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An Analytical Study on the Impact of the Sino-US Trade War on International Trade Flows and Industrial Supply Chain Dynamics

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Abstract. This study conducts research on the effects of Sino-US trade friction, especially 2018 and 2025 Sino-US trade friction, on China's global trade flow and global industrial chain reorganization. Results indicate that the tariff war between China and the US country has greatly diminished China-US trade while expedited offshoring of manufacturing to developing countries like southeast Asia. Further, in response to trade war, the fundamental shift between global and regional supply chain integration mode occurs in globalization with more cost-consciousness for global supply chain efficiency, under the stronger pressure from security issues in supply chain governance, and multinational companies pursue risk diversification policy, such as 'China Plus One' policy or off-shoring policy .This paper contends that the Sino-US trade war is a turning point of structure of the globalization process and that governments and companies in the world should upgrade their attention to supply chain security and supply chain flexibility as critical strategic aspects in a context of uncertainty.

Keywords: Sino-US Trade War, Global Supply Chain Restructuring, Trade Flow Diversion, Trade Protectionism.

1. Introduction

Since the Trump administration resumed imposing high tariffs on China in 2025, the Sino-U.S. trade war has escalated into a broader trade conflict with significant implications for the global economy his tariff-driven confrontation has not only reshaped the economic and trade relationship between the two nations but has also exerted profound effects on global supply chains, industrial structures, and the geopolitical landscape. This thesis will focus on the impact of the Sino-U.S. tariff war on international trade flows and the restructuring of global industrial chains. This paper will also examine the policy implications and propose strategic recommendations in response to the challenges posed by this trade conflict. The objective of this study is to compare the variations across different industries and enterprises in response to the Sino-U.S. trade war, as well as to analyze the adjustments and restructuring of industrial chains in the context of this ongoing trade conflict. The findings of this study can serve as a reference for China in formulating policies to address international trade frictions and safeguard the security of its industrial supply chains.

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Additionally, this research aids enterprises in understanding structural transformations in the global trade environment and offers recommendations for optimizing production layouts and diversifying supply chain strategies. Furthermore, it highlights the adverse effects of trade protectionism on global economic welfare and stability, offering insights and lessons for preserving the multilateral trading system and fostering international cooperation. This study will utilize case studies by selecting two companies: Apple Inc. and Dell Inc. for in-depth research and analyzing the response strategies of key enterprises within those industries. Additionally, it will conduct policy text analysis to examine the tariff schedules and industrial policies issued by both China and the United States. Furthermore, a comparative analysis approach will be employed to assess changes in trade and investment data before and after the onset of the trade war. This study first outlines the evolution and key characteristics of the Sino-U.S. trade war. It then analyzes the direct impacts of the trade conflict on international trade flows. Subsequently, it explores the reconfiguration of industrial supply chains at both the enterprise and industry levels. Finally, it offers relevant insights and strategic recommendations at the enterprise level as well as policy implications for governmental governance.

2. The evolution and defining characteristics of the Sino-US trade war

2.1. The defining characteristics of the trade war

The U.S.-China trade war has several unique characteristics that go beyond traditional trade disputes. First, it is strategic in nature and extends beyond the goal of correcting trade imbalances. From 2018 to 2025, the conflict between the two major powers went beyond economics. The underlying motivations driving the trade confrontation between these two major economies are predominantly political rather than economic in nature [1]. The U.S.-China trade war is driven by strategic competition for technological leadership and influence in emerging industries such as semiconductors, AI, and new energy technologies. The U.S. aims to limit China's high-tech development using both tariffs and non-tariff measures. More narrowly focused. Rather than taking a broad-brush approach, the trade war has lately been more precise. For instance, as noted above, instead of covering a broad range of products, tariffs have since been imposed on goods related with China’s “Made in China 2025” plan (a draft economic plan by Beijing aiming to achieve self-sufficiency in key industrial sectors) , followed by tariffs on steel and aluminum products, and more recently on rare earth exports held by China—both signs that the trade war has recently narrowed its focus.

2.2. The historical development of the trade war

In 2017, Donald Trump came as President of United States. He presented a “America First”-based speech focusing protectionist economy and claimed to safeguard domestic industries, domestic job and counteract low-price foreign commodities. For being the main country of America’s trade deficit, China became the critical attention from Trump administration. Administration also withdrew from Trans-Pacific Partnership (TPP), which shows a general trend towards trade protectionism. The US trade with China was under the pretext of two laws: first Section 232 of the 1962 Act on Trade expansion, which put tariffs on import of steel and aluminum under the pretext of national security — Section 232 investigation. The second was Section 301 of the 1974 Trade Act that authorized retaliatory tariffs against unfair trade behaviors, such as China’s intellectual property policies—also called the Section 301 investigation. The implementation of the Section 232 measures and the Section 301 investigation marked the onset of the Sino-U.S. trade war [2]. In 2018, the U.S.

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imposed a 25% tariff on $250 billion worth of Chinese imports, mainly targeting manufacturing. In the next phase, it added a 10% tariff on $200 billion in Chinese goods, including electronics and furniture. In response, China imposed a 15% tariff on 128 categories of U.S. goods and a 25% tariff on eight specific products, including pork, totaling about $3 billion. Later, China imposed a 25% tariff on 659 categories of U.S. goods. About 60% of U.S. soybean exports to China were affected, and tariffs on U.S. cars rose from 15% to 40%. In response to the third round of U.S. tariffs, China imposed tariffs of 5% to 25% on 5,207 categories of U.S. goods and a 25% tariff on liquefied natural gas, targeting U.S. energy exports. In early 2025, the U.S. imposed additional "equivalent tariffs" on China and ended tax exemptions for small Chinese packages. China responded with retaliatory tariffs and export controls on rare earth materials. By May 2025, tensions had eased. The two countries signed the Geneva Joint Statement, agreeing to suspend some high tariffs. The U.S. cut tariffs on certain Chinese goods from 125% to 10%, including a 20% tariff linked to fentanyl. China lowered its tariffs on U.S. goods from 125% to 10% and suspended enforcement for 90 days. In August 2025, both sides agreed to extend the suspension of 24% tariffs for another 90 days, keeping the base rate at 10%. However, on August 15, the U.S. announced a 50% tariff increase on 407 categories of steel and aluminum products, effective August 18. China responded by extending the tariff suspension on U.S. agricultural goods.

3. The impact of the trade war on international trade flows

3.1. The policy-level impact

The tariff policy adjustments resulting from the Sino-US trade war have significantly altered the dynamics and regulatory framework of global trade. A central characteristic of these adjustments is the presence of policy uncertainty and the process of regulatory reconfiguration. The elevated tariffs imposed by the United States on China have significantly diminished the volume of bilateral trade between the two nations [3]. Moreover, the Sino-US trade war has not only increased the costs of bilateral trade in the short term but has also influenced the production decision-making and strategic positioning of multinational corporations. The rise in trade costs has substantially elevated the expenses associated with intermediate goods and related supply chains, thereby triggering a significant reallocation of trade flows. Among these regions, Southeast Asia has emerged as a major beneficiary. Specifically, labor-intensive industrial sectors are increasingly being relocated to regions such as Southeast Asia and South Asia [4]. In July 2025, the volume of container shipments from Asia to the United States reached a record high. Notably, container shipment volumes from Vietnam to the U.S. surged by 34%, from Malaysia by 70%, and from India by 31%, whereas shipments from China to the U.S. experienced a decline of 8%. During the Sino-US trade war, the United States frequently implemented unilateral trade measures under the pretext of national security, reflecting a pronounced inward-looking orientation in its trade policy. During the trade war, the United States not only engaged in trade disputes with China, but also with key trading partners including Canada, Mexico, and the European Union. Moreover, through the implementation of domestic tax cuts and other measures designed to reduce operational costs for local enterprises, this strategy seeks to constrain the importation of foreign goods, thereby placing a priority on the national interests of the United States. In 2018, the Trump administration persistently initiated trade disputes with China by invoking provisions of U.S. domestic trade laws, including Section 201, Section 301, Section 232, and Section 337. These politically motivated actions have prioritized domestic trade legislation over the flexible rules established by the World Trade Organization (WTO). As a result, the foundational principles of multilateral, regional, and bilateral trade

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agreements have been undermined, contributing to a sustained rise in the risk of global trade protectionism [5].

3.2. The social level impact

The economic uncertainties arising from the trade war between China and the United States have gradually extended into the social domain. Research indicates that by December 2018, tariffs had increased the tax burden on American consumers and importers by $3.2 billion per month, resulting in a welfare loss of $1.4 billion [6]. Additionally, these tariffs contributed to a 1-percentage-point rise in the average price level within the U.S. manufacturing sector, disrupted global supply chains, and reduced the diversity of consumer product offerings. This analysis demonstrates that the tariff costs associated with the Sino-US trade war in 2018 were predominantly borne by American consumers. Simultaneously, the trade war has constrained export activities. While the trade war has safeguarded certain domestic manufacturing jobs, it has also resulted in a decline in orders for manufacturing enterprises and accelerated the relocation of industrial supply chains, thereby increasing the costs of domestic production. This, in turn, has contributed to a slowdown in GDP growth.

3.3. The enterprise-level impact

Enterprises directly affected by the Sino-US trade war and have been forced to take different strategies to cope with the cost increase and market uncertainty. The trade war between China and the U.S. will trigger enterprises to defer investment and innovation expenditure [7]. Secondly, the trade war will limit firms' access to the international learning channels and thus worsen their funding constraints and reduce the motivation for firms to take risks [8]. The Sino-US trade friction has greatly influenced firms that heavily depend on the intermediate goods from China and the US [9]. The firms faced issues such as disrupted supply chains and rising production costs. Moreover, in response to the sharply increased tariff costs during the Sino-US trade war, particularly for certain labor-intensive enterprises, there arises a dilemma: either raise product prices and risk losing market share, or absorb the cost increases internally, thereby reducing profit margins. As a result, many companies have been compelled to seek alternative suppliers, stockpile inventories in advance, and renegotiate pricing agreements with customers, all of which entail additional verification and integration expenses.

4. An investigation into the restructuring of industrial supply chains

4.1. Key drivers and main features of the trade war in industrial chain restructuring

Before the Sino-US trade war, the core of the global industrial supply chain was efficiency and minimizing production costs. Most enterprises have achieved highly optimized but highly concentrated global value chains(CVC) by allocating their production processes to regions with the lowest costs. For instance, before the Sino-US trade war, Apple Inc. of the United States had placed the majority of its production lines in China. However, the trade conflict between China and the United States has disrupted the underlying logic of the previous industrial supply chain structure. The tariff costs are predominantly borne by American importers and consumers [10]. This conclusion suggests that the tariff policies implemented in the trade relationship between China and the United States have directly altered the underlying cost structure. The imposition of high tariffs has not only increased supply chain costs associated with the cross-border division of labor, but also

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eroded the original cost advantages, thereby compelling enterprises to explore alternative low-cost production locations. Due to the elevated tariffs resulting from the Sino-US trade war, the traditional enterprise principles of prioritizing efficiency and minimizing costs have been increasingly balanced against considerations such as supply chain security, controllability, and resilience [11]. Consequently, policy uncertainty and the risk of supply disruption have emerged as factors of equal importance to cost in strategic decision-making. Therefore, enterprises have recognized that overly concentrated supply chains are susceptible to supply disruptions, and have consequently taken proactive measures to diversify their supply chain networks. For instance, the widely adopted "China Plus One" strategy has led Vietnam, Mexico, and India to emerge as preferred destinations for production relocation by certain enterprises [12]. For example, Apple Inc. has transitioned part of its smartphone production to India and relocated its computer and smartwatch manufacturing operations to Vietnam, while Dell has largely shifted its notebook computer production to Vietnam and Thailand.

4.2. Strategic importance of supply chain restructuring amid the US-China trade war

The restructuring of the global industrial chain under the Sino-US trade war represents a systemic transformation of significant historical importance. It signifies the conclusion of the traditional enterprise strategy that prioritized efficiency as the sole objective, and heralds the emergence of a more complex strategic era in which safety and supply chain resilience are accorded equal importance. The reconfiguration of supply chains is expected to accelerate the fragmentation of the global economic and trade landscape. Following this reconfiguration, supply chains exhibit a clear tendency toward friend-shoring and near-shoring strategies [13]. Enterprises increasingly prefer to establish production capacity in allied countries that share similar political values and are geographically proximate. This trend may contribute to the gradual emergence of several relatively independent trade blocs within the global economy, centered around major powers such as the United States, China, and the European Union. Moreover, during the process of supply chain restructuring, numerous enterprises have opted to relocate their manufacturing operations to developing countries such as Vietnam and Mexico, thereby offering these emerging economies valuable opportunities for industrialization. Moreover, the reconfiguration of supply chains has necessitated the elevation of economic security and supply chain resilience to a higher strategic national priority. It has introduced new dimensions to national competitiveness, marking a shift from the provision of low-cost production factors to the development of a stable, secure, and reliable industrial ecosystem.

5. Conclusion

This study systematically examines and illustrates the profound impact of the Sino-US trade war in recent years, particularly in 2018 and 2025, on global trade patterns and the restructuring of industrial supply chains. The central argument of this paper is that the Sino-US trade war is not merely a tariff dispute, but rather a strategic and far-reaching initiative aimed at reshaping the global economic order. It has fundamentally challenged the globalization paradigm centered on efficiency, compelling both enterprises and governments to elevate supply chain resilience, security, and controllability to a strategic level comparable to cost considerations. This study identifies that the impact of the trade war is multifaceted. In terms of trade fluidity, the Sino-US trade war has triggered a significant trade diversion effect: bilateral trade between China and the United States has declined, while countries such as Southeast Asia and Mexico have emerged as new trade hubs,

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absorbing production capacity displaced from China. Regarding supply chain reconfiguration, the trade conflict has prompted enterprises to adopt strategies such as "China Plus One," nearshoring, and regionalization. These developments have further facilitated the rise of geopolitically driven "friend-shoring," contributing to the fragmentation of the global economy. The trade war has also generated differentiated impacts across various stakeholders. For US consumers, it has resulted in the absorption of a substantial portion of tariff costs, leading to significant welfare losses. Enterprises, on the other hand, face challenges including increased operational costs and constraints on innovation. Concurrently, many governments have elevated supply chain security to the level of national strategic priority. At the same time, this paper acknowledges certain limitations. The data and research findings cited herein are subject to temporal constraints and may diverge from future conclusions due to unforeseen real-world developments, such as political and economic changes. Additionally, the case studies presented in this paper are similarly limited in scope. The analysis primarily focuses on leading enterprises in two to three key industries, such as Apple and Dell, as representative examples. However, enterprises across different industries and of varying sizes may exhibit significantly different response capabilities and strategic behaviors when confronted with trade conflicts. Therefore, an exclusive focus on large enterprises may not fully capture the diverse realities of all market participants. Based on the findings and limitations of this paper, future research could focus on a more in-depth investigation of the underlying mechanisms driving supply chain reconfiguration. For example, big data analytics could be employed to conduct quantitative assessments of the specific benefits associated with supply chain reconfiguration, thereby offering enterprises more practical and implementable recommendations. Furthermore, the scope of analysis can be expanded from the bilateral Sino-US trade relationship to a global perspective. Research could also explore the sustainable development challenges faced by beneficiary countries, such as those in Southeast Asia, following industrial relocation within the context of supply chain realignment. Such studies would contribute to a deeper understanding of the long-term implications of the trade war on the global governance framework.

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