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Development of the Petroleum Trading System and Countermeasures under the Trade Friction Between China and the US

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Abstract: Since 2018, the trade relationship between China and the United States has gradually become tense. Under these circumstances, China has been impacted from many aspects. As one of the world's largest importers of crude oil, the impact of Sino-US trade friction on China's oil trade cannot be ignored. This thesis discusses the impact of Sino-US trade friction on China's oil trade system and analyzes the impact on oil trade after the outbreak of the Sino-US trade war, as well as the dilemma and countermeasure analysis brought by the trade war. This thesis begins with the background and causes of the trade friction between China and the United States. Through overviewing the development of China's petroleum trade system, this paper explores the impact of the U.S.-China trade friction on China's oil trading system, the dilemmas posed by the trade war, and proposes countermeasures. These experiences and suggestions have certain guiding significance for promoting the reform and development of China's oil trade system.

Keywords: China-US trade friction, China's oil trading system, trade war impact, dilemma analysis, countermeasure suggestions

1. Introduction

With the deepening of globalization and the development of international trade, the trade relationship between China and the United States has become an important driver of global economic development. However, since 2018, the trade relationship between China and the United States has gradually become tense, with both sides imposing tariffs on each other and even triggering a prolonged trade war. The trade war has not only had a huge impact on the development of the Chinese and American economies, but also had a ripple effect on the global economy. Among them, oil trade is an important part of the trade relationship between China and the United States, and it is also one of the areas that have been most affected.

First of all, the background and reasons for the trade friction between China and the United States are multifaceted. On the one hand, there are huge differences between China and the United States in terms of trade patterns, economic development and governance systems. The Chinese side's development model is based on manufacturing exports, while the U.S. side focuses more on high value-added services. In addition, the Chinese side's laws and regulations on intellectual

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property rights, market access and other aspects differ greatly from the United States' standards, exacerbating trade disputes between the two sides.

Moreover, global economic development is becoming increasingly complex and unstable, coupled with the America First policy practiced by the United States Government in particular, and the fundamental reason for the United States to launch a trade war is to try to change its trade deficit, increase its say in foreign trade, and promote employment and economic growth in its own country. For a country like China, with its large population, huge market potential and rapid economic development, such a policy would have a considerable negative impact.

Secondly, the specificity of China's oil trading system also makes it more vulnerable to trade frictions between China and the United States. China is the world's largest oil importer, while the United States is one of the world's largest oil producers. The outbreak of the U.S.-China trade war has further pushed up the risk of oil trade. In particular, the "energy deterrence policy" adopted by the U.S. has seriously interfered with the normal operation of China's oil trade. As a result of the trade war between the United States and China, China's oil trade has shifted and diversified to other countries, thus affecting the stability and sustainability of China's oil trade system.

Therefore, with the escalating trade war, the oil trade between China and the United States has been affected in an unprecedented way. The author believes that in order to cope with the impact of the trade friction between China and the United States on China's oil trade system, we need to deeply recognize the dilemma that the trade war has brought to the oil trade and formulate corresponding countermeasures.

2. Impact of China-US Trade Friction on China's Oil Trading System

2.1. Overview and Development of China's Oil Trading System

China is one of the world's largest importers of crude oil. With the rise of the domestic economy and growing energy demand, China's oil imports have maintained a trend of high growth for many years and have become an important player and influencer in the international oil market.

China's oil trade system includes international and domestic trade, with international trade dominating. According to data released by the National Energy Administration, China's crude oil imports reached 567 million tons in 2019, up 9.5% year-on-year. Domestic crude oil production, on the other hand, was only 190 million tons, and import dependence has exceeded 70% [1-3].

Currently, China imports crude oil through both maritime transportation and pipelines. Among them, seaborne imports dominate, accounting for more than 90% of total imports. Seaborne imports are mainly concentrated in the Middle East, Africa and Russia, with Saudi Arabia, Russia, Iran, Angola and Iraq being the most important crude oil suppliers to China.

In addition, China has been actively laying out its oil resources on a global scale. At present, China National Petroleum Corporation (CNPC) has made layouts in more than 50 countries or regions around the world and owns 12 foreign oil fields with a total reserve of 340 million tons.

With the introduction and implementation of the One Belt, One Road initiative, China has continued to strengthen its cooperation in international oil trade, taking into account geopolitical and economic interests. For example, a series of major oil and gas pipeline construction projects, such as the China-Russia crude oil pipeline, the Central Asia gas pipeline and the China-Myanmar oil and gas pipeline, have been carried out, as well as energy cooperation projects with oil-producing countries in the Middle East and Africa.

2.2. Impact of China-US Trade Friction on China's Oil Trading System

Firstly, the trade friction between China and the United States has led to sharp fluctuations in oil prices. The economies of China and the United States are the two largest economies in the world,

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and the trade relations between the two countries are closely linked. Once there are problems in trade, it will have a greater impact on the supply and demand relationship in the oil market, leading to fluctuations in oil prices. For example, last year, the US imposed tariffs on China, which led Sinopec to refuse to import crude oil from the US and instead imported from the Middle East and West Africa [4-7]. The tightening of supply in the oil market has led to volatility in the price of oil, and investors have continued to sell oil stocks, leading to a decline in the price of oil stocks. Secondly, the trade war has affected the exports of Chinese oil companies. As a result of the trade war between China and the United States, the United States imposed tariffs on some Chinese products and China took retaliatory measures. This has affected China's oil products exported to the United States to a certain extent. In addition, some U.S. companies have abandoned their cooperation with Chinese oil companies, which has led to a decline in the overseas exports of Chinese oil companies. Thirdly, the U.S.-China trade war also affects the growth of Chinese oil companies. A trade war can slow China's economic growth, which in turn limits the capacity and scale of operations of Chinese oil companies. In addition, a trade war could cause investors to limit the ability of companies to raise capital and expand because of increased risk. Finally, the trade war has also led to changes in the structure of the oil import trade. China's oil imports come mainly from Middle Eastern countries, Russia and Africa, while oil imports from the United States have decreased significantly. This structural change will also affect China's oil market prices and supply and demand. To summarize, the impact of Sino-US trade friction on China's oil trading system is complex.

3. . Dilemmas Posed by Trade Wars

3.1. Monetary Policy Analysis

Against the backdrop of trade friction between China and the United States, monetary policy has become an important factor affecting China's oil trading system. The monetary policy adopted by China is mainly prudent and neutral, aiming to maintain the basic stability of the RMB exchange rate, the stability of the domestic price level and the stability of the financial market. However, after the outbreak of the trade war, as the trade friction between China and the United States continues to escalate, measures such as the imposition of tariffs by the United States have led to a rise in the exchange rate of the U.S. dollar and the pressure on the exchange rate of the RMB, which has brought about an adverse impact on China's oil trade.

The fall in the RMB exchange rate leads to an increase in the cost of oil imports. Relative to the U.S. dollar, the depreciation of the RMB will increase the price of imported crude oil, bringing economic losses to China's oil importers. Because oil imports are one of the largest items in China's foreign trade, the depreciation of the RMB will inevitably have a negative impact on China's overall trade, and this is when monetary policy needs to be targeted to minimize the negative impact on China's oil trading system. Furthermore, the trade war has led hedge funds to sell Asian currencies, including the renminbi, leading to increased capital outflows from China. This capital outflow has also had a negative impact on China's oil trading system. Capital outflows have led to a decline in liquidity in the domestic economy and an intensification of corporate capital requirements, leading to high interest rates and capital scarcity, which has had a negative impact on the oil sector [8]. Moreover, the impact of a trade war on confidence in international financial markets could also have an impact on China's oil trade. As the uncertainty of market expectations increases, foreign investors may increase their investment and protection of their own national currencies, which would lead to the formation of demand for the U.S. dollar in the international market, while the demand for other currencies would decline. This would make foreign investors less inclined to buy

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Chinese oil and could lead to a decrease in imports, which poses a significant threat to China's oil trading system.

3.2. Oil Supply Analysis

From the demand side, China imports a considerable proportion of crude oil from the U.S., the U.S. cancelled a portion of the crude oil export licenses, which makes China's oil supply is under greater pressure, especially the shortage of high-quality light crude oil is not optimistic about the situation. From the supply side, China is the world's largest importer of crude oil, but due to its own production capacity constraints, for the domestic and international demand for oil, can only be met through imports. Therefore, oil supply is the top priority for the development of oil trade. The monopolistic nature of China's oil trade, which is mostly imported, and in the form of three state-owned oil companies, PetroChina, Sinopec and CNOOC, has caused concern in the international market. Coupled with the U.S. ban on some of China's oil exports, China's domestic oil supply has been bottlenecked. The reason for this contradiction is mainly due to the imbalance in the quality structure of China's oil and the lack of high-quality light oil, which has to be imported from the United States and other countries. This undoubtedly puts a targeted damper on China's energy self-sufficiency and economic autonomy [9]. In addition to importing crude oil from the United States, China is also supplied with crude oil from many other countries, most importantly from regions such as the Middle East. At present, China already relies on long pipelines and shipments from regions such as the Middle East to send large quantities of oil raw materials to meet the needs of the domestic market. However, this dependence inevitably leads to a number of risks and problems, such as increased transportation costs, uncertainty about the future of oil production, and unstable supply.

4. Analysis of Responses

4.1. Suggestions for Diversifying Import Channels

At present, China's main import channel for oil is still the Middle East, with a high degree of oil dependence. This is partly due to the fact that the Middle East is rich in oil resources, and the quality is good and the price is relatively low [10]. However, the single channel of oil import brings greater risks to the security of oil trade. Since the outbreak of trade friction between China and the United States, the oil sanctions of the United States against China have been increasing, and the instability of import channels has become more obvious, in order to solve these problems, China should accelerate the layout in the construction of diversified import channels.In order to diversify import channels, we can take the following specific measures.

Firstly, the degree of diversification of import channels should be increased, and imports from non-Middle Eastern regions should be increased. For example, the quality as well as the price of oil from Russia and Latin America also have advantages, and cooperation with these countries should be strengthened. In addition to comprehensively assessing and considering the political, economic, cultural and legal aspects of importing countries, it is also necessary to strengthen cooperation with international oil companies and establish closer trade relations [11-14]. Secondly, develop domestic overseas oil resources and increase autonomous crude oil resources. China has certain oil resources in the South China Sea, the East China Sea and other areas, and should intensify its oil exploration efforts in order to increase autonomous and controllable crude oil production. At the same time, China can also actively expand overseas investment to exploit overseas oil and gas resources. This will reduce dependence on a single import channel. Finally, research on the oil market should be strengthened and import channels should be adjusted in a timely manner. The oil markets of different countries are affected by a variety of factors, such as monetary policy and geopolitics, and

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there is a need to strengthen monitoring and research on the market and adjust import channels in a timely manner.

4.2. Recommendations for Improving the Efficiency of Oil Utilization

4.2.1. Strengthening Energy Conservation and Environmental Protection Measures

In order to reduce oil consumption, energy conservation and environmental protection measures must be strengthened. In the industrial and transportation sectors, oil consumption can be reduced through such measures as technological upgrading, equipment modification and management optimization. In addition, for the transportation and storage of oil, technical means to reduce energy consumption and emissions can also be adopted, such as the use of energy-saving transportation vehicles and the construction of energy-saving tanks, thereby reducing the waste and loss of oil.

4.2.2. Improvement of Refining Technologies

Improving the level of oil refining technology can radically reduce oil consumption and also improve the efficiency of oil utilization. The upgrading and transformation of oil refining technology can reduce energy consumption and increase the conversion rate and utilization rate of oil. In the oil refining process, advanced reactors, separation technology and energy-saving equipment can be used, etc., so as to improve the utilization efficiency of oil and reduce energy consumption and emissions [15].

4.2.3. Strengthening Oil Reserves and Reserve Management

In order to safeguard the country's energy security, oil reserves are very important. The Government can strengthen the management of oil reserves and increase the volume of oil reserves, and it can also improve the efficiency of reserve utilization by optimizing the mode of reserve management, thereby reducing the consumption of oil. In addition, the government can strengthen international cooperation, expand the scope of oil reserve sharing, reduce the cost and risk of oil reserves, and realize a long-term stable supply of oil resources.

4.3. Proposals for the Development of New Sources of Energy

Under the impact of trade frictions and trade wars between China and the United States, China's oil trading system has encountered many difficulties and challenges. As a means of solving the problem, promoting the development and utilization of new energy has been widely recognized. New energy can reduce dependence on oil, reduce the pressure on oil imports, and enable China to better cope with the impact of trade frictions and trade wars.

4.3.1. Accelerating the Development of Renewable Energy Sources

Renewable energy refers to energy sources that are rich in natural resources and can be regenerated and renewed, such as solar energy, wind energy and water energy. These energy sources are inexhaustible and cause little environmental pollution. China has made a lot of achievements in renewable energy, but its scale and utilization rate are still low compared with that of petroleum energy. Renewable energy is one of the most important options for the development and utilization of new energy sources. Accelerating the development and utilization of renewable energy can reduce the risk of oil overcapacity and dependence on foreign oil, as well as the environmental pressure of energy consumption. Governments can support the development of renewable energy through financial subsidies and tax policies. At the same time, through scientific and technological

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progress and technological innovation, the utilization efficiency of renewable energy can be improved and costs compressed.

4.3.2. Promotion of Nuclear Energy Development

Nuclear energy is a clean, efficient and sustainable form of energy. With the continuous advancement of technology, nuclear energy has become the choice of more and more countries in the world.Currently, China has made significant progress in the development of nuclear power. Advancing the development of nuclear energy can reduce the demand for oil and the pressure of external dependence. The Government can increase its support for and investment in nuclear energy, while strengthening its independent research and development and innovation in nuclear energy technology and equipment. In addition, the Government should strengthen the legal system and regulation of nuclear energy to ensure its safe and sustainable development.

4.3.3. Promotion of New Energy Vehicles

With the continuous development of the automobile industry and the acceleration of urbanization, automobiles have become an important source of global energy consumption. New energy vehicles are an environmentally friendly, low-carbon and efficient means of transportation that can reduce dependence on oil and improve environmental quality. The Government can promote the production and sale of new energy vehicles through policy guidance and financial support. At the same time, domestic automobile manufacturers should also increase their research and development and innovation in new energy vehicle technology to improve the technical level and market share of new energy vehicles.

5. Conclusion

With the escalation of trade friction and the increasing tension between China and the United States, China's oil trading system has been greatly impacted. For China, oil is one of the country's important energy resources and plays a crucial role in the country's economic and social development. Therefore, the impact of China-US trade friction on China's oil trade system cannot be ignored. Overall, diversified import channels are very important for the stability and security of China's oil trade system. In addition, it is essential to improve the efficiency of oil utilization and develop new energy sources. In this way, China could establish a more secure and sustainable oil trade system. To achieve this goal, it is suggested strengthening energy conservation and environmental protection measures, promote new energy vehicles, improve oil refining technology, develop oil substitutes and strengthen oil reserves and reserve management.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

References

[1] *Ding Tianyue. A Comparative Study of U.S. Trade Protection Policies toward Japan and China [D]. China University of Petroleum (Beijing), 2021.*

[2] *Yang Can. Risk and Countermeasures Analysis of Importing U.S. Natural Gas under the Background of China-U.S. Trade Friction[J]. Times Finance,2020,(33):88-90.*

[3] *HUANG Changsheng,LIU Xiaochun. Détente is not the end: what Sino-U.S. trade friction tells us about China's energy security[J]. Price Monthly,2020,(08):85-89.*

[4] *Ma Jie,Yuan Yue. Impact of China-US trade friction situation on energy trade field and countermeasures[J]. China and foreign energy,2020,25(07):7-11.*

DOI: 10.54254/2754-1169/48/20230443

[5] *Gao Jian,Zhang Tonggong. Impact of the U.S.-China trade war on China's energy industry and coping strategies[J]. China and foreign energy,2020,25(06):19-25.*

[6] *Yu Yang. Research on the impact of exchange rate fluctuations on the export trade of China's photovoltaic industry in the context of trade friction between China and the United States [D]. China University of Petroleum (Beijing),2020.*

[7] *Wang Guanghui. China's energy security in the context of trade friction between the United States and China[J]. Modern Management Science,2020,(02):9-11.*

[8] *Wang Qingyu. Study on the Impact of Trade Friction Escalation on Oil and Gas Trade between China and the United States[J]. Foreign Economic and Trade Practice,2020,(02):26-29.*

[9] *WU Mouyuan, SHI Wei, KANG Yu, LIU Yueyang, XIONG Liang, CHEN Jiaru, HUANG Yingjia. The Road of Energy under the Great Changes--Review of "2020 International Energy Development Summit"[J]. International Petroleum Economics,2020,28(01):21-27+35.*

[10] *ZHANG Zijian, LI Shufeng, JIANG Ping, PENG Yun, MAO Liang. Economic and technological connotations of China-U.S. trade friction and its implications for China's energy industry[J]. International Petroleum Economics,2018,26(10):7-11+52.*

[11] *Xu R. Analysis of China-US stock market linkage under the impact of China-US trade friction[D]. Tianjin University,2019.*

[12] *ZHANG Yundong,ZHAO Xing,LIU Bing. Intellectual property rights work in China's oil and gas industry from the U.S.-China trade friction[J]. International Petroleum Economics,2019,27(08):37-42.*

[13] *HAO Yu, ZHAO Mingyuan, GAO Shang. Forecast and outlook of China's energy economy under the new trade situation[J]. Journal of Beijing Institute of Technology (Social Science Edition),2019,21(02):12-19.*

[14] *Zeng Xingqiu. China-US trade friction oil and gas market deeply affected[J]. International Petroleum Economics,2019,27(01):4-6.*

[15] *Li Shousheng. Attaching great importance to trade friction and environmental protection storm[J]. Wisdom China,2018,(08):37-39.*