

Geopolitical Conflicts and BYD's Internationalization Strategy: Response and Practical Effectiveness

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Abstract—Against the backdrop of intensified global geopolitical conflicts, New Energy Vehicle (NEV) enterprises face multi-dimensional risks in internationalization, including trade barriers, technological blockades, and supply chain disruptions. As a dominant chain-leader in the global NEV industry, BYD's strategic responses are both representative and instructive. Drawing on a case study approach supplemented by data analysis and literature review, this study systematically examines BYD's coping strategies across five dimensions—market layout, technological R&D, supply chain management, compliance adaptation, and ecological dominance—and evaluates their practical effectiveness. The results show that BYD has effectively mitigated the negative impacts of geopolitical conflicts by implementing a multidimensional, coordinated strategy and has achieved steady growth in overseas business and continuous improvement in industrial chain resilience. This study enriches research on internationalization strategies for NEV enterprises amid geopolitical risks and provides practical guidance for Chinese NEV enterprises to conduct overseas business.

Keywords—geopolitical conflicts, BYD, internationalization strategy, industrial chain resilience, ecological dominance

I. INTRODUCTION

Global geopolitical conflicts are now more persistent, leading to frequent changes in international trade and technology governance regimes. This makes it hard for the New Energy Vehicle (NEV) industry to expand globally (Bussy & Zheng, 2023). Existing studies confirm that geopolitical risks affect international direct investment flows and production network configurations of firms (Bown, 2023), but they focus on traditional manufacturing. There remains a notable gap in research on how chain-leader enterprises in the NEV industry can respond when multiple geopolitical risks coexist. The Chinese NEV industry has achieved large-scale development but has faced trade restrictions, such as EU anti-subsidy investigations and technological barriers, during its internationalization (Bown, 2023).

BYD is a leading NEV enterprise and has built a large overseas business, including Southeast Asia, Europe, and some emerging markets. But its overseas business now faces some geopolitical risks: export costs per unit are rising, cross-border technology cooperation channels are narrowing, and reliance on too few target markets creates vulnerability (Pan, 2025). This study takes BYD as the research object. In the context of geopolitical conflicts, this study examines the specific paths and implementation mechanisms of BYD's internationalization strategy to address these risks. It clarifies how the ecological dominance of chain enterprises can support risk response (Wang *et al.*, 2024).

This study employs a case study approach, complemented

by data analysis. In theory, it supplements empirical research on the internationalization strategies of NEV enterprises under geopolitical risks. The ecological dominance theory of chain enterprises can be expanded (Wang *et al.*, 2024). In practice, this study summarizes BYD's feasible risk response framework and provides strategies for Chinese NEV enterprises to cope with overseas geopolitical risks (Wang, 2025).

A. Impacts of Geopolitical Conflicts on the NEV Industry and BYD

1) Industry level

Geopolitical conflicts can promote the upgrade of global trade barriers for NEVs. The European Union launched anti-subsidy investigations against Chinese NEVs and used the Carbon Border Adjustment Mechanism (CBAM). This raises the policy threshold for Chinese NEV exports (Bown, 2023; Wang, 2025; Yi & Meng, 2024; Kong & Zha, 2024). Geopolitical events such as the Russia-Ukraine conflict can trigger fluctuations in global energy prices and shift regional consumers' preferences. At the same time, market demand for Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs) has undergone structural changes (Liu *et al.*, 2023). For instance, China's NEV penetration rate increased from 29.7% in 2023 to 41.0% in 2024, while Germany's decreased from 22.0% to 20.3% over the same period following subsidy reductions, showing how policy and energy price shifts can reshape regional demand patterns. In the supply chain, competition for key raw materials such as lithium and nickel has intensified. Also, the supply of core components, such as automotive-grade chips, is unstable and can disrupt the global NEV supply chain (Jones *et al.*, 2023; Kennedy, 2018). Relevant studies show that geopolitical risks can disrupt the original global division of labor in the NEV industry, and enterprises should adjust their international strategies to adapt to the new industrial pattern (Bown, 2023; Tian *et al.*, 2024).

2) BYD level

The per-unit cost of BYD in the European market can increase by an estimated 8-12% after the EU provisional anti-subsidy duties, thereby eroding its price advantage from its vertically integrated supply chain. Also, geopolitical conflicts bring two more constraints. First, the technology cooperation is restricted. The Wassenaar Arrangement and related blockade policies can limit BYD's cross-border collaboration in critical domains such as automotive-grade chips and intelligent driving, thereby slowing the pace of technological advancement (Pan, 2025). Second, the risk from single-market dependence is obvious. BYD concentrated its early overseas footprint in Europe and

Southeast Asia, and its international revenue stream can be sensitive to policy shifts in these specific regions (Pan, 2025; Zhang & Wu, 2025).

B. Core Strategies of BYD to Address Geopolitical Conflicts

1) Market layout strategy

BYD has built a diversified regional market layout, which can help reduce operational risks arising from geopolitical conflicts in a single region. In Southeast Asia, BYD has established greenfield production facilities in Thailand and formed joint ventures in Indonesia, helping embed the firm within ASEAN's preferential trade framework and avoiding extra-regional tariff barriers (Zhang & Wu, 2025). Also, its expansion into Central and Eastern Europe provides a manufacturing foothold inside the EU's regulatory perimeter. At the same time, pilot deployments in the Americas can lay the groundwork for further geographic diversification (Pan, 2025). Regarding products, BYD implements differentiated strategies based on energy prices and the consumption preferences of different markets, thereby improving product adaptability to regional markets (Liu *et al.*, 2023; Zhang, 2025).

2) Technological R&D strategy

Technological independence is the key strategy for BYD to overcome technological barriers. BYD invests heavily in developing core components in-house, including the proprietary Blade Battery, the DM-i hybrid powertrain, and automotive-grade chips. This can reduce the dependency on external technology and avoid geopolitical restrictions (Pan, 2025; Zhang, 2025). At the same time, BYD accelerates the filing of intellectual property rights and participates in the development of industrial standards, striving to have a voice in international industrial standards (Pan, 2025). Also, BYD increases R&D investment in new technologies such as solid-state batteries and sodium-ion batteries. It can lay a technical foundation for long-term development under geopolitical risks (Pan, 2025; Zhang, 2025).

3) Supply chain management strategy

BYD uses vertical integration and a diversified supply chain to improve its supply chain resilience. Vertical integration enables BYD to achieve a high level of self-sufficiency in key components, thereby reducing dependence on overseas suppliers (Wang *et al.*, 2024). Regarding raw materials, BYD secures upstream resources, such as nickel mines in Indonesia, to ensure a stable supply of key battery raw materials necessary for the sustainable development of the entire supply chain (Jones *et al.*, 2023; Kennedy, 2018). At the same time, BYD builds a diversified supplier system and strengthens regional coordination of the supply chain, and this can reduce the risk of supply chain disruption from geopolitical conflicts (Wang *et al.*, 2024).

4) Compliance adaptation strategy

Geopolitical conflicts create trade and carbon barriers, and BYD has built a comprehensive compliance system to address these issues. Regarding the EU anti-subsidy investigations, BYD provides relevant materials and conducts compliance rectification (Wang, 2025; Yi & Meng, 2024; Kong & Zha, 2024). For carbon compliance, BYD focuses on ESG construction and carbon footprint

management to meet requirements under international carbon-emission regulations (Gao *et al.*, 2024). Also, BYD improves policy tracking and patent protection and can adjust its business strategy to handle changes in geopolitical policies (Yu & Wang, 2023).

5) Ecological dominance strategy

BYD is a chain enterprise in the NEV industry. It uses its dominant position in the ecosystem to help the entire industrial chain resist risks together. BYD can drive technological progress among upstream and downstream supporting enterprises through technology spillovers, thereby improving the overall supporting capacity of the industrial chain (Wang *et al.*, 2024). It can promote coordinated development of the industrial chain. Also, it helps enterprises realize digital transformation, and overall resilience and risk resistance can be improved (Wang *et al.*, 2024; Zhang, 2025).

C. Evaluation of BYD's Strategic Practical Effectiveness

1) Market effectiveness

BYD's market diversification and localized layout strategies can show good results in practice. The ASEAN market is now a key growth pole for BYD's overseas operations. Localized production reduces the impact of extra-regional trade barriers, and this outcome can validate the market diversification and production localization strategies mentioned earlier (Zhang & Wu, 2025). The European market continues to show steady growth under anti-subsidy policies, and the differentiated product strategy is accepted by regional consumers (Pan, 2025; Liu *et al.*, 2023). As presented in Figs. 1 and 2, BYD's revenue composition shows the effectiveness of this multi-hub strategy. The share of overseas revenue in total revenue rose from 28.55% in 2024 to 38.65% in 2025, reflecting a reduction in dependence on the domestic Chinese market and confirming the strategic value of a diversified international footprint.

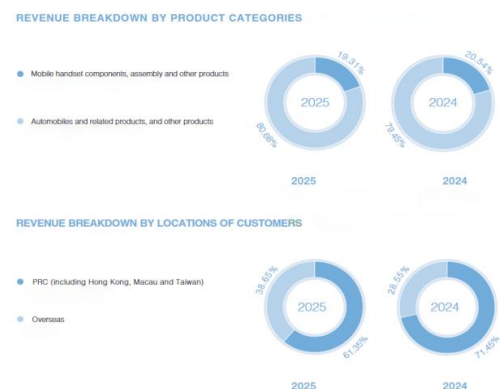


Fig. 1. BYD Revenue Proportion by Region (2024–2025) Data source: BYD Annual Report (2025).

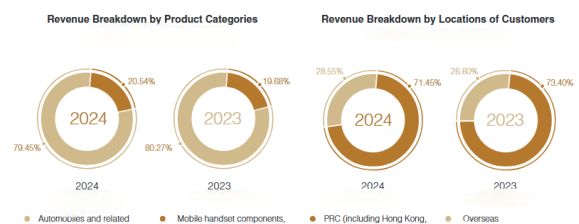


Fig. 2. BYD Revenue Proportion by Region (2023–2024) Data source: BYD Annual Report (2024).

2) Financial and competitiveness effectiveness

BYD uses technological independence and supply chain integration. These strategies can improve financial performance and core competitiveness. Independent R&D of core technologies reduces production costs. Also, vertical integration of the supply chain can further optimize the cost structure (Pan, 2025; Wang *et al.*, 2024). As summarized in Fig. 3, these advantages are evident in BYD's 2024 financial results. Total revenue reached 777.1 billion RMB, and net profit attributable to the parent company reached 40.25 billion RMB. Overseas revenue reached 221.9 billion RMB, indicating that international markets contribute more to profitability. It is worth noting that R&D investment reached 54.2 billion RMB, one of the highest absolute R&D expenditures in the global automotive industry, signaling BYD's commitment to sustaining technological leadership amid geopolitical uncertainty. Because of these combined advantages, BYD's brand influence in the global NEV market can be improved, and net cash flow from operating activities reached 133.5 billion RMB, providing enough financial reserves to buffer external shocks (Pan, 2025; Zhang, 2025). As shown in Fig. 4, BYD's 2025 financial results further demonstrate this momentum. Total revenue reached 804.0 billion RMB, with overseas revenue surging to 310.7 billion RMB, raising the overseas revenue share to 38.65%.

PERFORMANCE OVERVIEW

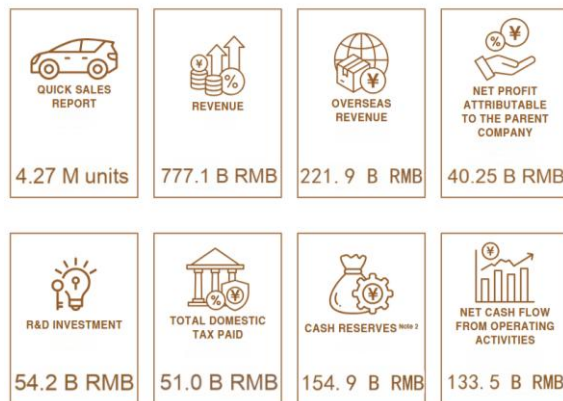


Fig. 3. BYD Key Financial and Operating Indicators Data source: BYD Annual Report (2024).

PERFORMANCE OVERVIEW



Fig. 4. BYD Key Financial and Operating Indicators Data source: BYD Annual Report (2025).

3) Industrial chain resilience effectiveness

BYD's supply chain strategy and ecological dominance strategy can improve the resilience of the industrial chain. When global chip shortages and raw material price fluctuations occur simultaneously, BYD can maintain stable production and operations because it is self-sufficient in components and has a stable raw material supply (Wang *et al.*, 2024). Also, BYD's cash reserves reached 154.9 billion RMB in 2025. This provides a large financial buffer that can help support upstream and downstream enterprises in joint overseas expansion, and this collaborative approach can strengthen the industrial cluster effect, thereby improving the overall risk-resistance capacity of China's NEV industrial chain (Wang *et al.*, 2024; Zhang, 2025).

II. CONCLUSION

Drawing on a focused body of academic literature and empirical data, this study systematically examines the impact of geopolitical conflicts on BYD's internationalization, its multidimensional coping strategies, and the practical effectiveness of these strategies. The research conclusions are as follows: First, geopolitical conflicts affect BYD's internationalization through four channels: trade, technology, supply chain, and energy, among which rising costs and compliance pressure are the core challenges faced by BYD. Second, BYD has constructed a multi-dimensional coordinated coping strategy covering market layout, technological R&D, supply chain management, compliance adaptation and ecological dominance, in which technological independence and localized production are the key paths to cope with geopolitical risks. Third, BYD's coping strategies have achieved remarkable results, which are specifically reflected in the steady growth of overseas market share, the continuous optimization of financial performance and the significant improvement of industrial chain resilience. Fourth, the ecological dominance of chain enterprises provides core support for the implementation of BYD's risk response strategies, and technological leadership, collaborative integration, and digital empowerment are the key capabilities.

This study has theoretical and practical significance. Theoretically, it enriches the research on the internationalization strategy of NEV enterprises under geopolitical risks and the ecological dominance of chain enterprises. In practice, it summarizes BYD's mature experience in managing geopolitical risks and serves as a practical reference for Chinese NEV enterprises conducting international business. Two limitations should be acknowledged. First, the study does not differentiate among the distinct impact mechanisms of specific types of geopolitical conflicts—such as trade frictions, technological sanctions, and military confrontations—which may affect firm strategies through different channels. Second, the temporal scope of the data constrains the analysis to short- and medium-term effects; the long-term sustainability of BYD's strategic adjustments beyond 2025 remains an open question for future inquiry. Future research can conduct comparative studies on the geopolitical risk response strategies of BYD, Tesla, and Toyota, and extend

the research cycle to explore the long-term sustainability of NEV enterprises' internationalization strategies under geopolitical risks.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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