

Research on Trade Competitiveness and Trade Potential of Sino-Russian Agricultural Products

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ABSTRACT

As two neighboring agricultural powers, China and Russia have always attached great importance to the agricultural cooperation between the two sides. Especially after China promoted the Belt and Road Initiative, building the China-Mongolia-Russia Economic Corridor and other major economic development strategies, the two countries have become more closely linked in the trade of agricultural products, and have actively explored deeper cooperation. This paper analyzes the competitiveness of Sino-Russian agricultural products trade, and then discusses the trade potential of Sino-Russian agricultural products under the Belt and Road Initiative through the gravity model. Aiming at the problems existing in Sino-Russian agricultural products trade, this paper puts forward some countermeasures for the cooperation development of Sino-Russian agricultural products trade.

KEYWORDS: *Sino-Russian agricultural products trade; trade potential; trade competitiveness; the Belt and Road Initiative*

INTRODUCTION

Since the 21st century, the scale of China's agricultural products import and export has been continuously expanding, and the consumption of agricultural products has been continuously upgrading, which not only drives the economic development but also promotes the continuous optimization of the structure of agricultural products and the transformation and upgrading of the industrial structure of agricultural products. The Belt and Road Initiative put forward by China has received positive responses from Russia and many other countries. As friendly neighbors, China and Russia both have great demand in the field of agricultural products. The field of agricultural products trade is a product trade with great regional influence and is a major issue concerning the national economy and people's livelihood. Under the current situation of COVID-19 epidemic sweeping the world and the rise of anti-globalization wave, studying the current situation and problems of Sino-Russian agricultural trade, developing the development potential of agricultural

trade between the two countries, exploring a new breakthrough in China's agricultural trade, and strengthening Sino-Russian agricultural cooperation and exchange have great theoretical and practical significance to the economy and people's livelihood of the two countries. Their importance and urgency are increasingly prominent.

I. Literature Review

Trade between China and Russia in agricultural products has always been a topic of concern to scholars. Novopashina (2013)^[1] believes that increasing foreign direct investment can promote the development of bilateral trade between China and Russia. Tong Guangji and Shi Lei (2016)^[2] proposed that market size and trade openness are important factors affecting the development level of intra-industry trade in agricultural products between China and Russia. Petboy (2017)^[3] uses the trade gravity model to analyze the influencing factors of Sino-Russian agricultural product trade cooperation, and

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puts forward suggestions on improving the investment environment, perfecting the supporting infrastructure construction, and establishing Sino-Russian agricultural production bases along the road. Wu Xuejun (2010)^[4], Sun Yuxin (2016)^[5], Hu Guoliang and others (2020)^[6] measure intra-industry trade indexes such as Revealed Comparative Advantage and Trade Complementarity Index on the level of product segmentation. It is found that the agricultural products exported from China to Russia are mainly labor-intensive agricultural products such as aquatic products, vegetables and fruits, while the agricultural products exported from Russia to China are mainly forest products. Besides fish, crustaceans and molluscs and products, the advantageous agricultural products of China and those of Russia are different and highly complementary. The large structural difference in import and export trade between the two sides is also one of the reasons for the trade deficit (Tong Guangji and Shi Lei, 2017)^[7].

In view of the problems existing in Sino-Russian trade, scholars have carried out further research. The obstacles in Sino-Russian agricultural economic and trade cooperation are mainly reflected in the difficulties in financing development, large trade barriers in agricultural products, lagging cooperation in processing and trading of agricultural products, low efficiency of Russian customs in freight and passenger transport, and low efficiency in finance and taxation (Luo Xiaoli, 2012)^[8]. Luan Shaoxiang (2014)^[9] Through the analysis of the data and policies of the trade in rural products between China and Russia, this paper summarizes the problems faced by the agricultural cooperation between China and Russia, which are mainly as follows: the cooperation mode is mainly small border trade, the agricultural products trade is mainly in the middle and low end, the support to the agricultural enterprises in Russia is insufficient, and the agricultural labor cooperation is at a low level. In addition to the traditional tariff trade barriers, Sun Hongyu and Tong Guangji (2019)^[10] empirically test the impact of green trade barriers on the trade volume of agricultural products exported from China to Russia through VAR model. The results show that green trade barriers have a continuous inhibitory effect on the trade volume of agricultural products exported from China to Russia.

In terms of the application of the method to analyze the trade development potential, Zhang Zhixin et al. (2019)^[11] analyzed the trade relationship between China and western Asian countries through TCD and RTA index, and calculated the trade potential index between China and western Asian countries using the trade gravity model, finding that the bilateral trade potential is relatively stable. Xie Yiqing and Leuvent

(2020)^[12] based on the "gravity model" of international trade and the characteristics of the trade industry, review and analyze the broad and intensive margins of the international trade potential of the countries along the Belt and Road Initiative route from different perspectives. Zhou Chong and Zhou Dongyang (2020)^[13] use the extended gravity model to measure the trade potential between China and 30 Latin American countries. The results show that the trade between China and most Latin American countries is potential development, and there is still a large trade space in the future. Dang Lin Jing and Zhao Jing Feng (2020)^[14] have constructed a time-varying stochastic frontier gravity model and a trade inefficiency model for China's agricultural exports to countries along the Belt and Road Initiative route, calculated and analyzed China's trade efficiency and major influencing factors for agricultural exports to countries along the route, and predicted the export potential and expansion space. Liu Yexin and Li Li (2018)^[15] use the stochastic frontier gravity model to study the bilateral trade potential between China and Russia, which indicates that the total trade between China and Russia is at a relatively stable level and the trade potential is huge. Li Shuang and Zu Ge Yan (2020)^[16] discussed the export trade potential of Sino-Russian agricultural products under the background of China-Mongolia-Russia Economic Corridor by constructing a gravity model of Sino-Russian agricultural products export trade. They believed that the overall and classified export trade potential of Sino-Russian agricultural products were potential development models, and had a large development space. The trade potential index of agricultural products shows an upward trend and trade development is stable.

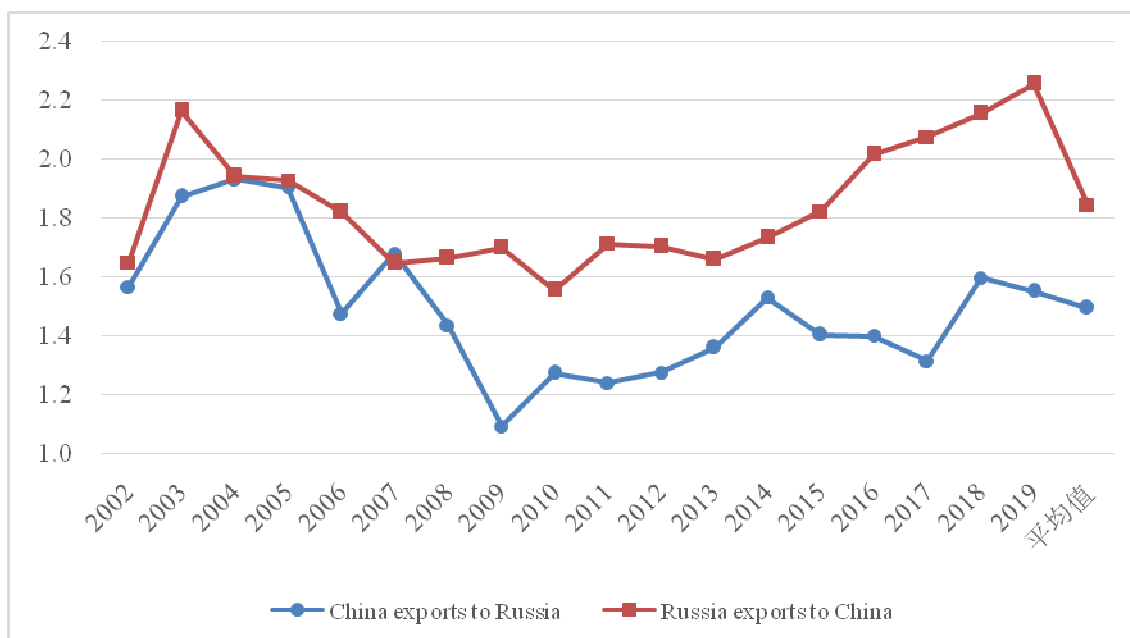
II. Trade Competitiveness of Sino-Russian Agricultural Products

A. Trade intensity index

In this paper, the export intensity index is used to analyze the closeness of the Sino-Russian agricultural trade relationship. The calculation formula is as follows:

$$TII_x = (X_{ij} / X_i) / (M_j / M_w) \quad (2-1)$$

In formula (2-1), X_{ij} represents the export value of country I to country J; X_i represents total exports of country I; M_j represents the total import of country j; M_w represents the world's total imports. If $TII_x > 1$, it indicates that the trade ties between the two countries are relatively close. The greater the value, the closer the trade ties between the two countries. If $TII_x \leq 1$, the trade links between the two countries are relatively loose. The smaller the value, the more distant the trade ties between the two countries are.



Source: based on UN Comtrade (three decimal places)

Figure 1 Trends of Sino-Russian Agricultural Product Trade Intensity Index from 2002 to 2019

See Figure 1 for the trade intensity index of agricultural products between China and Russia and Russia from 2002 to 2019. We can see that: (i) the average TII index of Chinese agricultural products exported to Russia is 1.494, and the average TII index of Russian agricultural products exported to China is 1.831, indicating that the trade intensity of Chinese and Russian agricultural products is relatively high and the trade ties are relatively close. (ii) The average value of the intensity index of trade in agricultural products between Russia and China is greater than the average value of the intensity index of trade in agricultural products between Russia and China, and the degree of integration of trade in agricultural products between Russia and China continues to be greater than that between China and Russia. This indicates that China's position in the market of agricultural products in Russia is more important than Russia's in the market of agricultural products in China, and demonstrates the importance of China's market in the trade of agricultural products in Russia. (iii) Sino-Russian trade in agricultural products is closely linked and relatively stable. Since 2002, the intensity index of Sino-Russian trade in agricultural products has been kept between 1 and 2, with a significant decline in the first place. This is due to the trend of diversification in the export market of agricultural products since China joined the World Trade Organization (WTO). After that, it recovered slightly and became stable on the whole, which roughly coincided with the time when the Belt and Road Initiative and the China-Mongolia-Russia Economic Corridor were put forward. However, the intensity index of trade in agricultural products between Russia and China has been kept between 1.5 and 2.5, with a slight "positive U" change in the change trend, indicating that although the trade combination of agricultural products between Russia and China decreased from 2002 to 2010, with the changes in domestic and international situations, the trade ties between Russia and China are becoming closer and closer.

B. Revealed comparative advantage index

This index is used to measure the agricultural trade between China and Russia, analyze the comparative advantages of each category of agricultural products, and apply the calculation formula adapted to the comparative advantage analysis of bilateral agricultural trade:

$$RCA_{ijk}^x = \frac{X_{ijk} / X_{ijt}}{X_{iwk} / X_{iwt}} \quad (2-2)$$

In formula (2-2), RCA_{xijk} is the revealed comparative advantage index of commodity K exported from country I to country J; X_{ijk} and x_{ijt} in the molecule respectively represent the trade volume of commodity K exported from country I to country J and the trade volume of all commodities exported from country I to country J; X_{iwk} and X_{iwt} in the denominator respectively represent the trade volume of commodity K exported from country I to the world and the trade volume of all commodities exported from country I to the world. When RCA value (i.e. comparative advantage index) is less than 1, competitiveness is weak; On the contrary, it is more competitive.



Source: based on UN Comtrade (three decimal places)

Figure 2 Trends of Sino-Russian Agricultural Products RCA from 2002 to 2019

According to Figure 2, from the perspective of the indicative comparative advantage of the overall agricultural products, it can be seen that the comparative advantage index of China's and Russia's agricultural products is 1.574 and 0.939 respectively, indicating that China's agricultural products have a larger comparative advantage, while Russia's agricultural products are slightly inferior. It is worth noting that the comparative advantage of China's agricultural products is in a downward trend, while the comparative advantage of Russia's agricultural products is in a fluctuating process with a leap-forward increase and then a steady decline in 2010. As shown in Figure 5, from 2002 to 2019, the RCA value of agricultural products in China continued to decline from 2.341 in 2002 to 1.199 in 2019, while that of agricultural products in Russia increased from 0.365 to 2.521 in 2008 to 2010, decreased to 0.900 in 2012, and then remained at about 1. Although the comparative advantage of China's agricultural products continues to decline, it is still higher than that of Russia's agricultural products. Considering that Russia's advantages in agricultural resources make Russia's agriculture more potential for development, it is expected that Russia's comparative advantage in agricultural products will have further development space in the future and may surpass China's.

Although the RCA value of China's agricultural products continues to decline, from the comparative advantages of specific categories of agricultural products, some Chinese agricultural products still have certain competitive advantages in the Russian market.

Table 1 Comparison of RCA index of China and Russia's Segmented Agricultural Products

HS code	RCA index of Chinese agricultural products			RCA index of Russian agricultural products		
	2009	2014	2019	2009	2014	2019
01	0.000	0.006	0.030	0.208	3.444	0.161
02	1.285	1.007	0.145	0.000	0.000	1.810
03	1.453	0.863	0.953	7.109	4.243	3.063
04	0.147	0.082	0.005	0.001	0.065	0.109
05	0.060	0.042	0.024	1.460	2.218	1.602
06	0.349	0.075	0.133	0.405	0.000	0.000
07	2.407	1.770	1.836	0.130	0.022	0.015
08	6.446	3.274	2.628	3.987	2.284	0.387
09	1.866	1.083	0.923	0.000	0.003	0.040
10	1.526	0.542	0.251	0.001	0.012	0.032
11	0.213	0.088	0.035	0.020	0.301	1.082
12	1.203	0.607	0.694	0.141	1.082	2.658
13	1.273	1.497	2.031	0.000	0.000	0.195

14	0.184	0.260	0.611	0.000	0.000	0.001
15	0.566	0.379	0.214	0.000	0.094	1.302
16	2.089	1.811	0.949	0.040	0.033	0.119
17	1.661	1.345	0.901	0.000	0.024	0.088
18	1.005	0.836	0.270	0.001	0.084	1.142
19	0.316	0.561	0.587	0.003	0.016	0.300
20	3.418	2.514	2.143	0.011	0.017	0.039
21	1.534	1.686	0.836	0.004	0.038	0.089
22	0.477	0.223	0.366	0.076	0.181	0.434
23	0.208	0.723	0.912	1.996	0.576	0.396
24	0.951	0.305	0.252	0.000	0.308	0.108

Source: based on UN Comtrade (three decimal places)

Table 1 gives a breakdown of agricultural products RCA between China and Russia in 2009 (after the financial crisis), 2014 (after the Belt and Road Initiative) and 2019 (after the Sino-US trade friction). It can be found that: (i) According to the size and sustainability of RCA, the three types of agricultural products that have always maintained a large comparative advantage for China are: edible vegetables, roots and tubers (HS07); Eating fruits and nuts; Peel of fruits such as melon (HS08); Products of vegetables, fruits or other parts of plants (HS20). These three types of agricultural products have always maintained a huge competitive advantage, among which, the RCA index of HS08 has always been greater than 2.5, with a strong competitive advantage. In addition, China's comparative advantages in shellac, gum, fats and other plant fluids, juices (HS13) and food industry residues and waste, formulated feed (HS23) are gradually increasing. In fish and other aquatic invertebrates (HS03), coffee, tea, yerba mate and spices (HS09), meat, fish and other aquatic invertebrate products (HS16) and agricultural products such as sugar and confectionery (HS17), the dominant comparative advantage index RCA was above 0.9, very close to 1. However, the comparative advantage of agricultural products such as miscellaneous food (HS21) also declined. (ii) According to the size and persistence of the dominant comparative advantage index RCA, the three types of agricultural products in which Russia has always maintained comparative advantage are: fish and other aquatic invertebrates (HS03), other animal products (HS05), oilseeds, kernels and industrial medicinal plants (HS12). Among them, fish and other aquatic invertebrates (HS03) have obvious competitive advantages. In addition, the comparative advantages of meat and edible offal (HS02), animal and vegetable fats and oils, waxes, refined edible fats and oils (HS15) and cocoa and cocoa products (HS18) increased, while the competitive advantages of edible fruits and nuts, peels of fruits such as melons (HS08) and food industry residues and wastes, formulated feed (HS23) decreased significantly. (iii) On the whole, there are differences in the types of agricultural products in which China and Russia have comparative advantages, and the competitiveness of both sides in agricultural products trade is relatively weak.

C. Trade complementarity index

Through this index, the trade complementarity between China's agricultural exports and Russia's agricultural imports is calculated as follows:

$$C_{ijk} = \sum[(RCA_{ijk}^x) \times (RCA_{ijk}^m)] \quad (2-3)$$

$$RCA_{ijk}^x = \frac{x_{ijk} / x_{ijt}}{X_{iwk} / X_{iwt}} \quad (2-4)$$

$$RCA_{ijk}^m = \frac{m_{ijk} / m_{ijt}}{M_{iwk} / M_{iwt}} \quad (2-5)$$

X_{ijk} in formula (2-5) represents the trade volume of commodity K exported from country I to country J; X_{ijt} represents the trade volume of all goods exported from country I to country j; X_{iwk} indicates the trade volume of commodity K exported from country I to the world; X_{iwt} represents the trade volume of all goods exported from country I to the world; M_{ijk} said that the trade volume of commodity k imported by country j from country I; M_{ijt} represents the trade volume of all goods imported by country j from country I; M_{iwk} said that the trade volume of commodity K imported by country J from the world; M_{iwt} represents the trade volume of all goods imported by country J from the world. Generally speaking, $c_{ijk} > 1$ indicates that the two countries complement each other in commodity k.

Table 2 Comparison of Trade Complementarity Index between China and Russia in Segmented Agricultural Products

HS code	China Export CI			Russian Export CI		
	2009	2014	2019	2009	2014	2019
01	0.000	0.000	0.001	0.010	9.497	0.029
02	0.020	0.037	0.008	0.000	0.000	0.301
03	1.113	0.582	2.025	110.956	38.448	14.091
04	0.000	0.000	0.000	0.000	0.000	0.001
05	0.000	0.000	0.009	0.552	3.356	1.860
06	0.011	0.001	0.000	0.007	0.000	0.000
07	2.408	1.573	0.016	0.005	0.000	0.000
08	2.873	1.007	0.113	3.622	1.013	0.062
09	0.792	0.407	0.012	0.000	0.000	0.000
10	0.892	0.027	0.003	0.000	0.001	0.008
11	0.041	0.004	0.062	0.000	0.062	0.708
12	0.360	0.070	0.450	0.001	0.036	0.936
13	1.057	1.579	0.221	0.000	0.000	0.000
14	0.088	0.257	0.001	0.000	0.000	0.000
15	0.011	0.010	0.029	0.000	0.004	2.226
16	2.462	1.250	0.078	0.000	0.000	0.707
17	0.432	0.499	0.040	0.000	0.000	0.002
18	0.012	0.058	0.055	0.000	0.011	4.023
19	0.015	0.041	0.045	0.000	0.000	0.013
20	4.694	2.775	0.030	0.000	0.000	0.001
21	0.155	0.299	0.017	0.000	0.001	0.004
22	0.009	0.003	0.008	0.005	0.018	0.101
23	0.011	0.134	0.094	2.944	0.579	0.334
24	0.252	0.065	0.017	0.000	0.087	0.021

Source: based on UN Comtrade (three decimal places)

As can be seen from Table 2, although the complementarity of China's agricultural products exported to Russia has been weakening on the whole, China and Russia have some complementarity in the agricultural products in Chapters 03, 07, 08, 16 and 20. However, among the agricultural products exported by Russia to China, generally speaking, trade complementarities are constantly increasing, such as chapters 02, 11, 12, 15, 16 and 18. Therefore, chapter 16 can be taken as the focus of the development of Sino-Russian agricultural products trade. As for the agricultural products in Chapter 03 (Fish and other aquatic invertebrates) and Chapter 05 (Other animal products), Russia and China show strong complementarity, among which Chapter 03 coincides with China and Russia. Therefore, focusing on the development of Sino-Russian trade relations in the agricultural products in Chapter 03 (Fish and other aquatic invertebrates) can bring greater benefits to both countries. However, some agricultural products between Russia and China have also seen a decline in trade complementarity, such as Chapters 08 and 23.

On the whole, both the agricultural products exported by China to Russia and the agricultural products exported by Russia to China have an index value of less than 1 for most of the agricultural products in each year. It can be concluded that although China and Russia have a highly complementary relationship on individual agricultural products, China and Russia have not yet formed a relatively complete complementary pattern of agricultural products. Russia has a large market demand for labor-intensive and other key agricultural products. It can be expected that there will be a large development space for the agricultural products trade between China and Russia in the future. China can focus on expanding the export scale of agricultural products to Russia to promote the development of agricultural products trade.

D. Trade specialization coefficient

From the above analysis, we can see that there is a strong complementary relationship between individual agricultural products in China and Russia. Whether this complementary relationship belongs to inter-industry or intra-industry complementarity needs to be measured by trade specialization coefficient. Judging whether the

complementarity relationship is inter-industry complementarity or intra-industry complementarity through the index, the calculation formula is:

$$TSC_{ij}^k = (X_{ij}^k - M_{ij}^k) / (X_{ij}^k + M_{ij}^k) \quad (2-6)$$

In formula (2-6), and are the export value and import value of country I to country j on k products respectively. This paper selects five agricultural products exported from China to Russia whose average trade complementarity index is greater than 1 and calculates their trade specialization coefficient respectively. The results are shown in Table 3.

Table 3 Trade specialization coefficient of products with average trade complementarity index > 1 among China's agricultural products exported to Russia

HS code	Average TSC
03	-0.737
07	0.994
08	0.732
16	0.582
20	0.997

Source: based on UN Comtrade (three decimal places)

As can be seen from Table 3, the trade complementarities of agricultural products between China and Russia are inter-industry complementarities. In these five categories of agricultural products, Chapter 07 and Chapter 20 agricultural products belong to China's high comparative advantage (competitive advantage) products, while Chapter 08 products are also close to China's high comparative advantage. Among them, Chapter 20 agricultural products with greater comparative advantage have an average TSC index of 0.997, but Chapter 03 products are close to China's high comparative disadvantage products.

III. Trade Potential of Sino-Russian Agricultural Products

This paper will use the trade gravity model to analyze the development potential of Sino-Russian agricultural trade. The original gravity model formula is expressed as follows:

$$T_{ij} = \frac{AY_i Y_j}{D_{ij}} \quad (3-7)$$

Among them, T_{ij} represents the double-standard trade volume between country I and country j, a is constant, Y_i represents the economic scale of country I, Y_j represents the economic scale of country j, and D_{ij} represents the distance between country I and country j. The formula is modified and the natural logarithm is taken to obtain the basic form of the gravity model:

$$\ln T_{ij} = \alpha_0 + \alpha_1 \ln GDP_i + \alpha_2 \ln GDP_j + \alpha_3 \ln DIS_{ij} + \mu \quad (3-8)$$

In order to better study the trade potential of Sino-Russian agricultural products, this paper adds control variables to the trade gravity model. The final model is:

$$\ln T_{cjt} = \alpha_0 + \alpha_1 \ln GDP_i + \alpha_2 \ln GDP_j + \alpha_3 \ln DIS_{ij} + \mu \quad (3-9)$$

The explanatory variable T_{cjt} represents the total import and export trade between China and its trading partner country J in the year of T, and the data are derived from the UN Comtrade database. The independent variable GDP_{cjt} represents the economic scale of China and the trading partner country J in T year, which measures the economic level of a country. The data are derived from official website of the World Bank. The independent variable POP_{cjt} represents the total population of China and the trading partner country J in the year of T, and the data are derived from official website of the World Bank. The independent variable DIS_{cjt} represents the distance between Beijing, China, and the capital of a trading partner country. The data is derived from Distance From To official website.

X Represents another control variable. Among them: the independent variable SHP_{jt} represents the liner transportation related index of the trading partner countries in T year, and the data is derived from the official website of the World Bank. It is generally believed that the liner transportation related index can better reflect a

country's maritime transportation capacity and thus play a role in the international trade of goods transportation. The index is based on the maximum value in 2004. The higher the value, the stronger the country's maritime cargo transportation capacity is. $APCE_{jt}$ is a virtual variable of whether a trading partner country is an APEC member country in the year of t , with 1 and 0 indicating yes and no respectively. The data is derived from the official website of APEC, and it is generally believed that regional trading groups will promote transactions among member countries.

In the selection of samples, in order to enhance the reliability and accuracy of the research conclusions, the research scope is expanded to the trading partner countries of China and Russia, including BRICS member countries Brazil, India and South Africa, as well as Japan, the United States, Vietnam, South Korea, Thailand, Malaysia, Germany, Indonesia, the Philippines, the United Kingdom, the Netherlands, Canada, Australia, Denmark, Ireland, France, Spain, Ukraine, Argentina, Uruguay, Peru, Ecuador and New Zealand, which have large agricultural trade with China, with a total of 27 countries.

Using STATA software for empirical regression, a linear fitting equation can be obtained, and then the actual value of Sino-Russian trade is brought into the fitting equation to obtain a series of fitting values T' , and the ratio P after comparing the actual value T with the fitting value T' obtained from the trade gravity model can be used to measure the trade potential of agricultural products between China and Russia. According to the research of Liu Qingfeng and Jiang Shuzhu (2002)^[17], the trade potential is divided into three types: potential reshaping, potential developing and potential huge. If $p \geq 1.2$, it belongs to potential modeling, when the trade is excessive; If $0.8 < p < 1.2$, it belongs to the trade development type. at this time, the trade potential has not been fully explored, but the exploration space is limited; If $p \leq 0.8$, it belongs to the type with great potential, at which time there is insufficient trade and there is a large potential for trade.

After calculation, the export potential index of Chinese and Russian agricultural products is shown in Table 4.

Table 4 Sino-Russian agricultural products export potential index

year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
specific value	0.840	0.881	1.002	1.014	1.026	1.009	1.002	1.012	1.024	1.036

On the whole, the agricultural products of China and Russia as a whole are of potential development type and have a large development space. The trade potential index has shown an upward trend year by year. This data shows that the prospects for cooperation between China and Russia in agricultural trade are huge and showing a trend of improvement. The regression results based on the trade gravity model show that the economic scale, liner shipping related index and whether to join APEC of both countries have significant positive effects, while the population size and distance of both countries have significant negative effects. In this regard, when expanding its trade cooperation with Russia, China can adopt corresponding policies in a targeted manner, strengthen its maritime transportation capacity and maintain policy communication with other countries to promote friendly cooperation between the two sides.

IV. Problems in the Development of Sino-Russian Agricultural Products Trade

A. Trade barriers

In order to make up for the loss caused by the loss of high tariff protection for domestic agricultural production enterprises, Russia has adopted a series of non-tariff barriers, mainly including anti-dumping, import quotas, technical barriers and barriers to customs clearance. According to the policy issued by

the Russian government in 2021, the import quota of beef and poultry will remain unchanged in 2021 and will be mainly distributed to the countries of the Eurasian Union. Russia has also set up higher technical barriers to agricultural products imported from China, and stepped up the safety inspection of agricultural products imported from China. This has greatly increased the difficulty for Chinese agricultural products to enter the Russian market, weakened the export competitiveness of Chinese agricultural products and may even stimulate bilateral trade frictions. Russia has also set up barriers in customs clearance for many Chinese agricultural products enterprises. Some agricultural products are not easy to store and have a short fresh-keeping period. Too complicated customs clearance and a longer customs clearance time will harm the interests of Chinese agricultural products manufacturers and will not be conducive to the development of Chinese enterprises in the Russian market.

B. Logistics constraints

China-Russia border ports have imperfect logistics construction and backward infrastructure. Since the Belt and Road Initiative was put forward, China and Russia have strengthened cooperation in the construction of logistics and transportation, but the effect is not significant. At present, the imperfection of the logistics construction at the border ports

between the two countries has become a major obstacle to the trade of agricultural products. The concentration of industries is relatively low, the mode of development is relatively single, the development between regions is unbalanced, and the overall situation of enterprises is "small, scattered and weak". There is a general situation of "large quantity and low quality" in Sino-Russian ports. Logistics infrastructure construction is backward. Most of the border ports were established in the 1980s and 1990s. The facilities are old and the degree of standardization is not high. These factors have greatly reduced the transportation efficiency of agricultural products and restricted the trade of agricultural products.

C. Single structure

The import and export of agricultural products have a single structure and are mostly complementary trade with low added value. On the one hand, Russia's vegetable cultivation is difficult and its output is small. The average annual self-produced vegetable production is less than 20% of the domestic market demand. Most of the rest depends on foreign imports. As the world's largest vegetable producer, China produces vegetables and fruits that can meet Russia's demand. On the other hand, China has a large population and a large base of grain consumption, while Russia is rich in land resources, and the bulk grain products have a strong competitive advantage in the world. China will import grain from Russia to meet the people's living needs. Therefore, the differentiated production of agricultural products between the two countries can complement each other and there is a huge space for Sino-Russian agricultural products trade cooperation. However, due to this geographical advantage, the agricultural products trade between the two countries is mostly labor-intensive primary agricultural products with low added value, and a single structure of agricultural products will also hinder the trade.

V. Suggestions on the Development of Sino-Russian Agricultural Products Trade

In order to promote Sino-Russian trade in agricultural products to develop better, strengthen friendly cooperation between the two sides and improve the international position of the two countries in the agricultural products trade market, the following policy recommendations are put forward in view of the problems exposed in Sino-Russian trade in agricultural products.

(i) Improve the construction of logistics infrastructure and build a high-level border logistics port. First of all, we should speed up the construction of the logistics information public platform between China

and Russia, integrate the existing information resources, and build an information network suitable for the field of Sino-Russian logistics industry cooperation through the use of the information reserves of both sides. Secondly, it is necessary to expand and repair the "multi-purpose" border logistics ports, strengthen the management of the existing ports and maintain the normal operation of the ports. It is also necessary to increase the number of Sino-Russian border waterway ports, repair the affected ports, resume the decommissioning of ports and strengthen the construction of water transportation ports. In addition, China and Russia should strengthen dialogue and communication and jointly plan the construction of logistics infrastructure. On the existing basis, the planning of regional logistics infrastructure platforms should be emphasized, and the important role of integrated trunk line planning should be emphasized. According to the characteristics of different cities as logistics hubs, the areas and directions of their development should be clarified, and the logistics parks and logistics centers should be effectively arranged and divided within the cities. Finally, we also encourage Russia to introduce professional logistics planning and construction team from China to speed up the pace of logistics system construction and improve the efficiency of bilateral logistics.

(ii) Improve policies and systems to ensure the smooth progress of trade. China and Russia should attach importance to the planning for the construction of agricultural products trade cooperation bases. By introducing preferential policies for the establishment of agricultural products trade cooperation bases on the Sino-Russian border, the two countries can attract investment from agricultural products trade enterprises and avoid the break of the capital chain. They can also guarantee the normal operation of the base's capital by signing agreements between governments. At the same time, Russia should relax its control over agricultural products trade, reduce trade barriers, turn its attention to export enterprises, and encourage a large number of agricultural products export enterprises to improve their international competitiveness and increase their export trade volume. Relying on the Belt and Road Initiative, China and Russia can formulate policies to support specific enterprises, reduce the market access threshold, encourage large and powerful enterprises and groups to "go out" and provide technical support and legal guidance to small and medium-sized enterprises.

(iii) Expand the import and export of agricultural products and increase the added value of agricultural

products. The trade structure of agricultural products between China and Russia is unbalanced and has a single form. China and Russia must focus on cultivating some advantages and characteristics of agricultural products from the perspective of resource endowments and national conditions to avoid falling into the trap of comparative advantages. On the one hand, it is necessary to stabilize and support the export of domestic advantageous agricultural products, establish large-scale agricultural product storage bases along the Sino-Russian border, and provide ancillary facilities such as freezers and fresh-keeping warehouses; On the other hand, it can increase the investment in scientific research in regions with large trade scale, and make up for the defects of the two countries that the trade structure of agricultural products is single and most of them are primary agricultural products by cultivating agricultural products with higher quality, higher output and more in line with Russian import standards. At the same time, it is necessary to increase investment in agricultural infrastructure and reduce production and transportation costs by dividing the production bases of different types of agricultural products and concentrating on processing to form large-scale production and processing bases for agricultural products. Through speeding up the construction of trade channels and logistics network between China and Russia, improving the circulation system of agricultural products, improving the traffic conditions at the border between the two countries, diversifying the trade and transportation routes, reducing the comprehensive cost, increasing the types and quantity of agricultural products trade, and changing the trade structure of the two countries through convenient transportation network.

(iv) Strengthen the supervision of agricultural products production, establish a risk prevention mechanism. We will continue to strengthen the quality control of key links in the processing of agricultural products, improve the quality and safety standards of China's agricultural products, and effectively improve the export quality of China's agricultural products. We will step up efforts to crack down on illegal activities in the food industry so that the illegal costs far exceed the illegal gains. We will also gradually improve the legal supervision mechanism for the cultivation and breeding of agricultural products to nip illegal activities in the bud. The trade of agricultural products between China and Russia is vulnerable to fluctuations and uncertainties in the international market price of agricultural products. The government must establish a risk prevention mechanism as soon as possible to improve its ability to resist external shocks. Flexible

and comprehensive use of ways to adjust the prices of agricultural products, eliminate the impact of exchange rate fluctuations on the transnational trade of agricultural products, and prevent and resolve exchange rate risks; Speeding up the internationalization of RMB and guiding Chinese agricultural export enterprises to set prices and settle accounts in RMB, so as to eliminate the adverse effects brought by exchange rate fluctuations; We will adjust the trade structure of agricultural products and establish a diversified market system for agricultural products to better cope with unknown risks.

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