Impact of Geopolitical and Bilateral Trade Frictions on Global Supply Chain Resilience: Strategies for Multinational Corporations

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Abstract. In the context of the growing interconnectivity of the global economy, the resilience of global supply chains (GSCs) is increasingly contingent upon a range of external factors, including geopolitical developments and the implementation of bilateral trade policies. This study examines the vulnerabilities faced by GSCs in recent years, particularly the challenges they have shown in responding to geopolitical events and bilateral trade frictions. Taking the United Kingdom's exit from the European Union and the trade war between the United States and China as examples, this study analyzes the significant impacts of these events on GSCs, including issues such as increased operating costs and structural reorganization. This study also proposes strategies for multinational corporations to cope with the complex international environment, such as supply chain diversification and localization of production. It is found that enhancing supply chain resilience is crucial to cope with geopolitical risks and safeguard business continuity, which helps to improve their market competitiveness and ability to cope with unexpected events.

Keywords: Global Supply Chains, Transnational Corporation, US-China trade dispute, Brexit.

1. Introduction

The recent occurrence of several significant global events, including the outbreak of the novel coronavirus (such as Covid-19), the Russian-Ukrainian and Israeli Gaza conflicts, the trade war between the United States and China, and the United Kingdom's exit from the European Union, have served to illustrate the vulnerability of numerous supply chains and to demonstrate why the topic of supply chain resilience (SCRES) represents one of the most important areas of discussion within the field of supply chain management literature [1]. SCRES refers to the ability of a supply chain to quickly recover and maintain normal operations in the face of unexpected events or uncertainties [2]. With the acceleration of globalization and the increasing complexity of supply chain networks, the impact of geopolitical and regional issues on supply chains has become more and more prominent. The highly resilient supply chain can effectively cope with these challenges, reduce the risk of disruption, maintain business continuity, and enhance the market competitiveness of corporations [3, 4]. In the complex and volatile international environment, enhancing supply chain resilience is crucial for enterprises to cope with geopolitical risks and regional issues and is a key strategy for achieving robust supply chain management.

Even with SCRES's attention, global supply chains appear more vulnerable than ever to endogenous and exogenous threats. This vulnerability will persist as supply chain managers contend with significant challenges posed by climate change, strained international relations, and cyber-attacks, among other factors.

In this context, this study posits that geopolitical events and bilateral trade frictions have become the primary exogenous factors influencing the stability of GSCs. The complex and interdependent nature of GSCs allows external shocks to propagate rapidly, with significant economic and operational consequences. It is evident that geopolitical conflicts and trade policy alterations profoundly influence the efficiency, cost, and flexibility of supply chains and their impact on trade flows [5]. This study examines the impact of geopolitics and bilateral trade on GSCs and provides a framework for multinational corporations and MNCs to navigate these complexities and develop strategic responses to mitigate the impacts, including supply chain diversification, localization, and increased flexibility.

2. The impact of geopolitics on supply chains: the case of Brexit

The occurrence of geopolitical events can significantly alter how supply chains are operated and structured. The United Kingdom's withdrawal from the European Union, commonly referred to as "Brexit", is an illustrative example of this phenomenon, as it has introduced a multitude of challenges to the global supply chain.

2.1. Impact on European supply chains

The introduction of trade barriers has led to a more intricate trade relationship between the EU and the UK in the wake of Brexit. The introduction of new tariffs and non-tariff barriers has resulted in businesses in EU countries facing increased costs and administrative burdens when trading with the UK. To illustrate, automotive manufacturers and pharmaceutical companies are required to navigate more rigorous inspection and certification processes when importing raw materials from the UK [6].

Furthermore, the costs associated with logistics and supply chains have increased considerably. This is due to the rise in tariffs and the necessity for additional border checks, which have significantly increased the time and cost of cross-border transportation. The impact is particularly pronounced for industries that rely on global supply chains, such as the food and pharmaceutical industries. To maintain their operations, companies have been compelled to identify alternative logistics routes or to realign their supply chains.

2.2. Impact on the UK supply chain

The United Kingdom's departure from the European Union has resulted in significant challenges for businesses operating within the country. The loss of access to the EU single market has led to the imposition of new tariff and quota restrictions, which have, in turn, affected the ability of UK businesses to export their products to the EU. This has compelled firms to re-examine their supply chain strategies, identify new markets, or modify production plans.

In order to circumvent the imposition of high tariffs and the complexities of trade regulations, numerous firms have elected to transfer their production facilities to EU member states or alternative commercial hubs [7]. The reconfiguration of supply chains is a complex undertaking that requires significant time and resources. In addition to these practical considerations, the reconfiguration of supply chains can also affect enterprises' operational efficiency and cost structure.

3. Impact of bilateral trade on supply chains

The trade conflict between China and the United States represents a paradigmatic instance of the influence of bilateral trade tensions on global supply chains. The trade war has significantly impacted both countries and the global economy, with far-reaching consequences and ripple effects.

3.1. Supply chain tow hooks, changes in tariffs and businesses

The Sino-US trade war has been in full swing since 2018, with the two countries imposing high tariffs on each other's goods, directly resulting in a significant increase in the cost of imports and exports. For numerous companies that depend on the Sino-US supply chain, the implementation of such tariffs has resulted in a notable escalation of production and transportation costs. To illustrate, electronic product manufacturers are subject to supplementary tariffs when importing essential components, which results in a considerable escalation of production costs. A considerable number of companies have elected to transfer this financial burden to consumers, leading to elevated product prices and exerting considerable pressure on the consumer goods market.

The imposition of high tariffs not only increases the direct costs of businesses but also introduces an element of market uncertainty. The formulation of pricing strategies, inventory management, and supply chain planning are now undertaken with a greater awareness of the risks involved. As an illustration, the unpredictable alterations in tariff policies render it unfeasible for companies to accurately anticipate forthcoming cost fluctuations and market demand, thereby creating obstacles in production planning and supply chain management. This lack of certainty undermines companies' competitive position and adversely impacts their market performance.

In order to mitigate the adverse effects of elevated tariffs, many companies have opted to transfer their manufacturing operations from China to alternative locations offering more competitive costs, including Vietnam, Thailand, and India, among others. The relocation of production lines is motivated not only by the avoidance of tariff costs but also by the reduction of dependence on the Chinese market and the reduction of geopolitical risks. To illustrate, several electronics companies in the United States have relocated their production lines to Southeast Asian countries, offering lower production costs and lower tariff burdens than China. This migration process comprises constructing new production facilities, searching for new suppliers, and reconfiguring existing supply chain networks.

In light of the challenges above, companies have also initiated re-examining and optimizing their supply chain structures. A considerable number of companies have adopted flexible supply chain strategies to reduce the risk of over-reliance on a single country or region. To illustrate, some companies are seeking to expand their supplier base on a global scale, thereby reducing their reliance on Chinese suppliers. Such a strategy can effectively mitigate the risk of supply chain disruptions resulting from trade frictions or geopolitical conflicts while enhancing the supply chain's resilience and flexibility.

3.2. Supply chain reorganization

The Sino-US trade war has relocated many production facilities from China to Southeast Asia and other countries with lower production costs. This process encompasses the relocation of production lines and the reconfiguration of associated supply chain links, including supplier networks and distribution channels. To illustrate, many manufacturing companies have established new production facilities in Vietnam, Thailand, and India. These countries offer relatively low labor costs and have become ideal locations for production relocation due to their less affected trade relations with the United States. Consequently, organizations are confronted with supply chain management challenges in their newly established production bases, including logistical arrangements and the procurement of raw materials [8].

In response to the uncertainty introduced by the Sino-US trade war, companies have adopted a supplier diversification strategy to reduce their dependence on a single country or region. The introduction of multiple suppliers enables companies to diversify risks and mitigate the impact of supply chain disruptions resulting from trade tensions in a specific country or region. To illustrate, certain automotive manufacturers have augmented their supply chains by incorporating suppliers in Southeast Asia and other regions, guaranteeing essential components' uninterrupted provision [9]. This strategy enables companies to maintain business continuity in geopolitical conflict or other unforeseen risks.

3.3. Long-term effects

The Sino-US trade war has had ramifications extending beyond the supply chains of China and the United States, with a considerable impact on the global supply chain. The migration of production lines and the reorganization of supply chains have transformed the global supply chain landscape. As a consequence of the reconfiguration of supply chains by numerous companies, production bases have been relocated to countries offering lower costs, which has resulted in alterations to the distribution of global supply chains. To illustrate, Southeast Asian countries have increasingly become a significant hub for global manufacturing, with the global supply chain also undergoing a notable shift in focus.

The experience of the Sino-US trade war has also prompted a re-evaluation of trade policies and the stability of international supply chains by companies and policymakers alike. In formulating future supply chain strategies, companies will accord more significant attention to the impact of policy risks and geopolitical factors. In light of the heightened sensitivity to trade policies, companies have been compelled to pay greater attention to flexibility and risk management in their supply chain planning. Concurrently, governments may implement additional policy measures to safeguard their companies from analogous trade tensions.

4. Strategies for TNCs to cope with these effects

In the context of intricate geopolitical dynamics and evolving bilateral trade relations, multinational corporations (TNCs) are confronted with considerable risks and uncertainties. In order to effectively address these challenges, it is essential that TNCs adopt a multi-pronged approach to enhance the resilience, flexibility, and stability of their supply chains. This section examines several potential strategies that could prove crucial in addressing these issues [10].

4.1. Supply chain diversification

The diversification of suppliers and production bases represents a core strategy for the mitigation of risks associated with geopolitical tensions and trade uncertainties. By extending their supplier network and establishing production facilities in several regions, TNCs can reduce reliance on any single country or region. This approach serves to both mitigate risk and enhance operational resilience. To illustrate, the relocation of production facilities from regions with a high concentration of activity, such as China, to other emerging markets, including Southeast Asia and South Asia, can serve to mitigate the impact of regional disruptions and fluctuations in trade policy.

The optimization of geographic distribution entails the strategic placement of production and supply chain facilities across a range of regions. This strategy ensures that companies are not overly dependent on a single location, thereby facilitating the management of risks associated with regional instability, trade barriers, and natural disasters. For instance, automakers and electronics manufacturers have progressively diversified their supply chains to encompass regions such as Vietnam, India, and Indonesia. Such geographic diversification mitigates the impact of localized disruptions and supports the overall stability of global operations [11].

4.2. Localized production

In order to adapt to market demand, it is necessary to establish manufacturing and assembly facilities within key markets on a localized basis. This strategy addresses several issues, including the imposition of high tariffs, the costs associated with logistics, and the necessity for a rapid response to fluctuations in the market. The production of goods closer to the end consumer allows multinational companies to reduce the time and costs associated with shipping, thereby enhancing the overall efficiency of the supply chain. For example, multinational companies such as Apple and Samsung are increasingly establishing production facilities in countries such as India and Vietnam to exploit favorable trade policies and grow local markets.

Mitigating Disruption Risk, localized production also plays a pivotal role in reducing the risks associated with international trade frictions and logistics disruptions. By situating production facilities close to key markets, companies can safeguard themselves from the detrimental effects of global trade tensions and supply chain disruptions [12]. This strategy ensures that operations remain stable and responsive despite global economic uncertainty. Furthermore, localized production allows for enhanced compliance with local regulations and standards, further reducing operational risks.

4.3. Risk management and early warning system

The development of advanced risk management tools is paramount to establish a robust risk management framework and advanced early warning systems. These are essential for the identification and mitigation of potential supply chain disruptions. The implementation of real-time monitoring tools enables MNCs to track geopolitical developments, changes in trade policy, and other risk factors in real time. Such systems employ data analytics and predictive models to provide timely alerts and facilitate proactive decision-making. To illustrate, organizations may harness the capabilities of artificial intelligence and machine learning algorithms to examine risk data and anticipate potential issues within the supply chain.

In addition to early warning systems, multinational corporations (MNCs) should develop flexible supply chain management strategies to facilitate rapid adjustments based on changing conditions. This flexibility encompasses developing contingency plans, diversifying supply sources, and maintaining buffer stocks. A well-designed, flexible supply chain management system enables companies to adapt to emergencies, market fluctuations, and disruptions promptly. By adopting agile practices and maintaining a responsive supply chain structure, MNCs can more effectively manage risks and maintain operational continuity.

5. Conclusion

This study employs a geopolitical and trade-focused lens to examine the impact of geopolitical events and bilateral trade frictions on the global supply chain. It illuminates how these factors alter the operational mode of the global supply chain. Geopolitical events, such as the United Kingdom’s withdrawal from the European Union (commonly referred to as Brexit) and bilateral trade disputes, including the Sino-US trade war, have resulted in significant disruptions to global supply chains, accompanied by rising costs and structural reorganization. In response to these challenges, multinational companies have adopted various strategies, including diversification of supply chains, production localization, and robust risk management systems. The findings of this research are of great significance to those engaged in corporate decision-making, as they facilitate the formulation of scientific and flexible response strategies in a complex global environment. This, in turn, enhances competitiveness and resilience in the global market. In the context of geopolitical and trade-related risks, it is imperative for companies to possess the resilience and strategic vision to ensure the stability of the supply chain and the sustainable development of their business.

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