

A Research on the Influencing Factors of Goods Trade Between China and India

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Abstract—The article first analyzes the per capita GDP, population, per capita gross national product, import and export volume of China and India from 2002 to 2016. It indicates that the economic growth rates in China and India are similar and the population is quite similar, too. While, the gap in export trade is increasing. By analyzing the data of China's and India's import and export trade from 2002 to 2016, it finds that the total import and export volumes between China and India both show an upward trend. However, China's exports to India has increased by a large margin for the increase in imports. The research shows that China's imports to India are mainly affected by the population of the two countries, China's GDP and its per capita GDP, while the exports are mainly influenced by the per capita GDP of India.

Keywords—goods trade; influencing factors; China & India

I. INTRODUCTION

Foreign scholars have conducted research on China's trade with India from different perspectives. The empirical analysis shows that India's potential gain is high when the influence of India's existing "behind the border" constraints are eliminated [1]. Using highly dis-aggregated trade data and firm-level field interviews, a paper finds that despite the low trade volume between India and ASEAN, vertical specialized trade has continued to grow [2]. The major change in the trade relations between India and China has come after China's joining of WTO in 2001. So we have studied the trade situation and trade dependence between China and India after China's accession to the WTO [3]. Using the market share model, through empirical analysis to study the factors affecting the trade between China and India, the conclusion shows that scale effect is always a major factor; the scale effect of the exports growth from China to India is manifested in the industrial finished or semi-finished products, and the competitive effect of primary products is even more significant [4]. The scale and depth of the study are restricted by authors' knowledge, hence may not be adequate in addressing those important issues. Both India and China are undergoing policy review regarding food security, under pressures in domestic market and from

multi-nation negotiations [5]. We indicate policy gaps for both countries, particularly for India, in speedy realization of stalled projects and smooth functioning of ongoing ones and then provide a guideline of the measures a consumer country must undertake as part of its national strategy in supplier and transit countries to achieve energy security and geopolitical advantage [6].

Domestic scholars have studied the trade between China and India as follows. Most of India's investment methods in Africa are obtained through private enterprise mergers and acquisitions, while China mainly passes state-owned units' direct investment in Africa. African countries have benefited from the growth of trade relations with India and China, as well as the two countries' investment projects in Africa [7]. In the context of the Belt and Road, we use the relevant statistical data on bilateral trade between China and India from 2006 to 2015 and took an empirical analysis of the relevant index of trade relations, finally propose suggestions for promoting bilateral trade development between China and India [8]. Take China and India as examples to discuss the relationship between the two countries and study the development process and trends of developing countries' international trade and international direct investment relations [9]. Through studying India's service trade and comparing it with China's service trade to comprehensively evaluate the global competitiveness of India's service trade [10].

According to the above reading, scholars at home and abroad have conducted a certain amount of research on trade between China and India, mainly focusing on trade potential, service trade and investment and so on. But about the factors affecting the import and export of goods between China and India after China has joined WTO, there are very few people conducting the researches. China and India are the two most populous countries in the world. The economic growth of the two countries is relatively fast. The development of economic and trade cooperation between the two countries has an important impact on both sides and even the world. Therefore, exploring the influencing factors of the import and export of

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goods between the two countries and proposing relevant recommendations are of great significance to the development of the two countries and the world economy. At the same time, it provides certain theoretical references for the economic and trade cooperation between China and India.

II. THE GOODS TRADE STATUS

Since the establishment of diplomatic ties between China and India in 1950, the relations between the two countries have followed an extraordinary path. All along, relationship of China-India faces multiple and severe challenges, but the most important thing is still how to manage the growing bilateral trade. China and India are the two developing countries with the fastest economic growth. The total population of the two countries accounts for nearly 40% of the world's total population. The trade cooperation between the two countries has a major impact on the nationals of the two countries and on the peaceful development of Asia and even the world at large.

In recent years, the economic and trade co-operations between China and India have developed rapidly and the trade volume has been continuously updated. According to the statistics, China's total import and export of goods to India increased from \$4.94451 billion in 2001 to \$70.16 trillion in 2016. At present, China is India's largest trading partner and India is China's largest trading partner in South Asia. China's exports to India are mainly electrical machinery, electrical equipment, audio-visual equipment and its accessories, boilers, machinery and parts, organic chemicals, fertilizers, precious metals and products, iron and steel products, plastics and their products. Chinese imports from India are mainly mineral products, jewelry, chemical products, textiles and raw materials, plastics and rubber, plant products.

Although China and India established diplomatic relations relatively early, they are politically interfered by Western political forces. The political factors of the two countries often hinder the development and cooperation of economic trade. Second, both countries are developing countries with a large population and economic basis. China has implemented reforms and opening up in 1992 and officially entered the WTO on December 11, 2001. The development of the economy and trade between the two countries has been affected to varying degrees. By analyzing China's import and export trade with India from 2002 to 2016, as shown in Figure 1 (unit: billions in dollars), from 2008 to 2009, both exports and imports have shown a downward trend, which may be affected by the financial crisis; however, they rebound quickly after a downward trend. And it rises sharply. China's imports to India have been at a relatively low level and have gradually declined in recent years. China's exports to India have been at a relatively high level and have been gradually increasing. China exports to India are very competitive in the goods trade between the two countries. In recent years, China's exports of goods to India have gradually increased, while imports of goods to India have gradually decreased. Therefore, the margin between the amount of imports and the amount of exports has increased. For China, it is a trade surplus; From India's point of view, it is a trade deficit.

TABLE I. CHINA'S IMPORTS AND EXPORTS OF GOODS TO INDIA(UNIT: BILLIONS IN DOLLAR)

<i>Year</i>	<i>Export</i>	<i>Import</i>
2002	26.712	22.739
2003	33.432	42.514
2004	59.36	76.78
2005	89.343	97.662
2006	145.813	102.774
2007	240.514	146.172
2008	315.854	202.589
2009	296.666	137.143
2010	409.14	208.463
2011	505.364	233.723
2012	476.775	187.972
2013	484.324	169.703
2014	542.174	163.587
2015	582.28	133.686
2016	583.978	117.641

Data Sources: Uncomtrade Database

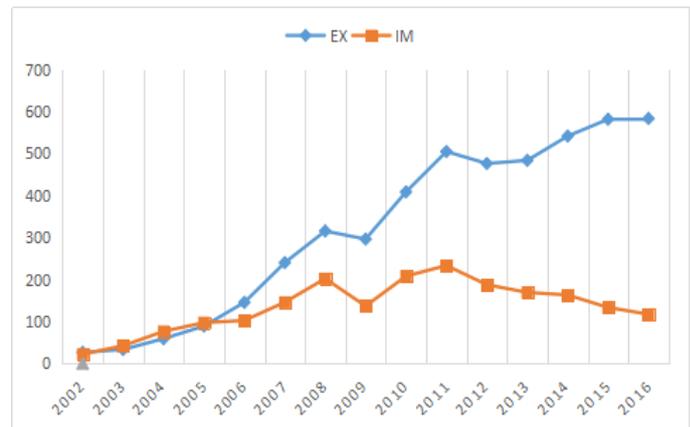


Fig. 1. Picture one

In addition, the current complex international relations are affecting the relations between China and India. The development of economic and trade co-operations between the two countries needs to inject new factors. Therefore, it is necessary to re-examine the needs of the two countries and use the opportunity of the “One Belt and One Road” to deepen the friendship. In my view, this paper intends to analyze the main influencing factors affecting the bilateral goods trade between China and India by establishing the bilateral trade gravitation model, explores the main influencing factors in the goods trade.

III. GRAVITY MODEL ESTABLISHMENT AND EMPIRICAL TEST

A. Model Construction

The gravitational model originated from the “gravitational law” in Newtonian physics. The earliest application of this model to international trade was Tinbergen¹ and Poyhonen². They believed that there was a positive relationship for the trade volume between the two countries or regions and the total economic aggregate between the two countries. It was inversely proportional to the spatial distance. In order to explore the impact of the population and per capita GDP of the two countries on the import and export trade between the two

changed positively and has a significant impact. This shows that when India's GNP per capita increases by 1%, China's exports of goods to India will increase by 0.4397%; when the per capita GNP of India decreases by 1%, China's exports to India will reduce the same percentage. Therefore, the per capita gross national product of India is the most important factor affecting China's exports to India. In addition, in the expression of China's goods exports to India, only the per capita GDP of India and the population of India are selected as the impact indicators. First, because the indicators of China's imports to India are not necessarily all indicators of China's exports to India, there are differences in practice tests. Second, although the GDP of the two countries is gradually increasing, the two countries are also very populous. China's import and export of goods to India ultimately requires the nationals to complete the practice. Therefore, in practice, the impact of the gross domestic product of the two countries on the import and export of goods is not obvious. Third, the per capita GDP of the two countries is different and individual purchasing power and consumer demand are different, so that the demand for import and export of goods is different.

The FTAs in China and India are currently in the research phase and have not been formally signed. Therefore, whether in the import trade or export trade, the FTA between the two countries cannot be combined with other variables to become a reasonable economic model, nor can it explore the significant impact of the FTA between the two countries on the goods trade.

IV. THE CORRESPONDING SUGGESTIONS

Based on the data collected in this paper and relevant empirical analysis of using Eviews 6.0, it is possible to clearly determine the factors that influence China's import and export of goods to India, even if the results differ from before in common sense. In detail, China's influencing factors of goods imports to India are China's population, India's population, China's GDP and China's per capita GDP; China's influencing factor of goods exports to India is mainly India's per capita GDP. Based on this, this article proposes corresponding proposals for long-term trade cooperation and development between China and India.

Firstly, the population of the two countries significantly affects China's imports to India. Among them, China's population and imports are significantly positive, and India's population and imports are significantly negative. An increase in China's population will increase China's imports of goods to India, while an increase in India's population will reduce China's imports of goods to India. Both countries are large populous countries. China's import of Indian goods is dominated by tropical crops, which has a greater consumer demand. Due to certain political differences between China and India and India's relatively conservative economic market, Therefore, first of all, China needs to maintain friendly relations with countries in Southeast Asia and South Asia, strengthen mutual political trust and economic cooperation, and expand China's sources of goods imports. Second, China can grow related tropical crops in the southern region, reduce the import of related crops and then it can have less reliance on the Indian market, thus reducing certain risks. At the same

time, India needs to open its own economic market, establish a free trade zone with China, sign a free trade agreement and promote the free development of trade. Finally, India should speed up industrial upgrading and promote the development of intra-industry trade between the two countries.

Secondly, the gross domestic product or the total economic output of a trading country affects the total foreign trade of a country. China's GDP and imports are in a reverse relationship. China's per capita GDP and imports are positive. Therefore, first of all, China should actively develop its own economy, increase its gross domestic product and increase its per capita GDP. On the one hand, it reduces the import of primary products and optimizes the structure of China's imports of goods. On the other hand, the increase in per capita GDP can increase national income and purchasing power, increase demand for overseas products and improve the quality of life of people. At the same time, China is a member of the WTO. China's foreign trade development will still depend to a great extent on the external economic situation. This is especially true for import and export trade. China's economy and the world economy affect each other. So China must actively participate in world economic activities and keep the same trend with the development trend of the world economy.

Thirdly, the factors affecting China's exports to India are mainly the per capita GDP of India. The per capita GDP and the export value of India which are positive. The impact is significant. So India's per capita GDP increases, then it will increase China's exports of goods to India. China's export of goods to India is dominated by electronic and mechanical equipment, so China can continue to exert its advantages in machinery and equipment and increase its technological content. At the same time, China should actively increase its direct investment in India and cultivate new export trade growth points. India is a country with a clear class and a wide gap between the rich and the poor. If India wants to gain certain advantages in the trade of goods with China, it needs to carry out certain reforms in its economy, narrow the gap between the rich and the poor, achieve a fair distribution of resources and finally increase national income.

Fourthly, China and India have not signed free trade agreements and have not established a trade zone between the two countries. Both countries are big countries in the world and the two countries can complement each other in the import and export of goods and optimize the resources of the two countries. The development of economic and trade cooperation between the two countries is of great significance to the long-term peace and friendship between the two countries and the growth of the world economy. Therefore, it is important to accelerate the signing of free trade agreements between the two countries, reduce the tariffs on related products, promoted the free flow of the two countries' factors and the free development of trade. At the same time, it will further open up the economic markets of the two countries, promote the deepening reforms and strengthen economic development of the two countries' economic markets.

V. CONCLUSION

China and India have had economic and trade exchanges

since ancient times. Due to political differences between the two countries in recent years, the development of economic and trade cooperation between the two countries has also been subject to certain restrictions. The cooperation between the two countries is of great significance. It is reflected in the trade in goods, the exchange of resources between the two countries is the basic economic and trade cooperation.

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