

International Development Strategies for Chinese New Energy Vehicle Enterprises

Letian Gao^{1,2*}

¹Independent Researcher, Shijiazhuang 052260, Hebei Province, China

²Josai International University, Chiba 283-8555, Japan

*Corresponding author: Letian Gao, watchers96jp@gmail.com

Copyright: © 2024 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: As a vital component of the low-carbon economy, new energy vehicles play a significant role in addressing energy shortages and environmental pollution. China's independent brands of new energy vehicles must achieve high competitiveness and global influence to advance the development of the nation's new energy vehicle industry, surpassing other automotive industry powerhouses. In light of new development opportunities, it is essential for Chinese new energy vehicle enterprises to leverage the advantages of a robust domestic and international market and a relatively comprehensive industrial chain. By doing so, these enterprises can actively pursue internationalization, effectively mitigate potential risks, and enhance their competitive edge in the global new energy vehicle market.

Keywords: New energy vehicle enterprise; International development; Enterprise growth

Online publication: December 23, 2024

1. Introduction

The international development of China's new energy automobile enterprises is a multifaceted process involving various factors. With the global focus on environmental protection and sustainable development, demand for new energy vehicles has been increasing, creating a substantial international market for Chinese enterprises^[1]. Technological innovation remains a critical driver for enabling Western new energy automobile enterprises to enter the global market. Enterprises possessing core technologies and intellectual property are more likely to gain recognition in international markets. Furthermore, the Chinese government's supportive policies for the new energy vehicle industry, such as tax incentives, have accelerated the rapid growth of this sector and established a strong foundation for the internationalization of Chinese enterprises.

2. Internationalization development model of China's new energy vehicle industry

2.1. Technological innovation-driven development

Continuous investment in research and development is essential to overcome bottlenecks in key technologies, such as battery technology and electronic control systems, ensuring that product performance meets or exceeds international advanced standards ^[2]. Actively applying for national patents to secure independent intellectual property rights provides a legal guarantee for products to enter the international market.

2.2. Market expansion and brand building

Building a new energy vehicle brand with international influence requires comprehensive efforts to enhance brand awareness through participation in international exhibitions, sponsorship of global events, and similar activities. Developing differentiated marketing strategies based on the target market's specific conditions is vital, including pricing strategies and the construction of distribution channels.

2.3. Localization of production and supply chains

Establishing production bases in target markets and leveraging local resources can reduce costs and improve market response speed. Forming cooperative relationships with local parts suppliers facilitates the establishment of a robust supply chain system, ensuring high-quality components and supply chain stability.

2.4. Cooperation and alliances

Strategic partnerships with internationally renowned enterprises and research institutions enable resource sharing and joint development. Mergers, acquisitions, or joint ventures offer opportunities for rapid entry into overseas markets while accessing local market resources and technologies.

2.5. Alignment with policies and regulations

Active participation in the formulation of international standards promotes the alignment of Chinese and international standards, thereby improving market access for products. Fully utilizing preferential policies in target markets, such as tax relief, helps reduce entry costs.

2.6. Financial services support

Utilizing international financial markets by issuing stocks and bonds enables continuous expansion of funding sources. Collaborating with international insurance companies can provide comprehensive risk protection schemes, including product liability insurance and export credit insurance.

2.7. Establishment of a service system

Creating a robust after-sales service system, including maintenance and parts supply, is crucial for enhancing user experience. Active participation in the construction of charging infrastructure in target markets, in collaboration with local governments and enterprises, promotes the development of essential infrastructure.

2.8. Innovative models

Exploring partnerships with international ride-sharing platforms and promoting the application of new energy vehicles in the sharing economy are innovative strategies. Launching rental service models can reduce consumers' initial purchase costs, increasing market penetration rates.

3. Challenges in the internationalization development of China's new energy vehicle industry

3.1. Uncertainties in the international trade environment

Developed countries, such as those in Europe and the United States, are increasingly tightening controls on key technologies and restricting technology transfers, particularly in areas deemed critical to national security. This presents significant obstacles for Chinese new energy vehicle enterprises that depend on acquiring advanced technologies to drive their development ^[3]. Furthermore, the reindustrialization strategies implemented by these nations aim to attract manufacturing industries back to their domestic markets and reduce dependence on external supply chains, potentially limiting opportunities for Chinese enterprises to penetrate these markets.

In many developing countries, the lack of a robust new energy vehicle market management system, coupled with undefined trade rules and technical standards, creates additional barriers for Chinese firms. Additionally, inadequate infrastructure, such as insufficient charging stations, hampers the adoption of new energy vehicles in these regions, further affecting market expansion prospects.

3.2. Bottlenecks in international certification and standards

The fragmentation of standards and regulations significantly restricts the global development of China's new energy vehicles ^[4]. Variations in standards not only hinder market access but also increase production costs and technical complexities for enterprises. For instance, the European Union and the United States adopt differing charging interface standards, while China utilizes its national standard, GB/T, leading to compatibility challenges.

Moreover, design requirements for vehicle collisions differ across countries, and certain aspects of China's national standards may not align with international norms. Similarly, the use and types of air-conditioning refrigerants vary globally, with some countries prohibiting specific refrigerants. Battery management systems, which encompass safety and energy management, also face inconsistent requirements across nations, complicating compliance for manufacturers.

3.3. Imperfect overseas market support systems

In many developing and some developed countries, the supply chains for parts are underdeveloped, and the availability of stable, high-quality suppliers is limited. This creates challenges for new energy vehicle enterprises in sourcing components, increasing production costs, and complicating supply chain management ^[5]. The lack of a robust supply chain infrastructure also affects the consistency of parts quality and delivery timelines, further disrupting production schedules and product reliability.

Additionally, the absence of comprehensive planning and coordination mechanisms for new energy vehicle infrastructure development in certain regions delays the establishment of critical facilities, such as charging stations. This lack of infrastructure directly impacts the market readiness for adopting new energy vehicles.

3.4. Weak service and support systems

Overseas markets often have limited financing channels, relying predominantly on traditional methods such as bank loans, with a scarcity of diversified tools like equity financing. Chinese new energy vehicle enterprises, facing low credit ratings or market recognition abroad, encounter high financing costs when attempting to

secure funding.

Insurance coverage in many foreign markets is insufficient and often expensive, failing to meet the comprehensive insurance needs of these enterprises. Furthermore, consumers in most countries rely heavily on consumer credit to purchase vehicles, but weak financial support systems limit their willingness to buy new energy vehicles, adversely affecting sales performance.

4. Countermeasures for the international development of China's new energy vehicle enterprises

4.1. Strategic design and cultivation of international leaders

The formulation of the “Action Plan for the International Development of the New Energy Vehicle Industry” represents a crucial initiative for positioning China's new energy vehicle (NEV) industry on the global stage^[6]. The plan should define clear development goals, pathways, and measures to enhance the international competitiveness of the NEV industry. These goals should encompass short-term, medium-term, and long-term objectives:

- (1) Short-term goals: Expand the export scale of NEVs, increase product market share in target regions, establish stable sales networks in countries along the “Belt and Road” and RCEP member states, and create multiple overseas production bases to facilitate localized production and sales.
- (2) Medium-term goals: Cultivate 2–3 globally competitive NEV enterprises, establish at least one internationally recognized brand to enhance the influence of Chinese NEV brands, and achieve policy alignment and mutual standard recognition with key trading partners.
- (3) Long-term goals: Transform China into a leading global production and export hub for NEVs, achieve comprehensive international industrial chain layouts, establish a complete industrial ecosystem, and promote the global adoption of Chinese NEV technologies and services.

To achieve these objectives, NEV cooperation could be integrated into the “Belt and Road” initiative. This would involve promoting industrial collaboration with Belt and Road countries, enhancing technical exchanges, aligning standards, and coordinating policies related to NEVs. Enterprises should be supported in establishing R&D centers, production facilities, and sales networks in these regions. The RCEP platform can be utilized to foster regional collaboration and to streamline NEV market access policies across member states.

Key measures include intensifying intergovernmental consultations to encourage target countries to relax restrictions on NEV enterprises and products, facilitating the exchange of legal, regulatory, and policy information with major trading partners, and addressing technical barriers and trade disputes. Regular evaluations of project progress are essential to ensure effective implementation.

Efforts should also focus on publicizing advanced experiences and effective practices to encourage greater enterprise participation in international development. Support for strong enterprises to pursue mergers and acquisitions can create large, globally competitive NEV groups. Brand building and market promotion initiatives are critical for improving the global visibility and reputation of Chinese NEV brands. Additionally, participation in the formulation of international standards should be encouraged to enhance the global influence of Chinese technical standards^[7].

4.2. Standardization and enhancement of international operational capabilities

- (1) Formulate relevant standards and establish interoperability: This involves actively participating in relevant working groups within organizations and contributing to the development of international

standards for new energy vehicles and related components. The aim is to leverage these platforms to promote global consistency in technical regulations for new energy vehicles, particularly in areas such as charging interfaces, battery management systems, and vehicle safety standards ^[8]. Additionally, efforts should focus on aligning these standards with common international practices to ensure mutual recognition between Chinese and international standards, thereby reducing the complexity of export product certification. Negotiations with major trading partners should lead to bilateral mutual recognition agreements for product inspection and standard certification, ultimately minimizing the costs and time associated with redundant certifications.

- (2) Enhance standardization cooperation in infrastructure: Collaboration with organizations such as the International Telecommunication Union and the International Energy Agency should be strengthened to promote the international standardization of power and grid technologies, enabling global connectivity of charging infrastructure. For international charging infrastructure projects, demonstration initiatives can help drive the adoption and application of these standards on a global scale ^[9].
- (3) Foster cooperation in inspection, testing, and certification: Institutions should establish robust partnerships with reputable international certification bodies to improve recognition in global markets. Efforts must be intensified to accelerate mutual recognition of new energy vehicle product inspections and standard certifications across major markets, thereby comprehensively enhancing the international competitiveness of these products ^[10].
- (4) Conduct risk assessment and management for overseas operations: This entails conducting comprehensive research on target markets to evaluate political, legal, and market risks, thereby providing a solid foundation for enterprises' internationalization strategies. Establishing a policy consultation platform is crucial to offer enterprises updated insights into international market dynamics and policy interpretations. Additionally, implementing a risk early-warning system will enable timely detection and mitigation of potential risks. Emergency response plans should also be devised to promptly address issues and minimize losses. Enterprises should be guided to comply with the laws and regulations of host countries, respect local cultures, and adhere to business management practices to avoid compliance risks ^[11].

4.3. Coordinated development and global industrial chain layout

- (1) Support enterprises in expanding overseas: Competent new energy automobile enterprises should be encouraged to establish subsidiaries or branches in countries along the Belt and Road to directly participate in local market competition. Market access and customer consultation can be expedited by acquiring existing local enterprises. Co-investment with local enterprises or international partners can help mitigate risks and share benefits. Strategic markets should be selected as key breakthrough points, pooling superior resources to build model markets. Priority should be given to developing key international markets that offer favorable conditions, such as robust infrastructure, policy support, and significant market potential ^[12].
- (2) Promote international cooperation on production capacity and the development of industrial parks: New energy vehicle enterprises should be encouraged to collaborate with parts manufacturers to jointly establish production bases overseas. Participation in the construction of industrial parks in countries along the Belt and Road is essential to creating a cluster effect and reducing operational

costs. Cooperation between infrastructure construction enterprises and new energy vehicle enterprises should be fostered, enabling joint investment in charging stations, battery-swapping stations, and other supporting facilities. Demonstration projects should be established abroad to showcase comprehensive solutions for China's new energy vehicles and associated infrastructure. Deep collaboration in research and development should be pursued, including the sharing of technical resources and outcomes. Furthermore, the global procurement network should be optimized to facilitate the efficient allocation of raw materials, components, and other resources^[13].

- (3) Establish and enhance mutual assistance and cooperation mechanisms among automobile enterprises: An information exchange platform should be established to facilitate the sharing of overseas market information among enterprises. Regular industry meetings should be organized to discuss significant topics such as market trends and policy updates^[14]. Collaboration should be promoted for the joint construction and sharing of charging infrastructure and maintenance service networks. Through production capacity cooperation, enterprises can achieve resource sharing and risk mitigation, thereby enhancing their resilience in international markets. Additionally, collaboration in sales channels, after-sales service, and related areas should be encouraged to form a unified approach for jointly exploring overseas markets^[15].
- (4) Establish a new development pattern for new energy vehicles that mutually reinforce domestic and international cycles: Domestically, efforts should focus on consolidating and expanding market share to drive industrial upgrades and technological progress. Continuous improvement of the domestic industrial chain will enhance independent innovation capabilities, creating a robust foundation for the domestic market. Simultaneously, active participation in international market competition is necessary to identify new growth opportunities and introduce advanced technologies and management practices through international collaboration. These measures will further promote the development of the domestic market^[16].

5. Conclusion

The international development of China's new energy automobile industry represents a systematic undertaking that necessitates the collaborative efforts of the government, enterprises, and the market. By leveraging pathways such as technological innovation, market expansion, brand building, production localization, and strategic cooperation and alliances, Chinese new energy vehicle enterprises can establish a competitive position in the global market and achieve sustainable development. Simultaneously, the government must provide appropriate policy support to assist enterprises in overcoming challenges encountered during the internationalization process, thereby fostering the healthy development of the entire industry.

Disclosure statement

The author declares no conflict of interest.

References

- [1] Li Y, He P, Dong C, 2024, Analysis on the International Development of Longjiang Agricultural Enterprises. Farm

- Econ Manage, 2024(6): 12–15.
- [2] Yang Y, 2024, Study on the Influence of the Internationalization of State-Owned Manufacturing Enterprises in China, dissertation, Harbin University of Commerce.
 - [3] Tong S, Ma Y, 2024, The Impact of Digital Transformation on the Speed of Enterprise Internationalization and Policy Suggestions: The Regulating Role of Environmental Uncertainty. *J Zhejiang Shuren Univ*, 24(3): 29–39.
 - [4] Qian X, 2024, Research on the Impact of Digital Transformation on the Internationalization Degree of Manufacturing Enterprises, dissertation, Zhejiang University of Science and Technology.
 - [5] Xu M, 2024, Research on the International Development of NIO Automobile, dissertation, Heilongjiang University.
 - [6] Du L, 2024, Research on the Impact of Digital Transformation on the Internationalization Level of New Energy Enterprises, dissertation, Hebei University of Economics and Business.
 - [7] Zhou S, Gao G, Fan M, et al., 2023, Development Mode and Countermeasures of Guangdong Science and Technology Business Incubator. *Res Dev Strateg Sci Technol Innov*, 7(5): 10–17.
 - [8] Li Z, 2023, Research on the Development Strategy of Natural International Enterprises Based on the Perspective of Joint Performance, dissertation, Jilin University of Finance and Economics.
 - [9] Wang Y, 2022, Research on the Two-Round Development Mode of International Accounting Firms in China, dissertation, Yunnan University of Finance and Economics.
 - [10] Cai Y, Nong C, 2021, The Internationalization Development and Practice of Chinese Enterprises. *Times Motors*, 2021(14): 4–10.
 - [11] Tang H, 2021, Research on the Evolution of Dynamic Ability and Technological Innovation Mode in the International Development of New Energy Automobile Enterprises, dissertation, Chongqing Technology and Business University.
 - [12] Yuan S, 2020, Research on the Internationalization Development Mode of Private Enterprises in China Under the “Belt and Road” Strategy, dissertation, Wuhan University of Light Industry.
 - [13] Lu Y, 2019, Research on China’s Innovation Internationalization and Its Growth Effect from a Comparative Perspective, dissertation, Liaoning University.
 - [14] Li N, 2019, Research on the International Development Strategy of YX Company, dissertation, Jilin University.
 - [15] Zhang Q, 2024, Research on the International Development Strategy of AN New Energy Vehicle Company, dissertation, Jilin University.
 - [16] Liu C, 2024, Support Hainan to Develop the International High-End Manufacturing Industry of New Energy Vehicles. *Hainan Daily*, 20240305(A11).

Publisher’s note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.