9	1.9	2.4	3	3	2.6	2.6
Wood and	1.3	1.8	1.8	2.2	2.7	2.6	2.3	2.4
products								
Plastic, rubber	1.3	1.6	1.3	1.7	2	2	1.6	1.7
Live animals;	1	1.1	1.2	1.5	1.8	1.7	1.3	1.5
animal products								
Food, beverage,	0.8	1.1	1.1	1.4	1.6	1.5	1.3	1.4
tobacco								
Transportation	0.8	1	0.9	1.2	1.5	1.4	1.3	1.4
Equipment								
Cellulose pulp;	0.8	0.7	0.8	1.1	1.4	1.3	1.2	1.2
paper								
Animal and	0.6	0.4	0.5	0.7	0.9	0.9	0.7	0.9
vegetable fats								
Ceramic; glass	0.3	0.2	0.3	0.4	0.6	0.6	0.5	0.5
Optics, clocks,	0.2	0.2	0.3	0.4	0.5	0.5	0.4	0.4
medical equipment								
Others	0.4	0.3	14.1	16.9	16.5	15.5	0.6	0.7

Combining Tables 2.4 and 2.5, it can be seen that from 2014 to 2018, the first three product categories of the top ten products imported by Russia from China are mechanical and electrical products, textiles and raw materials, and base metals and products. Among them, the import volume of mechanical and electrical products continued to increase from 2014 to 2018. From 23,465 million U.S. dollars in 2014 to 26,450 million U.S. dollars in 2018. Mechanical and electrical products are in a dominant position. In 2018, the structure of Russia's exports to China has changed in some respects. In 2018, Russia's main import structure from China: mechanical and electrical products accounted for 50.1%, base metals and products accounted for 7.7%, textile materials accounted for 7.7%. Russia imports a large number of toys, furniture and miscellaneous products, plastics, rubber, chemical products,

shoes, umbrellas and other light industrial products and transportation equipment from China. However, furniture, toys, and miscellaneous products decreased in 2018. The largest share of China's exports in Russia is light industrial products, in addition to food, toys, sporting goods, and plastic products for various purposes. It can be concluded that due to strong domestic demand in Russia and China has an advantage in producing these products, the demand for machinery, clothing and other products imported by Russia from China is also relatively large. Russia's imports from China are mainly concentrated in labor-intensive products, semi-finished products and industrial products.

Since China implemented the "One Belt, One Road" strategy in 2013, China economy has achieved faster development, and the amount of foreign trade has generally been steadily increasing year by year. In recent years, China's exports of machinery and transportation equipment accounted for half of the total: from 2016 to 2018, the proportions were 46.92%, 47.82%, and 48.57%, respectively. The proportion of finished products classified by raw materials such as leather, rubber, wood and spinning followed closely behind. In terms of imports, since 2009, China's imports of machinery and transportation equipment have ranked first in terms of total imports: 2016-2018 accounted for 41.43%, 39.86%, and 39.31%, respectively.

In summary, mechanical products and energy products account for a large proportion of China's primary product imports. On this basis, first of all, China's export advantages and Russia's import demand complement each other. Secondly, China's import demand and Russia's export advantages (machinery and transportation equipment, fossil fuels and primary products: rubber, plastics, textiles, wood products and other light industrial products) are also complementary. Therefore, trade between China and Russia will definitely have a positive impact on the economic development of the two countries (see Table 2.6, Table 2.7).

Table 2.6 – 2012-2019 Russia's main exports to China composition (amount unit: million US dollars) [30]

Commodity	2012	2013	2014	2015	2016	2017	2018	2019
category (%)								
Mineral products	65.6	51.7	32.5	70.2	68.3	70.5	77.9	75.2
Chemical products	10.2	9.5	3.8	7.9	3.7	2.9	2.9	2.2
Wood and	8.6	13.4	0.7	5.6	9.5	8.7	6.5	6.5
products								
Electronics	4.2	6.8	24.8	4.7	5.1	5.9	2.9	4.1
Live animals;	3.9	6.1	1.4	3.5	3.9	3.1	2.8	3.5
animal products								
Cellulose pulp;	3.2	4.7	0.8	2.9	3	2.4	2.4	1.8
paper								
Plastic; rubber	2.1	3.1	5.2	1.4	1.3	1.3	0.9	0.8
Base metals and	1.4	2.2	7.8	1.4	0.8	1.7	2.4	2.8
products								

The commodities that China imports from Russia are mainly primary products such as energy, resources, raw materials, and agricultural products, which are mainly based on Russia's resource endowment. Mineral products are the largest category of products imported by China from Russia. From 2008 to 2019, China-Russia energy cooperation has developed in all directions, and breakthroughs have been made. China's energy imports from Russia have grown rapidly, and the proportion of China's imports from Russia has increased from 56.8% increased to 75.2%. The second largest category of products is timber and its products. From 2008 to 2019, China's timber imports from Russia have maintained a steady growth, but the proportion of imports of such commodities has shown a downward trend, with the proportion of imports falling from 12.7% to 6.5 %. The proportion of imports of the first two types of resource-based products increased from 69.5% to 81.7%, and the resource-based structure continued to solidify. The import volume of mechanical and electrical products has increased significantly by 2.1 times, and the proportion of imports has increased from 3.4% in 2008 to 4.1% in 2019. Live animals and animal products, animal and vegetable fats, plant products, food, beverages, and tobacco were imported in small quantities in 2008. By 2019, the import volume of these products has increased significantly, reaching 1.371

billion U.S. dollars. 389 million U.S. dollars, 269 million U.S. dollars and 200 million U.S. dollars. Among them, the import value of live animals and animal products increased by 15.9 times. The trade volume of base metals and their products, cellulose pulp, paper, optics, clocks, medical equipment, and transportation equipment is increasing slowly, and the proportion of imports is declining. Imports of chemical products, plastics, and rubber have dropped significantly. Imports have decreased from US\$1.733 billion and US\$475 million in 2008 to US\$859 million and US\$318 million in 2019. The proportion of imports has also decreased from 11.4% and 3.1% respectively. % Dropped to 2.2% and 0.8%

China's exports to Russia are mainly manufactured products such as mechanical and electrical products, light industrial products, and chemical industrial products[33]. From 2008 to 2019, the structure of China's exports to Russia was relatively stable, with a slight improvement in the overall structure. The export value of mechanical and electrical products has always ranked first. In 2017, the proportion of mechanical and electrical products in total exports reached 53%. In recent years, the impact of demand has declined. From January to September 2019, the proportion was 47.7%. Textiles and raw materials, furniture, toys, miscellaneous products, light industrial products such as shoes and boots, umbrellas, leather products, luggage and other labor-intensive commodities are traditional Chinese exports to Russia. From January to September 2008, these types of products The proportion of Russian exports is 21.1%. In recent years, Russia has implemented import substitution policies and has achieved good results in the field of light industry. Labor-intensive products have low technical content and strong substitutability. As China's labor costs increase, China's price advantage for such products has declined. Light textile products exported to Russia face fierce competition in the Russian market. Therefore, the proportion of labor-intensive products in China's exports to Russia has declined, and the proportion dropped to 18.7% from January to September 2019. The export of chemical products and plastics and rubber to Russia has increased significantly. The export volume of chemical products has increased by 2.7 times, and the proportion of exports has increased from 2.4% to 5.9%; the export value of plastics and rubber has increased by 61%, and the proportion of exports has increased from 4.5% increased to 4.8%. The decline in the export proportion of labor-intensive products, and the rise in the proportion of manufactured products such as mechanical and electrical products and chemical products, reflect that China's export structure to Russia has improved to a certain extent.

Table 2.7 – 2012-2019 Russia's main imports from China(Amount unit: million U.S. dollars) [30]

Commodity	2012	2013	2014	2015	2016	2017	2018	2019
category (%)								
Electronics	45.1	45.5	56.2	49	53	53	50.7	47.7
Base metals and products	8	7.9	7.8	7.4	6.7	7.1	7.8	8.5
Textiles and raw materials	9.4	10	9.7	8.9	8	7.4	7.4	7.8
Chemical Products	3.4	3.5	3.8	5.1	5	4.9	5.5	5.9
Furniture, toys, miscellaneous products	6.5	6.5	6.7	5.9	5.2	5.8	5.6	5.7
Transportation Equipment	5.9	5.1	4.7	3.7	3.7	3.9	4.2	5.4
Plastic; rubber	4.8	4.7	5.2	4.6	4.4	4.1	4.5	4.8
Light Industrial Products	5.7	5.6	4.5	4.1	3.4	3.7	3.8	4
Optical clock medical equipment	2.3	2.2	2.1	2.2	2.2	2.2	2.4	2.5

Based on the above table, it can be seen that from 2014 to 2018, the first three product categories of the top ten products imported by Russia from China are mechanical and electrical products, textiles and raw materials, and base metals and products. Among them, the import volume of mechanical and electrical products continued to increase from 2014 to 2018. From 23,465 million U.S. dollars in 2014 to 26,450 million U.S. dollars in 2018. Mechanical and electrical products are in a dominant position. In 2018, the structure of Russia's exports to China has changed in some respects. In 2018, Russia's main import structure from China: mechanical

and electrical products accounted for 50.1%, base metals and products accounted for 7.7%, textile materials accounted for 7.7%. Russia imports a large number of toys, furniture and miscellaneous products, plastics, rubber, chemical products, shoes, umbrellas and other light industrial products and transportation equipment from China. However, furniture, toys, and miscellaneous products decreased in 2018. The largest share of China's exports in Russia is light industrial products, in addition to food, toys, sporting goods, and plastic products for various purposes. It can be concluded that due to strong domestic demand in Russia and China has an advantage in producing these products, the demand for machinery, clothing and other products imported by Russia from China is also relatively large. Russia's imports from China are mainly concentrated in labor-intensive products, semi-finished products and industrial products.

The structure of China-Russia commodity import and export is determined by the actual economic structure and resource structure of China and Russia. First of all, Russia is a resource-rich country. Although China is rich in resources, it has a large actual resource gap. Every year, it imports a large amount of natural resources from the international market, especially oil and mineral resources. The Russian oil reserves account for about 15% of the world's oil reserves. Oil and natural gas are Russia's traditional export advantages. The positive correlation between Russia's economic growth and oil prices is very strong[34]. The EU, China and other neighboring countries and regions are Russia's major exporters of oil and gas resources, especially in the West in 2014. In the context of economic sanctions, Russia has achieved an increase in oil supply to China, and the rebound in international oil prices has made this move a significant boost to the bilateral trade volume between the two sides. Secondly, Russia's insufficient domestic labor productivity and relatively high labor costs have caused Russia's light manufacturing industry to be underdeveloped. Therefore, among China's exports to Russia, labor-intensive products have a strong comparative advantage. Miscellaneous systems Russia's imports of finished products account for a large proportion of China's import trade. After the reform and opening up, China's

attention to high-tech technologies has soared. In addition to the introduction of foreign advanced patented technologies, China's level of self-development has continued to increase. Strengthening cooperation in the high-tech field has become part of Russia's "looking eastward" strategy. After the escalation of Western sanctions against Russia, the prohibition of export of dual-use technical equipment and technology to Russia has led to the lack of parts and components and blocked the import of equipment and machinery in many industries in Russia. For this reason, Russia has increased its export to China. Seek new alternative technologies and mechanical equipment to make up for market vacancies. Therefore, most of Russia's exports to China are mainly resource-based commodities, and most of China's exports to Russia are mainly made of industrial products, and the two are highly complementary in the structure of commodity trade.

Table 2.8 – Changes in the structure of China-Russia trade products from 1990 to 2019 [35]

Years	Russia's main exports to China	Russia imports major products from China
1990-2000	Fertilizer,steel,pulp, refined oil, wood	Plant products, leather, fur products, textile materials and products, live animals and animal products, umbrellas, etc.
2000-2010	Petroleum, steel, petroleum products and related raw materials, fertilizers, timber, transportation equipment	Apparel and clothing accessories, spinning, footwear, miscellaneous products, telecommunications and sound recording and reproducing equipment, finished products and related products, fabrics
2010-2015	Mineral products, wood and products, fertilizers, mechanical and electrical products, live animals, agricultural products	Mechanical and electrical products, textile materials and products, fertilizers, metals and products, light industrial products
2015-2019	Chemical products, mineral products, live animals, wood and products, animal products, mechanical and electrical products	Furniture, toys, mechanical and electrical products, footwear, umbrellas and other light industrial products, textiles and raw materials, metal and manufacturing, miscellaneous products

According to Table 2.8, from 1990 to 2000, Russia imported major daily necessities, household appliances and labor-intensive goods, footwear, such as

food, textiles, and clothing from China. Russia exports energy-intensive products to China, such as refined oil and timber. Russian machinery and equipment imported from China, high-tech products and high value-added products share a small share, but textile raw materials and products, food and home appliances, the proportion of such products in the total Russian-Chinese trade is more than 60%. The main advantages of Russia's exports to China are chemical products, fertilizers, mineral oil and its products, fossil fuels, cellulose pulp and wood products, and seafood. Russia accounts for 80% of China's total exports. An analysis of the structure of Russia's exports from 2001 to 2010 shows that the share of machinery, equipment and vehicles has increased significantly (from 38.6% in 2001 to 53.5% in 2010). This increase indicates the growth of the hightech economic sector. At the same time, the share of textiles, textiles and footwear fell from 25.3% to 15.4%. Between 2001 and 2010, China's import share of mineral products increased from 9.3% to 21.6%. This shows that on the one hand, certain types of minerals in China (mainly oil and gas) are increasing the deficit, and on the other hand, the consumption of minerals has increased due to the continued dynamics of economic growth. Machinery, equipment and vehicles have always accounted for a high proportion of imports (48% in 2001 and 46.2% in 2010). In the early 2000s, a strong bilateral trade framework was established between the two countries. Russia has reduced imports of labor-intensive products from China, and has expanded imports of mechanical and electrical products and high-tech products.

According to Table 2.8, Russia is currently importing more and more high-tech products from China. In particular, imported electrical machinery and equipment accounted for 14.8% of total imports, and imported energy equipment accounted for 15% of total imports. The main products exported from Russia to China are still minerals, wood and cellulose pulp and paper products. In 2018, the export of animal products increased to 2.8%, and the total export of chemical products fell by 1.8%. In short, from 2010 to 2018, there were no major changes in the commodity structure of Russia and China. Russia's exports to China are mainly

concentrated on raw materials. The export of electromechanical and high-tech products has also increased. Analyzing the Russian-Chinese trade structure, the Russian-Chinese trade structure is mainly the nature of inter-industry trade: these two countries are still in the traditional complementary trade development model. Therefore, bilateral trade between Russia and China should not be limited to interindustry trade relations, it is necessary to actively expand intra-industry trade. The choice of trade method will be in the direction of future economic cooperation between Russia and China.

Summary of Chapter 2

The second chapter introduces the situation of bilateral trade between Russia and China. It is introduced that the development of trade between China and Russia has gone through three stages: the tortuous development stage (1992-2000), the rapid development stage (2000-2008) and the current stable development stage. The analysis shows that the total volume of China-Russia trade is basically on the rise, and the total bilateral trade volume reached 110.76 billion U.S. dollars in 2019.

Through the comparison of the total import and export trade data between China and Russia from 2012 to 2019. It can be concluded that China is still Russia's most important trading partner, and the trade status of the two continues to improve over time, with the proportion of trade increasing from 16.27% in 2012 to 25.1% in 2019. According to the data in 2019, the bilateral trade between China and Russia is mainly through direct trade (54.1%), small border trade (34.5%) and processing trade (8.2%).

By comparing the previous commodity trade structure of the two countries, it is concluded that mineral products (75.2%) and wooden materials (6.5%) still dominate the Russian export structure to China. China's exports to Russia are mainly manufactured products such as mechanical and electrical products (47.7%), light industrial products (7.8%), and chemical industrial products (8.5%). The product structure of import and export is relatively simple, but it has gradually begun to develop in a more optimized direction.

3 FEASIBILITY ANALYSIS AND SUGGESTIONS FOR ESTABLISHING A CHINA AND RUSSIA FREE TRADE ZONE

3.1 Analysis of the trade effect of the China-Russia Free Trade Zone

1. Model introduction

The trade gravity model is used to analyze the trade flow between countries. It evolved from Newton's law of gravity in 1960. Tinbergen and Poyhonen were the first to apply the gravity model to the field of international trade [36]. These two economists conducted a quantitative analysis on the trade between two countries. They believed that the scale of bilateral trade flows between the two countries is related to the respective economies of these two countries. The scale is directly proportional and inversely proportional to the spatial distance between the two countries. This analysis conclusion of Tinbergen and Poyhonen has opened up a new space for the study of international trade theory in the field of econometrics. Subsequently, as the research continued to deepen, more and more explanatory variables were brought into the model to meet the needs of research. For example,

- economic factors, including per capita GDP, per capita national income,
 foreign direct investment, tariff rates, consumer price index, etc.;
 - geographic factors, including climate, territorial borders, etc.;
 - demographic factors, including language, Religion, population, etc.;
- related political factors, including whether to sign a free trade agreement,
 whether to establish an FTA, whether it is a developed country, etc.

Because of its simple principles and strong data availability, the trade gravity model has gradually been widely used in the field of economics and has become one of the main empirical research tools for studying trade flows in international trade.

In 1962, the Dutch economist Jan Tinbergen summarized the basic form of the trade gravity model based on the universal gravitation formula, namely the trade gravity equation [36]:

$$T_{ij} = A(Y_i Y_j) / D_{ij}, \tag{1}$$

where T_{ij} – represents the export of exporting country i to importing country j;

A – a constant;

 Y_i – the GDP of country i;

 Y_i the GDP of country j, is the product of the GDP of the two countries;

 D_{ij} – is the distance between country i and country j (is generally expressed by the distance between the capitals of the two countries).

The model is a non-linear model. Therefore, taking the natural logarithm on both sides of the formula becomes the linear form as follows:

$$lnT_{ij} = \beta_0 + \beta_1 ln(Y_i Y_j) + \beta_2 lnD_{ij} + \mu_{ij}$$
(2)

In the formula β_0,β_1,β_2 are regression coefficients, μ_{ij} is the error interference term.

2. Description of model data

The data extracted in this article comes from the China Statistical Yearbook [3]. The main trading member countries and regions selected are: Russia, India, South Korea, Thailand, Vietnam, Singapore, Malaysia, the Philippines and Indonesia. The time span selected in this article is from 2011 to 2019. The total bilateral trade and foreign direct investment data are from the China Statistical Yearbook. The data on GDP and GDP per capita are from the official website of the World Bank. The geographical distance is selected between the capitals of the two countries. The distance, the data comes from Google Earth, and the information on whether China has signed a free trade agreement with its trading partner countries comes from the official website of the China Free Trade Zone Service. See the table below for specific data:

Table 3.1 – Total bilateral trade between China and other countries from 2011 to 2019, US\$100 million [30]

Years	Russia	India	Korea	Thailand	Vietnam	Singapore	Malaysia	Philippines	Indone-
									sia
2011	792.7	739.1	2456.3	647.3	402.1	637.1	900.2	322.5	605.5
2012	882.1	664.7	2564.2	697.5	504.4	692.7	948.3	363.8	662.3
2013	892.6	654	2742.4	712.4	654.8	759	1060.8	380.5	683.5
2014	952.7	705.8	2904.4	726.2	836.4	797.4	1020.1	444.6	635.4
2015	680.2	716	2757.9	754.6	958.5	795.2	972.6	456.4	542.3
2016	696.2	701.8	2527	757.3	928.8	705.3	869.4	472.4	535.4

End of Table 3.1

Years	Russia	India	Korea	Thailand	Vietnam	Singapore	Malaysia	Philippines	Indone
									sia
2017	842.2	843.9	2802.6	801.4	1219.9	792.7	961.4	513.1	633.3
2018	1071.1	955.1	3134	875.1	1478.3	827.6	1085.8	556.5	773.4
2019	1109.4	928.1	2845.3	917.5	1619.8	900.4	1240.5	609.6	797.6

Table 3.2 – The actual amount of foreign investment by country from 2011 to 2019, Ten thousand U.S. dollars [30]

Years	Russia	India	Korea	Thailand	Vietnam	Singapore	Malaysia	Philippines	Indonesia
2011	3102	4217	255107	10120	129	609681	35828	11185	4607
2012	2992	4406	303800	7772	316	630508	31751	13221	6378
2013	2208	2705	305421	48305	0	722872	28053	6726	12623
2014	4088	5075	396564	6052	7	582668	15749	9707	7802
2015	1312	8080	403401	4438	0	690407	48048	3867	10754
2016	7343	5181	475112	5615	0	604668	22113	7760	6399
2017	2384	15772	367253	11023	353	476318	10836	500	4076
2018	5677	4754	466688	4574	13883	521021	21162	4986	3246
2019	5402	2563	553817	10580	1720	759064	7013	1383	1242

Table 3.3 - 2011-2019 GDP of China and other countries, US\$100 million [37]

Years	Russia	India	Korea	Thaila	Vietnam	Singa-	Malaysia	Philippines	Indone-	China
				nd		pore			sia	
2011	20459	18230	12532	3708	1355	2793	2979	2342	8929	75515
2012	22082	18276	12784	3975	1558	2950	3144	2619	9178	85322
2013	22924	18567	13707	4203	1712	3075	3232	2839	9125	95704
2014	20592	20391	14843	4073	1862	3148	3380	2974	8908	104756
2015	13634	21035	14657	4012	1932	3080	3013	3064	8608	110615
2016	12767	22947	15001	4134	2052	3186	3012	3186	9318	112332
2017	15741	26527	16239	4562	2337	3418	3191	3284	10156	123104
2018	16575	27131	17248	5065	2452	3732	3587	3468	10422	138948
2019	16998	28689	16467	5435	2619	3720	3646	3767	11191	142799

Table 3.4 – Per capita GDP of China and other countries from 2011 to 2019, USD [37]

Years	Russia	India	Korea	Thailand	Vietnam	Singa-	Malaysia	Philippines	Indo	China
						pore			-nesia	
2011	14311	1458	25096	5492	1525	53890	10399	2450	3122	5618
2012	15420	1443	25466	5860	1735	55546	10817	2694	3643	6316
2013	15974	1449	27182	6168	1886	56967	10970	2871	3694	7050
2014	14095	1573	29249	5951	2030	57562	11319	2959	3623	7678

End of Table 3.4

Years	Russia	India	Korea	Thailand	Vietnam	Singa-	Malaysia	Philippines	Indo	China
						pore			-nesia	
2015	9313	1605	28732	5840	2085	55646	9955	3001	3491	8066
2016	8704	1732	29288	5994	2192	56828	9817	3073	3562	8147
2017	10720	1981	31616	6592	2365	60913	10259	3123	3837	8879
2018	11370	2005	33422	7295	2566	66188	11377	3252	3893	9976
2019	11584	2099	31846	7806	2715	65233	11414	3485	4135	10216

Table 3.5 – Additional calculation parameters [38, 39]

Country	Distance between country and China, km	Availability of a free trade agreement with China
Russia	5806	No
India	3788	No
Korea	960	No
Thailand	3309	Yes
Vietnam	2328	Yes
Singapore	4473	Yes
Malaysia	4354	Yes
Philippines	2841	Yes
Indonesia	5224	Yes

3. Model construction and regression

Based on the status quo of bilateral trade between China and the world's major trading members and regions, this article analyzes the variables that affect the bilateral trade volume, and rationally introduces and removes relevant variables, so as to establish an economy that conforms to the bilateral trade between China and the world's major trading members and regions Correlation analysis between variables. Through the analysis of the correlation between these variables, it can be seen that there are certain correlations among variables such as economic aggregate, investment level, geographic distance, bordering, absolute value of per capita balance, and whether to sign a free trade agreement, and so on. It will make an intuitive and effective judgment on the economic, political, and geographic factors generated by the bilateral trade between China and the world's major trading member countries and the impact on the development of bilateral trade. Based on the analysis of the original trade gravity model and the selected

indicators, the panel data model is constructed as follows:

$$Ln(T_{cpy}) = \beta_0 + \beta_1 ln(Y_{cy}Y_{py}) + \beta_2 ln(I_{cpy}) + \beta_3 ln(GDP_{cpy}) + \beta_4 ln(D_{cp}) + \beta_5 F_{cpy} + \mu_{cpy},$$
 (3)

where c – represents China;

p – represents the trading partner country;

y – represents the year.

The explanation of specific explanatory variables is shown in Table 3.6.

Table 3.6 – Explanation of explanatory variables, expected symbols and theoretical analysis

Explanatory variables	Variable description	Expected symbol	Analysis
T_{cpy}	The total bilateral trade volume between China <i>c</i> and its trading partner country <i>p</i> in <i>y</i> year		If the bilateral trade volume continues to increase, it indicates that the trade between the two countries is developing in a positive manner
I_{cpy}	Trading partner country p 's direct investment in China c in y year	+	Foreign direct investment is conducive to the development of bilateral trade. The greater the investment, the greater the bilateral trade.
$Y_{cy}Y_{py}$	The product of the GDP of China <i>c</i> and its trading partner country <i>p</i> in <i>y</i> year	+	GDP reflects the total economic volume and economic scale of a country or region. The larger the economic scale, the greater the capacity for supply and demand and the greater the bilateral trade volume.
GDP_{cpy}	The absolute value of the difference in GDP per capita between China <i>c</i> and its trading partner country <i>p</i> in <i>y</i> year	-	The larger the difference, the more the two countries will focus on interindustry trade and the smaller the bilateral trade volume. The smaller the difference, the more the two countries will focus on intra-industry trade and the larger the bilateral trade volume.
D_{cp}	Geographical distance between China <i>c</i> and trading partner country <i>p</i>	-	The farther the distance, the higher the transportation cost and the reduction of bilateral trade.
F_{cpy}	China <i>c</i> and its trading partner country <i>p</i> sign a free trade agreement in <i>y</i> year	+	Signing a free trade agreement to reduce trade barriers will help increase the bilateral trade volume between the two countries.

Use the data collected in the China Statistical Yearbook [30] to analyze the

trade gravity model through the Stata software of econometrics:

Table 3.7– Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Тсру	81	1000.107	663.666	322.5	3134
Icpy	81	119426.33	219658.3	0	759064
YcyYpy	81	997900000	896200000	102300000	4097000000
GDPcpy	81	11271.728	15192.377	126	56212
Dcp	81	3675.889	1425.644	960	5806
Fcp	81	0.667	0.474	0	1

It can be seen from Table 3.7 that, except for dummy variables, the standard deviation of each variable is extremely large, indicating that the sample data is extremely scattered, so in the following empirical steps, the above variables are processed logarithmically.

Table 3.8 – Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) LnT	1.000					
(2) LnI	0.470***	1.000				
(3) LnYY	0.413***	0.038***	1.000			
(4) LnGDP	0.331***	0.579***	0.035	1.000		
(5) LnD	-0.646***	-0.307***	-0.031	-0.313***	1.000	
(6) Fcp	-0.492***	-0.087	-0.826***	-0.101	0.269**	1.000

From Table 3.8 we can see the correlation between the two variables. The sign of the coefficient can reflect the positive or negative correlation of the two variables to a certain extent. *** means significant at the 99% confidence level, ** Indicates that it is significant at the 95% confidence level. It can be seen that the correlation between most indicators and the explained variable is very significant, indicating that the model is effective.

In the Hausman test, if the P value is greater than 0.1, the null hypothesis is accepted and the random effects model is selected. If the P value is less than 0.1, the null hypothesis is rejected and the fixed effects model is selected. The specific results are as follows:

- Chi-square test value is 3.02;

- P-value is 0.6969

According to the output result, the value of Hausman statistic is 3.02, and the corresponding P value is 0.6969, which means accepting the null hypothesis and establishing a random effects model.

Breusch and Pagan (1980) [40] provided an LM test to test individual random effects. The original hypothesis is H0: = 0, and the alternative hypothesis is H1: \neq 0. Through the LM test, we can know that the p value is 0.0000, which strongly rejects the null hypothesis, indicating that the original model should include the random disturbance item ui that reflects the individual characteristics, instead of using mixed regression, and choosing to use random effects regression.

 Table 3.9 – Regression results

 LnT
 Coef.
 St.Err.
 t-value
 p-value
 [95% C

 LnI
 0.032
 0.015
 2.07
 0.038
 0.0

LnT	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LnI	0.032	0.015	2.07	0.038	0.002	.061	**
LnYY	0.568	0.067	8.47	0.000	0.437	.7	***
LnD	-0.709	0.296	-2.40	0.017	-1.288	129	**
LnGDP	0.004	0.025	0.18	0.860	-0.044	.053	
F	0.604	0.34	1.77	0.076	-0.063	1.271	*
Constant	0.264	2.597	0.10	0.919	-4.827	5.355	

Mean dependent var 6		SD dependent var	0.511			
Overall r-squared	0.559	Number of obs	78.000			
Chi-square	149.001	Prob > chi2	0.000			
R-squared within	0.686	R-squared between	0.528			
*** p<.01, ** p<.05, * p<.1						

Table 10 shows the random effects regression results. From the data in the table, it can be seen that the R2 of the model is 0.686, and the model has a high degree of goodness of fit, indicating that the model setting is effective.

The following conclusions can be drawn from the results of the equation:

The p-value of the direct investment (LnI) of trading partner countries in China is 0.038, which is significant at the 95% confidence level, and the coefficient is 0.032, indicating that foreign direct investment is beneficial to the development of bilateral trade.

The explanatory variable has a product coefficient of 0.568 for the GDP of the two countries, indicating that the higher the GDP, the larger the economic scale and

the larger the bilateral trade volume. Therefore, for every 1% increase in the logarithm of the product of the GDP of the two countries, the logarithm of the bilateral trade volume between the two countries will increase by 0.568%. It further shows that the increase in GDP of China and Russia, the increase in total economic volume and economic scale, and the increase in economic level have a significant promotion effect on the bilateral trade between the two countries.

The p-value of the distance between China and its trading partners (LnD) is 0.017, which is significant at the 95% confidence level, and the coefficient is - 0.709, indicating that the distance is negatively correlated with the bilateral trade volume. Although the Chinese capital Beijing is relatively far from the Russian capital Moscow, the Northeast region represented by Heilongjiang is very close to the Russian Far East. Strengthening trade cooperation between Northeast China and the Russian Far East will be more conducive to the expansion of China and Russia trade.

The p-value of the per capita GDP difference (LnGDP) between the trading partner country and China is 0.860, and there is no significant correlation under the random effects model.

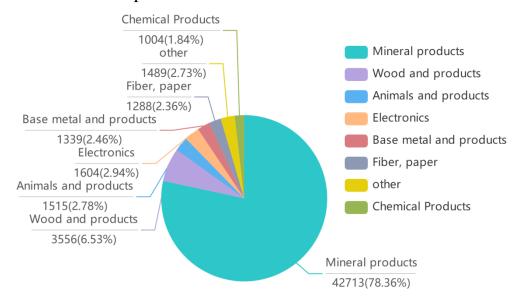
The p-value of the dummy variable whether to sign a free trade agreement (F) is 0.076, which is significant at the 90% confidence level, and the coefficient is 0.604, indicating that the signing of a free trade agreement does promote the growth of bilateral trade volume, which also shows that China and Russia The establishment of a free trade zone will produce trade creation effects, further showing that the establishment of a China and Russia free trade zone has a positive role in promoting the economic development of China and Russia.

3.2 Main problems found in China and Russia trade relations

The commodity structure of China and Russia bilateral trade is unitary

The problem of the structure of bilateral commodity trade between Russia and China still exists. Low-quality and low-tech commodities account for a large share of the trade volume, and the share of high-tech and high-value-added commodities is still small. In particular, the share of electromechanical products in the total trade volume between Russia and China is only 30%. At the same time, the share of mechanical and electrical products exported from Russia to China dropped from 30% in 1992 to 2.9% in 2018. The share of footwear, clothing, textiles, consumer goods, household appliances and daily necessities exported from China to Russia is about 75%.

According to the data in Picture 3.2, raw materials and resource products exported from Russia to China, such as crude oil and petroleum products, unprocessed wood, steel, non-ferrous metals, ore, and cellulose, account for more than 85% of total exports. The low proportion of high value-added commodities in bilateral trade has severely restricted the further expansion of the scale of bilateral mutual assistance and cooperation between Russia and China.



Picture 3.2 – Major commodities exported from Russia to China in 2019 (unit: millionU.S. dollars, %) [22]

The trade relationship between Russia and China has lasted for a long time, and trade cooperation has become stronger every year, but trade cooperation is mainly based on the factor endowments of the two countries. The trade cooperation between Russia and China is based on major resource commodities, and the import and export of commodities between the two countries is not balanced, and the

commodity structure is single. The main commodities that Russia imports from China are manufactured goods, with a share of over 80%. Russia imports a large amount of primary products. It should be pointed out that the structure of Russia's imports of manufactured products from China is unbalanced, and the volume of mechanical and electrical products in 2018 exceeded that in 2017. In 2018, the import value of mechanical and electrical products was 26,450 million U.S. dollars, and in 2017 it was 25,445 million U.S. dollars. Imports of mechanical and electrical products increased by 50.7%, and the share of other industrial products did not exceed 10%. The main products exported by Russia to China are mineral products, timber and mechanical and electrical products. In 2018, the growth rate of exports of mineral products reached 77.9%, and the growth rate of exports of other commodities did not exceed 8%. Therefore, the commodity structure of Russia and China has a single structure. Russia mainly exports natural resources to China, which makes up for China's shortage of energy resources. Commodity prices are largely determined by price fluctuations in the world market. Prices in the world market affect the value of commodities in Russia and China, which seriously affects the scale of trade between Russia and China. The drop in prices on the world market has exerted a huge negative impact on the trade cooperation between Russia and China. The drop in oil prices in 2014 affected the trade relationship between Russia and China. Therefore, the decline in oil prices in 2014 affected the trade relationship between Russia and China. For Russia, this is a big blow to the Russian economy, because Russia is an oil exporter. Russia mainly imports light industrial products and mechanical and electrical products with low added value from China. The production of mechanical and electrical products is labor-intensive and capital-intensive, and the development of high-tech requires a long period of time. High technology is the driving force for the development of domestic and foreign markets.

On the one hand, the trade volume of a single structure shows that only raw materials are competitive for other commodities that are not competitive in the world market. On the other hand, Russia's industrial structure has adjustment problems, as well as exports and imports. Therefore, this problem has led to the spontaneous and retrogressive development of trade cooperation. The internal structure of Russian industry is relatively low, which has led to a low level of imports and exports. The monotonic nature of the commodity structure of Russia-China trade cannot fully confirm that a real and promising competitive advantage becomes possible. Therefore, if the governments of the two countries do not take measures to diversify the trade between Russia and China, and if the cost of crude oil and other raw materials is reduced or continues to fluctuate significantly, it will be difficult to ensure a further steady increase in trade volume.

Imperfect trade management system

In Russia's strategic plan for the development of the Far East, the construction plan of transportation facilities cannot keep up with the speed and requirements of trade development, and the infrastructure and equipment required for cargo transportation are backward. Before the successful construction of the free trade zone, the transit period of goods was too long and the procedures were cumbersome. Regardless of trade cooperation with any country, special regulatory agencies should be established to ensure the quality and safety of commodity trade. The bilateral trade volume between China and Russia continues to grow under the "One Belt, One Road" initiative. Realistic reasons have promoted the feasibility of the construction of a China-Russia free trade zone. However, the development of the China and Russia trade supervision mechanism is still very imperfect and mature. In terms of transportation management between China and Russia, the transportation departments of the two countries lack effective negotiation and the improvement of the docking work, such as the inconsistency of traffic regulations, whether the two countries can reach agreement in the negotiation of railway construction in the common area, and whether the formulation and planning of transportation policies Both countries can accept, these factors have hindered the pace of the construction of the China-Russia free trade zone.

The border infrastructure service system is imperfect: Judging from the current status of trade between Russia and China, the border trade cooperation between the two countries is one of the key points of bilateral trade cooperation, but the infrastructure environment in the border areas is poor and the border trade service system is not sound To a large extent, it has restricted the development of border trade and bilateral trade between China and Russia. The main manifestations are the underdeveloped transportation facilities in the border areas, mainly railway transportation and passenger transportation, because some road sections in Russia are not accessible by train, and the imperfect transportation facilities make the two countries' trade cooperation inefficient and increase the cost of transportation. The second is the imperfect customs clearance procedures at the border areas of the two countries, and the interconnection facilities between the two countries are not sound enough, which leads to the time-consuming and labor-consuming process of the trade between China and Russia in the border transition process, which affects the turnover time of trade in goods. Third, the lack of an effective large-scale trade docking platform between the two countries has resulted in Chinese companies not being able to understand Russian trade information in a timely and effective manner, limiting the opportunities and development space for China and Russia trade cooperation, and also making Chinese companies changeable in Russia's policies, laws and regulations. It also cannot be grasped in real time, which greatly increases the risks of Chinese companies in the process of trading with Russian companies. Fourth, Russia's customs taxation problem is serious and the lack of a trade service supervision mechanism has led to many issues such as smuggling of goods, corruption, and inaccurate product verification in the China and Russia border areas, which will eventually lead to trade disputes between the two countries and affect China and Russia bilateral trade cooperation. quality.

The trade settlement system between the two countries is not perfect: In recent years, there have been more and more calls for the use of RMB settlement in trade cooperation between China and Russia. However, the development of trade cooperation between Russia and China has not adopted local currency settlement. USD settlement will not only increase trade between the two countries The currency risks of cooperative enterprises are also complicated in procedures, and it

is easy to cause product price differences during the currency exchange period, leading to disputes between Chinese and Russian enterprises in the process of trade cooperation. The reason why China and Russia did not use local currency for settlement has a lot to do with the underdeveloped financial system in Russia. From the perspective of the current development of Russia's domestic financial industry, its unsound financial industry structure has increased the process of currency exchange when trading with China. , The complicated procedures have delayed the time of trade settlement, leading to increased costs for Chinese companies in conducting trade with Russia, and at the same time inhibiting the development of domestic currency settlement business in China and Russia trade cooperation. Especially in the border areas of China and Russia, the financial industry is underdeveloped, and the financial system and facilities are very imperfect, which has played a negative role in hindering the use of local currency settlement in both countries.

Poor infrastructure and interconnection

Infrastructure such as transportation and energy supply are the basic guarantee for a country's economic and trade development. Infrastructure and its interconnection are the rigid foundation for promoting bilateral and multilateral trade and investment cooperation, product transportation, and free trade zone construction in the region. The poor state of infrastructure and interconnection such as transportation, energy supply and international communications between Russia and China is another important factor restricting the construction of a China and Russia free trade zone.

Table 3.10 – Ranking of China and Russia's Infrastructure Competitiveness in 2019 [43]

		Road		Railway		Aviation		Water transport		Electricity	
Country	Total	Road connectivity	Road quality	Railway density	Railway service	Air connection	Shipping service	Sea connectivity	Seaport service	Electrification rate	Power quality
China	36	10	45	61	24	2	66	1	52	2	18
Russia	50	41	99	68	17	18	52	43	47	3	61

Russia straddles the Eurasian continent. Although its infrastructure construction such as roads, railways, aviation, and water transportation has a certain foundation, most of them were built during the Soviet period, which is relatively old and of poor quality. Especially for roads, nearly 30% of the roads are of inferior quality. Maintenance standards. Although China's infrastructure conditions are slightly better than Russia's, it does not match its international status as the world's second largest economy. The Davos World Economic Forum report shows that in 2019, Russia's overall level of infrastructure competitiveness ranked 50th among the 141 economies assessed in the world, including road quality, railway density, power supply quality, water supply reliability, and The competitiveness of shipping service efficiency is particularly weak, ranking 99th, 69th, 61st, 53rd and 52nd respectively; China's overall level of infrastructure competitiveness ranks 36th, including drinking water safety and water supply reliability, Shipping service efficiency, railway density, seaport service efficiency and other competitiveness ranked 74th, 68th, 66th, 61st and 52nd respectively (shown in Table 3.10).

Not only that, the infrastructure interconnection between China and Russia is even worse, especially in terms of railway and highway interconnection. In terms of railways, the inconvenience of logistics caused by different rail distance standards is a major problem facing the interconnection of railways between China and Russia. In addition, China and Russia have different railway standard track standards, which has caused unnecessary transportation costs and reduced transportation efficiency in the process of reloading carriages between the two. In terms of roads, Russia's roads are mainly located in Europe, most of which are connected to European countries such as Finland, Ukraine, and Belarus, and only a few are connected to China.

1. The innovation capabilities of Chinese and Russian companies are relatively weak

From the perspective of trade economics theory, the productivity of

enterprises determines to some extent the trade mode and enterprise production methods. The level of enterprise productivity is directly determined by the enterprise's ability to innovate. As a result, the degree of participation of a country or a region in international trade activities directly depends on the size of its corporate innovation capabilities. With strong corporate innovation capabilities and deep participation in international trade activities, the easier it is to establish bilateral or international trade activities with other trading partners. Multilateral free trade zone. The weak innovation capabilities of China and Russia and their companies are an important factor restricting the establishment of a China-Russia free trade zone.

After the 18th National Congress of the Communist Party of China, the Chinese government placed technological innovation at the core of the overall national development and implemented an innovation-driven Technological innovation is becoming a new engine to promote the high-quality development of the Chinese economy. Statistics from the Ministry of Science and Technology of China show that in 2018, China's R&D investment intensity (R&D) expenditure as a percentage of GDP) was 2.18%, exceeding the average level of the 15 EU countries; the contribution rate of scientific and technological progress to China's economic growth increased to 58.5%, compared with 2012 An annual increase of 6.3%. Nevertheless, compared with the international advanced level, the innovation capability of Chinese enterprises still lags far behind.

Table 3.11 – Comparison of Global Ranking of Chinese and Russian Enterprises' Innovation Capability Competitiveness in 2019 [43]

	Total		n and diver	R&D					
Country		Staff diversity	Cluster developme nt	Internation al joint invention	Multi- stakeholder collaboratio n	Scientific papers	Patent application	R & D spending	Research institutions
China	24	78	26	50	30	13	32	15	2
Russia	32	37	101	54	48	22	48	34	9

The Davos World Economic Forum report shows that in 2019, the overall

competitiveness of Chinese companies' innovation capabilities ranked 24th among the 141 economies evaluated globally. Among them, diversity of employees, international joint inventions, trademark applications3 The secondary indicators ranked 78th, 50th and 46th respectively (according to Table 3.11). Compared with China, Russia's corporate innovation capabilities are generally weaker, but it has absolute advantages in employee diversity, and comparative advantages in secondary indicators such as international joint inventions, scientific research institutions, scientific papers, and patent applications. The Davos World Economic Forum report shows that in 2019, the overall competitiveness of Russian enterprises' innovation capabilities ranked 32nd among the 141 economies in the world. Among them, there are 4 items including cluster development, buyer maturity, trademark application and international joint invention. Ranked 101st, 80th, 77th, and 54th respectively in the second-level indicators; compared with China, Russian enterprises' innovation capabilities lag behind by 8 places overall, but lead 41 places in the second-level indicators of employee diversity. Secondly, it is only 4, 7, 9 and 16 behind in the 4 secondary indicators of international joint inventions, scientific research institutions, scientific papers and patent applications, respectively (according to Table 3.12). This also shows that China and Russia have a realistic basis for scientific and technological innovation cooperation.

The scale development of China-Russia trade is unstable

The trade cooperation between Russia and China is not fast enough and not stable enough. Russia mainly exports energy and mineral products to China, while China exports low value-added products and high-tech products to Russia. on the other hand. Russia and China account for a relatively high proportion of bilateral trade, while the three industries of Russia and China account for a relatively small proportion, which means that the development of Russia-China trade in services is relatively low. Russia's exports of mechanical and electrical products to China have decreased every year. The overall scale of Russia's exports of mechanical and electrical products to China dropped from 30% in 1992 to 2.9% in 2018. During the same period, Russia exported mineral products to China. Wood and products

and mechanical and electrical products accounted for 80% of the total export value. In 2018, Russia's imports of mechanical and electrical products and light industrial products from China accounted for the largest part of the overall Russian-Chinese trade. In 2018, China's exports of mechanical and electrical products to Russia accounted for 50.7% of 2017, and light industrial products accounted for about 20%.

Due to the internal and external influences of the economy, trade cooperation between Russia and China has been accompanied by fluctuations of different forces. From 1992 to 2018, the trade cooperation between Russia and China has been fluctuating. As can be seen from the above table, Russia-China bilateral trade cooperation is expressed by a wave curve, which shows the different dynamics of the development of trade relations between Russia and China in different time periods. From 1992 to 1993, the trade volume between the two countries increased, but in 1994, due to internal problems in Russia, the trade volume between Russia and China fell to 33%. From 1997 to 1998, there was another fluctuation in the trade volume between Russia and China. In 1997, the trade volume was 6.11 billion U.S. dollars. Compared with 1997, the trade volume dropped by 10.3% in 1998. After 1998, the growth of trade volume began to increase, but Russia has always had a deficit. In 2007, the trade volume between Russia and China reached 48.16 billion U.S. dollars, an increase of 44.2% over 2006. This is the first time Russia has seen a surplus of 8.82 billion U.S[42]. dollars in a long time. But due to the global financial crisis, there was another fluctuation in trade decline and trade growth rate dropped sharply. Compared with 2008, the trade volume in 2009 dropped to 31.5%. From 2010 to 2013, the Russian economy has been in a surplus trend. The growth of trade between Russia and China has increased, but the volume of trade is still not large enough. In 2013, due to the country's negative external factors affecting the Russian economy, this deterioration affected the scale of bilateral trade between Russia and China. From 2013 to 2016, Russia-China trade cooperation experienced a decline in trade volume. In 2018 Russia. The trade volume between China increased to 100.07 billion U.S. dollars, and the Russian

economy began to restore Russia's surplus to 18.97 billion U.S. dollars.

Therefore, it can be concluded that in the bilateral trade cooperation between Russia and China, trade cooperation is affected by external and internal factors. Therefore, the speed of trade cooperation between the two countries is relatively slow and the development of trade is unstable.

3.3 Proposals on the establishment of a China and Russia free trade zone

The construction of the China-Russia Free Trade Area is a long, complicated and systematic process. The free trade area is still in its initiation stage. The huge economic benefits brought by China will further provide effective guarantee for the economic security of the two countries. The development potential of China and Russia is still great. In the face of the urgent need for improvement, optimization, and improvement in the industrial structure, economic structure and cooperation methods between China and Russia, the construction of the China-Russia Free Trade Area is a time for both China and Russia. Both favorable methods should be highly valued by the Chinese and Russian governments and put on the agenda. Taking advantage of this good political and economic environment, adjust the economic structure, strengthen exchanges and cooperation, and achieve a win-win situation for the two countries' economies. In order to actively build a China-Russia free trade zone and make full use of its trade effects, this article puts forward the following suggestions:

Optimize trade structure and expand trade scale

To optimize the structure of China and Russia import and export trade, we must first progress and expand the scale of cooperation with Russia. China should rely on Heilongjiang's established cooperation platform with Russia and multiple overseas parks to open up land-sea transport channels with Russia, rely on the opening of Arctic waterways, and promote the close connection with ports in the Russian Far East, which is a commodity for China and Russia. Establish the

foundation for the two-way flow. The core of expanding the scale of trade is to improve the competitiveness of Chinese products, and to pay attention to the brand effect of the products and the building of reputation and reputation. Attach importance to the trademark registration and protection of Chinese products in Russia, brand promotion and patent technology application, core technology training and learning of international marketing strategies, improve corporate credibility and product quality, and form specialty products to expand the scale of trade with Russia.

China is an important equipment manufacturing country in the world. In recent years, the equipment manufacturing industry, automobile industry and high-tech industry have all become advantageous industries in China's equipment manufacturing industry. China's major exports to Russia are electromechanical products. On this basis, it should focus on increasing the proportion of high-tech products, precision instruments and automobiles in its export trade with Russia, and speed up the adjustment of the structure of exports to Russia.

Both China and Russia should work hard to find new growth points for trade. At present, China's exports to Russia are mainly concentrated in labor-intensive commodities, and Russia's exports to China are mainly concentrated in resource-based commodities. The two trade structures are simple and vulnerable to international market price threats, and their trade risk tolerance is low. At present, the trade volume between China and Russia accounts for a relatively low proportion of their respective foreign trade. The two sides have more areas to deepen cooperation in the future, and there is a huge potential for trade growth. China and Russia should gradually adjust their bilateral trade structure on the basis of deepening economic cooperation. Not only should they explore potential trade growth points in traditional cooperation areas such as energy cooperation, they should also use high-tech technologies as the fulcrum to actively develop the two countries' emerging industries. The cooperation between China and Russia has opened up new areas of cooperation for China and Russia trade to promote the growth of bilateral trade between the two countries.

Accelerate the promotion and innovation of energy resources cooperation paths China and Russia should use the docking and cooperation of key development and construction projects along the borders of the two countries as the starting point to accelerate the process of trade liberalization. In March 2007, China and Russia reached a consensus to combine the strategy of revitalizing China's northeast old industrial base with the development and construction of the Baikal region in the Russian Far East, creating an opportunity for cooperation in areas adjacent to the border between the two countries[43]. In 2009, China and Russia signed a natural gas agreement, and will launch new cooperation models in oil, natural gas, coal, nuclear power and other fields, and jointly invest in the development of Siberian oil and gas projects, including cooperation in upstream oil production and downstream cooperation in refining projects. In 2010, Russia proposed key projects in the Baikal region of the Far East and introduced an economic development strategy until 2025. The strategy clearly mentioned cooperation with China's northeast border. In 2012, China issued a detailed plan for the revitalization of the Northeast, and Russia subsequently issued an outline for the development of the Baikal region outside the Far East. This shows that China and Russia have raised their strategic cooperation in the revitalization of the Northeast and the development of the Russian Far East to the height of their national development strategy.

Energy cooperation occupies the largest weight in the field of China and Russia economic cooperation, has achieved the most results, and is also the most extensive field of cooperation between the two countries. Russia has very rich mineral resources such as oil and natural gas. Russia has 80 billion barrels of oil reserves, ranking eighth in the world, and proven natural gas reserves of 38.9 trillion cubic meters, which ranks first in the world. The energy industry has therefore become an important pillar industry in Russia. On the one hand, for China, choose Russia. Energy resources have many advantages. Relatively close distance, low cost, and sufficient and stable gas source can meet the needs of domestic economic efficiency; on the other hand, from the perspective of Russia, it

needs to expand the Asia-Pacific market to cope with the US market in Europe. Squeezed on the market, thereby consolidating its position in the international energy market. In particular, the commissioning of the natural gas pipeline on the eastern route of China and Russia has brought the economic and trade cooperation between China and Russia to a higher level.

Most of China's previous energy imports came from the Middle East. However, the sensitive political issues in the Middle East and the unstable regional situation make it difficult for China to have a security guarantee for trade with these countries. Under China's "One Belt, One Road" initiative, China and Russia achieve regional energy cooperation. On the one hand, it has ensured that the comprehensive strategic partnership between China and Russia has entered a new stage; on the other hand, as the international energy landscape changes, The strengthening of energy cooperation between China and Russia has provided a guarantee for the political and economic development and stability of the remote areas of the two countries. The energy cooperation between China and Russia has such great potential. What kind of development path should be taken to maximize the effect of the energy economy? The current energy cooperation between China and Russia is in a small-scale and small-regional cooperation model. In the process of the construction of the China-Russia Free Trade Area, energy cooperation is regarded as the main driving force for the construction of the China-Russia Free Trade Area, and the dialogue mechanism between governments has been actively carried out, and energy cooperation agreements have been signed and continuously improved.

Promoting the construction of the China-Russia Free Trade Area, China and Russia have huge development potential and space in certain commodities and fields is the main reason, because China and Russia have a large room for economic complementarity, especially in the energy field. Big. Therefore, China and Russia may wish to develop a plan for the construction of a free trade zone around the cooperation in the energy field, so that the construction of the China-Russia free trade zone has more vitality and development potential. On the premise

of insisting on energy trade as the mainstay, China and Russia, through continuous consultations between the governments of China and Russia, broaden the access channels for China and Russia trade commodities, lower the threshold for energy investment, and encourage and support more private enterprises to participate in the process. Energy investment in Russia and Russia.

Promote investment and financial cooperation, and accelerate China-Russia infrastructure construction

After 2000, China's direct investment in Russia has grown slowly, not large in scale, and in a lukewarm state. In 2003, China's investment in Russia was US\$31 million; in 2004, China and Russia organized investment promotion conferences to expand Chinese companies' investment projects in Russia; at the end of 2006, the total number of Chinese investment projects in Russia was 736; In 2009, China's direct investment in Russia was US\$348 million, and Russia's direct investment from China was US\$32 million; in 2010, China's non-financial direct investment in Russia was US\$594 million; in 2011, it was US\$303 million, a slight decrease year-on-year; 2012 It was US\$656 million in the year, an increase of 11.6% year-on-year; China's cumulative non-financial investment in Russia was US\$4.42 billion. However, Chinese investment accounts for a small proportion of foreign investment in Russia. On the whole, mutual investment between China and Russia lags behind each other's political and economic development. It can be seen that there is great potential for development in the field of investment between China and Russia.

In recent years, Russia has introduced a development strategy for the Baikal region in the Far East, encouraging Chinese companies to participate in the development of the Russian Far East, which has attracted a lot of Chinese investment. From the perspective of investment industry, China's investment in Russia's agriculture, forestry, animal husbandry, sideline fishery and other industries accounted for a larger share, accounting for nearly 30% of the stock of direct investment in Russia; followed by the real estate industry, leasing, and business services, where the investment situation is also relatively large. active.

Russia's investment in China is mainly in manufacturing, textiles, chemical raw materials and products, construction, wood processing, and transportation. The investment targets are mainly in the three northeastern provinces and coastal areas. Due to Russia's insufficient funds and slow economic recovery, the level of Russia's direct investment in China needs to be improved. The mutual investment between China and Russia seems to be still in its infancy, and there is still much room for growth in the future. Mutual investment is an important part of China-Russia economic and trade cooperation, and investment can drive China-Russia trade. We suggest that China and Russia can hold investment and trade exchange meetings, business project negotiation and matchmaking activities, and establish investment funds, mainly for companies in China and Russia that have needs and projects, and build a platform for their supply and demand in trade and investment to promote Its capital, resources, technology, etc. are optimized and integrated. As the China-Russia relations continue to deepen, the investment environment of the two countries will definitely be improved, and investment efficiency and benefits will also gradually increase[44].

At present, China-Russia bilateral trade and financial services are relatively simple. The vast majority of bilateral trade volume is settled in rubles and U.S. dollars. The settlement methods and channels are single and there are few effective bilateral settlement tools. This has become a key issue that restricts the sustained and rapid development of bilateral trade between the two countries. . With the changes in the international cooperation environment and the deepening of the strategic cooperation between the two countries, Russia is expected to further expand the scope and channels of RMB bilateral settlement, establish an effective RMB bilateral settlement mechanism, and further improve the financial service system of bilateral trade between the two countries. Improve financial risk foundation for prevention capabilities and lay the advancing internationalization of the RMB. In addition, the construction and development of the China-Russia Free Trade Zone cannot be separated from the continuous support of funds. Improving the infrastructure and interconnection between China and Russia requires a large amount of funds. The existing funds of the two governments are far from meeting the construction needs. The shortage of funds is the biggest difficulty facing. In the process of establishing a China and Russia free trade zone, various forms of capital should be used flexibly, and on the basis of effective supervision and guidance, the powerful innovative functions of the financial system should be fully utilized, and innovative financial tools such as "special funds" should be used to redistribute capital. It encourages private capital investment, effectively guides the rational flow of idle capital between the two countries, and improves the efficiency of capital use, so as to effectively solve the problem of shortage of funds during the construction of the trade zone, thereby providing capital guarantee for the advanced development of China and Russia trade.

The key to the future of the China-Russia Free Trade Zone is to innovate financing models and financial service methods, and promote the construction of infrastructure and interconnection between China and Russia in transportation, energy supply, and international communications. On the one hand, innovate financing models, develop a win-win government and social capital cooperation (PPP) model, and attract more social capital to participate. The Chinese and Russian governments can apply and promote this model to attract and promote social capital to participate in their infrastructure and interconnection construction. On the other hand, innovate the financial service methods of financial institutions to provide high-quality and efficient financial services for the infrastructure and interconnection construction of the two countries. It is necessary to strengthen the guidance of the above-mentioned four major international financial institutions, Chinese-funded financial institutions and China and Russia investment funds, and promote them to innovate financial service methods through overseas trade and direct investment in RMB settlement, bond issuance or income and asset securitization. And improve financial service capabilities, and promote the implementation of major projects such as infrastructure construction[45].

Improve the bilateral trade service system

The construction of the trade service system plays a vital role in international trade cooperation. It can promote the facilitation, standardization and institutionalization of China and Russia trade cooperation, and can fully safeguard the common interests of the bilateral enterprises of China and Russia and the harmonious development of bilateral trade. However, the current China and Russia trade cooperation lacks such a complete and complete trade service system. Specifically, the construction and improvement of the trade service system can be carried out from several aspects:

First, the customs procedures of China and Russia should be simplified. Due to the complexity of the customs procedures at the border between China and Russia, the import and export process of China and Russia trade has increased, which greatly delays the sales time of goods and increases the import cost of enterprises; Second, we should strengthen cooperation in infrastructure construction in border areas, improve border port environment and logistics facilities, provide convenience for the development of China and Russia import and export trade, and reduce the obstacles of trade development companies; third, actively eliminate existing in China and Russia. Trade barriers between countries, including tariff barriers and technical barriers, etc., set up customs services in the border areas of China and Russia to ensure the smooth transfer of goods between China and Russia at the border.

The establishment of a China-Russia free trade area cannot rely solely on trade in goods. It also requires a developed service industry to make the construction of the free trade zone smoother. There are still many problems in the service trade between China and Russia that need to be improved, such as the border between China and Russia. Compared with the developed railway transportation, the logistics industry does not match it; the volume of China-Russia cargo transactions is increasing, but the customs clearance procedures are extremely cumbersome, the transit time of goods is long, and the efficiency of the Russian border formalities is not high; China and Russia The two countries have incomplete understanding of each other's market information, and lack a relatively authoritative intermediary

agency to enable the two countries to fully understand each other's investment environment, government policies, and other information.

Therefore, in the process of strengthening the construction of the China-Russia free trade zone, China and Russia should actively promote the development of service trade, transform the development of foreign trade, establish a mechanism for resolving trade disputes, improve relevant laws and regulations, and enable both parties to actively strengthen communication and consultation., And strive to build a service trade system integrating finance, taxation, insurance, logistics, tourism, study abroad and other diversified services. Vigorously develop the logistics industry, so that the transportation time between China and Russia can be shortened, and transportation efficiency can be improved; vigorously develop the financial, insurance, and consulting industries, which can standardize bank settlements, greatly reduce the import and export risks between China and Russia, and make the trade process more efficient. Smooth; vigorously develop the labor service cooperation industry, make the two countries' human resources reasonable allocation, and promote the labor cooperation between the two sides. Actively improve the service trade system, so that various types of service trade serve the personnel of the two countries and the goods trade between the two countries, and promote the construction of the China-Russia free trade zone more smoothly.

In addition to the trade dispute settlement mechanism, a legal mechanism for trade cooperation regulations should also be established to use laws to restrict trade cooperation between China and Russia. Both Russia and China should actively adjust their own policies and regulations around the WTO framework rules, so that their legal regulations can be aligned with international rules, and the differences in legal regulations for international trade cooperation between Russia and China should be narrowed. In addition, Russia and China should further improve and improve legal remedies. For example, in addition to the "Foreign Trade Law", loopholes in the "Anti-Subsidy Law" and "Anti-dumping Law" should be further improved and improved, and the international standards should be approached and adjusted so that the legal mechanisms of the two countries can effectively protect

the two countries. The development of bilateral trade cooperation plays its due role.

Enhance technology and Cultural exchanges

Not only the governments of the two countries, but also the academic and industrial circles of China and Russia should enhance exchanges. Through communication and research, it is clear that the significance of China-Russia trade liberalization is huge and that China and Russia are a community of shared future with highly integrated interests. The construction of a China-Russia free trade zone has an important role in promoting the prosperity of foreign trade between the two countries. In particular, it is a brand-new development opportunity for Russia, which has just joined the WTO. The two countries should establish a multi-level dialogue mechanism based on a good foundation of political mutual trust. Through exchanges and discussions from all walks of life, the good political mutual trust should be expanded into mutual trust in politics and economy, and dialogue and exchanges in regional cooperation should be strengthened to further promote China. More comprehensive and higher-end multi-engine cooperation between Russia. Judging from the current development of China-Russia bilateral trade, the economic and trade cooperation between the two countries has a good development trend and huge potential for cooperation. China has mature conditions and can propose to the Russian Federation a proposal for the establishment of a China-Russia free trade zone. Through equal dialogue and friendly consultations, China and Russia should strive to reach an agreed reform and development direction as soon as possible after discussions and demonstrations by high-level governments of the two countries and experts and scholars from all walks of life, draw up basic lines and frameworks, and establish specific implementation steps. The establishment of a free trade zone is an important impetus for the continued friendly development of China-Russia economic and trade, and it is also a strong guarantee for long-term economic benefits[46].

We should look at China-Russia relations from a strategic perspective. From a long-term perspective, China-Russia cooperative relations should be

comprehensive and multi-faceted. China-Russia cooperation should not only be limited to economic and trade aspects, but should also focus on science and technology and people-to-people exchanges. Economy, technology, and humanities go hand in hand. Especially in the field of culture, the Chinese and Russian people's respect, recognition and acceptance of each other's culture are the foundation of the deep cooperation between the two countries. In 2004, China and the Russian Far East held the China-Russia Cultural Exchange Week with the theme of friendly exchanges and development. The people of the two countries conducted friendly consultations on each other's science and technology and cultural fields, which enhanced cultural exchanges and integration between China and Russia. The "China-Russia National Year" activities held in 2006 and 2007 covered various fields such as politics, economy and trade, culture, education, and science and technology. These beneficial exchange activities enabled the Chinese and Russian people to understand each other's culture and enhanced friendship and feelings. In addition, Moscow has held Chinese competitions for university and middle school students. Cultural exchange activities such as the Language Year and Tourism Year jointly organized by the two countries have established a platform for communication and exchanges between the two peoples and enhanced mutual trust and friendship between the peoples. The deep development of China-Russia relations is inseparable from cultural exchanges. China-Russia friendly relations are based on the importance and recognition of each other's culture. This kind of mutual trust and recognition is conducive to overcoming cultural obstacles in China-Russia cooperation. An important thrust that cannot be underestimated when establishing a free trade zone.

Summary of Chapter 3

This chapter introduces the trade gravity model, selects the main trading member countries, and calculates the regression equation based on the influencing factors. The calculation shows that for every 1% increase in the GDP of the two countries, the logarithm of the bilateral trade volume between the two countries

will increase by 0.568%. For every 1% increase in direct investment, the trade volume increases by 0.032%. It further shows that the increase in the scale of investment between China and Russia and the improvement of the economic level have a significant promotion effect on the bilateral trade between the two countries, and the signing of the free trade agreement has a positive effect on the growth of the bilateral trade volume (0.604%).

Through data research and analysis, there are problems in bilateral trade between China and Russia, such as a single product structure, an imperfect trade management system, insufficient infrastructure, and weak innovation capabilities. In order to solve the above problems, the following suggestions are proposed: the need to optimize the trade structure, expand the scale of trade between the two countries, accelerate the cooperation between the two countries in finance and new energy, and improve the bilateral trade service system to promote the China-Russia free trade zone construction.

CONCLUSION

Based on the theories of customs union, big market, free trade area, absolute advantage, etc., this article expounds the development characteristics and current situation of China-Russia bilateral trade. By using the trade gravity model to analyze the main factors affecting China-Russia trade, it determines the freedom of China-Russia trade. The establishment of a trade zone will promote the two countries. Through research, this article has reached the following conclusions:

First, China and Russia already have the basic conditions for establishing a free trade zone and the establishment of a free trade zone is necessary for the development of the two countries. With the establishment of the free trade zone, the economic development of the two countries will surely be promoted. The specific manifestations are: the competitiveness of enterprises is improved, attracting foreign investment; the country's export trade will increase and show a trend of diversification; technological innovation capabilities will be improved Correspondingly, the country's income and foreign exchange reserves will be greatly increased at the same time. Combining the development experience of the major free trade areas in the global economy: the European Union, North American Free Trade Area and the ASEAN Free Trade Area, it is concluded that the free trade area has regional characteristics and differences and has a certain degree of exclusivity. Based on the stable relationship between China and Russia and on the 4,300 km border between China and Russia, there are already more than 20 open port cities, as well as railways, roads and other facilities jointly built by the two countries, which provide economic and trade links between the two countries. Convenient transportation. List important border trade cities as the core area of the free trade zone and carry out the construction of the free trade zone.

Second, the development of China-Russia trade has gone through three stages: the tortuous development stage was from 1992 to 2000. During this period, the development trend of bilateral trade between China and Russia was wavy and the growth rate of trade volume fluctuated greatly. The most important feature of the

China-Russia commodity structure is that China's exports to Russia are mainly labor-intensive products, and Russia's exports to China are mainly primary raw materials, and the types of commodities exported by both sides are single and stable. The period of rapid development from 2000 to 2008. Although the growth rate of China-Russia trade volume fluctuated, both were above 11%. The bilateral trade volume showed a clear upward trend from USD 8 billion in 2000 to USD 56.9 billion in 2008. An increase of more than 611%. Today, China-Russia trade is in a steady upward phase. From 1992 to 2019, Russia's exports to China increased by nearly 17 times, from 5.69 billion US dollars to 11.07 billion US dollars, indicating that the bilateral trade volume between China and Russia has been increasing.

At the same time, the closeness of the trade between China and Russia has continued to increase. According to Russian customs statistics, the import and export volume of bilateral goods between China and Russia in 2016 was US\$71.15 billion. China has become Russia's second largest export market and largest source of imports., Continue to maintain Russia's largest trading partner status, accounting for 14.1% of Russia's foreign trade. From 2014 to 2018, China has been Russia's main trading partner, and China's trade share with Russia has increased year by year. According to the data in 2019, the bilateral trade between China and Russia is mainly through direct trade (54.1%), small border trade (34.5%) and processing trade (8.2%). In recent years, the field of China-Russia investment cooperation has continued to develop, and the scale of China's direct investment in Russia has shown an expanding trend. Before 2012, the flow of China's direct investment in Russia had not exceeded US\$1 billion. The investment scale fluctuated greatly from 2013 to 2018. The annual investment reached a peak of US\$2.962 billion. As of the end of 2018, the stock of Chinese investment in Russia was US\$14.21 billion, which was 5.1 times the investment stock in 2010.

Third, there is still a problem of a single product structure in China-Russia bilateral trade, but it has gradually begun to develop in a more optimized direction. By comparing the previous commodity trade structure of the two countries, it is

concluded that mineral products (75.2%) and wooden materials (6.5%) still dominate the Russian export structure to China. China's exports to Russia are mainly manufactured products such as mechanical and electrical products (47.7%), light industrial products (7.8%), and chemical industrial products (8.5%). The structure of China-Russia commodity import and export is determined by the actual economic structure and resource structure of China and Russia. Oil and natural gas are Russia's traditional export advantages, and neighboring countries and regions such as the European Union and China are Russia's main exporters of oil and gas resources. Secondly, Russia's insufficient domestic labor productivity and relatively high labor costs have caused Russia's light manufacturing industry to be underdeveloped. Therefore, among China's exports to Russia, labor-intensive products have a strong comparative advantage. At present, China is gradually transforming from labor-intensive to technology-intensive, and Russia has optimized the structure of its main advantageous products, which makes China and Russia have considerable complementarity, and the difference in trade structure makes the construction of the China-Russia free trade zone very useful. Strong feasibility.

Fourth, through the trade gravity model, the following conclusion can be drawn by selecting the data of major trading member countries to calculate the regression equation: for every 1% increase in the GDP of China and Russia, the logarithm of the bilateral trade volume between the two countries will increase by 0.568 %. It shows that the higher the GDP, the larger the economic scale and the larger the bilateral trade volume. For every 1% increase in direct investment, trade volume will increase by 0.032%. This further shows that the increase in the scale of investment between China and Russia and the improvement of the economic level have a significant role in promoting bilateral trade between the two countries. With the signing of the free trade agreement, each percentage of the bilateral trade volume will increase by 0.604%. It shows that the signing of a free trade agreement does promote the growth of bilateral trade volume, which also shows that the establishment of a China-Russia free trade area will produce trade creation

effects, and further shows that the establishment of a China-Russia free trade area has a positive effect on the economic development of China and Russia. To promote the role.

The completion of the China-Russia Free Trade Area will definitely reduce or abolish certain tariff and non-tariff barriers, thereby reducing the prices of goods in China and Russia and increasing consumer surplus. For the domestic industries of the two countries, the use of domestic production costs will be eliminated. Products and resources, and then turn to low-cost, low-priced products and resources of importing member states, the free flow of production materials, and the improvement of production efficiency, not only can give play to each other's advantages, but also greatly increase the utilization rate of production factors, which is more conducive to The specialized division of labor between the two countries has accelerated the trade exchanges between China and Russia and increased the bilateral trade volume between China and Russia. Therefore, the establishment of the China-Russia Free Trade Area will have a trade creation effect.

Fifth, there are still problems in the current China-Russia trade relations, such as imperfect trade management system, weak infrastructure, weak innovation capabilities of the enterprises of the two countries, and unstable trade scale development. To improve and solve the above-mentioned problems is a prerequisite for the establishment of a China-Russia free trade zone. By optimizing the trade structure, expanding the scale of trade, and actively carrying out cooperation in the emerging industries of the two countries before, it will promote the growth of bilateral trade between the two countries. Accelerate the promotion of key development and construction projects in the two countries: In 2010, Russia proposed the key promotion projects in the Far East Baikal region and issued an economic development strategy until 2025. The strategy clearly mentioned cooperation with China's northeast border. The construction of trade zone. Speed up the construction of the previous infrastructure between China and Russia, improve the bilateral trade service system, ensure the smooth development of trade

cooperation between the two countries, and reduce a series of risks caused by the imperfect trade service system. Both China and Russia need to make full use of their own advantages, adopt a positive attitude, and work together to build a free trade zone between the two countries. The economic and trade cooperation between China and Russia will have broader and far-reaching development.

REFERENCE

- 1 Xu Yongzhi. Research on the issue of building a China and Russia free trade zone[D]. Jilin University, 2016.
- 2 Vishal Perrie Park. The importance of developing border trade between China and Russia. The World Economics, 2005.
- 3 Kellerhals ,Merle David Jr. Clinton: China, Russia Trade Pacts Show Economic Interdependence. State Department Documents/FIND, 2009.
- 4 AB Ostrovsky, translated by Lin Lin. Joint development plan, problems and prospects of the Russian Far East and Northeast China[J].Russian Journal, 2012(2):1323.
- 5 Terry Sicular. Capital Flight and Foreign Investment: Two Tales From China and Russia[J]. World Economy, 1998, 21(5).
- 6 Michael A. Hitt, David Ahlstrom, M. Tina Dacin. The institutional effects on strategic alliance partner selection in transition economies: China VS. Russia. Organization Science, 2004, 15 (2):173-185.
- 7 Titarenko's "Russia and China Cooperation in the Context of Globalization", 2005 edition.
- 8 Robert Waschik. The effects of free trade areas on non-members: Modelling Kemp–Vanek admissibility[J].Journal of Policy Modeling,2009,31(5).
- 9 Yu Zhen, Chen Jiyong, etc. The trade, tariff and welfare effects of China-Russia FTA are based on WITS-SMART Simulation analysis of [J]. East China Economic Management, 2014 (6).
- 10 Chen Shuhua. Analysis of the positive effects of the China and Russia establishment of the Belarusian trade zone[J]. Siberian Studies, 2008 (2).
- 11 Nechukhaeva Ekaterina. Analysis of the development of bilateral trade between Russia and China [D]. Hebei Normal University, 2019.
- 12 Li Siyuan. Research on the feasibility and effect of the construction of China-Russia Free Trade Area under the background of "One Belt One Road" [D]. Guangdong Finance and Economics University, 2016.

- 13 Sun Xiaoyu. Future-oriented China and Russia Economic and Trade Relations[M]. Beijing China Development Press. 2003:24-150.
 - 14 Tsoulfidis L.David Ricardo's Principles of Political Economy[M]. 2009.
- 15 Kaiser W,Leucht B, Rasmussen M.The History of the European Union[M]. 2008.
- 16 Yakubovskiy S, Rodionova T,Tsviakh O.Development history of the North American Free Trade Area.2020.
- 17 ASEAN-CHINA Free Trade AREA business portal.URL:http://www.asean-cn.org/
- 18 Liu Ning, Wu Pengfei. "Analysis of the Welfare Effect of the ASEAN Free Trade Area", "International Trade Issues", Issue 9, 2003.
- 19 Li Xiaochen, Yu Luyao. Research on the development of China-Russia natural gas trade under the background of "One Belt One Road" [J]. Management and Technology of Small and Medium-sized Enterprises (Mid-day Issue), 2019.
- 20 Liu Huaqin. Opening up a new era of China and Russia economic and trade cooperation—a review and prospect of China and Russia economic and trade cooperation in 70 years [J]. Russian, Eastern Europe and Central Asia Studies, 2019.
- 21 Yuan Xintao. National Strategic Analysis of "One Belt One Road" Construction[J]. Theory Monthly, 2014, (11): 5-9.
 - 22 China Ministry of Commerce Database.URL:http://english.mofcom.gov.cn/
- 23 Wang Jinliang. An Empirical Analysis of the Main Factors Affecting China and Russia Trade[J]. Russian Central Asian and Eastern European Studies, 2008, (03): 39-43.
- 24 Li Xuexin, Song Jialiang. Research on China and Russia Relations Promoting the Development of Northeast Region in the New Situation[J]. Theoretical Discussion. 2018(05)
- 25 Li Zhangmiao, Cheng Baihua. China and Russia economic cooperation in the context of the Belt and Road Initiative[J]. Think Tank Times. 2018(30)
- 26 Marcel de Haas. Russia-China security cooperation. Power and Interest news report, 2006, (1).

- 27 Ministry of Commerce Country
- Report.URL:http://english.mofcom.gov.cn/
- 28 An Zhaozhen. Feasibility study on the establishment of China-Russia Belarusian Trade Zone[J]. Siberian Studies, 2014.
- 29 Mu Xue. Research on the issue of creating a China-Russia free trade zone [D]. Baoding: Hebei University. 2014.
 - 30 China Statistical Yearbook.URL:http://www.stats.gov.cn/tjsj/ndsj/
- 3. Guo Weihan. Research report on the development plan of China-Russia free trade zone [D]. Zhejiang University, 2014.
- 32 Li Siyuan. Research on the feasibility and effect of the construction of China-Russia Free Trade Area under the background of "One Belt One Road" [D]. Guangdong University of Finance and Economics, 2016.
- 33 Cao Haixia. The status quo and development prospects of Russia-China economic cooperation[J]. Northern Economy and Trade, 2013 (7).
- 34 Yang Guantong, Li Taoran. Problems and countermeasures in Russia-China economic cooperation [J]. Industry and Technology Forum, 2013.
 - 35 Country Report-URL:https://countryreport.mofcom.gov.cn/
- 36 Liu Yongming, Zhu Yuanqiu, Lu Yiqing. Research on the efficiency and potential of China and Russia bilateral trade under the background of "One Belt and One Road"——Basic Yu Stochastic Frontier Gravity Model (SFGM)[J]. Economic System Reform, 2018 (9).
 - 37 World Bank official website URL:https://data.worldbank.org/
 - 38 Google Earth URL:https://www.google.com/earth/
 - 39 China Free Trade Zone Service Official URL:http://fta.mofcom.gov.cn/
- 40 Breusch, T.S. and Pagan, A.R. (1979) A Simple Test for Heteroskedasticity and Random Coefficient Variation. Econometrica, 47, 1287-1294.
- 41 Hao Yubiao. Analysis of the influencing factors of the level of China and Russia trade cooperation—based on the trade gravity model [J]. Economic and Social Body System comparison, 2013

- 42 Zhu Xinguang, Liang Rui. The adjustment of Russian foreign trade rules after joining the WTO and its impact on China and Russia trade[J]. Siberian Studies, 2018 (8)
- 43 Davos World Economic Forum 2020 Report.URL:https://www.weforum.org/
- 44 Liu Shuang. Research on accelerating Russia-China economic and trade structure adjustment in the post-financial crisis period [J]. Research on Russia, Central Asia and Eastern Europe, 2010 (3).
- 45 Zhang Jiani, Ma Chunming, Zhou Yidan. New opportunities and potential problems for the development of China and Russia trade under the "Belt and Road" Initiative[J]. Inner Mongolia Coal Economy, 2016 (12).
- 46 Cao Yang. The influence of Russia's entry into WTO on Russia-China trade and its countermeasures[J]. Northeast Asia Forum, 2012 (6).
- 47 Zhao Xia. Research on the Complementarity of China and Russia Trade Relations [J]. Contemporary Economy, 2017 (12)