



The Impact of the China-US Trade War on China's Industry and Economy

Zixia Hua

Liberal Arts College, Oberlin College, Oberlin, United States

zhua1@oberlin.edu

Abstract: Since the beginning of the 21st century, small-scale trade frictions between China and the United States, which were originally sporadic, have gradually escalated into a comprehensive trade conflict under the intertwined influence of various factors. The scope of its impact is wide, covering almost every industry and field of international trade between China and the United States. The United States, especially during the Trump administration, has taken a series of trade protectionism measures that have caused damage to key parts of China's exports. Measures such as imposing high tariffs have brought multiple challenges to different sectors of the Chinese economy, such as manufacturing and agriculture, which have been impacted to varying degrees. However, crises often coexist with opportunities. This trade conflict has also created new opportunities for the development of China's internal market, prompting China to actively explore potential consumers in other parts of the world and explore new market space. Although the damage caused by trade conflicts is certain in the short term, in the long run, its full impact is still full of many possibilities.

Keywords: China, Macroeconomics, International Trade, Trade Conflict.

1 Introduction

Since the foundation of diplomatic relations in 1979, the international trade between China and the US has experienced continuous rapid growth due to the complementary essence of production and labor in the two countries. For nearly three decades, China has benefited from the trading revenue of exports and the US got easy access to cheap goods across the Pacific Ocean. However, such cooperation unexpectedly ended at the start of a trade war between China and the US in 2017. US President Donald Trump claimed the massive trade deficit measured by billions of dollars was “stolen” by China and established a 25% tariff on Chinese imported goods with the value of 24 billion dollars. Chinese development of electronic and communication technology was deeply relied upon international trade and imports, so did astronomical research and renewable energy. China hadn't fully acquired the production and materials for the industries above in 2017 due to the long-lasting lag of required technologies and specialists. Reasonably, they became targets of US sanctions against China to force it to make concessions. Beyond the expectation of the Trump administration, the sanctions triggered the

counterattack from China with the same level of tariffs instead of compromise, intensifying the previous trade conflict into a total trade war that lasted until today. For over seven years, the US has established sanctions on agricultural and energy products, besides high-tech industries, affecting multiple industries and production in China. The trade revenue between China and the US drastically declined, along with the diplomatic relationship and communication.

However, there are still chances of this crisis. That lost income influenced various production industries in China and forced them to make changes to adapt new financial environment. This research aims to explore the influence of US sanctions on specific Chinese industries and society, the challenges Chinese enterprises and the government would face, and how they should respond to lead the state out of the economic recession with steadiness [1]. The change in foreign traders broadened the international market, most of them from the third World. The increased development within those countries essentially pushed the multipolarity of the world, offering more reputation among developing countries. In the meantime, even though the limitations in high-tech industries interrupted the development of corresponding production in China, it also reminded the Chinese government of the importance of acquiring a comprehensive industrial chain in those areas and encouraged more supporting policies and investments in benefiting future expansion to those industries.

2 The Impact on the Chinese Economy and Production From Us Sanctions

2.1 High-tech Industries

Since China joined the international trading market in 2001, it has been a major importer of the high-tech products of the US. Consequently, high-tech product and their relevant productions became the first victim of US sanctions against China, significantly affecting the development of the Chinese high-tech industry. Electronic production, astronomical research, and renewable energy are typical examples of victims the sanctions targeted. The electronic products of China, represented by semiconductors and chips, heavily rely on imports. The US was also aware of that, so it simply prohibited corporations in its territory and its allies from selling products and machines in high-tech industries to China. The US expected the restriction would obstruct the development of corresponding industries and enterprises, and the initial outcome did match the expectations of the Trump administration. The production and R&D (research and development) of multiple communication and electronic enterprises. Besides the manufacture of semiconductors itself, affected industries included integrated circuits, 5G communication, smart devices, artificial intelligence, and the Internet as well. Along with the prohibition on trade, restrictions against academic visas for Chinese students planning to study “sensitive” majors abroad were also established. Majors like material science and computer science in US colleges limited admission to Chinese students to a much lower level since 2017. Those majors provide essential specialists for astronomical research and renewable energy.

Alienated from the original international trade and research system, China was forced to invest in its own high-tech corporations and research projects. Most of the communication companies being sanctioned in the trade conflict, such as Huawei and ZTE, realized the necessity of self technological breakthroughs in their industries. With the encouragement of governmental policies in response to the sanction, more investment was brought in to consummate a comprehensive industrial chain from raw materials to final products. The policies and investments also benefit the further cooperation of enterprises along the industrial chain, triggering collaborative development which realized more comprehensive integration of resources that benefit the construction of multiple complete industrial systems in industries like electronic chips, lithium batteries, and solar panels [2]. Finally, the increased investment not only supported the enterprises but also benefited domestic colleges in corresponding academic research. Those colleges with more funds could admit more students and cultivate them with more advanced courses and laboratories. Those specialists provide the necessary expertise for the later technological breakthrough along with production upgrades.

2.2 Agriculture

If categorizing industries by technologies required, the products imported from the US to China largely affected by the tariffs and sanctions are allocated on two sides of the rankings. One of them is the high-tech products mentioned above, the other one is agricultural products that seem to require little technology. However, because of the abundant territorial resources and advanced fertilizer production, agriculture had become one of the most important proportions of US exports. On the other hand, the limited agricultural territory of China forced it to prioritize the production of food crops such as wheat and rice to feed its people and import other agricultural products from abroad. Two agricultural products that were imported the most in the past, corn and soybean, had been affected the most among all the agricultural imports. Soybean and its collateral product, soy meal, are crucial materials for animal husbandry. The soybean market in China had long depended on imports, especially from the US. Since the soybean import from the US decreased year-on-year by 49.5% in 2018, finding alternative sellers to replace the US soybean became necessary. In 2018, the soybean import from Brazil increased year-on-year by 29.8% [3]. Compared to US soybeans, Brazilian soybeans were sold at lower prices due to better climate conditions in Brazil. With the investment from COFCO group, Brazil obtained enough fundings and technologies to expand its soy bean production for Chinese demand [4]. In the meantime, the price of soybeans in the domestic market in 2018 decreased by 2.1% compared to last year. The anticipated price increase of soybeans due to the US tariff didn't occur.

On the other hand, corn is another agricultural product largely imported by China from the US. Similar to soybean, the US established tariffs and sanctions for corn as well. Ironically such a limitation affected the Chinese corn supply much less than the soybean market even though the corn imported from the US decreased year-on-year by 58.9%. Thanks for the agricultural base in Northeastern China and Inner Mongolia, China kept a decent amount of domestic corn production. Due to the lower price of US corn, those domestic corn could only be stored as inventory in the past. The decrease in corn imports provides a chance for those corn stored for years to be released into the

market [5]. The producer price of corn in 2017 even decreased by 2.1% because of the release of inventory, but its increase of 5.1% in 2018 not only signals the depletion of inventory but also indicates the necessity of seeking alternative sources of corn other than domestic production to fulfill the impending shortage [6]. The domestic relationship between the demand and supply of corn gradually changed between 2017 and 2018 affected by the factors mentioned above.

2.3 Traditional Manufacture

Even though not the main victim of the trade conflict, traditional manufacturing in China was still affected to some extent by the US sanctions. General manufacturing has been the traditional strong category in Chinese industry. It has provided the main proportion of international trade revenue of China and thus should be more resistant to potential sanctions. However, some of the new categories of general manufacture, due to their immature development and close affiliation to the high-tech enterprises (such as providing raw or primary materials), are relatively more vulnerable to tariffs and sanctions. For example, companies produce cables for industrial robots and frames for electronic vehicles. Their revenues decreased as well along with the production shock of relatively high-tech enterprises [7]. However, as the investment increased encouraging integration along the industrial chain, companies in general production were able to form closer relationships with high-tech enterprises. After the technological breakthrough and the introduction of innovative production, general production companies also obtained more profit by contracting upstream industries.

3 Challenge to Chinese Macroeconomics and Society due to US Sanctions

Undoubtedly, the sanctions from the US would have a tremendous effect on the Chinese economy due to the market size and trade influence of the US. The challenge to the Chinese economy affects multiple areas including economic growth, employment, currency, and financial market.

First, the production shock of high-tech industries caused by US sanctions ceased the continuous economic growth of China since the beginning of the 21st century. Before 2017, a considerable proportion of Chinese economic revenue comes from exports. The capital bought from the US and European countries enabled Chinese enterprises to produce decent quality electronic products and sell them at lower prices. The restriction on that capital decreased the production and revenue they brought. What made the situation worse was the decreased confidence in the market. Both consumer and enterprises reduced their expectation of the Chinese market affected by sanctions and trade conflict. Domestic consumers chose to save their money in the bank instead of buying new stuff, and enterprises decreased their production to save expenses. The demand shock would gradually exacerbate into an economic recession without confidence in consumption or governmental interference.

Second, the decrease in market demand discourages enterprise production and expansion, resulting in a scale condense and increased unemployment. Because of the

descending profit caused by the demand shock, enterprises had to cut employees and production. Undoubtedly, the increased unemployment rate caused a lot of serious problems for China [8]. Economically speaking, the unemployed workers losing their income had no money to consume, pulling the demand curve further back and making the economy recover more slowly from the recession. According to the labor market model, the decreased income forced some of the laborers to quit their jobs in the short run, making the enterprises shrink in scale. In the long run, the unemployed labor will shift their expected salary down due to the descending quality of life and rejoin their original occupation with a lower wage, bringing the equilibrium back with a permanent decrease in wages. Socially speaking, no matter whether those laborers quit their jobs or were hired with a lower wage, both of the situations reflected a weaker society and poorer life for the Chinese people. The determination of the Trump administration to keep their sanctions, and the economic recession would likely last for years, which brought critical challenges to the Chinese economy and government in responding to the economic crisis.

Lastly, the financial market would face the same level of challenge from the economic sanction. The currency and finance market, due to its dependence on free trade and consumer confidence, was even more sensitive to foreign policies and relative change than the real economy. Confidence, as an abstract and idealist concept, changed way faster than assembly lines. For the industries being sanctioned, such as high tech, electronic device production, and communication, their stock dropped rapidly because of the loss of confidence from the investors. In the meantime, the expected effect of US sanctions on the Chinese economy made international traders hold a bearish attitude toward RMB. They increased selling off the currency, causing its depreciation in the international market, bringing a potential burden to export. In the meantime, the decreased value of RMB also slowed down the process of its internationalization supported by the Chinese government [9,10]. Those problems raised new challenges for the Chinese central bank (People's Bank of China). To generate more consumer confidence and stabilize the currency, policies including enterprise supervision, capital outflow control, foreign exchange reserves utilization, and contractionary monetary policies were necessary. In the meantime, the investment to high-tech enterprises in constructing comprehensive industrial chains also requires the support of the central bank. To provide financial support the central bank should decrease the discount rate and reserve requirement ratio.

4 Conclusion

In summary, the US sanction generated a huge shock to the Chinese economy and ceased the continuous growth of China's export-oriented economy for more than a decade. The declined exports revealed the structural issue of the Chinese economy used to be covered by international trade. In the meantime, the importance of constructing an independent industrial system and internal market circulation also brought challenges to the ability of the government to establish encouraging policies for industrial integration. The economic recession would likely last for a long period, therefore the central

bank should maintain the stability in price level and money supply given the fiscal expansion of commercial investment. With the future success of production upgrades and reasonable collaboration between the government and enterprises, there would be a decent chance for China to gradually remove the demand shock with more advanced technology and industry.

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