

The Impact of US Trade Policy on Chinese EV Companies from 2018-2023

Zongyuan Wu^{1*}, Xiuyuan Du²

¹*School of Professional Studies, Northwestern University, Evanston, USA*

²*Hangzhou No.4 Highschool, Hangzhou, China*

**Corresponding Author. Email: zongyuanwu2023@u.northwestern.edu*

Abstract. This paper examines the impact of US trade policies on Chinese electric vehicle (EV) companies from 2018 to 2023, focusing on case studies of BYD and Geely. The research analyzes how these companies responded to and navigated the challenges posed by US trade restrictions. Through a comparative analysis of their strategies, this work reveals the resilience and adaptability of Chinese EV manufacturers in the face of international trade barriers. The study finds that while BYD opted for direct entry into developing markets by establishing local production facilities, Geely leveraged its ownership of Volvo to indirectly enter the US market. This research contributes to the understanding of how trade policies influence corporate strategies and industry development in a globalized economy, offering valuable insights for policymakers, business executives, and researchers in the fields of international trade, corporate strategy, and emerging high-tech industries.

Keywords: Chinese EV companies, US trade policies, corporate strategies, global market expansion, international trade

1. Introduction

The rapid growth and increasing diversification of the international electric vehicle (EV) business has occurred during the recent years, with China becoming a significant player in this sector. On the other hand, the scenario of global trade - accompanied by geopolitical tensions - created new complexities, especially in terms of the U.S.-China relations. This case study looks at US trade policies during the years 2018 to 2023 and how they impacted the growth of Chinese electric vehicle companies in the context of deteriorated trade ties and the rise of regulatory barriers in the US.

The purpose of this research is to analyze how Chinese EV manufacturers have responded to and navigated the challenges posed by U.S. trade restrictions. Through learning what strategies, the main players in this industry adopt, we want to equip our audience with knowledge about the resiliency and adaptability of Chinese electric vehicle companies in the face of international trade impediments. This study holds significant importance for various stakeholders in the global automotive and trade sectors.

From an industry development perspective, it offers valuable lessons for the global EV industry on how to navigate complex international trade environments and adapt to rapidly changing market conditions. From policymakers' perspective, one of the most critical aspects is learning from trade

policy's impacts on the emergent new economy, industries, and concept for real-time policy-making. By offering the framework for the analysis of addressing emerging external issues, this study will be an insight for business executives who want to learn useful approaches in converting adverse circumstances into avenues for progress. In addition, the concern arises when the trade war starts and results in the transformation of China's EV industry under its restrictions. Furthermore, by analyzing the transformation of China's EV industry under trade tensions, we gain insights into the broader economic implications of trade policies on emerging industries.

As the world emphasizes sustainable transportation and tackles the climate change causes, understanding this process as the EV industry grows globally is vital. This article gives a hand to that end through exploring how trade policies reform the growth and the internationalization of a vital sector. By examining the experiences of Chinese EV manufacturers in responding to U.S. trade policies, we can glean valuable insights into the interplay between government policies, corporate strategies, and global market dynamics in the rapidly evolving EV sector.

2. Literature review

The impact of trade policies on emerging industries has been a subject of significant scholarly attention. Notable topics are taking shape on the literature regarding the Chinese EV sector, e.g., how Chinese companies have been riding through the tide of U.S. trade barriers, and its analysis as the test for our case.

The well-documented function of the governmental assistance in the EV sector development has been seen in China mostly. According to [1], R&D and non-R&D subsidy, as well as other government supports, are the main reason of the fast expansion and technologies of the sector contribution. This support has played an indispensable role in strengthening Chinese EV player manufacturers for the global vehicle market.

The U.S.-China trade war started in 2018 as a turning point for the industry, and its impact has been worsening over time. According to [2], the initial imposition of a 25% tariff on specific Chinese commodities, including EV parts, was under the Trump administration. This tariff rate escalated dramatically to 100% by 2024 under Section 301, significantly impacting the export capabilities of Chinese EV manufacturers [3,4]. These tariffs posed a substantial complication to Chinese companies who wish to enter or grow within the U.S. market.

Beyond tariffs, non-tariff barriers have also played a significant role in shaping the landscape for Chinese EV producers [5]. explores the stringent regulatory standards and higher requirements for critical minerals and battery components imposed by the U.S. government. According to [5], such policies, inevitably increased the production cost of Chinese producers who wish to enter the US market, creating other barriers apart from the impact of tariffs.

However, on the other hand, the capacity of the Chinese EV industry to withstand and to adjust to the challenges presented has been impressive [6]. report a significant growth in China's EV exports globally, noting a 1,016% increase in export volume from 2018 to 2023. During this period, China became the largest exporter by volume and the second-largest by value since 2021. This growth suggests a successful adaptation to trade barriers through market diversification and strategic pivoting, indicating that Chinese EV manufacturers have found effective ways to navigate the changing global trade landscape.

Taking other industries as a reference can inspire new ways of addressing trade barriers, which helps mitigate losses [7]. evaluate the situation in which the Chinese photovoltaic (PV) industry faced the same protectionist policies by the European Union in 2013. They identify these trade restrictions as results in an upward movement in exporting new markets, which boosted domestic

demand and eventually led to a much more innovative industry. The EV sector may study the experiences of other industries and learn how they coped with trade measures stifling exports.

[8] gives an outline of the two primary counteractions used by Chinese EV industry: the enhancement of technological capability to lessen reliance on US market and the use of cost advantage to penetrate new markets, especially in developing countries. These strategies show the industry's emphasis on both technology break-through and market extension as principal solutions for trade restrictions.

This literature acts as a foundation for understanding the interaction dynamics between trade policy, industry evolution, and the business strategy on the example of the EV sector of China. We extended this foundation to a holistic study of how two leading EV companies in China have been affected by these developments and taken actions to overcome them. In case studies of dominant players in Chinese EV industry, we may broaden the knowledge of the development process of an emerging industry.

3. Case studies: BYD and Geely

From 2018 to 2023, there were major changes within the US trade policy on issues relating to China and the EV industry. Such policy shifts have a broad effect on Chinese electric vehicle (EV) producers who need to enter the US market. This case investigates the results of these trade policies for two leading Chinese EV makers, BYD and Geely, whose expansion strategies have changed in reaction to the changing US trade policy.

3.1. BYD (Build Your Dreams)

BYD, (Build Your Dreams) is a Chinese famous automobile and innovation company established in 1995. At first, BYD was a battery maker, but it began to deliver automobiles in 2003 and presently it is one of the greatest electric vehicle (EV) producers in China. BYD is well-known for its vertical integration procedure, creating numerous key components in its own manufacturing plants, including batteries, which gives the company a critical fetched advantage.

The strict trade policies of the U.S. and the geopolitical tensions forced Chinese clean vehicle producers to suspend their operations on American soil. Since the US government was playing a major role in the change, BYD and the other Chinese EV enterprises had to alter their overall development pattern worldwide. Those enterprises shifted their attention to other potential markets, for instance, Mexico, Brazil, and Turkey, as well as Southeast Asian nations like Thailand and Indonesia [9].

BYD's reexamined strategy was presently centered on reinforcing the worldwide impression by building local EV assembly plants in other nations. Hence, this plan entailed the establishment of production and assembly plants for electric vehicles. By localizing production, BYD intended to avoid trade barriers, minimize logistical costs, and identify local market demands with regulatory authorities.

There were eminent advantages to this strategy. The prime benefit was that it enabled BYD to avoid the tariffs falling on Chinese models, and this contributively made their cars more price-competitive in those markets. The localized production gave BYD another advantage, for example, it could resort to using various types of government incentives, which were deliberately designed to attract foreign investment and promote the electrical vehicle industry. Also, establishing production bases close to the end markets might have shielded BYD from committing noncompliance: avoiding deviations from local regulations and obeying local standards, for instance. Hence, it cooperated

directly with customers and used information from different markets to speed up the penetration process. On top of this, the establishment of local production facilities provided BYD with opportunities to join the local supply chain and establish contacts with local partners. Moreover, these initiatives gave rise to positive perceptions about the company's role as a contributor to local economies, as well as a buffer in case of future trade disputes or political tensions that might occur.

This process had some limitations, too. The high initial expenditure required by BYD for an offshore production facility raised the company's exposure to the financial risk in many ways. It should be noted that after searching for a new place for its factories, it was novel to them to deal with the different regulatory systems, social expectations, labour practices, and operations challenges in each new market, which demanded careful navigation. The company was also confronted with the awkward situation of establishing brand authority and developing customer loyalty in the markets where it was a newcomer.

In particular, putting so much efforts to separate the global production sites may potentially complicate the maintaining of quality and running the operational efficiency. BYD also had to carefully balance its production capacity with projected demand in each market, a particularly challenging task in the rapidly evolving and often unpredictable electric vehicle sector.

Despite all the challenges, BYD went ahead and devised strategies that showed their flexibility and adaptability, whereby they could find a way of outperforming their competitors. The decision to enter several developing countries away from the U.S. trade barriers helped BYD not only to pursue the opportunity to sell the vehicles in other growing markets but also purpose for them to explore the EV market in emerging countries. Thus, BYD's options for its future growth have broadened and established a tendency for long-term growth through a diversified distribution network rather than sticking to one way to their business, the way they initially envisioned.

This strategy allowed BYD to continue its global expansion despite the closure of the U.S. market, and it illustrates how much adaptability the company displays during difficult trade restrictions. By targeting potential markets of the emerging economies and utilizing localized production facilities, BYD will manage to penetrate the developing markets less affected by U.S.-China trade tensions.

3.2. Geely

Founded in 1986, Geely Automobile Holdings Limited has grown into one of the leaders in China's automotive industry. Unlike its main competitor BYD, Geely took a different direction, resulting in a lesser target from the trade restrictions in the US for Chinese companies. One of the crucial pillars of Geely's strategy was the acquisition of Volvo from Ford Motor Company in 2010 [10]. The acquisition helped Geely deal with the complicated market of automotive sector, especially in the US.

While BYD decided for the direct entry into developing markets, where it has taken the effort to establish local production facilities, Geely, on the other hand, adopted the business model of indirect entry into the US automotive market using its ownership of Volvo as a leverage. This strategy came out in the summer of 2023 when Volvo released its first China-made electric vehicle on the U.S. market [11]. This move exemplified Geely's inventive strategy of circumventing the high tariffs posed by the U.S. government on Chinese car imports.

The strategy of Geely entering the U.S. electric vehicle market through its subsidiary offers a few merits. Firstly, this plan guarantees that the company makes utilise of the well-known brand Volvo conjointly with its age-old and faithful client base inside the U.S. market. Consequently, the company manages to avoid the challenges of creating a new brand in a highly competitive market.

This model lets Geely tap into Volvo's in-depth understanding of the U.S. buyer pool and state regulatory framework, thus making the market entry more seamless. In addition, the use of Volvo's dealer network and after-sale customer service will provide Geely its competitiveness within the U.S. market, and as a result, Geely will have wider market coverage and reduce its operational expenditures.

Primary benefit points to innovation chance as well as to the integration of operation, pulling together synergy from Geely and Volvo. The cooperation offers a way to blend the lowest cost of manufacture in China with Volvo's unique innovative techniques and high product quality capacity to develop vehicles that meet the needs of U.S. market. More importantly, this mechanism is an insulation strategy from American-China trade friction because cars are attributed to the Volvo brand, which is perceived as Swedish rather than Chinese.

Nonetheless, this approach has its own shortcomings. A key challenge is the decomposition of operations which leads to disruption of brand identity, often with a need for unity. Adhering to independence and keeping the Volvo's brand identity while adapting it to strategic objectives of Geely's business require careful management of change-mindedness and discreet administration skill. There's also the chance of potential brand weakening if buyers associate Volvo too closely with its Chinese ownership, which threatens its image as a premium Swedish brand.

In addition, this might undermine the possibility of Geely to totally gain the full potential of its outstanding brand identity for the U.S. local market. While it permits the market entrance, it does not directly increase the brand recognition for Geely itself. So, the company may face a sort of barrier when the US market successes only happen in its subsidiaries and that it may impact its global brand building plans.

Moreover, this approach demands huge amount of initial capital and also running costs. The acquisition of Volvo was costly. Funding operations, research and development, and maintenance are becoming more demanding and overwhelming. A high-investment strategy might be a burden for profitability, specifically in the short to medium term.

Finally, one matter that still stays is the problem of involvement with complicated rules and regulations. Volvo serves as a bridge to enter the U.S. market; therefore, the risk continually exists pertaining to the technology transfer, intellectual property rights, and national security issues present in the dynamics of the U.S.-China trade relations.

In conclusion, the worldwide development strategy of Geely could be truly advanced and careful as they naturally overcome the trade barriers. By leveraging its possession of Volvo, Geely has found a one-of-a-kind way to enter the U.S. electric vehicle market despite challenging trade conditions. This plan, although having its disadvantages, serves as a great case for other Chinese car companies who plan to expand the global market in a highly sophisticated geopolitical environment.

4. Comparative analysis and conclusions

4.1. Contrasting strategies: BYD vs. Geely

BYD and Geely show two opposite coping methods used to face the challenges of U.S. trade policy towards electric vehicle business. The adaptive capability of the two firms was extraordinary, but they still performed in remarkably different ways to the same external pressure.

BYD adopted a clear strategy directed away from the market of the USA and concentrated in developing economies. By establishing factories in countries such as Mexico, Brazil, and Thailand, BYD avoided the tariffs that impose trade barriers, and thus gained access to markets with rapidly increasing demand for EVs [12]. This option enabled BYD to not only maintain its brand identity

but at the same time get direct influence over their day-to-day operations. However, this plan requires noteworthy capital investment and might confront challenges due to working in different, assorted markets.

On the opposite, Geely took another path by using the acquisition of Volvo. By presenting Chinese-manufactured electric vehicles under the well-known Volvo brand, Geely found a novel way to enter the U.S. market despite external pressures. This strategy was based on the truth that Volvo as of now had a well-established public image, distribution channels, and a great understanding of U.S. market. Nevertheless, it also faced challenges in terms of brand management and constrained Geely's ability to set up its own brand identity.

4.2. Effectiveness of strategies

Both strategies are working well in their particular fields. After BYD expanded its business into other markets and started providing job opportunities, this comfortable ground started building up. Moreover, it enriched a wide range of experiences in handling its products and operations in continents with diverse environments.

In addition, Geely's strategy was getting into the existing U.S. market earlier with its subsidiary brand, Volvo, as an invaluable resource. This strategy gave Geely the possibility to take advantage of the growing U.S. demand on electric vehicles, domestically, meanwhile mitigating the negative consequences of the US-China trade conflicts.

4.3. Lessons and implications

The cases of BYD and Geely's different approaches to U.S. trade policy teach us a number of important lessons. Perhaps the most notable lesson is that a high degree of adaptability and the ability to adjust is a core principle for companies planning to do business in global markets. The flexibility with which both companies modified their global expansion strategies in the face of unexpected external constraints is a good example of how resourcefulness is an important trait for a successful company in today's changing geopolitical landscape.

We should also note that what works in one country may not work in another, especially in a complex geopolitical environment. The choices made by BYD and Geely illustrate that each company must tailor its strategy in different countries and markets according to its strengths, resources and the situations it faces in different markets. The example of Geely's use of the Volvo brand to enter the US market demonstrates the feasibility of acquiring a well-known brand as a way to circumvent trade restrictions and enter the market faster, and the referential value it brings cannot be ignored. On the other hand, BYD's choice of numerous emerging countries highlights the main purpose of the globalisation process, which is to reduce dependence on any single market and thus protect the company from local crises or upheavals.

The convergence between these two strategies also shows that long-term preparation is a necessity in every global market entry plan. Whether investing in new production facilities across various countries like BYD, or managing a complex, multi-brand international operation like Geely, these approaches require significant investment, patience, and a willingness to tolerate short-term challenges for long-term benefits. Taking this long-term attitude is indispensable in the automotive sector, given the duration of product development cycles and the length of time required to cultivate customer loyalty.

4.4. Future outlook

As we look to the future, it's obvious that this trend towards EV will gain extra momentum and companies such as BYD and Geely will get the maximum importance in the world's automotive industry. Their case studies of tackling U.S. trade policies provide useful lessons not only for other Chinese enterprises but for other multinational firms seeking to expand globally in politically complicated environments.

The future trajectory of these corporations and the broader EV industry will be expected to be influenced by certain important factors. The evolution of trade relations between the U.S. and China will be crucial for Chinese manufacturers, which may bring new opportunities or further difficulties for them in the U.S. market. However, the developing markets for electric vehicles in emerging economies are also going to be significant, which could approve BYD's strategy of giving priority to these regions.

EV production technologies and battery advancements combined in the real world will be the most decisive factors. Companies that can innovate and improve the performance, range, and affordability of their electric vehicles will likely gain significant advantages. BYD and Geely will surely be one of the heavily investing players in the area with their brands and partnerships.

Also, the evolution of the global climate policies will certainly play a big role in the EV adoption rate all over the world. As governments increasingly implement stringent emissions regulations and offer incentives for EV purchases, the market for electric vehicles is likely to expand rapidly, presenting both opportunities and intensified competition for companies like BYD and Geely.

In conclusion, while the different approaches taken by BYD and Geely in response to U.S. trade policies highlight the importance of a delicate approach in automobile exports, it also shows the complexity associated with global expansion in the automotive industry. With the progress of technological advancement in this field, success may depend on a company's capacity to keep flexibility, continuous innovation, and adjustment to the fast-paced changes of economic, political, and technological factors. The BYD case and the Geely case are the best experiences for studying global EV market issues and provide some contributions that should still be valuable for the future of the industry.

5. Significance & potential contributions

This case study on the impact of U.S. trade policies on Chinese electric vehicle (EV) companies from 2018 to 2023 offers several significant insights and potential contributions to both academic understanding and practical application in the fields of international trade, corporate strategy, and industry development.

First of all, this research gives a clear and comprehensive description of how the policies on trade can influence the development strategy of two Chinese EV companies, BYD and Geely. By studying the situations of BYD and Geely, two well-known Chinese EV enterprises, it became possible to demonstrate that protectionism, while challenging, can still stimulate innovation and strategic diversification. The different methods of tackling trade tensions suggested by these companies, such as BYD's technical shift to emerging markets and Geely's purchase of Volvo to circumvent tariffs, clearly show that there is no one-size-fits-all solution to overcome such issues. This finding contributes to the broader discourse on corporate responses to protectionist measures and highlights the importance of adaptability in global business strategies.

Secondly, our analysis unveils the intricate interconnection between state policies and corporate competitiveness in the context of international trade. The analysis discovers how Chinese EV

enterprises, initially under domestic policy support, have been struggling to keep pace and suddenly rethink their global strategy under an external pressure. This continuous adaptation process offers valuable insights for both policymakers and corporate administrators, emphasizing the need for flexible and responsive approaches in both policy formulation and business planning.

Thirdly, this study adds new dimensions to our understanding of global value chains and how they are restructured by trade wars. Therefore, relocation of production plants, reconfiguration of supply chains, and the exploration of new markets by Chinese EV companies all point to the malleability of global value chains in the face of trade barriers. These findings have a direct impact on how we think about international business networks in the face of political complications, which are rapidly emerging.

Furthermore, our study provides insights on the possible long-term effects of trade policies on technological innovations and industrial competitiveness. The efforts of Chinese EV companies to enhance their technological capabilities in response can be termed paradoxical as such measures may in some cases stimulate innovation and competitiveness. Nonetheless, complex issues arise in the generalisation of these findings as the long-term effects vary across different contexts and industries.

In addition, this case study provides a framework for analysing corporate responses to trade barriers that may be applicable beyond the EV industry. The strategies used by BYD and Geely, namely market diversification, localization of production, and strategic acquisitions provide a business template for other industries coping with similar problems. This framework could be useful both for researchers willing to evaluate what other firms are doing in a frequently changing environment and practitioners who are professionals developing their own strategies in a world of turbulence.

Lastly, our research contributes to the ongoing debate about the effectiveness of trade policies in achieving their intended goals. Even though trade restrictions initiated by the US have presented obstacles to the penetration and competitiveness of Chinese EV in the U.S. market, they have led to a rapid surge of these companies into other markets. The latter outcome reveals how the trade policies reshape the market dynamics globally and causes other unintended consequences.

However, what needs to be emphasized is that these findings may be useful guidelines, but should be interpreted with caution. The electric vehicle industry is in rapid transition, and geopolitical situations are continually evolving. Moreover, the cases of BYD and Geely do not reflect the situation of all the companies in the Chinese EV sector or even companies in other industries that experiencing similar challenges.

6. Conclusion

This case study makes a contribution to our understanding of how trade policies impact corporate strategies and industry development in a globalized economy. It highlights the resilience and adaptability of companies in the face of trade barriers, as well as the complex relationships between business strategies and government regulations. These insights have the potential to inform more effective policymaking, more resilient corporate strategies, and a more nuanced academic understanding of international trade dynamics in emerging high-tech industries.

References

- [1] Q. Zhao, Z. Li, and C. Zhang, "The Impact of R& D and Non-R& D Subsidies on Technological Innovation in Chinese Electric Vehicle Enterprises," *World Electric Vehicle Journal*, vol. 15, no. 7, pp. 304–304, Jul. 2024, doi: <https://doi.org/10.3390/wevj15070304>.

- [2] W. Pan, "The Effects of U.S. Tariff Increases on Chinese Automotive Parts Trade," *Frontiers in Business Economics and Management*, vol. 15, no. 3, pp. 398–400, Jul. 2024, doi: <https://doi.org/10.54097/xpnkc951>.
- [3] E. York, "Tariff Tracker: Tracking the Economic Impact of Tariffs," *Tax Foundation*, Jun. 26, 2024. [https://taxfoundation.org/research/all/federal/trump-tariffs-biden-tariffs/#: ~: text=Section%20301%2C%20Chinese%20Products& text=The%20administration%20soon%20published%20a](https://taxfoundation.org/research/all/federal/trump-tariffs-biden-tariffs/#:~:text=Section%20301%2C%20Chinese%20Products&text=The%20administration%20soon%20published%20a)
- [4] The White House, "FACT SHEET: President Biden Takes Action to Protect American Workers and Businesses from China's Unfair Trade Practices," *The White House*, May 14, 2024. <https://www.whitehouse.gov/briefing-room/statements-releases/2024/05/14/fact-sheet-president-biden-takes-action-to-protect-american-workers-and-businesses-from-chinas-unfair-trade-practices/>
- [5] M. Ramadan, "A comparison of American and Chinese policies forelectric vehicle technologies," *MIT Science Policy Review*, vol. 3, pp. 11–16, Aug. 2022, doi: <https://doi.org/10.38105/spr.02hu42bdxo>.
- [6] D. Coffin and J. Walling, "Chinese Vehicle Exports: Electrified," *United States International Trade Commission*, Apr. 2024. https://www.usitc.gov/sites/default/files/publications/332/executive_briefings/ebot_china_ev_exports.pdf
- [7] E. Mu, S. Zhu, H. Sheng, and C. He, "Chasing the Sun: How Does Policy-Induced Local Demand Promote the Spatio-Temporal Evolution of China's Solar Photovoltaic Industry," Jan. 2024, doi: <https://doi.org/10.2139/ssrn.4853713>.
- [8] T. Chen, "The impact of the US-China trade war on China's vehicle and vehicle chip industry," *BCP Business & Management*, vol. 38, pp. 989–999, Mar. 2023, doi: <https://doi.org/10.54691/bcpbm.v38i.3817>.
- [9] B2B Cambodia, "BYD Expansion Into Cambodia Is Part Of Its Global Strategy - Kingdom's EV Targets Are Highly Ambitious," *B2b-cambodia.com*, Jul. 24, 2024. <https://b2b-cambodia.com/news/byd-expansion-into-cambodia-is-part-of-its-global-strategy-kingdoms-ev-targets-are-highly-ambitious/> (accessed Aug. 29, 2024).
- [10] I. Mazzocco and G. Sebastian, "Electric Shock: Interpreting China's Electric Vehicle Export Boom," *www.csis.org*, Sep. 2023, Available: <https://www.csis.org/analysis/electric-shock-interpreting-chinas-electric-vehicle-export-boom>
- [11] N. Shirouzu and C. Kirkham, "How Volvo landed a cheap Chinese EV on U.S. shores in a trade war," *Reuters*, Apr. 25, 2024. <https://www.reuters.com/business/autos-transportation/how-volvo-landed-cheap-chinese-ev-us-shores-trade-war-2024-04-24/>
- [12] D. A. Gantz, "Excluding EVs Produced in Mexico by Chinese Enterprises from the United States," *Social Science Research Network*, Mar. 2024, doi: <https://doi.org/10.2139/ssrn.4759600>.