

## The Situation of China's Trade

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**Abstract.** Under the background of Sino-US trade war, this paper expounds the situation of trade between China and its major trading partners, and gives some explanations from the perspective of value-added. Meanwhile, the effects of FTA on China's exports are measured using data from 2001 to 2014. It is found that the effect of FTA on China's exports is higher than 30%.

### Introduction

China's economy has maintained a medium and high-speed development, China's import and export trade volume is increasing every year. According to the statistical yearbook issued by the China Statistical Bureau, China's total import and export of goods in 2016 was 3685.6 billion dollars, accounting for 11.45% of the world's total import and export of goods. Among them, China's export volume is 2098.2 billion dollars, accounting for 13.15% of the world's total exports of goods; China's import volume is 1587.4 billion dollars, accounting for 9.78% of the world's total imports of goods. In order to study the development of China's foreign trade, this paper selects the United States, Japan, South Korea and the European Union (EU 27) as representatives to study China's foreign trade situation.

The following analysis is based on the National Reporting Network of the Ministry of Commerce of the People's Republic of China. The volume of trade between the two countries is related to many factors, such as the economic scale, distance, population and cultural identity. These are the basic factors of Gravity equation, but they are all factors that can't be changed in the short run or even in the long run. Export, as a mean of economic development, is also affected by bilateral trade barriers. Artificial tariff barriers are an important part of the barriers, while FTA is an important measure of eliminating trade tariff barriers. At present, there are two research directions on the impact of FTA on trade. One is pre-research method, the other is post-research method. The pre-research method apply elasticity theory and general equilibrium model to analyze the changes of trade volume after tariff barrier reduction [1]. The post-research is mainly to test the changes of trade flow with and without FTA. Gravity equation is an important tool in post-research. Since it was put forward, the Gravity equation has been modified and new factors have been added into it. Baier&Bergstrand [2] studied the impacts of the "average distance between trade partners and the rest of the world" and "differences of factor endowment" between trade-partner. In this paper, we add these two elements to the Gravity equation to examine whether they have effects on China's Trade. At the same time, this paper analyses the effect of FTA on China's Export.

### The State of Trade

**Sino-US Trade Situation.** Since the establishment of diplomatic relations between China and the United States in 1979, trade between China and the United States has been growing, and the volume of import and export trade between China and the United States is increasing every year. According to statistics released by the U.S. Department of Commerce, the total bilateral imports and exports of goods between China and the United States amounted to \$635.97 billion in 2017, an increase of 10.0% over last year. Among them, China's exports to the United States amounted to 50.56 billion dollars, an increase of 9.3% over last year. China imported 130.37 billion dollars from the United States, an increase of 12.8% over last year. In 2017, China's top four exports to the United States were mechanical and electrical products, furniture and toys, textiles and base metals, accounting for

75.5% of China's total exports to the United States. China's top four imports from the United States were transportation equipment, mechanical and electrical products, plant products and chemical products, accounting for 61.9% of the total imports from the United States. The orientation of development established before China's reform and opening-up has promoted the emergence of export-oriented policies [3]. In Asia, China is unwilling to blindly follow the leadership of the United States [4]. From the perspectives of domestic stability, military status and trade expectations, Sino-US relations have remained stable for a long time [5]. The Sino-US trade war will have an impact on China, but China's economy can still grow steadily [6].

In Figure. 1, we can intuitively see the trend of Sino-US trade, which declined slightly in 2016. Although there are twists and turns, Sino-US trade relations as a whole are still good. From the point of view of the import and export industries of China and the United States, the proportion of mechanical and electrical products exported by China to the United States has increased significantly. The proportion of mechanical and electrical products imported by China from the United States has declined, and the proportion of transport equipment that needs to be imported has increased. From 2010 to 2017, the major import and export industries of China and the United States basically have not changed. The proportion of the major import and export industries of China and the United States has changed slightly. We can see that China's Electro-mechanical industry is undergoing a good transformation.

From 2010 to 2017, trade frictions between China and the United States have been existing. These frictions are mainly manifested in economic disputes. China and the United States have always been partners and rivals. The United States believes that rising China will affect its position as the world's hegemony. It has been suppressing China's economy and constantly creating various trade frictions, such as this year's Sino-US trade war. The United States not only suppresses our country economically and politically, but also begins to arouse our reflection when some American culture flows into our country. It is undeniable that our culture is indeed influenced by American culture. When American Christmas is popular among our young people, no one can tell whether the result of this cultural confrontation is good or bad. What we can see is that the cultural collision between China and the United States does not seem to have a great impact on the economy in Sino-US trade.

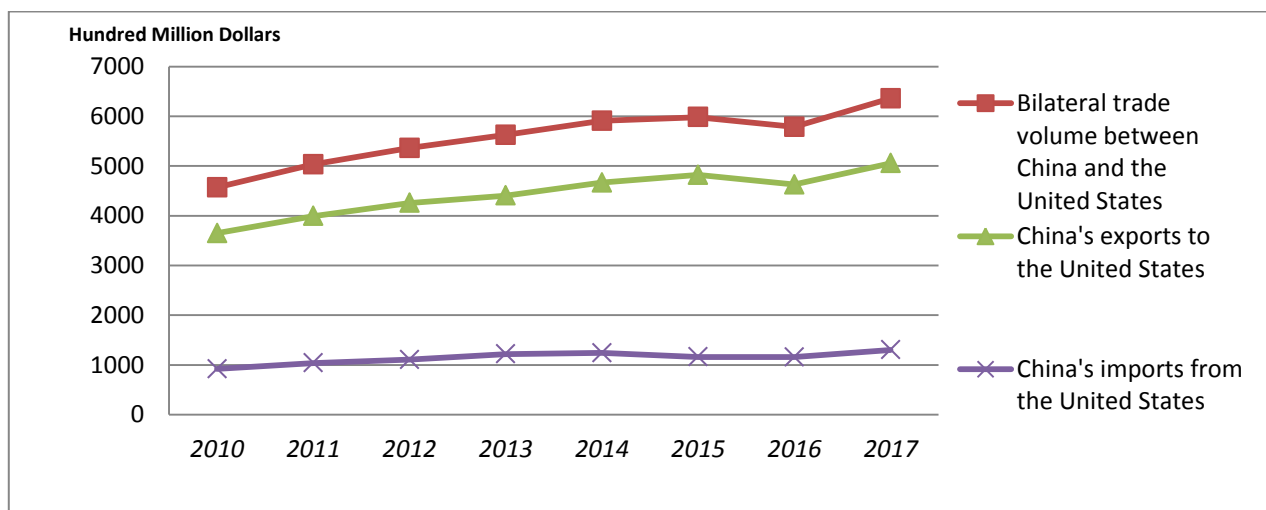


Figure. 1 Sino-US Import and Export from 2010 to 2017

**Current Situation of Sino-EU Trade.** According to the statistics of Eurostat, the import and export volume of goods between EU and China was 644.46 billion dollars in 2017, and the trade surplus between China and 27 EU countries was 20.69 billion dollars. In 2017, China's top four exports to 27 EU countries were mechanical and electrical products, textiles and furniture toys, accounting for 69.3% of the total exports to 27 EU countries. The top three products that China imported from 27 EU countries were mechanical and electrical products, transportation equipment

and chemical products, accounting for 64.9% of the total imports from 27 EU countries. Now China has become the second largest export market and the first source of imports for 27 EU countries. Market system is an important factor affecting Sino-European trade relations [7]. The trade issues between China and Europe include human rights, environment and security issues [8]. Because of the absence of China-EU trade data in the national reporting network in 2014, this paper borrows China's import and export data in 2015 China Statistical Yearbook to calculate China-EU trade volume in 2014. Due to the different statistical source of the website, the calculation results may be erroneous. The import and export trade volume of China and the EU is very large, and the trade volume is gradually increasing. China has always had a trade surplus. Compared with Sino-US trade, the trade surplus between China and Europe is relatively small. From the point of view of the fluctuation of the broken line chart, China's trade with the EU has increased or decreased, the volume of trade has decreased in fewer years, and the overall development is good. The main import and export commodities of China and EU in 2017 have little change compared with 2010, but the main export products of China are still in the middle and low-end manufacturing industry, and the products exported to China by EU are relatively high in technology.

**Current situation of Sino-Korea Trade.** South Korea is very close to China and has similar cultural background. After the establishment of diplomatic relations between China and South Korea in 1992, the trade between China and South Korea has been carried out smoothly. Now China has become one of the main trading countries of South Korea. According to statistics released by the Korean Customs, the bilateral imports and exports of goods between China and South Korea in 2017 amounted to US\$239.97 billion. The top three products exported by China to South Korea were mechanical and electrical products, base metals and products and chemical products, accounting for 69% of China's total exports to South Korea in that year. The main products imported from Korea are mechanical and electrical products, chemical products and optical medical equipment, accounting for 75.8% of China's total imports from Korea. In recent years, there are also some problems in Sino-Korean trade, such as weak trade growth, trade imbalance, and shrinking South Korean investment in China. In addition, trade between China and South Korea is escalating. China-ROK FTA Promotes Intellectual Property System Convergence [9]. The trade volume between China and South Korea has increased or decreased. China has been running a trade deficit with South Korea, which shows that South Korea is also very dependent on the Chinese market. In recent years, Korean current is very popular among young people in China. Korean men's League and women's league, cosmetics and mobile phones are very popular in China, so Korea has benefited a lot from it. From 2014 to 2016, the trade volume between China and South Korea declined, which is due to the bad overall trade environment and the tense relations between China and South Korea. In 2017, South Korea's exports to China accounted for 24.8% of South Korea's total exports, and trade between China and South Korea began to warm up. From the point of view of China and Korea's import and export industries, industry is the main export force of our country, and Korea's export products are technology-intensive.

**Current Situation of Sino-Japanese Trade.** Because of historical problems, China and Japan have always been very tense in their political relations. Naturally, trade between the two countries will be hindered by many obstacles. In recent years, due to limited domestic resources, Japan has begun to strengthen trade protectionism and the "China Threat" theory, which makes the development of trade between China and Japan difficult. According to the statistics of Japanese Customs, the bilateral import and export volume of goods between China and Japan was 297.28 billion dollars in 2017, an increase of 9.9% over last year. Among them, China exported 164.42 billion US dollars to Japan, an increase of 16.7% over last year, and imported 132.86 billion US dollars from Japan, an increase of 5.0% over last year. The effect of Sino-Japanese trade on the long-term development of both sides has been concerned. The change of real exchange rate and comparative advantage is the main factor affecting the change of Sino-Japanese trade [10].

In 2017, China's main exports to Japan were mechanical and electrical products, textiles and furniture toys, with exports of 75.23 billion dollars, 21.45 billion US dollars and 10.61 billion dollars, respectively. Among them, mechanical and electrical products increased by 5.7%, textiles

and raw materials decreased by 0.9%, textiles and raw materials increased by 13.4%, accounting for 65.3% of China's total exports to Japan in that year. The main products imported from Japan by China are mechanical and electrical products, chemical products and transport equipment, with exports of \$562 billion, \$13.95 billion and \$12.46 billion. And they respectively increased 19.6%, 20.9% and 8.9% over last year, accounting for 62.2% of China's total imports from Japan. The main products exported by China to Japan have not changed, and the base metals and products exported by Japan to China have changed a lot, which may be related to Japan's resource endowment. Sino-Japanese trade relations are tortuous and the volume of trade fluctuates greatly. From 2011 to 2015, Sino-Japanese trade volume has been declining. In addition to the unfriendly international trade environment, during this period, Japan's competition for Diaoyu Island also made Sino-Japanese trade relations tense.

**The Impact of FTA on Export of China.** The gravity model used in this paper adds two variables: the average distance between trade partners and other countries in the world and the difference of factor endowment between trade partners. The model is constructed as follows:

$$\ln(Export_{jt}) = \beta_0 + \beta_1 FTA_{jt} + \beta_2 \ln(GDP_{jt}) + \beta_3 \ln(Peo_{jt}) + \beta_4 \ln(DIS_{jt}) + \beta_5 \ln(Ave_{jt}) + \beta_6 KL_{jt} + \varepsilon_{jt} \quad (1)$$

Among them, the residuals represent the uncontrollable factors of China's exports to country J in the t year. Export, FTA, DIS, Ave, GDP, Peo and KL respectively represent China's export volume to partner countries, whether the partners of trade in one FTA, distance between trade partners, average distance between trade partners and other countries in the world, the product of economic scale between trade partners, the product of population between trade partners and the difference of factor endowment between trade partners. Data are from UN COMTRADE database, China Free Trade Area Service Network, CIA database, World Bank database.

Table 1 Estimation of the Effect of FTA on China's Export

	(1)	(2)	(3)
FTA	0.301*** (0.0770)	0.374*** (0.0919)	0.375*** (0.0929)
Ln(GDP)	0.741*** (0.0305)	0.738*** (0.0310)	0.743*** (0.0312)
Ln(Peo)	0.127*** (0.0324)	0.127*** (0.0323)	0.121*** (0.0342)
Ln(DIS)	-0.494*** (0.0499)	-0.482*** (0.0528)	-0.484*** (0.0527)
Ln(Ave)		-0.695 (0.440)	-0.700 (0.438)
KL			-0.00745 (0.0271)
Constant	-18.72*** (1.380)	-12.33*** (4.066)	-12.23*** (4.060)
N	532	532	532
adj. R <sup>2</sup>	0.794	0.795	0.795

Note:\*\*\*P<0.001,\*\*P<0.05,\*P<0.1.

The results of Table 1 show that FTA promotes China's exports by more than 30%, while factor endowment differences and the average distance from other countries in the world have negative effects, but the effects are not significant. The reason may be that the current transportation technology breaks through the distance restriction problem and the elements can also flow internationally.

**An Analysis of the Current Situation of Trade.** In terms of trade volume, the United States is the largest trading partner of China's exports, followed by the European Union. China's exports to

both countries are very close. And China's exports to Japan and South Korea are close, much less than those to the United States and Europe. In terms of trade balance, China's exports have shown a huge surplus, and the trade surplus between China and the United States is the largest. This is measured in terms of trade volume. The difference will be greatly reduced in terms of value-added. Of course, the large trade deficit between China and the United States is not only in terms of absolute volume, but also in terms of the relative proportion of the trade deficit in China's export volume. It can be seen from the relative distance between the trade balance line in Figures 1 to 4 and China's imports and exports. But overall, China's exports far outweigh its imports. The factor endowment theory in traditional trade theory can explain this phenomenon to some extent. Overall, compared with China, the United States, Europe, Japan and Korea are capital-intensive and technology-intensive countries, while China belongs to labor-intensive countries, especially low-tech and unskilled labor. This has led to the transfer of production from developed countries to China. The transfer of production from developed countries to China results in the rapid development of China's processing trade and China's exports of a large number of goods, but the increase in value-added is less than the volume of trade.

## Summary

At present, China's trade shows a huge trade surplus. Trade promotes the development of China's economy, but also forms a dependence on the economy of other partners. Trade policies of other countries may have a great impact on our country. FTA has significantly promoted trade exports, and the promotion effect has reached more than 30%. Factor differences and the average distance between trade partners and other countries in the world have no significant impact on China's exports. At present, political factors have more and more influence on international trade.

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