

The Influence of RMB Exchange Rate Fluctuation on Sino-us Agricultural Trade

Xiuli Shi*

School of economics, ShangHai University, Shanghai, China

e-mail: 1912104757@qq.com

*Corresponding author

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Abstract: The outbreak of the Sino-US trade war in March 2018 has had an important impact on the economic and trade development of China and the United States bilaterally and the world, with agricultural trade becoming the focus of the dispute. China is the main export of U.S. agricultural products, in recent years has been firmly in the top two U.S. agricultural exports, agricultural trade is bound to bear the brunt of the Sino-U.S. trade war. The trade war led to the Federal Reserve raising interest rates, directly causing the yuan to fall against the dollar. This paper makes empirical analysis through the Granger causal and co-integration test, and establishes the error correction model to adjust the model, selects the data from 1999-2017 as a sample space, and mainly explores the impact of RMB exchange rate fluctuations on Sino-US agricultural trade. The results show that RMB exchange rate fluctuations have indeed had an impact on China-US agricultural trade, and when the RMB exchange rate falls, China's agricultural imports from the United States decrease, and put forward countermeasures for RMB exchange rate fluctuations and Sino-US agricultural trade to reduce the adverse effects of Sino-US trade disputes.

1. Introduction

Since China joined the WTO in 2001, China has little protection for agricultural trade, while the United States has introduced a series of incentives for agricultural exports since the subprime crisis. The differentiated agricultural products strategy of China and the US leads to the continuous expansion of the US agricultural products export scale to China. According to the data, by 2017, the United States had become the second largest source of China's agricultural imports, occupying the leading position in the world's agricultural exports. Over the past decade, China has been the top two destinations for U.S. agricultural exports. The US trade deficit in agricultural products has long been a sensitive issue in bilateral trade, and has caused trade frictions between the two countries. The trade war between China and the United States that broke out in March 2018 has drawn wide attention from countries around the world, with the trade in agricultural products once again at the center of the dispute. The United States imposes trade restrictions on China through a trade war, and China's main products to counter the trade war with the United States are agricultural products. In the early stage of trade counterattack, the products targeted by China to take counterattack measures were basically agricultural products, which once again proved the importance of agricultural trade in bilateral trade between China and the United States.

The US launched a trade war with China in 2018, and the Fed's interest rate hike is a typical move in the trade war. On the other hand, in recent years, China's economic growth has changed from focusing on speed to focusing on quality, and the economic growth rate has slowed down to some extent. The slowdown of China's economic growth and the interest rate increase of the Federal Reserve directly lead to the depreciation of the RMB, triggering the debate whether the RMB exchange rate against the US dollar breaks through 7. On October 1, 2016, RMB was officially added to the SDR basket and became an important member of the world currency. Further progress was made in the internationalization of the RMB, and the degree of liberalization of the use of the RMB in the world continued to increase. But the yuan is still a long way from being fully

convertible compared with the dollar circulating around the world. Traditional trade theory holds that when a country's currency depreciates, the price of its products measured in other countries' currencies falls, which is good for exports, bad for imports and good for the sino-us trade deficit. Then, as the renminbi depreciates against the dollar, us agricultural exports to China fall. On the basis of the theory, study the mechanism of RMB exchange rate fluctuations of agricultural trade of China and the United States to study, and compare to other factors and verification, such as population, tariffs and annual consumption level, and simple correction model, Granger causality test analysis it is concluded that the RMB exchange rate decrease is agricultural products import trade of China and the United States to reduce the relationship. At the same time, Suggestions are proposed to stabilize the exchange rate, promote agricultural transformation and upgrading, adjust the pattern of foreign trade and improve bilateral terms of trade to improve the adverse impact of RMB/usd exchange rate on sino-u.s. agricultural trade.

2. Analysis of China-us Agricultural Trade and Exchange Rate Changes

2.1analysis of china-u.s. agricultural trade

2.1.1Analysis of china-u.s. agricultural trade scale

Throughout the development history of China's agricultural trade, before 2003, China's agricultural trade was stable. With the release of wto dividend, since 2004, China's agricultural trade began to show rapid growth; To 2009, agricultural trade volume presents explosive growth. Under the trend of such rapid growth, China's agricultural trade volume in 2015 has reached five times that of 2008, reaching nearly 50 billion us dollars.

In terms of bilateral trade in agricultural products between China and the United States, the scale of trade in agricultural products between China and the United States was stable from 1999 to 2002, and increased slightly from 2003 to 2009. In 2008, the outbreak of the subprime crisis in the United States threatened the global economy, leading to the global economic downturn, and bilateral trade in agricultural products was impacted to a certain extent and reduced by a certain scale. At the same time. The United States began to curb China's agricultural exports, and also introduced a series of measures to encourage the export of its own agricultural products, leading to the decline in China's agricultural prices, the relative surplus of agricultural products, and the further widening of the sino-us agricultural trade deficit. From 2010 to 2015, after China's accession to the WTO, tariffs were gradually lowered, which stimulated China's agricultural imports from the United States, with a small increase in the scale of imports, and the trade value peaked at \$10 billion in 2015 and leveled off. From 2015 to 2017, the world economy was weak and the prices of agricultural products were relatively low. However, China's economy entered a new normal of high-quality growth from high-speed growth to medium-to-high speed growth, focusing on industrial transformation and upgrading. With the process of globalization, China's choice of agricultural products import is also increasing, so the import from the United States shows a downward trend.

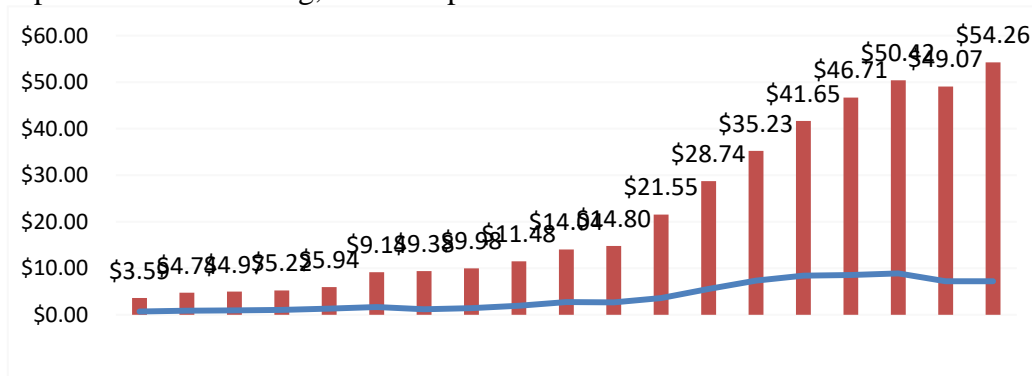


Figure 1. agricultural products imported from the us by China from 1999 to 2017 (unit: us \$1 billion)

Source: United Nations database

2. 1.2 Analysis of agricultural trade between China and the United States

China is a major importer of U.S. agricultural products, including oil seeds, soybeans and grains. In 2017, bilateral trade in agricultural products between China and the us was \$19.6 billion, accounting for 14 percent of the total us agricultural exports. Oil seeds accounted for \$12.4 billion, soybeans \$12.3 billion, grains and feed \$2.1 billion, with soybeans and grains accounting for 63.7% and 10.7%, respectively. Soyabeans are the biggest single agricultural export between China and the us, almost six times the size of grain and feed exports. In terms of the total value of exports, the exports of agricultural products increased slightly from 2015 to 2017. The first column is oil seeds and products, the second column is oil seeds, the third column is soybeans, the fourth column is animal and animal products, the fifth column is grain and feed, the sixth is the choice of non-agricultural exports, the last column is fish or shellfish.

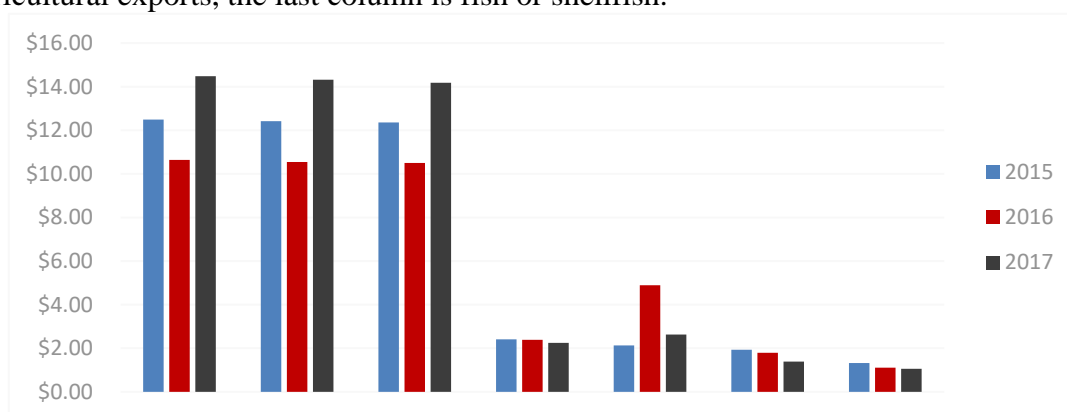


Figure 2. 2015-2017 Major categories of U.S.-China agricultural trade (in billions of Dollars)

Analysis of RMB/usd exchange rate trend

From 1999 to 2017, the overall trend of RMB exchange rate showed a downward trend and then an upward trend. Specifically, it can be seen from the data over the years that before 2005, the RMB was basically stable, with an exchange rate of about 830 yuan to 100 U.S. dollars, and maintained until 2005. In 2005, the RMB exchange rate system was gradually reformed and developed to a floating exchange rate system [6]. In 06 years began to present a renminbi appreciation, thus appeared from \$100 to RMB 700 yuan to 100 dollars for less than 625 yuan RMB, the yuan in 2016 to join the SDR basket and "revaluation" 811 yuan two-way volatility present normalized development, the value of the yuan at a higher level, reached \$100 to RMB 610 yuan, is also in recent 20 years, the value of the yuan highest point; After 2016, due to the economic slowdown in China and the capital repatriation strategy of other countries, especially the United States, the RMB tends to depreciate and gradually recovers to the exchange rate of usd 100 to about RMB 700 [6].

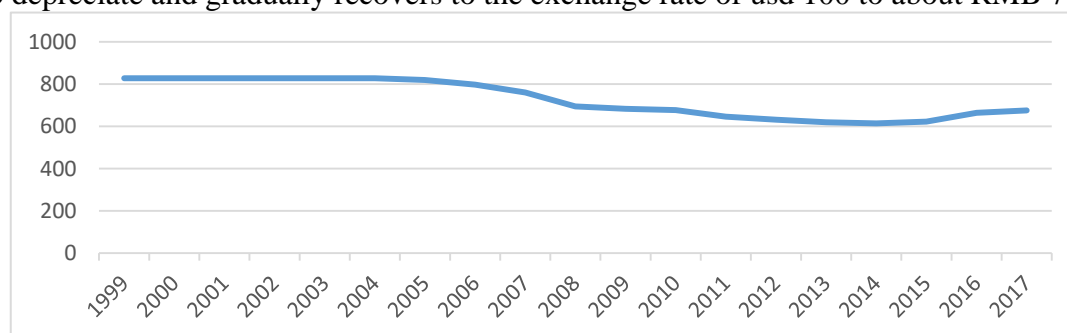


Figure 3. changes in the exchange rate between RMB and us dollar from 1999 to 2017 (100 us dollars to RMB)

Source: national bureau of statistics

3. Theoretical Analysis and Model Construction

According to international economic theory, a country's import and export are mainly determined by factors such as exchange rate level and market demand structure [5]. This paper discusses the agricultural trade between China and the United States, and mainly analyzes the impact of exchange rate on agricultural trade. Meanwhile, the United States is a major importer of agricultural products to China, while the United States is a major exporter, so it only analyzes the impact of China's agricultural imports from the United States.

Hypothesis 1: the higher the tariff, the higher the price of us agricultural products, the less competitive us agricultural products will be in China, which may lead to the reduction of China's imports of us agricultural products.

Hypothesis 2: the higher the exchange rate of RMB, the weaker the purchasing power of RMB, and the relative appreciation of us dollar, the lower the import value of agricultural products.

Hypothesis three: in the short term, consumption is one of the three drivers of economic growth. As residents upgrade their consumption, the trade volume should also increase [5]. The higher the annual consumption of residents, the better the living standard of the people, the increasing purchasing power, and hence the increase in demand, the import of agricultural products probably increased to some extent.

Hypothesis 4: the larger the population of China, the greater the demand. When domestic production remains roughly unchanged, the demand for foreign products will increase. Since the United States and China trade agricultural products closely, the demand for American agricultural products may increase.

4. Countermeasures and Suggestions for the Development of Sino-American Agricultural Trade

In the context of the current trade war between China and the United States, the trade environment for agricultural products between China and the United States has changed dramatically. Based on the above empirical analysis conclusions, this paper puts forward the following countermeasures and Suggestions to promote the development of agricultural trade between China and the United States under the new situation:

4.1. Implementing a prudent monetary policy and stabilizing the exchange rate

We implemented a prudent monetary policy to keep the total amount of money moderately tight. We should adjust the rediscount rate and the required reserve ratio of Banks in a reasonable way, so as to convey government signals to the public, influence public expectations, and make proper use of open market repurchase. A trade war with China, the RMB against the U.S. dollar presents the downward trend, the central bank should lower the discount rate and deposit reserve rate and buying bonds in the open market, the market increase in the number of currency circulation, increase the money circulation speed, at the same time, the market turnover of funds, make capital outflows, and stable exchange rate. At the same time through the policy to stabilize people's expectations of the value of the renminbi and control effective real interest rates. Stable expectations, the increase of the RMB exchange rate relations, associated with the world currencies such as the euro, ease trade imbalance with other countries of the RMB exchange rate fluctuations, strengthen the cooperation and exchange with other countries, increase of China's national strength and status in the world trade organization in China, enhance the ability of independent use of the yuan and establish confidence in the yuan, and the interest rate will affect the ability of a country's financial assets attract, resulting in the inflow and outflow of capital, capital flows and the corporate finance stability.

4.2. Strengthening capital and foreign exchange controls and improving the foreign exchange market

Foreign exchange and gold reserves are very important to stabilize the exchange rate, which can be mainly used to hedge and forward settlement and sale of foreign exchange, evade foreign exchange control measures, and increase the transparency and depth of the market. Increase foreign exchange varieties and broaden foreign exchange channels and business scope; To maintain the independence and independence of the central bank's policies, the central bank should not pay for the actions of the government to make foreign exchange transactions fair, just and open; Expand the foreign exchange market players, improve the structure and increase their liquidity, to achieve free and efficient trading on the foreign exchange platform.

4.3. Promote supply-side reform of agriculture and promote agricultural transformation and upgrading

China or partial traditional agricultural production, the output is not high, mechanization and specialization degree is not enough, at the same time is insufficient on the r&d investment of agriculture, so the government should be more emphasis on agriculture and engaged in support of agriculture, the agricultural resource advantages into development advantages, high efficiency and sustainable development of modern agriculture road. Can promote the interaction of hi-tech talents at home and abroad, make technology, will operate agricultural products manufacturers, improve agricultural production technology and mechanization level, innovative high-tech talent, especially focus on the cultivation of the agricultural products research and development of high-tech talent and the introduction is very important, to planting scale expand agricultural output to promote modern agriculture development; Furthermore, we should enhance the competitiveness of domestic agricultural product producers and step out of the characteristic management line of China's agricultural products. Attach importance to the expansion of the scale of agricultural investment and the construction of agricultural production infrastructure; We will support research and development, deep processing and manufacturing, and independent management of domestic agricultural products, so as to form a core agricultural product unique to China, gradually improve its competitiveness, update its production philosophy and business model, and develop a brand effect of domestic agricultural products.

4.4. Promote the development strategy of One Belt And One Road and adjust the pattern of foreign trade

Given the high tariff barriers between China and the us, China should strengthen exchanges and cooperation with other countries. In order to change this unfavorable situation, we should implement the development strategy of One Belt And One Road, spread the net widely and increase the opportunities to be accepted by other countries, invest products in different markets in combination with market conditions, and avoid the price decline and market loss of agricultural products caused by market saturation and vicious competition. We will implement the strategy of bringing in and going global, introduce advanced development models and experience and technology in agricultural development, and get rid of the demographic dividend and cheap labor. Build a diversified bilateral and multilateral trade system, increase the friendly trade with other countries, expanding import and export trade of China, and in addition to other countries such as the United States often trade with countries to establish friendly relations of cooperation, promote China's voice in agricultural trade, the products are sold to barriers and hit the smaller countries and regions, to diversify trade strategy; At present, network technology is increasingly developed. With the help of cross-border e-commerce and other emerging enterprises and Internet information technology, the institute has learned to expand the global trade volume, reduce the cost of trade, and open up the logistics transportation and product trade between China and other countries in the world.

4.5. Implementing differentiated competition strategies and stabilizing bilateral terms of trade

Soybean and oil seeds imported from the United States belong to products with relatively high technical content and deep processing. Therefore, the specialization and differentiation of agricultural products of China and the United States should be improved, and differentiated competitive market strategies should be implemented through product and market segmentation. Develop their own advantageous products in the competition and seek development in the competition [17]. China by the economic reform, the continuing escalation of industrial structure and consumption, provides a huge market opportunity for the United States, and the high and new technology and infrastructure upgrades to the Chinese enterprises also provide the cooperation opportunity, enterprise to strengthen exchanges and cooperation between China and the United States, joint cooperation projects, increase and employment opportunities of cooperation between the two countries, the benefit of the sino-us trade between the two countries through organic be united in a multinational company, starting from the overall situation to speed up the negotiation process; Both China and the United States should reduce trade barriers, for example, China should increase imports of export advantage products to the United States, such as oil seeds, soybean, wheat and other agricultural products [13]. And the United States also increased imports of superior Chinese products, can avoid unnecessary friction. China is still at the middle and lower end of the international division of labor. We should deepen supply-side reform, transform from a trading power to a trading power, diversify the market, explore new market advantages, optimize the international division of labor mechanism, and solve China's economic and trade problems in the long run. At the same time, regulating the domestic competition mechanism and using WTO to solve disputes are also important means. As one of the important member states of WTO, WTO should take the initiative to undertake the mediation of confors to appeal for the support and assistance of other countries. The economy of China and the United States is closely linked to trade, and the interests of the two countries are highly integrated. To stay true to the theme of win-win cooperation in today's world, both China and the United States should put aside prejudices and refrain from vicious competition.

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