BYD's Competitive Strategy and Internationalization Path: From the Perspective of New Energy Vehicle Industry Transformation

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Abstract: Under the background of the accelerated transformation of global new energy automobile industry, BYD has gradually grown into a globally competitive new energy automobile enterprise by virtue of technology accumulation and strategic adjustment. From the perspective of industrial transformation, this paper analyzes BYD's competitive strategy choice and its internationalization path evolution under the dual pressures of technological change and market competition. BYD has built an independent industrial chain with "Three Electric Systems" technology as the core through vertical integration, which has formed significant advantages in cost control and product iteration. Its competitive strategy presents the composite characteristics of technology-driven, cost-leading and differentiation. In terms of internationalization, BYD cut into overseas markets from electric buses, and gradually transitioned to passenger car export and localized production, showing strong adaptability. However, in the face of challenges such as trade barriers, brand awareness and intelligent competition, its global expansion still needs to strengthen localized operation and ecosystem construction.

1. Introduction

In recent years, the global automobile industry is undergoing a profound technological and structural change. The era dominated by traditional fuel vehicles gradually faded out, and the wave of new energy vehicles (NEV) with electrification, intelligence and networking as the core swept the world [1]. This transformation is not only the replacement of technical route, but also the re-layout of energy system, transportation mode and even national industrial strategy [2]. Under this background, with the advantages of policy guidance, market scale and industrial chain, China has rapidly grown into the core engine of global new energy vehicle development. In this round of industrial restructuring, BYD's performance is particularly eye-catching. From the private enterprise that started with secondary batteries at first to the leading enterprise in global new energy vehicle sales, BYD's growth track is almost in sync with the development of China's new energy vehicle industry [3].

With the increasingly fierce competition in the domestic new energy market, new forces such as NIO, XPENG and LEADING IDEAL are constantly squeezing space, and the localized production of Tesla in China further intensifies the price war, so BYD must set its sights on a broader global market [4]. In recent years, with the acceleration of passenger car export, BYD has set up factories or sales networks in Thailand, Brazil, Germany, Australia and other places, and gradually moved from "product export" to "localized operation". The road to sea is not smooth. European and American markets have extremely strict requirements on technical standards, data security and environmental protection, and the rise of trade protectionism also brings uncertainty. In 2023, the EU launched a countervailing investigation on electric vehicles in China, pointing directly at major export enterprises including BYD. At the same time, the lack of brand awareness, weak after-sales service network and lack of cultural adaptability have also become practical obstacles restricting its global expansion [5]. How to achieve global recognition of brand value while maintaining technological advantages is a strategic issue that BYD must face.

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For this reason, under the background of the transformation of new energy automobile industry, it is not only helpful to understand the growth logic of a China enterprise, but also provide reference experience for more local automobile enterprises to "go global".

2. The background of new energy automobile industry transformation

The rise of new energy automobile industry is not a simple vehicle replacement, but a systematic change covering energy structure, manufacturing system, consumption pattern and even geopolitical pattern. The starting point of this transformation can be traced back to the increasing global concern about climate change at the beginning of this century. With the aggravation of greenhouse gas emissions, transportation, as one of the important sources of carbon emissions, has naturally become the focus of emission reduction policies in various countries. In this context, the development of new energy vehicles is generally regarded as the core path to achieve low-carbon transportation. The breakthrough in technology also provides practical support for this change. In the past decade, the energy density of power batteries has increased significantly, and the cost has continued to decline. By the end of 2023, the number of public charging piles in China has exceeded 2.7 million. Europe and the United States are also increasing their investment, and the coverage and convenience of charging networks have been continuously improved. China has played a key role in this round of transformation. The goal of "peak carbon dioxide emissions, carbon neutral" in 2020 has injected long-term impetus into industrial transformation. Under the policy dividend, the domestic new energy vehicle market has achieved explosive growth.

But the transition has not been smooth sailing. With the gradual decline of subsidy policy, the market has changed from "policy-driven" to "market-driven", and the competition pattern has also rapidly divided [6]. On the one hand, Tesla gained a firm foothold in the China market by virtue of its brand influence and technological first-Mover advantage, and promoted the consumption upgrade of the entire high-end electric vehicle market; On the other hand, NIO, XPENG, LEADING IDEAL and other new car-making forces rely on capital support and user operation mode to quickly seize market segments. Traditional car companies such as GAC and Geely are also accelerating their transformation and launching independent new energy brands. With the increasingly fierce market competition and frequent price wars, the overall profit rate of the industry has been continuously compressed. For enterprises, the era of relying solely on policy dividends has ended, and technological innovation, cost control and brand building have become the key to survival [7].

Deeper changes take place at the level of industrial chain. The manufacturing logic of new energy vehicles is different from that of traditional fuel vehicles. Its core has changed from "engine+gearbox" to "battery+motor+electronic control", which is the so-called "Three Electric Systems" system. This transformation has broken the original supply chain pattern, spawned a number of emerging suppliers, and forced the transformation of traditional parts enterprises. With the first-Mover advantage in lithium battery materials and motor manufacturing, China has gradually established a relatively complete industrial chain of new energy vehicles [8]. From the distribution of lithium, cobalt and nickel resources in the upstream, to the production of anode and cathode materials, electrolyte and separator in the midstream, and then to the vehicle assembly in the downstream, China enterprises occupy a leading position in the world in many aspects. This industrial chain advantage has provided strong support for local car companies and enhanced their bargaining power in the international market.

With the integration of technologies such as autonomous driving, intelligent cockpit and car networking, cars are no longer just vehicles, but mobile intelligent terminals. This trend puts forward higher requirements for enterprises' R&D capabilities, and the proportion of software investment continues to increase. Traditional car companies generally face challenges in upgrading the electronic and electrical architecture, while new forces and technology companies show greater flexibility. In this context, although BYD has accumulated a lot in the field of "Three Electric Systems", it still needs to speed up the pace of catching up in terms of intelligent driving and software ecology.

3. BYD's competitive strategy analysis

BYD, which started from batteries, has long realized the importance of independent control of core components. While most car companies are still relying on foreign suppliers such as Bosch and Chinese mainland to provide electronic control systems, BYD has realized the self-research and self-production of batteries, motors, electronic controls, IGBT chips and even automotive semiconductors. Cost control is another big competitive advantage. Because a large number of core components are supplied internally, BYD has a strong cost reduction space in the manufacturing process. Taking DM-i super hybrid technology as an example, this system greatly reduces the price threshold of hybrid vehicles while ensuring fuel economy.

In recent years, BYD has continued to increase its technical level. The introduction of blade batteries is a turning point. Compared with the traditional ternary lithium battery, the blade battery is made of Ferrous lithium phosphate material. Although the energy density is slightly lower, the safety is greatly improved, and it has passed the rigorous acupuncture test, completely changing consumers' concerns about the safety of electric vehicles. More importantly, the structural innovation of blade battery improves the space utilization rate, so that the endurance of the whole vehicle does not lose to mainstream products. This technological breakthrough not only enhanced its own product strength, but also attracted international car companies such as Tesla and Toyota to cooperate in purchasing.

In terms of brand strategy, BYD has gone through a difficult transformation from an "cost-effective" image to one of "technology + quality". For a long time in the past, its products gave people the impression of being practical but lacking in design sense, with weak brand premium capacity. However, with the launch of the "Dynasty Series" (Tang, Song, Han, Qin) and the subsequent "Ocean Series", the design language has become more mature, and the interior texture and intelligent configurations have significantly improved. In particular, the "Han" model, as the first self-owned brand sedan with a price exceeding 200,000 yuan, successfully entered the core market of joint-venture cars, proving that BYD has the ability to enter the mid-to-high-end market.

It is undeniable that BYD still has shortcomings in intelligence. Compared with the high-profile investment of new automotive forces in smart cockpits and autonomous driving, BYD's moves are relatively conservative. Its DiPilot assisted driving system still lags behind leading enterprises in terms of functional richness and user experience. However, the company has realized the problem. In 2023, it announced the establishment of an independent intelligent R&D center and cooperated with algorithm companies such as Momenta in an attempt to speed up making up for the gaps.

4. The internationalization path of BYD

BYD's internationalization doesn't start with passenger cars, but a gradual path of "from business to multiplication, from Asia to Europe". As early as 2008, BYD began to explore overseas markets, initially focusing on electric buses and energy storage systems. This strategy of "commercial vehicles first, then passenger cars" comes down in one continuous line with its technology accumulation and risk control ideas. As a public product, the electric bus has a long procurement decision-making cycle but high stability, and relatively low brand requirements, which is suitable for China enterprises to establish initial trust overseas. In 2011, BYD electric bus entered Los Angeles, becoming the first China new energy bus brand to enter the North American market. Since then, its electric buses have successively entered many cities around the world, such as London, Amsterdam, Sydney and San Diego, with a cumulative export of over 3,000 vehicles, covering more than 50 countries on six continents.

From the perspective of export mode, BYD's internationalization path presents obvious stage characteristics. In the initial stage, it was mainly for vehicle export, mainly for emerging countries with clear policy support and low market threshold; In the medium term, KD (Parts Assembly) mode is adopted to reduce the tariff cost and improve the localization degree; In the later stage, it gradually transited to wholly-owned factories, local R&D and brand operation. This "from light to

heavy" investment strategy not only controls the initial risks, but also lays the foundation for long-term deep cultivation. Its internationalization process can be roughly divided into three stages, as shown in Table 1.

Table 1 Key Phases and Initiatives in BYD's Internationalization (2010-2023)

Phase	Time Period	Major Markets	Product Types	Key Initiatives
Initial Exploration	2010-2017	USA, select European cities	Electric buses, energy storage	Exported electric buses; participated in international tenders
Strategic Positioning	2018-2021	Japan, India, Chile, Norway	Electric buses, limited passenger vehicles	Established overseas offices; obtained EU WVTA certification
Rapid Expansion	2022-2023	Thailand, Germany, Australia, Brazil	Passenger vehicles	Built overseas production bases; launched global models (e.g., ATTO 3, SEAL); expanded dealership network

In terms of brand strategy, BYD adopts the way of "global model+local adaptation". For example, yuanplus PLUS named ATTO 3 in overseas markets, which optimizes suspension adjustment and car system for European users; SEAL directly benchmarked Tesla Model 3, and comprehensively benchmarked the design and technical parameters. This product positioning of "benchmarking the international mainstream" helps to break the stereotype that "China cars are cheap". In 2023, ATTO 3 ranked first in electric vehicle sales in Thailand for many months, and even surpassed Tesla in Israel for a time, showing strong market acceptance.

The road to internationalization is not smooth sailing. European and American markets have strict requirements on technical standards, data security and labor policies, and cultural differences and brand awareness barriers still exist. In October, 2023, the European Union announced to launch a countervailing investigation on electric vehicles in China, and BYD, as one of the main investigation targets, faced with high tariff risks. In addition, the problems such as the lag of after-sales service network construction, insufficient local talent reserve and weak brand communication ability also restrict its breakthrough in high-end market.

Table 2 BYD's Major Overseas Production Facilities (as of early 2024)

Country	Location	Investment Model	Primary Function	Planned Capacity
Thailand	Rayong Province	Wholly-owned	Passenger vehicle manufacturing, export hub	150,000 units/year
Brazil	Bahia State	Joint venture + government cooperation	Integrated vehicle and battery production	150,000 units/year (by 2025)
Hungary	Szeged	In planning	European manufacturing center	To be announced
Germany	Munich	Sales and service center	Brand showroom, after-sales support	Non-production facility

As can be seen from Table 2, BYD is taking Southeast Asia and South America as springboard to steadily advance to the core market in Europe. In the long run, BYD's internationalization has shifted from "selling cars" to "building ecology". In Thailand, in addition to building a factory, it also builds a charging network and training center; In Brazil, it is planned to build an energy closed loop of "photovoltaic+energy storage+electric vehicle". This systematic output marks that its globalization strategy has entered a new stage. It is no longer a simple commodity trade, but a comprehensive output of technology, standards and business models.

5. Conclusions

The rise of BYD is the epitome of China's new energy automobile industry from "running with" to "running with" and even leading partially. Its success is not accidental, but the result of long-term adherence to technology self-research, industrial chain autonomy and strategic determination. In terms of competitive strategy, BYD did not blindly follow the capital boom or marketing-oriented model, but embarked on a unique path based on vertical integration, with cost advantage as the breakthrough and technological innovation as the continuous driving force. Breakthroughs in core technologies such as blade battery, DM-i hybrid system and E-platform 3.0 have enabled it to face international brands in product strength.

In terms of internationalization, BYD's path is pragmatic and steady. It didn't hit the mainstream markets in Europe and America from the beginning, but built a reputation through electric buses, and then opened up emerging markets with cost-effective global models. With going out to sea and entering deep water, relying solely on products and prices is not enough to support long-term development. In the future, BYD should not only continue to deepen its cultivation in manufacturing, but also make up for its shortcomings in brand building, local services and cross-cultural management.

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