

BYD: From a Battery Giant to A Global Leader in New Energy Vehicles

Yahui Yang *

School of Economics and Management, Foshan University, Foshan, 528000, China

* Corresponding author: Yahui Yang (Email: 906509534@qq.com)

Abstract: As a leading enterprise in the global new energy vehicle industry, BYD has made remarkable achievements through technological innovation, market strategy and global layout. Its success story includes continuous investment in innovation in battery technology and vehicle technology, as well as a market strategy that flexibly responds to different market needs. BYD has established a strong production and sales network around the world, especially in the European and American markets, which has won wide recognition. In the future, BYD will continue to focus on technological upgrading and sustainable development, strengthen environmental responsibility, expand market share, and meet the challenges of the global new energy vehicle industry. These strategic initiatives will provide a solid foundation for BYD to maintain its leading position and sustainable development.

Keywords: New energy, Automotive industry, Technological innovation.

1. Introduction

As an important part of the global energy structure adjustment, new energy vehicles play a key role. With the increasing global concern about climate change and environmental pollution, new energy vehicles have significantly improved environmental quality by reducing greenhouse gas and air pollutant emissions from traditional fuel vehicles. The research and development of new energy vehicles will become a major trend, and a large number of new energy vehicle technologies have emerged, becoming the mainstream direction of China's future automobile development. The use of electricity or other renewable energy sources as the main power source not only helps to reduce dependence on finite resources such as oil, improves the security and stability of energy supply, but also promotes technological innovation in areas such as battery technology and charging infrastructure. Therefore, new energy vehicles play a vital role in promoting the transformation of the global energy structure to a cleaner and more sustainable direction.

As a leading NEV manufacturer in China, BYD has demonstrated the competitiveness and development potential of NEVs in the global market. BYD is known for its deep accumulation in the field of battery technology, and is one of the world's leading battery manufacturers, especially for its application of lithium iron battery technology. The company not only focuses on the production of electric passenger cars, but also involves many fields such as buses and logistics vehicles, providing diversified solutions for different market needs. The successful implementation of the globalization strategy has enabled BYD to establish production bases and sales networks around the world, especially in the European market, which has made remarkable progress, showing its mature strategy in market development and brand building. BYD's efforts have not only promoted the progress of new energy vehicle technology, but also made positive contributions to global environmental protection and sustainable development.

2. BYD's Development History and Background

2.1. Origin and Initial Development of The Company

The establishment of BYD Corporation (BYD) can be traced back to 1995 as a company focused on battery manufacturing. At the beginning of its development, BYD mainly developed and produced batteries, and made a certain reputation in the field of batteries. With the rapid development of China's economy and the growth of market demand for electronic products, BYD has risen rapidly in the battery field and has become one of the major battery manufacturers in China. The development of the battery industry has played a key role in BYD's growth. China's gradual improvement in battery technology and production capacity has provided BYD with a good market environment and technical support. In the early days, BYD established its leading position in the battery industry through continuous technology accumulation and market expansion, laying a solid foundation for the subsequent new energy vehicle business.

2.2. Technology Foundation and Innovation

BYD has played a key role in technological innovation, especially in the research and development and application of battery technology. As a company that started with batteries, BYD continues to explore and promote new battery technologies, especially the application of lithium iron battery technology, which gives it an important competitive advantage in the new energy vehicle market. Advances in battery technology have a profound impact on BYD's strategy. First of all, advanced battery technology has enabled BYD to develop high-performance electric vehicle products, which has improved the market competitiveness and user satisfaction of the products. Secondly, the progress of battery technology has also promoted BYD's market expansion and the implementation of its globalization strategy in the field of new energy vehicles, laying the foundation for the company's development in the international market.

BYD has successfully transformed itself from a battery

manufacturer to one of the world's leading new energy vehicle manufacturers through continuous technological innovation and market-oriented product development, demonstrating the key role and strategic significance of technological innovation in the development of the company.

3. BYD's Strategy and Competitive Advantage

3.1. Technology Foundation and Innovation

Chinese auto companies have been suppressed for a long time, and disruptive innovation has become a powerful tool to break the dilemma of upgrading, achieve lane change overtaking and leapfrog development. BYD's vertical integration strategy in the battery and automotive industry chain is an important pillar of its successful development. Starting from battery manufacturing, the company has realized the vertical integration of the industrial chain through independent research and development and control of key technology nodes. In the field of batteries, BYD is not only involved in the development and production of battery materials, but also includes battery chip manufacturing and battery assembly processes. This integration strategy not only improves product stability and performance, reduces production costs, but also strengthens the ability to control technological advances. In the automotive industry chain, BYD has also achieved comprehensive coverage from vehicle design, manufacturing to sales and service, optimized production efficiency through an integrated production model, and ensured the consistency of product quality and the continuous improvement of market competitiveness.

3.2. Global Market Expansion & Diversification Strategy

BYD has demonstrated strong strategic execution capabilities in global market expansion and product diversification. In the international market, BYD has actively expanded its market share by establishing a localized production base and a complete sales network. Especially in Europe and other developed countries, BYD has won wide recognition for its products and services that meet local environmental standards. The company's product diversification layout in the fields of public transportation and logistics has also achieved remarkable results, such as its electric buses have been widely used in many countries and regions, becoming the first choice for local urban public transportation.

Through the strategy of global market expansion and product diversification, BYD has not only expanded its market share and brand influence, but also effectively reduced its dependence on specific markets, and enhanced its ability to adapt to market changes and resist risks. The successful implementation of these strategies has not only promoted BYD's leading position in the global new energy vehicle market, but also laid a solid foundation for the company's sustainable development in the future.

4. Policy Support and Market Impact

4.1. Government Policies and Support Measures

The Chinese government's policy support in the field of new energy vehicles has played a crucial role in promoting it.

With the growing global concern about environmental issues, the Chinese government has formulated a series of policies and support measures aimed at promoting the development of new energy vehicles. These policies include, but are not limited to, subsidy policies, tax reductions for car purchases, and support for the construction of charging facilities, etc., aiming to reduce the purchase cost of new energy vehicles, improve the coverage of charging facilities, and promote the innovation and application of related technologies. For new energy vehicle manufacturers like BYD, the implementation of government policies has provided important support for its marketing and sales. Through policy support, BYD can better promote its products in a highly competitive market environment, and accelerate technological progress and product upgrades, thereby further consolidating its leading position in the industry.

4.2. Market Impact and Social Responsibility

BYD has demonstrated remarkable practices and achievements in market influence and social responsibility fulfillment. As one of the world's leading new energy vehicle manufacturers, BYD is not only committed to product technology innovation and market expansion, but also actively fulfills its corporate social responsibility, especially in environmental protection and sustainable development.

4.2.1. Environmental Contribution and Effectiveness

BYD's electric vehicle products significantly reduce tailpipe emissions and noise pollution, which has a positive impact on improving urban air quality and residents' living environment. The company continues to promote the innovation and popularization of electric vehicle technology, and has made important contributions to reducing carbon emissions and combating climate change.

4.2.2. Fulfillment of Social Responsibility

BYD not only contributes to its products, but also actively fulfills its corporate social responsibility by participating in public welfare activities and supporting community development. The company's investment and practice in employee welfare, environmental protection and social welfare reflect its image and values as an enterprise with a strong sense of social responsibility.

To sum up, BYD has continuously promoted its own development and market influence by relying on the support of government policies; At the same time, it actively fulfills its social responsibilities, gives back to the society with practical actions, and makes positive contributions to sustainable development. These measures not only enhance the company's market competitiveness, but also lay a solid foundation for its long-term development.

5. Summary

5.1. Government Policies and Support Measures

As a global leader in the new energy vehicle industry, BYD's successful experience is mainly reflected in three aspects: technological innovation, market strategy and global layout: BYD has always regarded technological innovation as the core driving force for development, especially in battery technology and electric vehicle technology. The company's innovation in lithium iron battery and fast charging technology not only improves the performance and safety of products, but also effectively reduces production costs and

promotes the overall improvement of the industry's technical level. Through vertical integration, global market expansion and product diversification, BYD has effectively enhanced its market competitiveness and brand influence. The company's flexible market strategy enables it to respond quickly in different regions and market environments to meet customer needs, and has won wide market recognition.

Global layout: BYD has successfully expanded the international market by establishing a global production base and a perfect sales network. Especially in the European and American markets, BYD has won the trust and support of a large number of users and partners through products that meet local standards and needs.

BYD's successful experience provides important enlightenment for the global new energy vehicle industry: technological innovation is the core driving force for the development of the industry, and the flexibility of market strategy and the ability to execute global layout are the keys to achieving long-term competitive advantage.

5.2. Suggestion

In the future, BYD's development in the field of new energy vehicles should focus on the following directions: First, BYD needs to continue to increase R&D investment in battery technology, intelligent driving and electric vehicle technology, promote the continuous upgrading of product technology, and enhance competitiveness and user experience. Second, strengthen efforts in environmental protection and sustainable development, further reduce the carbon footprint of electric vehicles, promote the use of clean energy, fulfill corporate social responsibility, and win wider social recognition and support. Third, we will further strengthen market expansion and brand building in major global markets, especially in emerging markets and European markets,

expand market share and enhance global competitiveness.

The future development trend of the global new energy vehicle industry includes technological intelligence, the accelerated implementation of carbon neutrality goals, and the growth of consumer demand for clean energy products.

References

- [1] Zhang Lan, Ren Xing, Liang Biming. Green innovation policy empowers the construction of enterprise innovation ecosystem: A case study based on BYD Auto [J]. *Science of Science and Management of Science and Technology*, 2023, 44(11):111-128.
- [2] Zhang yongqin. Analysis of constraints on the development of new energy vehicles [J]. *Automotive Practical Technology*, 2024, 49(12):6-10.2024.012.002.
- [3] Zhang Shusheng, Chen Jin. Research on the hybrid disruptive innovation mode of electric vehicles in the context of digital intelligence: the case of BYD and Tesla [J]. *Science and Technology Progress and Countermeasures*, 2023, 40(24):51-60.
- [4] Wang Qin, Xia Yuxin, Yang Zhangbo. Organizational legitimacy, dual-use capability and enterprise innovation strategy choice [J]. *Science and Technology Management Research*, 2023, 43(17):11-19.
- [5] Wang Hongqi, Wang Yinghua, Wu Jianlong, et al. Evolution Mechanism of New Energy Vehicle Innovation Ecosystem: A Case Study Based on BYD's New Energy Vehicle [J]. *China Soft Science*, 2016, (04):81-94.
- [6] Yang Jin, Zhu Yanbin. How can China's new energy vehicle enterprises achieve disruptive technological innovation-the interaction effect of resource action and dynamic ability [J/OL]. *Science and Technology Progress and Countermeasures*, 1-11[2024-07-04]. <http://kns.cnki.net/kcms/detail/42.1224.G3.20240112.1351.002.html>.