Analysis of the Trade Potential between China and the Eight Countries in South Asia under the Background of the Belt and Road Initiative

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Abstrat: Based on the trade potential model, this paper determines the trade potential relationship between China and the eight countries in South Asia in the context of the "Belt and Road". Firstly, the panel data analysis method is used to study the overall situation of China's trade with South Asia from 2001 to 2014. Secondly, the trade gravity model is used to estimate the trade volume between China and the eight countries in South Asia. The estimated value is compared with the actual value to calculate China and the eight countries of South Asia. Trade potential value. Finally, based on the calculated potential value, the policy recommendations in the context of the "Belt and Road" are given.

Keywords: Trading, Trade Potential, South Asia, The "Belt And Road"

Introduction

The "One Belt, One Road" strategy is aimed at promoting economic and trade exchanges between countries along the route and developing the economies of countries along the route. As one of the areas along the route, South Asia is an important direction and partner to promote the construction of the "Belt and Road". Therefore, studying the trade cooperation between China and the eight countries in South Asia is conducive to broadening the development of this field, and has certain research significance and research value.

Most scholars have studied the relationship between China and South Asia through the trade gravity model. The trade gravity model estimates the trade volume between the two countries through the two variables of the gross national product of the two countries and the distance between the two capitals. Then, by comparing the true value with the estimated value, the ratio is calculated, and the potential value of the trade between the two countries is calculated by comparing the ratio with the magnitude of 1. However, different scholars will expand the variables of this gravitational model according to the actual research situation, and introduce different variables into the model for analysis. For example, Li Shijie, Deng Maojie and Liu Dianguo (2017)[1] took the cultural trade volume of 2002-2014 as a new variable and found that there are big differences between China's core cultural products and countries along the route. The reason is that social embeddedness is different; Maria et al. (2015) [2] Using the export growth rate of 1995-2010, export market share and other variables, analyzed the competitiveness and

trade advantages of China and countries along the line in the model; Benkovskis et al (2015) [3] used exports from 2000 to 2011 as a potential index,and compared the non-price factors between China and other countries along the world through empirical analysis; Jan & Martin (2017) [4]put technology competitiveness, competence competitiveness, price competitiveness and demand competitiveness into the model and consider the development. Bilateral trade must satisfy these four competitiveness; Li Junjiu and Qiu Yuyu (2017)[5] added two virtual variables to the model:whether there is a trade agreement and whether there is a common boundary. They believed that China should expand bilateral transactions and eliminate trade barriers. To conduct mutual trust and cooperation; Chen Jidong and Li Jingfeng (2010)[6] used the volume of import and export trade between China and South Asia to analyze trade potential.They found that the trade between China and South Asia reduced mainly dues to the decrese of China's imports to South Asia.

In this paper, when we study the trade relationship between China and South Asia, we first conducted a competitive analysis of China and South Asia, export similarity analysis and trade complementarity analysis. Through the trade gravity model, using the total GDP of the two countries from 2001 to 2014, the distance between the capitals of the two countries, and the data of the population of China and South Asia, an empirical analysis is carried out. At the same time, according to the special circumstances of South Asia, we added whether it is a member of APEC , whether it is a member of the Shanghai Cooperation Organization and whether it is a member of the World

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Trade Organization into the model to make a further anlysis. Finally, by comparing and calculating the trade potential ratio of different countries, the trade direction between China and South Asian countries is analyzed.

The trade gravity model

Traditional trade gravity model

  which is:

$$T_{ij} = A \times Y_i^{\alpha} \times Y_j^{\beta} / D^{\theta}_{ij}$$

Among them, A is a fixed amount, T_{ij} represents the total trade between the two countries, Y_i^{α} and Y_j^{β} represent the total GDP value of country i and country j, and D_{ij}^{θ} represents the distance between the capital ratio of country i and country j. Therefore, according to Jantibergen's conclusion, T_{ij} is proportional to Y_i^{α} and Y_j^{β} and inversely proportional to D_{ij}^{θ}. However, when the model is analyzed, it may affect the analysis result of the data due to heteroscedasticity, and the model does not consider the influence of economic organizations existing in China and South Asia. Therefore, it needs to be further expanded.

The expansion of the trade gravity model

In order to avoid the occurrence of heteroscedasticity, the two sides of the formula are taken at the same time, and the total population product is introduced, whether it is a member of APEC, whether it is a member of the Shanghai Cooperation Organization and whether it is a member of the World Trade Organization. Construct the following linear equation:

$$LnT_{cx} = \beta_0 + \beta_1 LnY_C + \beta_2 LnY_s + \beta_3 LnP_cP_s + \beta_4 LnD_{cs} + \beta_5 APEC + \beta_6 TSCO + \beta_7 WTO\mu_{cs}$$

Among them, T_{CX} represents the trade volume of two countries, Y_C and Y_S represent the GDP of China and South Asia respectively, P_CP_S represents the population of China and South Asia, D_{CS} represents the distance between Beijing and the capitals of South Asia, APEC, TSCO and the WTO respectively indicate whether they are members of APEC, whether they are members of the Shanghai Cooperation Organization and whether they are members of the World Trade Organization. The estimates for the above variables are as follows:

The higher the gross domestic product, the better the degree of economic development. The better the degree of economic development, the larger the market for foreign trade and the greater the trade volume.

The farther Beijing is from the capital of the country, the higher the transportation cost of trade. Correspondingly, the total trade will also decrease accordingly.

If the population of China and South Asia is larger, the market for the two countries will increase, and thus the relative trade volume will increase.

If the South Asian country is a member of APEC, a member of the Shanghai Cooperation Organization or a member of the World Trade Organization, the number of trades with China will increase, and thus the trade volume will increase.

The data source and choice

This paper uses panel data from 2001-2014 for regression analysis and estimates the trade volume for 2015 based on the model. By comparing the estimated and true values of 2015 and calculating the ratio, we estimate the trade potential of China's eight countries in South Asia. Therefore, this paper selects the cross-section data of the panel data of the eight countries in South Asia, and joins the time series from 2001 to 2014 to analyze the trade situation between China and the eight countries in South Asia. The data sources are as follows:

The 2001-2014 data from the United Nations Conference on Trade and Development database (http://www.un.org/en/database) was applied to the calculation of total trade.

The 2001-2014 data from the World Bank database (https://data.worldbank.org) was applied to the calculation of China and South Asia's GDP and population.

The distance calculator provided by www.indo.com is used to query the data from 2001 to 2014 to calculate the distance between China and the capitals of the eight countries of South Asia.

Empirical analysis

Competitive analysis of China's trade with eight countries in South Asia.

Competitive analysis is mainly reflected by the display comparative advantage index. The Display Comparative Advantage Index uses a quantitative method to measure the import and export of a country. The index can reflect the strengths and weaknesses of a country's export industry. [7] The model is built as follows:

$$RCA_{ij} = \frac{X_{ij}}{X_i} \Big/ \frac{W_i}{W}$$

Among them, RCA_{ij} represents the explicit comparative advantage index of i country j products, X_{ij} represents the export value of i country to world export j products, X_i represents the total export value of i country to the world, W_j represents the export value of world j product, W represents The total export value of world products.

According to the regulations of the United Nations, the products are classified into a total of (0-8), and the 9 types of products are as follows:
0 food industry
1 drinking and tobacco
2 non-edible raw materials (excluding fuel)
3 fossil fuels, lubricants and related substances
4 types of animal and vegetable oils, greases and waxes
5 chemical materials
6 types of raw materials oriented industrial products
Category 7 machinery and transportation equipment
8 miscellaneous products [8]

First, the comparative advantage analysis of China's data, the obtained comparative advantage index is as follows:

Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	0.59	0.51	0.44	0.44	0.45	0.47	0.46	0.45	0.42	0.41	0.40
1	0.20	0.15	0.15	0.15	0.15	0.16	0.15	0.16	0.15	0.15	0.17
2	0.31	0.21	0.22	0.22	0.20	0.21	0.22	0.17	0.16	0.18	0.17
3	0.17	0.12	0.13	0.13	0.12	0.13	0.11	0.08	0.09	0.09	0.11
4	0.10	0.06	0.08	0.08	0.05	0.06	0.08	0.05	0.05	0.06	0.06
5	0.45	0.48	0.54	0.54	0.45	0.50	0.49	0.52	0.51	0.49	0.50
6	1.26	1.28	1.37	1.37	1.23	1.30	1.29	1.34	1.34	1.33	1.37
7	1.26	1.33	1.43	1.43	1.48	1.51	1.53	1.48	1.46	1.38	1.29
8	2.29	2.28	2.35	2.35	2.20	2.31	2.33	2.42	2.47	2.27	2.03

Table 1. Comparative Advantage Index of Various Products in China

It can be seen from the data in Table 1 that the comparative advantage index of China's 0-5 products is less than 1, indicating that they do not have comparative advantages in the international market and do not have international competitiveness. Moreover, it has not shown a growth trend year by year, but it has a tendency to fluctuate or even decline. It shows that China's diet, minerals and other industries do not occupy an advantage. On the contrary, in China's 6-8 categories, the display comparative advantage index shows a trend of more than 1, and it shows a trend of increasing year by year. This shows that China has certain advantages in resource-intensive and labor-intensive industries. Moreover, with the increase in the degree of industrialization in China, the degree of industrial mechanization and modernization in China has also increased. These data show that when China conducts trade cooperation with the eight countries in South Asia, it can exert its labor and technological advantages and conduct more in-depth trade cooperation.

we will analyze the comparative advantages of the eight countries in South Asia. Because Bhutan's data is missing more, it is difficult to analyze its

comparative advantage. Therefore, only the remaining seven countries in South Asia are analyzed

for comparative advantage.

Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	1.59	1.68	1.44	1.30	1.25	1.62	1.66	1.64	1.66	1.62	1.56
1	0.11	0.10	0.09	0.16	0.09	0.10	0.11	0.11	0.11	0.10	0.12
2	2.36	2.22	2.08	1.60	1.56	1.62	1.29	1.11	0.88	1.05	0.99
3	0.77	1.12	1.47	0.78	0.78	1.32	1.14	1.17	0.67	1.18	1.03
4	0.93	0.82	0.71	0.61	0.61	0.76	0.58	0.54	0.75	0.61	0.76
5	1.10	1.11	1.12	1.02	1.02	0.91	0.91	0.88	1.27	1.08	1.21
6	2.50	2.14	1.78	1.85	1.85	2.01	1.70	1.60	2.13	1.94	2.07
7	0.29	0.31	0.33	0.46	0.46	0.42	0.50	0.54	0.51	0.46	0.45
8	1.51	1.33	1.15	1.81	1.81	1.17	1.50	1.51	1.35	1.14	1.19

Table 2. Comparative Advantage Index of Various Products in India

As can be seen from the data in Table 2, India has a comparative advantage in category 0, category 2, category 5, category 6 and category 8 products, and is competitive internationally. Compared with China, India has a comparative advantage in some raw material industries, indicating that the country has its own advantages in some resource-intensive and labor-intensive industries. At the same time, India's display comparative advantage index of the fifth category of chemical raw materials shows a high value, indicating that India's IT industry is relatively mature compared to China, and the chemical industry is developing better and can become its comparative advantage. China conducts trade cooperation.

Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	2.22	2.27	2.32	3.22	2.53	2.78	3.00	3.13	3.15	2.91	3.00
1	0.21	0.25	0.29	0.13	0.16	0.19	0.15	0.14	0.17	0.13	0.07
2	0.61	0.54	0.47	0.75	0.83	0.81	0.88	0.94	1.11	1.01	0.86
3	0.31	0.34	0.37	0.35	0.29	0.30	0.30	0.30	0.12	0.16	0.10
4	1.67	1.60	1.53	1.51	1.07	0.68	0.69	0.50	1.16	0.90	0.54
5	0.29	0.25	0.21	0.33	0.33	0.35	0.36	0.38	0.41	0.40	0.35
6	3.62	3.51	3.40	3.15	3.52	3.52	3.38	3.36	3.59	3.51	3.42
7	0.05	0.05	0.05	0.09	0.07	0.08	0.09	0.10	0.05	0.05	0.04
8	2.55	2.64	2.73	2.53	2.37	2.36	2.33	2.28	2.17	2.16	2.20

Table 3. Comparative Advantage Index of Various Products in Pakistan

As can be seen from the data in Table 3, Pakistan has a comparative advantage in category 0, category 4, category 6 and category 8 products, and is competitive internationally. The category 0 also shows an upward trend year by year, indicating that the comparative advantage of Pakistan's food products is very obvious. When China develops trade with it, it can use this comparative advantage to conduct effective trade cooperation.

Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	1.09	1.11	1.13	0.85	0.55	0.54	0.41	0.58	0.60	0.60	0.52
1	0.33	0.22	0.11	0.30	0.36	0.31	0.32	0.41	0.45	0.49	0.48
2	0.49	0.47	0.45	0.47	0.50	0.48	0.48	0.48	0.43	0.47	0.50
3	0.03	0.03	0.03	0.06	0.07	0.08	0.09	0.06	0.05	0.05	0.06
4	0.05	0.06	0.07	0.04	0.07	0.06	0.07	0.09	0.08	0.07	0.07

5	0.18	0.12	0.06	0.14	0.09	0.07	0.05	0.09	0.09	0.08	0.07
6	0.73	0.76	0.79	0.64	0.63	0.61	0.58	0.70	0.71	0.65	0.61
7	0.04	0.03	0.02	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
8	7.11	7.36	7.61	8.12	7.35	7.88	8.01	7.65	7.47	7.15	6.67

Table 4. Comparative Advantage Index of Various Products in Bangladesh

As can be seen from the data in Table 4, Bangladesh has a comparative advantage index of greater than 1 in both Category 0 and Category 8 products, both showing comparative advantages and being competitive internationally. Especially the category 8 products are particularly obvious, indicating that for Bangladesh, miscellaneous products are the country's comparative advantage. Compared with China, such products in our country also show comparative advantages, indicating that they have formed a competitive situation with China in such products. However, for category 0 products and food products, China is relatively weak and can trade with China.

Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	3.67	4.08	4.49	4.48	4.06	4.51	4.63	4.75	4.23	3.91	3.57
1	1.17	1.06	0.95	1.17	0.95	0.96	0.93	0.90	1.33	1.24	1.23
2	0.90	0.96	1.02	1.25	1.28	1.40	1.50	1.61	0.75	0.78	0.79
3	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.16	0.15
4	5.76	3.52	1.28	1.05	0.31	0.27	0.23	0.19	0.38	1.11	2.28
5	0.13	0.11	0.09	0.10	0.10	0.09	0.08	0.07	0.14	0.14	0.14
6	1.26	1.22	1.18	1.13	1.00	0.98	0.91	0.85	1.30	1.13	1.01
7	0.12	0.14	0.16	0.15	0.13	0.15	0.15	0.16	0.14	0.17	0.18
8	4.39	4.43	4.47	4.32	4.32	4.31	4.29	4.26	4.40	4.11	3.95

Table 5. Comparative Advantage Index of Various Products in Sri Lanka

As can be seen from the data in Table 5, Sri Lanka, like Bangladesh, has a comparative advantage index of greater than 1 in both categories 0 and 8, both of which have comparative advantages and are competitive internationally. It also shows that for the category 0 products and food products, China is relatively weak and can trade with China. However, the country experienced relatively large fluctuations in the fourth category of products. Although the display comparative advantage index rebounded in 2015, it also shows that Sri Lanka has experienced relatively large problems in animal and plant related products. Therefore, for our country, trade cooperation with Sri Lanka needs to be more cautious on such products.

Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	2.16	2.27	2.38	3.40	3.95	2.94	3.85	4.13	3.16	3.60	3.88
1	0.37	0.39	0.41	0.37	0.07	3.88	2.57	3.04	1.64	3.24	2.17
2	0.94	0.94	0.94	0.87	1.80	1.59	1.76	1.92	1.02	1.27	0.91
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	32.13	26.57	21.01	18.42	1.43	0.64	0.60	0.56	0.55	0.29	0.24
5	0.76	0.75	0.74	0.72	0.57	0.59	0.54	0.50	0.49	0.49	0.46
6	2.84	2.94	2.92	3.74	4.40	4.13	3.92	3.76	4.42	4.60	4.79
7	0.01	0.01	0.01	0.01	0.02	0.06	0.02	0.02	0.02	0.02	0.02
8	2.49	2.18	2.18	2.18	1.30	1.33	1.30	1.31	1.31	1.30	1.31

Table 6. Comparative Advantage Index of Various Products in Nepal

As can be seen from the data in Table 6, Nepal's Display Comparative Advantage Index varies greatly,

especially for Category 4 products. From 2005 to 2015, it plummeted, and the decline was very obvious. Explain that the excessive demand for animal and vegetable oil resources in Nepal has turned the resource advantage into a resource disadvantage. At the same time, the comparative advantage of the sixth category of products is obvious, which will also form a competitive situation with China. Class 0 products can be trade-complemented with China and trade cooperation. On the contrary, the eighth category of products will also form a certain range of competition with our products. China and Nepal are adjacent to each other and should play their respective comparative advantages for trade cooperation.

Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	15.00	18.64	19.28	16.72	13.44	11.26	12.04	10.98	15.74	14.79	14.47
1	0.33	0.03	0.27	0.05	0.01	0.14	0.32	0.13	0.32	0.17	0.23
2	0.30	0.41	0.52	0.84	0.60	1.47	0.00	0.00	0.00	0.00	0.00
3	0.47	0.00	0.00	0.00	0.00	1.47	0.16	0.05	0.00	0.00	0.00
4	0.02	0.18	0.34	0.28	0.10	0.29	0.31	0.34	1.96	1.02	1.52
5	0.25	0.04	0.17	0.00	0.00	0.00	0,02	0.01	0.01	0.01	0.01
6	0.32	0.23	0.14	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
7	0.09	0.06	0.03	0.12	0.13	0.14	0.12	0.12	0.12	0.12	0.10
8	0.36	0.17	0.02	0.05	0.06	0.08	0.14	0.12	0.12	0.12	0.10

Table 7. Comparative Advantage Index of Maldives Products

As can be seen from the data in Table 7, the display comparative advantage index of Maldives on other products is not high, only the display comparative advantage index of the 0th product is greater than 1, and the value is very high. It shows that the food products in Maldives are their comparative advantages, while the products in China are relatively weak and can trade with China.

Through the analysis of the comparative advantages of various countries in South Asia, it can be seen that the countries of South Asia are all countries with abundant natural resources, and the degree of industrialization still needs to be further strengthened. Therefore, for natural resource products, such as food products, South Asian countries generally have a certain comparative advantage. Conversely, for products that require industrialization, such as chemical products, countries in South Asia are generally relatively weak.

However, China has comparative advantages in Class 6, Class 7, and Class 8 products, but there are certain weaknesses in Class 0 to Class 5 products. This complements the products of South Asian countries. It shows that China and South Asian countries have strong complementarity and certain trade cooperation foundation. Therefore, we should use this foundation under the "Belt and Road" conditions to further enhance our trade with South Asian countries.

Analysis of the similarity of exports between China and the eight countries in South Asia

The analysis of export similarity is mainly analyzed by the export similarity index. The build model is as follows:

$$S^{p}(i,j,w) = \left\{ \sum \left[\frac{X_{iw}^{k}/X_{jw} + X_{jw}^{k}/X_{jw}}{2} * \left(1 - \left| \frac{X_{iw}^{k}/X_{iw} - X_{jw}^{k}/X_{jw}}{X_{iw}^{k}/X_{iw} + X_{jw}^{k}/X_{jw}} \right| \right) \right] \right\} * 100$$

Among them, $S^{p}(i, j, w)$ represents the export similarity, i and j represent two countries i and j, w represents the export value of this product in the world, xkiw represents the export value of the k product of the country i, xiw represents The export value of all products in country i, xkjw represents the export value of j country products, and xjw represents the export value of all products in country j. The

export similarity index ranges from 0-100, and the higher the export similarity index, the stronger the export similarity of the products between the two countries. [9]

China's import and export trade to the eight countries in South Asia has shown an upward trend year by year. But the differences between trade with different countries are also very different. Among them, China has more import and export trade with India, Pakistan and Bangladesh. On the contrary, the value of import

and export trade relative to the Maldives and Bhutan is relatively small. Since the import and export trade volume between China and Maldives and Bhutan is too small, we will not consider these two countries when conducting export similarity analysis, but study the export similarity analysis between China and the other six countries. The nine categories of products classified above were analyzed for export similarity between China and the six South Asian countries, and then the average was taken. The overall export similarity obtained is as follows:

	2010	2011	2012	2013	2014	2015
India	59.28	55.55	55.45	52.01	56.42	58.93
Pakistan	52.07	52.00	52.56	51.30	53.42	52.98
Bangladesh	38.87	38.81	41.11	41.00	40.59	39.13
Sri Lanka	44.44	50.50	54.52	51.78	52.22	49.66
Nepal	38.11	38.14	38.00	40.41	41.53	43.22
Afghanistan	33.00	38.91	29.01	30.01	37.42	31.52

Table 8. Export similarity between China and six South Asian countries

It can be seen from the data in Table 8 that the export similarity index of China and South Asian countries is generally high, indicating that China and the six South Asian countries have similar export similarities, especially with India and Pakistan. Therefore, China needs to conduct trade cooperation with South Asian countries, and trade cooperation with India and Pakistan is a breakthrough. Therefore, we should seize the background of the "Belt and Road" to find out the comparative advantages of India's chemical products and Pakistan's comparative advantages in food products and trade cooperation. Through India

and Pakistan, the South Asian market will be opened up, and China will promote trade cooperation with other countries.

Analysis of the complementarity between China and the eight countries in South Asia
The analysis of trade complementarity is mainly analyzed through the trade complementarity index. The trade complementarity index mainly measures whether the import and export between the two countries has a trade complementarity relationship. The build model is as follows:

$$C_{ij} = \sum [(RCA_{xik} \times RCA_{mjk})] \times [W_k / W]$$

Among them, c_{ij} represents the national export i and the national import j, RCA_{xik} represents the comparative advantage of the country i measured by the export on the product k; RCA_{mjk} represents the comparative advantage of the country j measured by the import on the product k; W_k represents the k class The total amount of international trade of products in each country; W represents the trade volume of all products in the world.

The final C_{ij} can be discussed in three cases: (1) If $0 < C_{ij} < 0.5$, the trade complementarity between the two countries is weak; (2) If $0.5 < C_{ij} < 1$, it means that between the two countries The trade complementarity is strong; (3) If $C_{ij} > 1$, it means that the trade complementarity between the two countries is very strong. [10]

It can be seen from the data in Table 9 that the trade

complementarity index between China and South Asian countries is basically between 0.5 and 1, indicating that China has strong trade complementarity with South Asian countries. From this, we can find that China's trade complementarity with Bhutan and Maldives is more complementary than that of other countries. However, from the previous table, we can find that the trade volume between China and the two countries is the lowest among the eight countries. Therefore, trade cooperation between China and Bhutan and the Maldives is imminent. From the table, we can also find that the trade complementarity index between China and India shows a trend of decreasing year by year, indicating that the trade complementarity between China and India has been declining year by year. At the same time, it also shows that the competition between China and India products is increasing year by year. rise. Through the previous

comparative comparative advantage analysis, we can find that the competition between China and India is mainly in resource-intensive and labor-intensive industries. Therefore, for China, on the one hand, it should reduce labor costs, making China's labor force more advantageous and more competitive. On the other hand, the industrial structure should be transformed to promote the transition of China's labor-intensive and resource-intensive industries to technology-intensive industries, and to upgrade China's technological level and modernization level. In addition, China's trade complementarity index with Sri Lanka and Bangladesh has remained at a high level with little fluctuation. In the future development, further trade should be promoted based on the comparative advantages of the two countries in food products.

	2010	2011	2012	2013	2014	2015
India	0.69	0.67	0.61	0.62	0.62	0.58
Pakistan	0.65	0.68	0.65	0.62	0.61	0.65
Bangladesh	0.87	0.89	0.85	0.86	0.92	0.88
Sri Lanka	0.90	0.89	0.91	0.88	0.88	0.88
Nepal	0.86	0.82	0.79	0.77	0.77	0.97
Afghanistan	0.80	0.84	0.84	0.87	0.65	0.75
Bhutan	1.02	1.07	0.99	0.93	0.86	0.96
Maldives	0.84	0.87	0.77	0.80	0.78	0.75

Table 9. Trade Complementary Index between China and Eight Countries in South Asia

The empirical results of China's trade with the eight countries in South Asia.
According to the above model, the above variables were subjected to multivariate regression analysis, and the confidence was taken as 95%. The empirical results are as follows:

Interpret variable	regression coefficient	t value	prob.
β_0	19.48	6.13	0.0015
Y_C	0.96	7.01	0.0003
Y_S	0.77	2.99	0.0002
$P_C P_S$	0.53	5.03	0.0005
D_{CS}	-1.02	-4.74	0.0000
APEC	2.28	2.98	0.0000
TSCO	0.41	2.56	0.0315
WTO	2.74	2.23	0.0002
R-squared	0.97		

Table 10. Empirical results of China's trade with eight countries in South Asia

Both China and South Asia's GDP are positively related to trade volume. This is the same as the expected regression coefficient symbol. When China's GDP rose by 1%, China's total trade with South Asia rose by 0.96%. When South Asia's GDP rose by 1%, China's total trade with South Asia rose by 0.77%. It shows that the total trade between China and South Asia depends on the GDP of China and South Asia.

The distance between Beijing and the capitals of South Asian countries is negatively correlated with the total trade. This is also the same as the expected regression coefficient symbol. When the distance between Beijing and the capitals of South Asian countries decreased by 1%, the total trade volume between China and South Asia increased by 1.02%.

There is a positive correlation between the population and trade volume of China and South Asia. This is also the same as the expected regression coefficient. When the population of our country is multiplied by 1% of the population of the eight countries in South Asia, the trade volume between China and the eight countries in South Asia will increase by 0.53%.

Whether the regression coefficient of the three dummy variables of the Shanghai Cooperation

Organization and whether it is a member of the World Trade Organization is positive. Explain that if the South Asian country is APEC, the Shanghai Cooperation Organization or a member of the World Trade Organization, it will promote the development of trade between China and South Asia.

5. The trade potential index of China and eight countries in South Asia. Through the gravity model to calculate the trade potential, this paper uses the trade volume in 2015 as the benchmark value, and calculates the estimated trade volume between China and South Asian countries in 2015 through the model. Then, compare it with the actual value of 2015, using the actual value/estimated value. If the ratio is greater than 1, indicating that the actual value is greater than the estimated value, we need to dig more new ways and factors to promote trade. If the ratio is equal to 1, it means that the trade between the two countries is normal. If the ratio is less than 1, it means that the actual value is less than the estimated value, indicating that there is still a lot of trade space between the two countries. [11]

The trade potential values of China and the eight countries in South Asia are as follows:

Trade potential	Afghanistan	Bangladesh	Bhutan	India
	0.47	0.79	0.44	0.81
	Sri Lanka	Maldives	Nepal	Pakistan
	0.62	0.39	0.55	0.61

Table 11. Potential value of trade cooperation between the eight countries of South Asia and China

It can be seen from the data in Table 11 that China's trade potential relative to the eight South Asian countries has not exceeded 1, indicating that there are still many unexplored places in China's trade space relative to the eight South Asian countries. Among them, China and India have the largest trade potential. The key to the development of trade cooperation between China and the eight countries in South Asia lies in trade cooperation with India. China's trade cooperation with the Maldives and Bhutan needs to be further improved, taking advantage of their respective comparative advantages, tapping more trade potential and complementing trade. China's trade potential with Sri Lanka and Bangladesh is also relatively large. We should make good use of China's comparative advantages in machinery products and the comparative advantages of these two South Asian countries in food products for trade cooperation. Finally, for Pakistan, China's trade potential with Pakistan is in the middle, and China's trade with Pakistan is developing at a relatively high level. More potential for trade cooperation should be tapped, so that trade cooperation between China and Pakistan will develop in a stable and upward direction.

Policy recommendations for the development of trade cooperation between China and South Asia
In the context of the "Belt and Road", we should make good use of the policy advantages, seize the opportunity of development with South Asia, and further deepen the trade and cooperation relationship with the eight countries of South Asia. From the table of trade potential values, it can be seen that the trade potential value of China and the eight countries in South Asia are all less than 1, indicating that the trade space between China and the eight South Asian countries needs to be further explored, and further development of trade cooperation is still needed.

First, we must cooperate with the development of the "Belt and Road" and carry out corresponding trade transactions according to the policy of South Asia in the "Belt and Road". China has proposed a policy of developing South Asia as a key area of the "Belt and Road" and China's willingness to develop together with South Asia. Then, correspondingly, the trade policy between China and South Asia should also be matched with it, placing China's development with South Asia in an important position in trade policy.

Second, we must "in the trade cooperation of South Asia, embody the spirit of "One Belt, One Road". The part of China's trade cooperation with South Asia as a Belt and Road" should reflect the spiritual connotation of the "Belt and Road".

Third, we should seize the policy advantage and do a good job of inter-connecting with the eight countries of South Asia. The maritime interconnection between China and South Asia has been perfected. By comparing the cost of maritime interconnection and land interconnection, it can be found that the cost of land interconnection is lower. Therefore, in the future development, we should focus on the realization of land interconnection between China and South Asian countries. [11] Then, it is time to seize the policy opportunities and improve the land interconnection with South Asia.

Through the analysis of the export similarity index between China and the eight countries in South Asia, it can be seen that the export similarity index of China and South Asian countries is generally high, indicating that China and South Asia have similar

export similarities, especially with India and Pakistan.

First, India and Pakistan should be regarded as breakthroughs in the trade development between China and the eight countries in South Asia. Through trade cooperation with India and Pakistan as a bridge, we will develop trade cooperation between China and other countries in South Asia and open up the market in South Asia.

Second, through the analysis of the status quo of China's import and export trade with South Asia, we can see that the import and export trade volume

between China and Bhutan and Maldives is relatively low. Therefore, in the future development, we must further strengthen the import and export trade between China and these two countries.

Third, the import and export trade between China and the eight countries in South Asia has problems as a whole. The import and export trade volume between China and South Asia accounts for a relatively small proportion of China's total import and export trade volume. Similarly, China's import and export trade with South Asia accounts for a smaller proportion of South Asia's overall import and export trade.

Year	Export	Import	Proportion of China's trade volume(%)	Proportion of trade in South Asia(%)
2001	42.22	23.13	1.14	3.44
2002	54.45	28.83	1.20	4.07
2003	71.91	48.85	1.29	4.91
2004	112.31	83.62	1.55	5.94
2005	159.61	107.25	1.72	6.14
2006	233.93	114.27	1.82	6.56
2007	352.08	159.01	2.15	7.94
2008	443.89	214.68	2.34	7.86
2009	418.59	151.92	2.34	7.79
2010	576.07	229.63	2.47	8.38
2011	713.01	261.11	2.45	8.04
2012	704.49	226.14	2.18	7.51
2013	752.48	210.05	2.08	7.82
2014	838.35	201.87	1.92	8.65

Table 12. Import and export situation between China and South Asia in 2001-2014

It can be seen from the data in Table 12 that the proportion of China's import and export trade volume with South Asia in China's total import and export trade volume does not exceed 3%, and the volume of China's import and export trade with South Asia accounts for the total volume of import and export trade in South Asia. Not more than 10%. Therefore, we should increase the import and export trade between China and the entire region of South Asia. The import and export of China and South Asia has also experienced serious imbalances, and there has been a serious trade surplus. This is not good for the development of China and South Asian countries. Therefore, we should balance the relationship between imports and exports and solve the problem of trade imbalances.

Through the analysis of the comparative advantages of China and the eight countries in South Asia, it can be seen that the countries of South Asia are all countries with abundant natural resources, and the degree of industrialization still needs to be further strengthened. China's industrialization development is relatively good, and its modernization level is relatively high, which can complement the products

formed by our country.

First, continue to maintain China's comparative advantage in industry and further enhance China's industrialization level. When China is engaged in trade cooperation with South Asia, it should maintain its comparative advantage. Among the display comparative advantage index of 9 types of products in China, among the 6-8 products, the display comparative advantage index shows a trend of more than 1, and it shows a trend of increasing year by year. This shows that China has certain advantages in resource-intensive and labor-intensive industries. Moreover, with the increase in the degree of industrialization in China, the degree of industrial mechanization and modernization in China has also increased. China will continue to maintain this advantage in its future development.

Second, take advantage of the comparative advantages of the eight South Asian countries and use them as the focus of trade cooperation. Through the analysis of the comparative advantages of South Asian countries, it can be seen that the eight countries in South Asia generally have comparative advantages

for Category 0 and Category 5 products, indicating that South Asian countries have comparative advantages in natural resources and food products. China should cooperate with the eight countries of South Asia in this regard.

Third, expand the field of cooperation and innovative cooperation methods. The trade potential value of China and South Asian countries is less than 1, indicating that the path of trade cooperation between China and South Asia needs to be further expanded. It is necessary to innovate the way of trade cooperation and carry out multi-faceted, multi-field and deep-level trade cooperation.

Through the analysis of the complementarity between China and the eight countries in South Asia, it can be seen that the trade complementarity index between China and South Asian countries is basically between 0.5 and 1, but the trade complementarity index is still less than 1, and needs to be further improved.

First, we should reduce labor costs and make our labor force more competitive and more competitive. South Asian countries, especially India, have shown their comparative advantages in labor-intensive industries, which has formed a competitive situation with China. The labor force in South Asian countries is cheaper than in China. Therefore, China should reduce labor costs and maintain labor cost advantages.

Second, new trade complementarity should be created. Transforming the industrial structure, promoting the transition of China's labor-intensive and resource-intensive industries to technology-intensive industries, and upgrading China's technological level and modernization level. Thereby, strengthen the trade complementarity

between China and the eight countries in South Asia.

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