MASTER'S QUALIFICATION THESIS

12.01 – МКР. 704 “С” 2024.05.06. 08ПЗ

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2024 y.

NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE

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UDC 339.1:339.9

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MASTER'S QUALIFICATION THESIS
on topic

Organizational and economic support for the development of the enterprise's international business activity

Specialty 073 “Management”

Educational program Management of International Activity

Orientation of educational programme educational and professional

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KYIV – 2024

NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE
Faculty of Agricultural Management

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06 May 2024

TASK
on implementation master's degree qualification thesis by graduate

_____ Pei LU _____

Specialty 073 “Management”
Educational program Management of International Activity
Orientation of educational programme educational and professional
Topic of master's degree qualification thesis « Organizational and economic support for the development of the enterprise's international business activity »
approved by Rector Order NUBiP of Ukraine from «06» May 2024 No 704 «C»

Deadline for submission of completed work to the department___2024.11.25_____

Source data for the master's qualification thesis: legislative acts, educational and scientific literature, financial statements of the enterprise, statistical data, technological maps, resolutions, orders _____

List of questions, that subject to research:

1. THEORETICAL AND METHODOLOGICAL ASPECTS OF ORGANIZATIONAL AND ECONOMIC SUPPORT OF FOREIGN ECONOMIC ACTIVITY
2. ANALYSIS OF THE ENTERPRISE'S FOREIGN ECONOMIC ACTIVITY NEW ENERGY VEHICLE INDUSTRY
3. DIRECTIONS OF IMPROVEMENT AND PROSPECTS FOR THE DEVELOPMENT OF FOREIGN ECONOMIC ACTIVITY OF ENTERPRISES OF VEHICLE INDUSTRY

List of graphic material (if necessary) tables, figures, diagrams_____

Date issues task «06» ___May___ 2024.

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ABSTRACT

Modern conditions, there is an urgent need for a deeper understanding and research of the factors affecting the efficiency of enterprises in a dynamic economic environment. Technological changes, globalization and increasing competitive pressure require companies to adapt their strategies and processes to ensure sustainable development. The importance of these issues is emphasized by the need to implement innovations, optimize resources and increase competitiveness.

The purpose of the master's thesis «Organizational and economic support for the development of the enterprise's international business activity» is to determine the theoretical and methodological aspects and justify the organizational and economic mechanism of the formation and functioning of the international activity of the enterprise.

The object of the research is the organization of management of the international activities of enterprises.

The subject research of the study is a set of theoretical and practical mechanisms for the formation and functioning of processes that manage the international activities of enterprises.

KEYWORDS

ORGANIZATIONAL, ECONOMIC, SUPPORT, DEVELOPMENT, ENTERPRISE, INTERNATIONAL BUSINESS ACTIVITY

CONTENT

INTRODUCTION

Modern conditions, there is an urgent need for a deeper understanding and research of the factors affecting the efficiency of enterprises in a dynamic economic environment. Technological changes, globalization and increasing competitive pressure require companies to adapt their strategies and processes to ensure sustainable development. The importance of these issues is emphasized by the need to implement innovations, optimize resources and increase competitiveness.

In addition, in the presence of numerous risks and challenges, enterprises are faced with the need for effective change management, which requires new approaches to management analysis, strategic planning and performance evaluation. Understanding these processes and their impact on the activities of enterprises is critically important not only for individual companies, but also for the overall economic development of the country.

The purpose of the master's thesis «Organizational and economic support for the development of the enterprise's international business activity» is to determine the theoretical and methodological aspects and justify the organizational and economic mechanism of the formation and functioning of the international activity of the enterprise.

According to the goal, the following tasks are outlined:

- analyze the theoretical foundations of organizational and economic support of international activities;

- define the basic concepts of organizational and economic support for the development of the international economic activity of the enterprise;

- assess the influence of the external environment on the functioning of international business;

- identify and substantiate the mechanisms of international business formation;

- evaluate the role of innovations in the development of international business activities;

- identify the main challenges facing enterprises in the process of international activity;

- determine the methods and tools of management of international operations;

- study the factors affecting the success of the international activity of the enterprise;

- offer recommendations for increasing the competitiveness of the enterprise on international markets.

The object of the research is the organization of management of the international activities of enterprises.

The subject research of the study is a set of theoretical and practical mechanisms for the formation and functioning of processes that manage the international activities of enterprises.

Research methods. In the course of writing the bachelor's thesis, the following research methods were used: functional and system analysis, historical and logical observation, information synthesis method, graphic representation methods, grouping, comparison, and generalization method.

SECTION 1. THEORETICAL AND METHODOLOGICAL ASPECTS OF THE ORGANIZATIONAL AND ECONOMIC MECHANISM FOR MANAGING FOREIGN ECONOMIC ACTIVITY

1.1. Theoretical foundations of organizational and economic support of international activities

Scholars started to study the motivations of enterprise internationalization early. Van Tulder (2015) believed that the motivations and strategies of enterprise internationalization are different at different stages of the product. Enterprises should adapt to the evolution of the product life cycle and flexibly adjust strategies according to the product cycle theory to maintain competitiveness in the global market. Doh (2005) emphasized that enterprises will choose to operate overseas in order to reduce costs, get closer to the market or take advantage of tax incentives, and can create opportunities, disperse risks, enhance competitiveness, and integrate international resources to cope with market competition in the context of globalization. Deng and Zhang (2018) believes that the internationalization of enterprises into larger international markets has eased the competition in China's industry from the perspective of China's competition. On the basis of exploring the motivations of internationalization, scholars have also conducted research on the choice of entry mode. Cavusgil and Knight (2015) pioneered a dynamic study on the choice of enterprise internationalization mode. They pointed out that in the process of internationalization, enterprises continue to enrich their knowledge and experience, and market choices and entry modes also change accordingly. Etemad (2004) pointed out that the motivation of enterprise internationalization affects the way it enters the international market. When enterprises want to maintain the competitive advantage of core assets, they will choose more direct and strict control methods to enter new markets, such as direct investment, wholly-owned subsidiaries, etc. On the contrary, they will adopt joint ventures, licenses, alliances and other models with low control. (Puljeva and Widen, 2007) believes that the factors affecting the choice of entry mode of enterprises are divided into external

conditions and enterprise strategic characteristics, among which external conditions include opportunities, host country market conditions and other factors.

The factors that affect the internationalization of enterprises after entering the host country market are also valued by scholars. Nielsen and Nielsen (2011) proposed from the perspective of managers that the education level and international management experience of managers have a great impact on transnational operations. Prajogo et al. (2018) demonstrated the relationship between enterprise production efficiency and international operations. He pointed out that production efficiency is the main factor affecting the transnational operation of enterprises. The difference in production efficiency affects the development of enterprises. Only efficient enterprises have the opportunity to compete in larger international markets. Luo et al. (2010) found through case studies that enterprises should fully consider the policies, laws, market competition environment, economic conditions of the host government, as well as their own funds, technology and other related factors when operating internationally. Favorable conditions are the basis of international operations.

Scholars have conducted detailed research on the development of the new energy vehicle industry from both external and internal factors (Meng and Jin, 2019; Na, 2024; Han et al., 2022). They almost unanimously emphasized the huge impact of policies on the industry among external factors, and discussed many aspects of marketing, innovation, strategy and other internal factors. In terms of external factors, Wang and Li (2022) studied European policies that affect the new energy vehicle industry. He believed that in the early stage of the development of the new energy vehicle industry, policy guidance should be used to promote industry innovation, research and development and promotion. Jacobsson and Johnson (2000) summarized the main factors affecting the development of the new energy vehicle industry through interviews with different stakeholders in the new energy vehicle industry, including policy measures, infrastructure, and business models. Zhou et al. (2015) reviewed the sales, products and policies of the Chinese PEV market in the past decade from the perspective of supply and demand and

compared them with the US market. Among them, China's sales are concentrated in regions with prosperous economy and rich policy incentives, while the trend of low-priced small electric vehicles as the main force of sales growth is weakening. In the United States, Tesla occupies the main market, and the market competitiveness of established companies is also strong. The policy has shifted from demand incentives to supply promotion to reduce the fiscal burden and promote electric vehicle sales.

In terms of internal factors, Coker (2022) analyzed effective communication channels and tools and explored the relationship between marketing strategy and financial status through research on Tesla's marketing communication practices. He emphasized that marketing communication is the key to efficiently convey accurate information to customers, and put forward suggestions for achieving effective marketing communication to increase customer volume and sales. At the same time, the choice of communication channels and the cost of tools need to be considered in specific implementation. Agnihotri and Bhattacharya (2024) summarized that Tesla Motors promoted commercialization through architectural innovation and attacker advantages, and insisted on innovation, seeking strategic alliances, and building "super factories" to improve production capacity and maintain competitive advantages when facing net losses and supply chain problems. From its successful experience, we can see the importance of innovation, courage to face challenges and use external resources, which points the way for other companies. Valentin (2019) conducted an in-depth analysis of Tesla's commercialization strategy in the electric vehicle market, proving that it did not adopt a disruptive innovation approach. On the contrary, Tesla used the attacker advantage strategy to successfully cope with the challenge of architectural innovation, and this strategy is worth learning from other companies.

After reviewing the research on international strategic management and the internationalization strategy of new energy vehicle companies, it can be clearly seen that different scholars have conducted in-depth discussions on this topic from different perspectives. These studies include both the construction of theoretical

frameworks and the verification of empirical analysis, providing a theoretical basis and rich perspectives for us to understand the strategic choices of enterprises in the context of globalization. Scholars have a wealth of empirical research in the field of new energy vehicles, and have deeply explored the impact of various factors such as policies, marketing, and innovation on the development of enterprises. The research of scholars outside China not only focuses on the markets and enterprises in their respective regions, but also conducts cross-cultural comparative analysis.

Overall, the research on international strategic management and the internationalization strategy of new energy vehicle enterprises has made significant progress. However, there are still some limitations in methods, theories and perspectives, as well as controversial issues that need to be explored and resolved in depth in future research. Classical theories such as product life cycle theory provide a guiding framework for corporate internationalization strategies, but some studies may not be deep enough or innovative when applying these theories to specific practices. Some studies on the international development of new energy vehicle enterprises may be limited by specific methodologies or data sources, which may affect the universality of the conclusions to a certain extent. For example, some studies may rely too much on data collection methods with strong subjectivity such as questionnaires or interviews. Most existing studies start from a single perspective of external factors or internal factors, while relatively few studies on the interaction and joint influence between the two have the disadvantage of limited research perspectives. There are also different opinions on the impact of new energy vehicle policies on corporate development. Some scholars believe that policies are the key factor in promoting the development of the industry, while others emphasize the importance of market mechanisms and innovation strategies. These disputes provide a broad space for exploration in future research.

1.2. Definition of concepts and theoretical basis

New energy vehicles refer to vehicles that use energy sources other than gasoline and diesel engines (Gong et al., 2013). The concept of new energy vehicles in China was first proposed in the "863 Plan" at the beginning of the "Eleventh Five-Year Plan" (Gong et al., 2013). It refers to the use of unconventional automotive fuels as a power source, integrating advanced technologies in vehicle power control and drive, and forming vehicles with advanced technical principles, new technologies, and new structures. At present, new energy vehicles mainly include hybrid electric vehicles (HEV), pure electric vehicles (BEV), fuel cell vehicles (FCEV), etc. Hybrid electric vehicles use traditional fuels and are equipped with electric motors or generators to improve low-speed power output and fuel consumption. Generally, traditional internal combustion engines and electric motors are used as power sources. According to whether charging is required, they can be divided into plug-in and non-plug-in types. According to the power transmission route in the system structure, they can be divided into series, parallel and hybrid types. Compared with traditional fuel vehicles, hybrid vehicles are more fuel efficient, more environmentally friendly, and can travel longer distances with the same fuel consumption. Pure electric vehicles are electric vehicles that are completely powered by rechargeable batteries. Pure electric vehicles do not have internal combustion engines, are pollution-free and low-noise, and use a single electric energy source. The electronic control system is much simpler than that of hybrid electric vehicles. Fuel cell vehicles are vehicles that use electricity generated by on-board fuel cell devices as power. The fuel is generally hydrogen, methanol, etc.

Internationalization is the business activity of enterprises to formulate strategic goals for the international market, expand markets across borders, and realize the cross-border flow and optimal allocation of production factors (Schmid, 2018). Different companies are often driven by different motivations on the road to internationalization. These motivations mainly include market-oriented, resource-

oriented, technology and management-oriented, and cost-oriented. Market-oriented motivation is an important force to promote the internationalization of enterprises (Melin, 1992). The main goal of such enterprises is to seek a broader market space. Due to the fierce competition in the Chinese market or the inability of the existing market to meet their development needs, they need to expand to the international market to increase sales. Resource-oriented motivation drives enterprises to internationalize in order to obtain strategic resources. Enterprises usually establish relevant organizations in the raw material supply area to flexibly purchase scarce resources and ensure a stable supply source. This business model can significantly reduce transportation costs and establish a stable supply chain. Technology and management-oriented motivation is the key driving force for enterprises to internationalize in order to seek external ready-made assets. These enterprises mainly seek foreign brands, advanced technology and management experience, which are resources that they lack. Through international operations, they effectively make up for their shortcomings, overcome technical difficulties and improve management level. Cost-oriented motivation is also an important factor in promoting the internationalization of enterprises. Faced with rising production costs in China and intensified competition with low-cost producers, some enterprises choose to operate across borders to reduce production costs. They use cheap production factors abroad to improve efficiency and maintain competitiveness.

The monopoly advantage theory was first proposed by American scholar Stephen Hymer in his doctoral dissertation in 1960, and was later formed with the supplement and improvement of Kindleberger (Simpson, 2010). By observing the motivations of American multinational corporations, Heimer found that under the conditions of imperfect market competition, in the competition with host country enterprises, multinational corporations that are not familiar with the market environment and laws and regulations of the host country can only make up for their shortcomings and obtain more profits if they have monopoly advantages (Melvin and Warne, 1970). Monopoly advantages are manifested in various ways,

specifically in production technology, management experience, financial strength, internal economies of scale and external economies of scale. Multinational corporations use their monopoly advantages to control most resources in the market, exclude free competition, and prevent enterprises without monopoly advantages from obtaining the resources needed for development to expand their scale. As a result, enterprises in the industry are clearly differentiated, forming oligopolistic enterprises that occupy the vast majority of market profits. The monopoly advantage theory proposed by Heimer marks the beginning of the study of international direct investment theory, explains the transnational operation behavior of enterprises that do not have obvious advantages in China but have obvious advantages over host country enterprises, and lays the foundation for subsequent foreign direct investment theory.

In 1976, British Barclay and Carson proposed the internalization theory in the book "The Future of Multinational Corporations" (Lazarus, 2001). They believe that when the cost of market resource allocation of enterprises increases and exceeds the cost of self-coordination of enterprises, enterprises are forced to abandon the external market and turn to internalization to reduce transaction costs. Internalization can enable enterprises to maintain their monopoly advantages and maximize profits (Alger, 1972). The behavior of enterprise internalization forms international operations between two countries. The factors affecting internalization are mainly: regional factors (differences in geographical location, religious culture, etc.), national factors (political, legal, economic system and other superstructure conditions), enterprise factors (organizational structure, management coordination, etc.) and the most profound industry factors (product characteristics, external market structure, economies of scale). The perspective of internalization theory is different from that of monopoly advantage theory. It discusses the motivation of foreign direct investment of multinational corporations in developed countries. It can better explain the behavior of foreign direct investment and the phenomenon of multinational operations of most enterprises. Therefore, it is regarded as a general theory of international direct investment.

Intra-industry trade theory is an important branch of international trade theory. Unlike comparative advantage and factor endowment theory, which focus on trade between different industries, intra-industry trade theory focuses on the phenomenon of two-way trade of products in the same industry (Bernhofen, 2002). The core view of intra-industry trade theory reveals a series of laws. "Product differentiation" enables products produced by different countries in the same industry to find different market positioning and consumer groups in the international market, which is the premise of trade in the same industry. "Diversified demand" prompts enterprises to differentiate and innovate products to meet different consumer preferences, revealing the diversity of consumer demand. "Economy of scale" enables enterprises to gain cost advantages in production. "Horizontal product division of labor" enables enterprises in various countries to focus on their own strengths and improve efficiency and competitiveness. The emergence of intra-industry trade theory emphasizes the diversity and complexity of trade. It explains why international trade can exist within the same industry and provides more choices and opportunities for enterprises, countries and consumers. In addition, intra-industry trade theory also provides a theoretical framework for the formulation of China's industrial policies, corporate competition strategies and international trade rules (Das, 2009).

1.3. Theory of enterprise internationalization business strategy

Enterprise internationalization business strategy involves a series of strategies and actions for enterprises to take transnational operations. Enterprises need to flexibly formulate internationalization business strategies that match them based on different target markets, product positioning and other factors to ensure success in the international market.

(a) Types of enterprise internationalization business strategies

Based on the industry competition situation and the different product demands of consumers in various countries, enterprise internationalization business strategies are divided into four types: global standardization strategy, localization

strategy, transnational strategy and international strategy (Young, 1987). Companies that implement global standardization strategies look for cost-saving production bases around the world, concentrate on producing standardized products, meet the general needs of consumers in the operating countries, and form cost advantages among strong competitors. Different from global standardization strategies, companies that adopt localization strategies provide products and services suitable for the host country to meet the diverse needs of consumers in various countries. However, as time goes by, diversified product demands will bring higher costs to companies. If the number of industry competitors increases, companies have to change their business strategies to reduce production costs. Transnational strategies combine the characteristics of global standardization strategies and localization strategies, and put forward requirements for companies from the perspective of cost advantages and product diversity (Kuivalainen et al., 2012). Companies that use transnational strategies must not only achieve global efficiency through economies of scale, but also improve the localization response of each host country, which requires high resource integration capabilities and cross-cultural management capabilities of companies. International strategies are different from transnational strategies. Companies that adopt this strategy not only face less industry competition pressure, but also meet the general needs of consumers in various countries. There is no cost and diversity pressure in transnational operations. Such companies concentrate knowledge and technology-intensive activities in the home country and disperse labor-intensive activities to foreign subsidiaries. If the degree of industry competition increases or the diversified needs of consumers increase, this strategy will evolve into the above three strategies.

(b) Analysis Methods of Enterprise Internationalization Business Strategy

Given the differences in the environment of enterprise transnational operation, the enterprise internationalization business strategy is mainly analyzed from the macro, meso and micro environment (Masum and Fernandez, 2008). The macro environment analysis adopts the PEST model, which focuses on the four factors of

politics, economy, society and technology. These factors have an important impact on enterprises, industries and the entire business environment. Political factors are the premise of leading the development of the industry and directly affect the operation and development of enterprises, mainly including government policies, laws and regulations, political stability, etc. The economic environment is the cornerstone of industry development, covering economic factors such as economic growth, inflation, unemployment rate, and consumer income level (Amal and Rocha Freitag Filho, 2010). The social environment affects market demand and consumer behavior, mainly examining factors such as population structure, social culture, and cultural factors such as cultural traditions and religious beliefs. Technological factors mainly focus on technological development trends, the emergence of new technologies and their impact on enterprises, so that enterprises can adjust their strategies and policies in a timely manner.

Porter's Five Forces Model is a theoretical system for analyzing the competitive situation of a meso-industry (Mc Lintock and Hofmann, 2020). It includes five aspects: the bargaining power of suppliers, the bargaining power of buyers, the threat of new entrants, the threat of substitutes, and the degree of competition among competitors. They jointly affect the competitive landscape of the industry and the strategic choices of enterprises. The bargaining power of suppliers is determined by the importance and supply of the factors they provide. If the factors provided by suppliers are crucial to the production and operation of enterprises in the industry, or if the factors are relatively scarce in the market, then the bargaining power of suppliers will be strong. The bargaining power of buyers is affected by factors such as the number of buyers, the scale and importance of the purchased products, and the level of conversion costs. When the number of buyers is large and the scale of the purchased products is large, the bargaining power of buyers will be strong. The threat of new entrants is closely related to the level of entry barriers, including technical barriers, capital barriers, etc. New entrants will bring new production capacity and resources to the industry, thereby intensifying market competition. The degree of threat of substitutes depends on factors such as

the price, performance, and conversion costs of substitutes. If substitutes meet consumer needs at a lower price or better performance, the market position of existing products will be weakened. Finally, the competition among existing competitors is mainly reflected in price, quality, service, marketing and other aspects. The number of competitors, market share, strategic choice and other factors will affect the degree of competition in the industry.

The analysis tool for the internal environment of an enterprise is the SWOT analysis method, which helps enterprises formulate appropriate development strategies and action plans by conducting a comprehensive analysis of the strengths, weaknesses, opportunities and threats of the enterprise (Sammut-Bonnici and Galea, 2015). Strengths and weaknesses refer to internal factors that are conducive to or hindering the competition between an enterprise and its competitors, including technology, capital, services, organizational structure, etc. Opportunities and threats refer to external factors that are conducive to or hindering the development of an enterprise, including changes in policies, markets, technologies and natural disasters.

SECTION 2: ANALYSIS OF THE ENTERPRISE'S FOREIGN ECONOMIC ACTIVITY NEW ENERGY VEHICLE INDUSTRY

2.1. Analysis of the current state of development of the foreign industry of new energy vehicles

This section will introduce the current development status of the foreign new energy vehicle industry from three perspectives: sales, brand and infrastructure construction of new energy vehicles, laying the foundation for the internationalization research of NIO in the following text.

In 2022, the global annual sales of new energy vehicles exceeded 10 million, and the market penetration rate reached 14%, and most countries had a significant increase in sales compared with 2021 (see Figure 2.1). The three major markets for new energy vehicles are China, Europe and the United States, of which China's sales were 6.897 million vehicles, accounting for about 65%; Europe's sales were 2.201 million vehicles, accounting for about 21%; the United States' sales were 992,000 vehicles, accounting for about 10%; emerging markets such as Thailand and Indonesia, with sales of 20,000 and 15,000 vehicles.

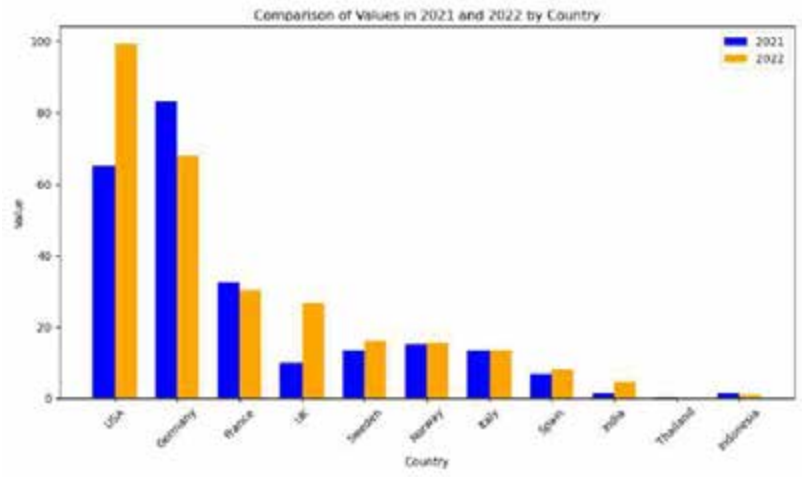

Figure 2.1. Sales volume of new energy vehicles in some countries from 2021 to 2022 (unit: 10,000 vehicles) (Data source: International Energy Agency)

With the continuous development of the new energy vehicle industry, new energy vehicle brands are becoming more and more abundant. In 2022, the European new energy vehicle market share is mainly occupied by Tesla, BMW,

Volkswagen and Mercedes-Benz (see Figure 2.2), and the eight brands with the highest sales account for 55% of the European market share. In 2022, Tesla's market share in the US market reached 65%, becoming the fastest growing auto company in sales. Among the mainstream luxury car brands in the United States, Tesla is also the only company with rising sales. At the same time, Tesla Model Y and Model 3 are the top two best-selling electric models in the United States in 2022.

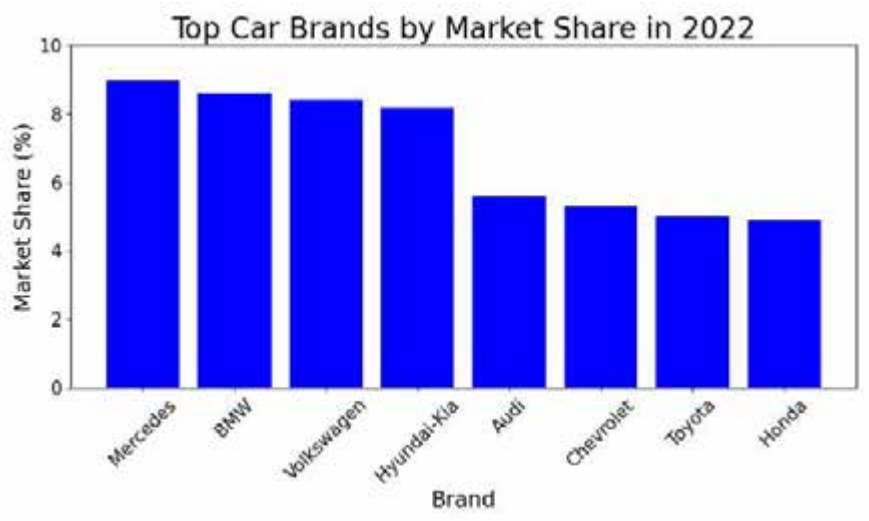

Figure 2.2. Market share of new energy vehicle brands in Europe in 2022 (Data source: European Automobile Manufacturers Association)

The global energy replenishment network is being rapidly deployed, mainly based on public and personal charging piles. According to statistics, the number of public charging piles in the European market has increased from 67,000 in 2015 to 356,000 in 2021, with a compound annual growth rate of 132.1%. Although the infrastructure construction in the United States started later than that in China and Europe, it also showed a trend of rapid growth. As of the end of 2021, there were 130,700 charging piles in the United States, including 116,600 public charging piles. Although the infrastructure is developing rapidly, there is an uneven distribution of charging pile construction among European countries. The Netherlands has about 90,000 charging piles, and is currently the country with the most charging piles in Europe, while the Republic of Cyprus, the country with the lowest number of charging piles, has only 57 charging piles. The infrastructure

construction levels of various countries are seriously polarized.

According to China Association of Automobile Manufacturers, China's market share of new energy vehicles has been in the leading position in the world for eight consecutive years since 2015, with production and sales ranking first in the world. The production and sales in 2015 were 341,000 and 331,000 respectively, and increased to 7.058 million and 6.887 million respectively in 2022, an increase of nearly 21 times. The production and sales in 2022 increased by 96.9% and 93.4% compared with 2021.

In recent years, the market share of China's independent new energy vehicle brands in China has continued to increase, and brand competitiveness has increased. The pattern of China's independent brand new energy vehicle companies can be roughly divided into four camps: FAW, Dongfeng Motor, and Changan Automobile with central enterprise backgrounds; SAIC, GAC, and BAIC with local state-owned enterprise backgrounds; traditional private enterprises such as Geely Automobile, Great Wall Motors, and BYD Auto; new forces in car manufacturing such as Ideal Auto, NIO Auto, and Xiaopeng Auto. Overall, the sales of various car companies are basically on the rise. Among them, BYD, as a "time-honored" car company, has successfully transformed from a traditional fuel car company to a new energy car company, and has been the top seller of new energy vehicles in China for many years. Its sales in 2022 reached 1.862 million units (see Figure 4-3), a year-on-year increase of 207.2%. The sales of new car-making forces such as Ideal Auto, NIO Auto, and Xiaopeng Auto are quite different from BYD, and there is a large room for development in the future.

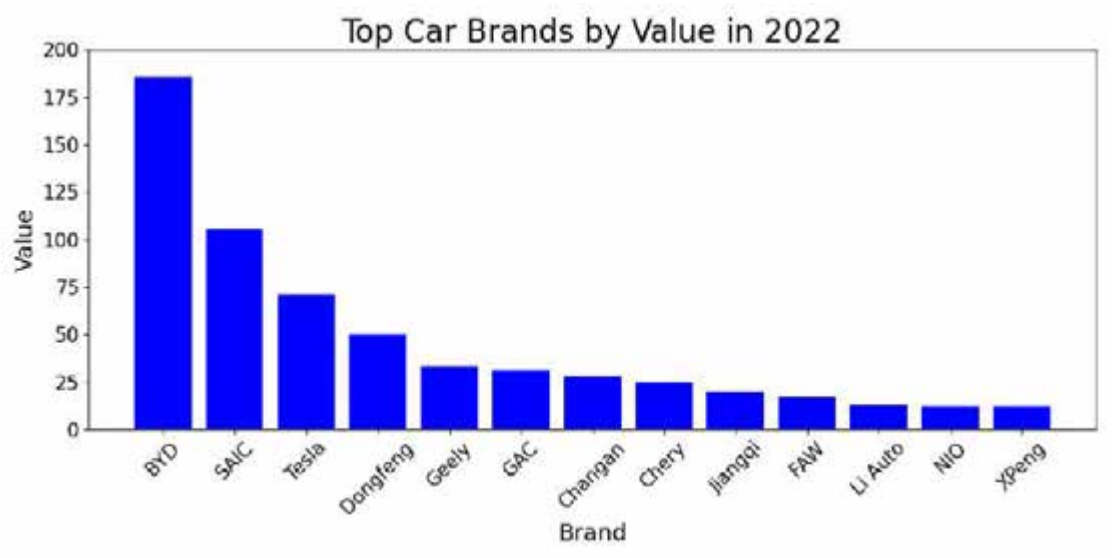

Figure 2.3. Sales volume of some Chinese new energy vehicle companies in 2022 (unit: 10,000 vehicles) Data source: China Association of Automobile Manufacturers

Due to the scale effect of the development of China's new energy vehicle industry, the corresponding supporting infrastructure has been rapidly built and improved. From 2015 to 2022, the number of charging infrastructure in China increased from less than 100,000 to 5.21 million, with an average annual growth of more than 700,000 units. In 2022, the construction speed was significantly accelerated, with 2.593 million new charging piles and 675 battery swap stations. By the end of 2022, the ratio of piles to vehicles has far exceeded that of Europe and the United States, reaching 2.5:1. Although the construction speed of China's new energy vehicle infrastructure is significantly faster than that of Europe and the United States, there is also the problem of uneven distribution of charging facilities. 71.3% of the country's public charging piles are distributed in ten regions, including Guangdong Province, Jiangsu Province, Zhejiang Province, Shanghai, Beijing, Hubei Province, Shandong Province, Anhui Province, Henan Province and Fujian Province (see Figure 2-4). The construction of facilities in developed regions covers a wide range and is significantly more than that in relatively backward regions. Section 3 Current Development of NIO Based on the development of the new energy vehicle industry in foreign countries and China, this section focuses on the basic situation and international development of NIO. I.

Overview of NIO (I) Basic Information of the Company NIO was founded in November 2014 and is one of the representative brands of China's new energy vehicle new car-making forces. NIO has established R&D, design, production and business institutions around the world, covering 13 regions including San Jose, Munich, London and Shanghai, and has gathered thousands of world-class automotive, software and user experience industry talents. As of 2023, NIO has launched 8 models, priced between 300,000 and 600,000 yuan, including the ET series ET7, ET5 and ET5T, ES series ES8, ES7 and ES6, and EC series coupe SUVs. NIO has industry-leading battery swap technology, battery rental service Baa S, proprietary autonomous driving technology and autonomous driving payment service Adaa S, which together constitute the connotation of NIO's positioning as a mid-to-high-end car.

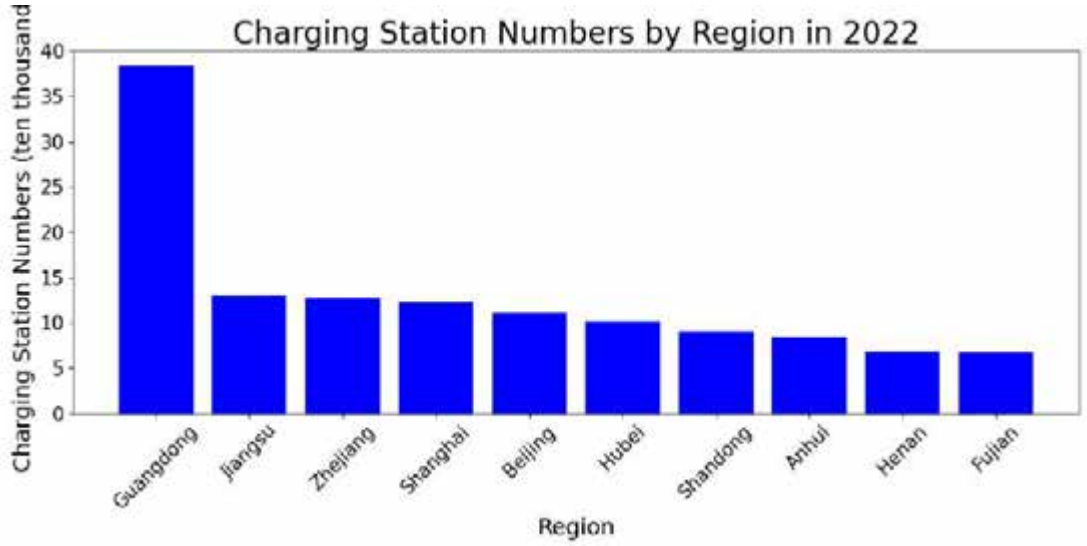

Figure 2.4. Top ten provinces with the largest number of public charging stations by the end of 2022 Data source: Public data compilation

NIO's sales volume has increased significantly in the past five years. In 2018, NIO's market performance improved slightly, with 8,000 vehicles sold throughout the year (see Figure 2-5). In 2019, the sales growth rate was as high as 162.5%. Although affected by the COVID-19 pandemic in 2020 and 2021, its sales also increased by more than 100%. In 2022, its sales reached 122,000 vehicles, a year-on-year increase of 34.07%. Although NIO's sales have increased year by year, its market share in China is still relatively small. In 2022, NIO's sales ranked 13th

among Chinese new energy vehicle companies (see Figure 2-3). BYD's sales were about 14.7 times that of NIO, so NIO has a lot of room to catch up in terms of sales. (III) Infrastructure construction As of the beginning of 2023, NIO has built a total of 1,261 supercharging stations, 6,385 supercharging piles, and 1,331 battery swap stations around the world. Unlike other car companies, NIO is committed to providing users with a battery swap mode instead of charging, which has improved NIO's competitiveness in the industry. The battery swap mode based on infrastructure construction helps users solve the pain points of short battery life and long charging time of electric vehicles. The company plans to build a total of 4,000 battery swap stations worldwide by 2025, of which about 1,000 will be deployed in overseas markets. In order to improve the satisfaction of battery swap stations, NIO has invested a lot of money in research and development and updates. The third-generation battery swap station put into operation in 2023 has many optimizations compared to the previous generation, such as: battery swap time is reduced to less than 5 minutes; high-power liquid-cooled power modules are used to improve energy replenishment efficiency; intelligent parking systems that realize functions such as summoning vehicles and automatic battery swapping; more compatible batteries suitable for a variety of models and structures, etc.

Compared with other new energy vehicle companies, NIO pays more attention to providing a full range of user experience and services, and increases the stickiness between enterprises and users, and between users through a combination of offline and online services. By the end of 2022, NIO has built 99 NIO Houses and 303 NIO Spaces. NIO Houses provide users with integrated exhibition halls, offices, reading, gatherings and other functions. NIO Spaces are responsible for the product display and sales of NIO cars, and provide "one-stop" services including maintenance, repairs, and inspections. NIO Service Center provides users with detailed and comprehensive services, including insurance, free repairs, accident relief services, etc. NIO Day is an offline user gathering held by NIO every year, aiming to provide a platform for in-depth communication between enterprises and users, and between users and users, and to improve user stickiness.

NIO's online marketing channels are mainly through the NIO APP. By the end of 2022, the number of registered users of the NIO APP exceeded 5 million, and the number of daily active users exceeded 380,000. Its function is more like the "circle of friends" of car owners. It is not only the main way for users to buy cars, but also a multi-functional comprehensive service platform covering communities, shopping malls, communications, and vehicles. NIO Life in the APP is an original lifestyle brand of NIO's extended brand. Hundreds of designers from around the world are involved in the design of multiple product categories, which penetrate all aspects of life, from food, clothing, household goods to electronic products, etc., with rich categories, and establish extensive connections with users through extended brands.

In May 2021, NIO announced its official entry into the Norwegian market, which means that it has started its internationalization process. In September of the same year, ES8 was officially launched in Norway and began to be delivered. The first stop of internationalization is Norway in Europe, aiming to open the door to the European market with the Norwegian market. In 2022, NIO entered the markets of Germany, the Netherlands, Denmark and Sweden successively, and launched models such as ET7, ET5, ET5T, EL7 and EL6. Different from the sales model in Norway and China, NIO first launched a subscription model in the four European countries. Subscribers enjoy the same treatment as car buyers. The buyout service will be launched two months after the subscription model is implemented, aiming to increase customer engagement and thus increase brand awareness.

NIO has entered the five European countries with fierce competition in the electric vehicle market, and its car sales are relatively low. After NIO was listed in Norway in 2021, its deliveries in the third and fourth quarters totaled 200 vehicles. In 2022, it launched more models in the European market, and its sales rose to 1,223 vehicles. In 2023, its sales increased by 93.3% year-on-year to 2,364 vehicles (see Figure 2-6). After NIO's unremitting efforts, it gradually gained a certain market share in the European market, but it did not have economies of scale

and its brand influence was minimal.

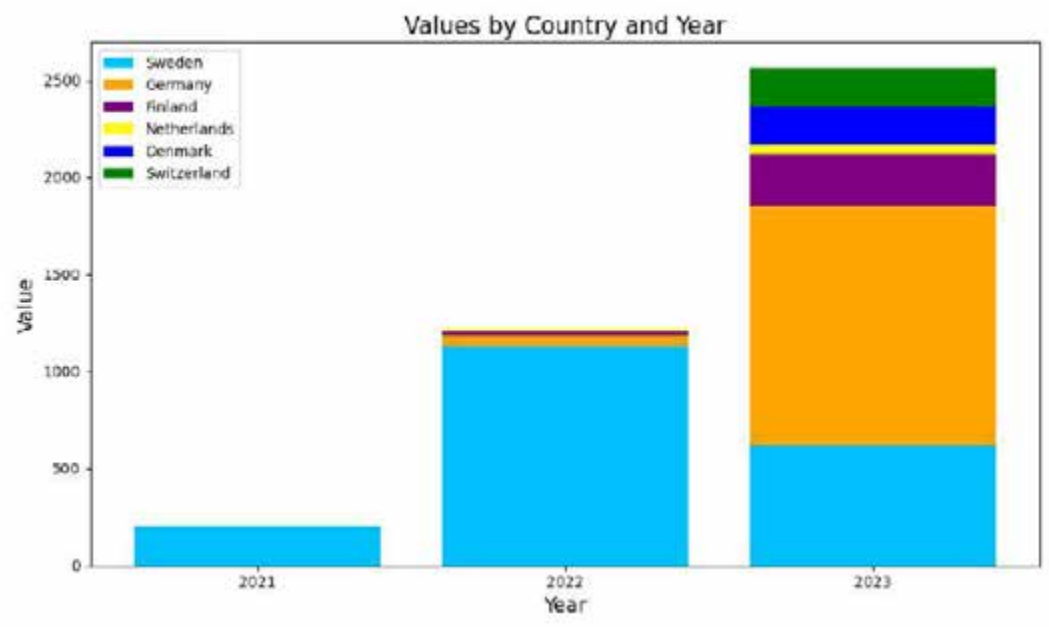

Figure 2.5. NIO's sales in five European countries from 2021 to 2023 (unit: vehicle) Data source: EU-EVs

The expansion of new energy vehicles in the international market is inseparable from the construction of infrastructure. In 2022, NIO's first battery swap station in Norway officially started operation, and thus started the layout of charging and swapping networks in overseas markets. According to statistics from NIO's official website, as of the beginning of 2023, NIO has deployed 11 battery swap stations, 6 supercharging stations, and 18 supercharging piles overseas. In 2022, NIO cooperated with Hungary to invest in and build the NIO Energy Europe Factory in Pest County, Hungary, which was officially put into operation. This is NIO's first overseas energy factory and the center for NIO to manufacture and develop charging products in Europe. It will help NIO build battery swap stations in European countries in 2022 and improve energy replenishment efficiency.

NIO has also conveyed the user concept to Europe. As of 2023, NIO has deployed 2 NIO Centers, 6 NIO Spaces, and 37 NIO Service Centers overseas. In 2021, NIO's first NIO Center established in Aulus, Norway began to provide a full range of services to Norwegian users, and then continued to deploy experience

centers in Germany, the Netherlands and other places to spread the user service concept. In general, NIO is in the initial stage of overseas market expansion. It chooses the European market as a starting point to expand its brand awareness and continuously establishes supporting infrastructure and service systems to ensure steady progress in internationalization. Summary of this chapter This chapter mainly explains the development status of the new energy vehicle industry and NIO. The new energy vehicle industry is in a rapid development stage, with low barriers to entry and many market participants. Competitors increase sales through various means, establish supporting infrastructure, and enhance service capabilities and brand influence. NIO seizes the development period of the industry to expand into foreign markets, taking the European market as a pilot, and gradually opens up the market in Europe with its high-end technology and unique services, and uses this as a starting point to layout the global market in the future.

2.2. Analysis of NIO's international business environment

The macro environment is the foundation of NIO's international operations. The political, economic, social, and technological environments of the host country affect NIO's strategic choices (Pisano et al., 2023).

NIO's internationalization began in Europe. European countries have promoted the development of the new energy vehicle industry from three aspects: car purchase discounts, car use discounts, and infrastructure subsidies. Car purchase discounts are divided into car purchase subsidies and car purchase tax discounts. For example, Germany stipulates that the purchase of new or used BEV and FCEV models is subsidized by the government and enterprises; Norway stipulates that new energy vehicles are exempt from purchase tax and import tax, and are exempt from 25% value-added tax in terms of car purchase tax discounts. The car use benefits are manifested in car tax benefits and company car tax benefits. Most countries provide preferential measures for both. For example, the Netherlands stipulates that zero-emission vehicles are tax-free, and companies enjoy the lowest tax rate for using zero-emission vehicles. In terms of

infrastructure subsidies, Denmark and Sweden mainly stimulate the construction of charging networks through tax incentives, while the United Kingdom, Italy, and Spain mainly adopt the method of providing subsidies. With the increase in the popularity of new energy vehicles, the policies of various countries have declined to varying degrees, especially Norway, the country with the highest penetration rate of electric vehicle market. After implementing preferential measures such as exemption from import tariffs, purchase tax, and value-added tax, it began to tighten policies in 2023, levying a 25% value-added tax on BEV models exceeding 500,000 Norwegian kroner, while the price of the whole vehicle of NIO ES8 is between 609,000 and 679,000 Norwegian kroner, which will affect the sales of NIO to a certain extent. Only about half of the countries in Europe have introduced infrastructure construction policies, and compared with the policies for purchasing and using cars, they are not clear and have less strength, which makes NIO still face huge cost pressure for the construction of infrastructure for supercharging piles and battery swap stations in the future. In general, although the policies of European countries show a trend of subsidy reduction, compared with HEV, PHEV, FCEV and other models, most countries have higher subsidies and preferential policies for BEV models, which provides a good policy guarantee for NIO to increase its sales in Europe. However, the policies on infrastructure in Europe are unclear and weak, which is not conducive to the expansion of NIO's battery swap model in Europe based on battery swap stations.

Affected by the new crown pneumonia epidemic, the economic growth rate of most European countries has slowed down significantly since 2020, and negative growth has occurred in the United Kingdom, France, Spain, Norway and other countries. China's GDP has fallen by 5.3%, 3.3%, 8.4% and 10.1% year-on-year respectively (see Figure 5-1). The world economic recovery in 2021 has led to a rapid rebound in the economies of various countries. However, the conflict between Russia and Ukraine in 2022 has caused the inflation rate to continue to rise, reaching a peak of 10.6% in September. The soaring global prices and energy prices have dealt a heavy blow to Europe, which is highly dependent on natural gas

imports, causing its economic growth level to drop sharply. The GDP of France, Germany, and Sweden decreased by 5.9%, 4.4%, and 8.7% year-on-year. In 2023, Europe's energy difficulties have eased, and the inflation rate in October 2023 has dropped to a two-year low of 2.9%. According to the European Commission's forecast, the economic situation will improve in 2024, and GDP growth is expected to improve, reaching 1.3% in the EU and 1.2% in the euro area, and the inflation rate will drop significantly from a peak of 10.9% to 3.5%. Overall, although the COVID-19 pandemic and the Russia-Ukraine conflict have brought severe shocks and challenges to the global economy, the global economy is gradually emerging from the haze and showing a steady recovery trend. Among them, the European economy has maintained stable growth while also showing a positive development trend, providing a good economic environment for the development of NIO.

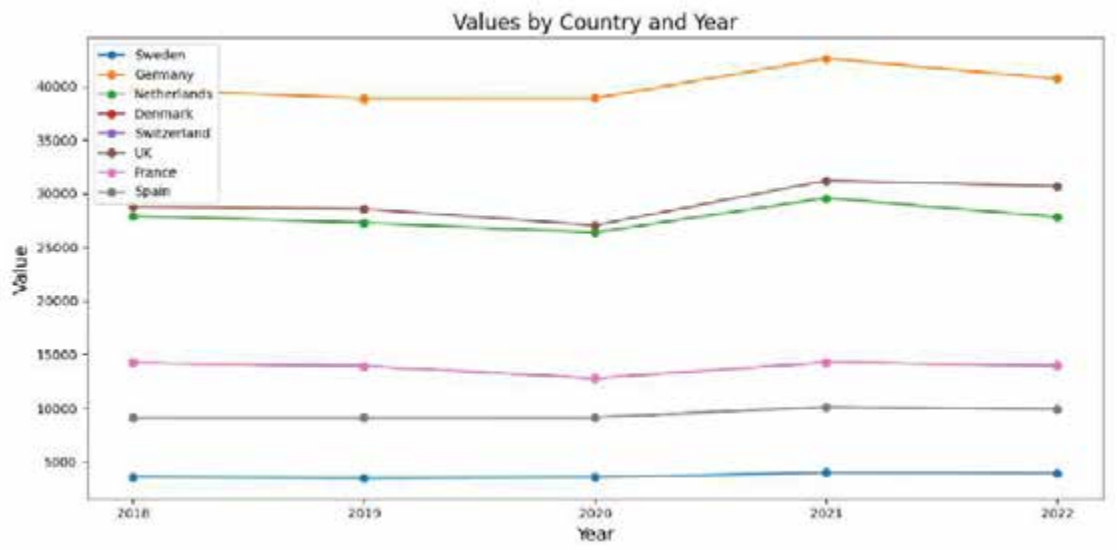

Figure 2.6. GDP of some European countries from 2018 to 2022 (Unit: 100 million US dollars) Data source: World Bank

In recent years, the total population data in Europe has been on a downward trend and the aging problem has deepened. In 2022, the total population decreased at a rate of 0.2%. In 2022, young and middle-aged people under the age of 59 in Europe accounted for 73.7% of the total population, while the global figure was 86.1%. In 2022, the China Automobile Dealers Association and DoCar jointly released the "New Energy and Fuel Vehicle User Consumption Behavior Insight

Report", which mentioned that 43% of China's new energy vehicle users are young people under the age of 30, 41% are young people between the ages of 31 and 40, and users over the age of 50 account for only 3% (see Figure 3-2). Young and middle-aged people are the main users of new energy vehicles. It can be seen that the overall social environment in Europe is not favorable. The social background of population decline and aging is not conducive to the overall sales of the new energy vehicle industry in Europe, but the impact on NIO, which has a low market share, is not expected to be great.

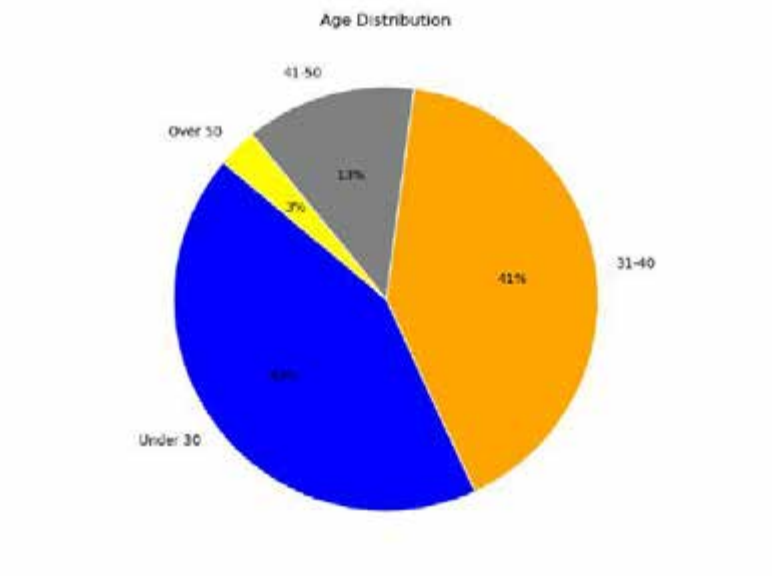

Figure 2.7. Age distribution of Chinese new energy vehicle users
Data source: China Automobile Dealers Association, Dongchedi, etc.

In addition, Europeans generally attach importance to environmental protection and sustainable development, and have always been at the forefront of the world in environmental protection. In 2021, the United Nations Environment Program announced the top 15 donors of the Environmental Fund in 2021, of which 13 are European countries (see Figure 5-3). It can be seen that European countries pay great attention to the environment, which has laid a stable social foundation for the electrification of the European automobile industry.

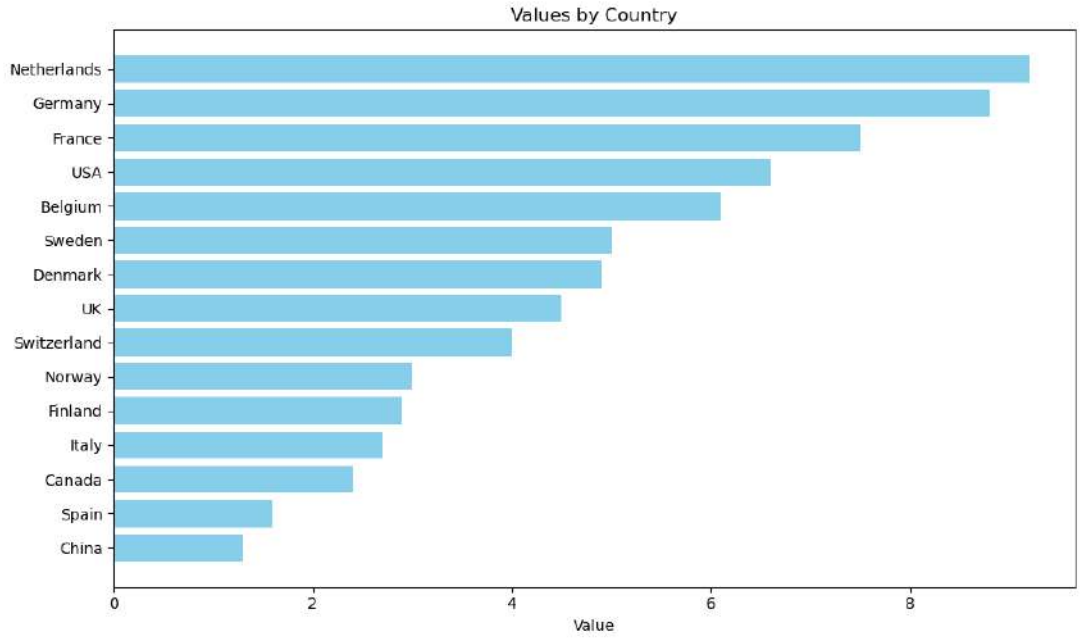

Figure 2.8 Top 15 donors to environmental funds in 2021
Data source: United Nations Environment Programme

The technology of electric vehicles mainly refers to the three-electric system, namely batteries, motors and electronic control systems. Among them, batteries account for more than 40% of the cost of the whole vehicle. At present, the commonly used batteries for passenger cars are ternary lithium batteries. The China Automobile Dealers Association and other institutions have counted the battery energy density of new energy vehicles in the Chinese market in the first half of 2022. Tesla's Modle 3 model topped the list with an energy density of 300 Wh/kg, and five models of NIO entered the top 16 with an energy density of 185.44 Wh/kg (see Figure 5-4). At the same time, it strengthened battery research and development. In July 2023, NIO launched a 150k Wh battery pack with a single cell energy density of 360Wh/kg.

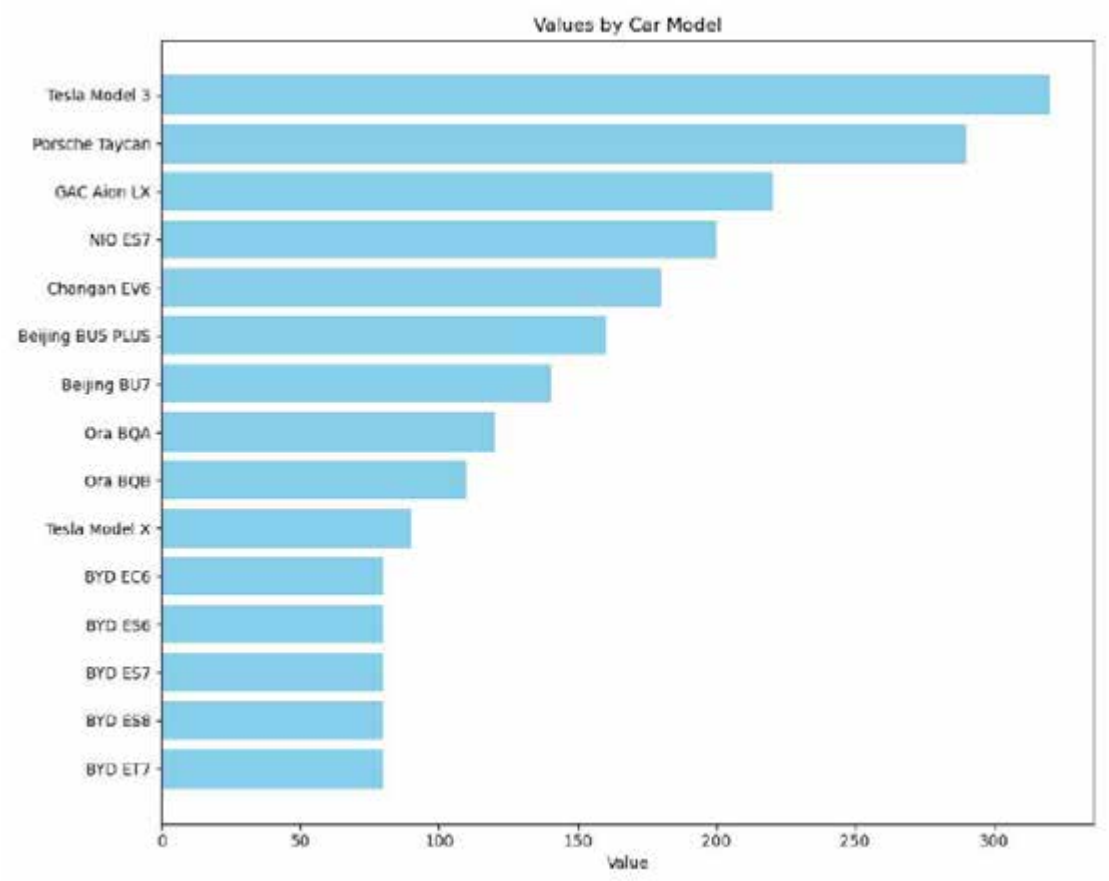

Figure 2.9. TOP16 energy density of new energy vehicle batteries in the Chinese market in the first half of 2022 (Unit: Wh/kg) Source: China Automobile Dealers Association, etc.

The motor provides torque to electric vehicles. The main popular motor types are permanent magnet synchronous motors and asynchronous AC motors. Permanent magnet synchronous motors are small in size, high in efficiency and high in cost, while asynchronous AC motors are large in size, low in efficiency and high in cost. Due to performance and market factors, most Chinese automakers use permanent magnet synchronous motors, including BYD and Geely, while most European and American automakers use asynchronous AC motors to achieve high acceleration with greater torque. Tesla and NIO use dual-motor mode, taking into account both high performance and longer driving range. The electronic control system is the core of motor drive and control, and its core technology power module is IGBT. The IGBT market has long been monopolized by companies such as Infineon Technologies of Germany and Fuji Electric of Japan. Although China does not have the manufacturing capability of fully independent development of the core technology IGBT module, with the acceleration of domestic independent

research and development, BYD is currently the only automaker in China with a complete IGBT industry chain, from the first generation of IGBT chips launched in 2009 to the updated IGBT 6.0 in 2021, forming a lower-level replacement while affecting the market price to a certain extent. Overall, the technical environment is favorable for NIO. The improvement of NIO's battery energy density helps to enhance product competitiveness. The dual-motor mode combines the advantages of two motors, improving performance and driving range. The start-up of BYD and other companies in the IGBT field may have an impact on market prices and indirectly affect NIO's procurement costs.

2.3. Analysis of the new energy vehicle industry environment

Based on the macro-environment analysis, this section uses Porter's Five Forces Model to analyze the meso-industry environment of NIO's international operations, and analyzes the industry environment of new energy vehicles from five aspects (He et al., 2023): the bargaining power of suppliers, the bargaining power of buyers, the threat of new entrants, the threat of substitutes, and the degree of competition of competitors in the same industry.

Suppliers in the new energy vehicle industry include upstream raw materials and midstream three-electric system integrators. The upstream of the industrial chain is composed of battery raw materials, motor raw materials and electronic control components. The main raw materials of batteries include mineral resources such as salt lake lithium mines and ore lithium. With the development of the electric vehicle industry, the global demand for lithium mineral resources has increased in recent years. The mismatch between supply and demand has led to sharp price fluctuations and a rising tide. However, according to the forecast of the Australian Department of Industry, Science, Energy and Resources, global lithium production will continue to rise to fill the gap in lithium supply, and prices are expected to fall between 2024 and 2025. The raw materials for motors are mainly rare earths and iron ore. The supply of rare earths is strictly controlled by the state, and the price is rising steadily, while the price of iron ore fluctuates frequently,

showing an overall growth trend. The core module IGBT in the electronic control system is monopolized by international manufacturers. In 2020, the top three IGBT manufacturers accounted for 51% of the overall market (see Figure 3-5), which is a seller's market with strong bargaining power. Overall, the upstream of the industrial chain has strong bargaining power. The core components of the midstream are batteries, motors and electronic control systems. According to a study by SNE Research, a South Korean research organization, six Chinese companies are on the list of the top ten global power battery installed capacity rankings in 2022, with a market share of 60.4%. Among them, the Chinese company CATL has been ranked first in the world for six consecutive years, with a market share of 37% in 2022 (see Figure 3-6). The market share of the top ten leading companies is as high as 91%. The industry concentration is relatively high, which is a seller's market with strong bargaining power. The development of new energy vehicle motor systems is relatively mature, with obvious homogeneity and fierce competition among manufacturers. In 2022, the market share of the top ten Chinese motor supporting companies exceeded 73% (see Figure 3-7), which is a buyer's market. Globally, the main manufacturers of new energy vehicle electronic control systems are Continental AG, Denso Corporation, etc. Although a few Chinese companies have also started the production of electronic control systems in recent years, such as BYD and BAIC New Energy, most companies still rely on foreign core technologies, especially IGBT power modules, and suppliers have strong bargaining power. To sum up, given the scarcity and irreplaceability of upstream raw materials, upstream suppliers have strong bargaining power; some parts of the midstream three-electric system are unique, high-quality and high value-added. These products have a low degree of homogeneity and high market demand, which has led to a monopoly situation among some suppliers and given them high bargaining power.

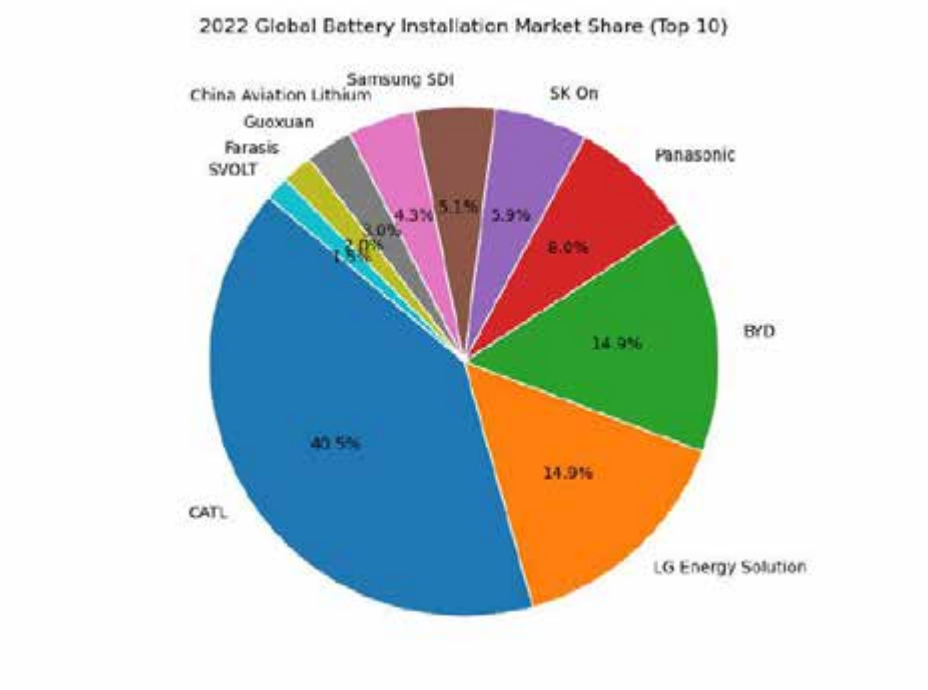

Figure 2.10. IGBT supplier market share in 2020 Data source: Omdia

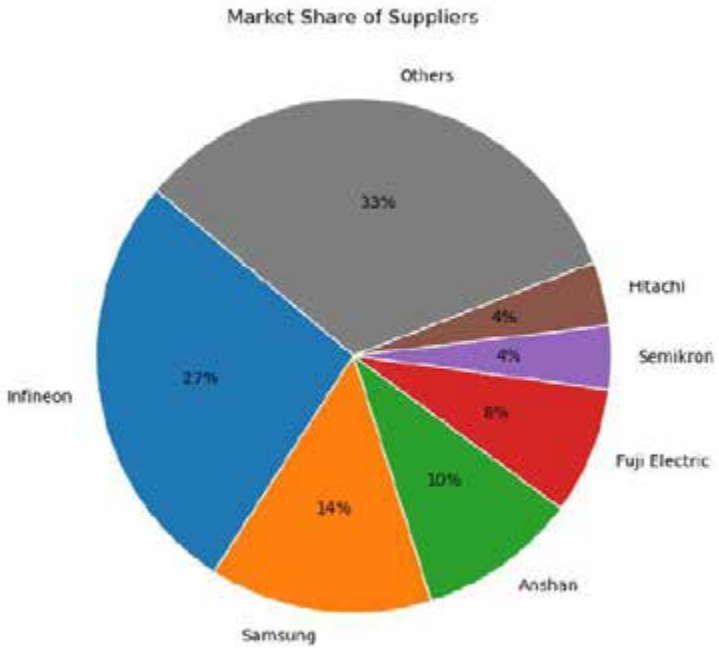

Figure 2.11. Global power battery installed capacity TOP10 in 2022 Company market share Data source: SNE Research

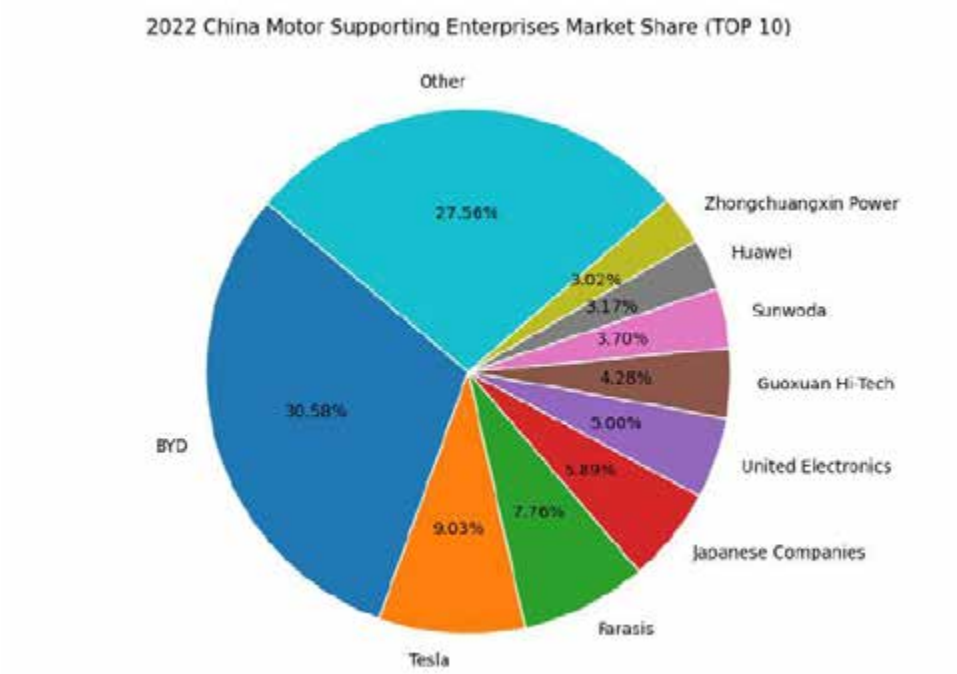

Figure 2.12. Top 10 Chinese motor supporting enterprises in 2022
Data source: NE Times

The characteristics of NIO users determine that they are highly sensitive to prices and have strong bargaining power. From the perspective of user characteristics, NIO users are relatively young and concentrated in the age group of 30-35. Most of them have a bachelor's degree or above. Consumers are mainly middle and senior managers, and they are relatively rational consumers. From the perspective of the availability of substitutes, there is no shortage of well-known traditional brands in the high-end car market. Buyers can compare between products to seek better prices and services. In this case, buyers may have strong bargaining power. From the perspective of the degree of market information mastery, the role of the Internet in assisting car purchase decisions is very obvious. Before buying a car, consumers obtain vehicle information through various online and offline platforms for price comparison and communicate with existing car owners or potential consumers. Their bargaining power has greatly improved compared with the past.

Due to the characteristics of high profits, high government subsidies, and lower technical barriers to vehicle manufacturing, the new energy vehicle industry

has attracted a large number of new entrants, and the competition landscape is diversified, mainly divided into traditional car companies, start-up electric car companies, joint venture car companies, cross-border companies, etc. Traditional car companies also have a place in the field of new energy vehicles, such as BYD, Geely, BMW, Volkswagen, Audi, Hyundai, etc. Among them, BYD's cumulative sales of new energy vehicles in 2022 reached 1.8635 million units, exceeding Tesla, which has been the sales champion for three consecutive years. Traditional fuel car companies have strong capital, exquisite manufacturing technology, complete marketing system, good brand image, and a stable supply chain for traditional parts such as interior and exterior decoration, chassis, etc. required in the manufacturing process of electric vehicles. However, since the special technology of new energy vehicle production, especially energy storage battery technology, is completely different from the production of traditional internal combustion locomotives, it is also difficult to open up the supply channels of these suppliers, which creates entry barriers for traditional car companies. However, once the technical barriers and supply barriers are opened, they will become the strongest competitors. Global start-up electric car companies have developed rapidly in recent years, including Rivian and Lucid Motors in the United States, and Chinese brands include Ideal, Xiaopeng, and Leapmotor. Among them, Rivian is considered to be the most capable startup company to compete with Tesla, attracting investment from large companies such as Amazon and Ford. Joint venture brands have the characteristics of not paying enough attention to new energy vehicles, low technical reserves, and insufficient product competitiveness. However, joint ventures are rich in car manufacturing experience. By increasing technology research and development, enriching product lines, and continuously deepening the layout of the electric field, they will gradually form a competitive advantage. In recent years, other industries have also taken actions to compete for market share in the new energy vehicle industry, mainly divided into smartphone companies Huawei, Xiaomi, Apple, etc. and Internet companies Baidu, Google, Alibaba, etc. The former has advantages in electronic manufacturing and supply

chain management, and the latter has advantages in artificial intelligence and exploring autonomous driving landing solutions, both of which constitute potential threats to new energy vehicle companies. In summary, the new energy vehicle industry is in a period of fierce competition, and there are many industry competitors with their own advantages. New entrants may not have a direct impact on NIO Automobile, but they will intensify the intensity of industry competition, such as triggering price wars, revolutionary sales models, or iterative intelligent driving, which will have an impact on NIO Automobile that cannot be ignored.

The substitute products of new energy vehicles are mainly traditional fuel vehicles. In 2022, China's automobile sales will reach 26.864 million units, of which 19.977 million units will be traditional fuel vehicles, accounting for nearly 3/4 of the market share. From the perspective of market share, fuel vehicles are somewhat threatening. However, with the fierce competition in the new energy vehicle industry, its power technology, safety performance, service and maintenance, etc. have gradually matured with the expansion of the industry scale. Price factors may change over time and with the increase of market competitors. While its own competitiveness is enhanced, the substitution threat of traditional vehicles will inevitably decrease gradually. In addition, the policies of various countries continue to favor new energy vehicles and promote the transformation and upgrading of the traditional automobile industry, which has greatly accelerated the process of new energy vehicles replacing fuel vehicles and weakened the substitution advantage of fuel vehicles.

The European new energy vehicle market shows a high degree of market concentration and fierce competition. According to EU-EVs, the European new energy vehicle market is mainly occupied by European local brands. In the top ten new energy vehicle sales rankings of 14 major European countries in 2022, there are 7 European local brands, 1 American brand and 2 Korean brands. Among them, only Tesla of the United States and Volkswagen of Germany have a market share of more than 10%, while the average market share of the other 8 brands is only 5%, and the highest is only 6.2%. In addition, the sales volume gap of these 8

brands is small, and the market share is concentrated. Leading brands such as Tesla and Volkswagen have significant market share and brand influence, while other brands face competition and competitive pressure for market share. For new entrants, to succeed in such a market, they may need to have unique technological innovations, product advantages and market strategies.

This section focuses on the internal environment of NIO, and uses the SWOT model to deeply analyze its internal strengths and weaknesses, opportunities and challenges, and pave the way for the subsequent analysis of its internationalization strategy (Zhang, 2023).

(1) S—Advantages

(a) Professional Technology

As of 2022, NIO has issued 3,703 patents and has industry-leading battery swap technology and autonomous driving technology. Its battery swapping technology supports battery swapping stations that can provide battery swapping services and realize automatic summoning functions; its autonomous driving system NIO Pilot can realize high-speed navigation assistance and enhance safety by judging road structure and road conditions. There are also 12 full-stack self-developed technologies, covering 12 key technology areas such as chips and on-board intelligent hardware, battery systems, electric drive systems, vehicle engineering, operating systems, mobile interconnection, intelligent driving, intelligent cockpits, smart energy, intelligent manufacturing, artificial intelligence, and global digital operations.

(b) Product quality and design

NIO has obtained the ISO 9001 quality management system certification and ISO 14001 environmental management system certification from the German Rhine TUV Group, and ES8, ET5, ET7 and EL7 have obtained a five-star safety rating from the European New Car Assessment Program Euro NCAP. NIO's interior design is committed to creating a full sensory riding experience for users from the three dimensions of sound, light and shadow. The Pano Cinema panoramic digital cockpit uses spatial acoustic technology and Dolby Atmos

technology to restore the original sound, fully meeting the needs of its target customers.

(c) Customer Service System

NIO's customer service system covers a full range of services from after-sales service to community operations. In terms of after-sales service, NIO Service Center and authorized third-party service centers provide comprehensive and detailed services such as basic maintenance, door-to-door tire repair, roadside assistance, and accident repair using original accessories. In terms of outdoor energy replenishment, NIO not only provides users with real-time information on public charging networks and NIO's own charging and swapping network resources on the NIO APP, but also provides users with charging car services with fast charging technology, and promptly goes to the location of the user's vehicle and provides charging services. In terms of community operation, NIO cleverly combines online and offline methods, directly serving users through offline NIO House, NIO Space and grand NIO Day events, and online through NIO APP to build a communication bridge between the brand and users from all over the world, forming a rich and close communication channel.

(2) W-Disadvantages

(a) Continuous losses

NIO has been in a loss-making state since its establishment. In 2023, its net loss was as high as RMB 20.72 billion (see Table 5-1), a surge of 43.5% from 2022, and the total loss for 6 years was as high as RMB 65.413 billion. The long-term losses and extremely high losses have brought huge financial pressure to NIO, which is initially internationalized. The root cause of NIO's difficulty in making a profit is that its car sales have not reached the expected level, while the cost remains high. Among them, NIO's unique battery replacement model has brought a heavy financial burden. The construction cost of battery swap stations is high, and battery swap stations have not yet achieved a turning point of profitability. What is more disadvantageous is that with the increasing development of fast charging technology in the infrastructure industry, NIO is facing fierce market competition,

which further exacerbates its difficulty in profitability.

Table 2.1.

NIO's losses from 2018 to 2023 (Unit: RMB 100 million)

Year	Sales on Credit
2018	96.39
2019	112.96
2020	53.04
2021	40.17
2022	144.37
2023	207.20

(b) Low brand awareness

NIO just entered the European market in 2021. According to EU-EVs statistics, its market share in 14 European countries in 2022 is only 0.1%, and its brand awareness is at a low level. Since consumers generally tend to buy familiar and trusted brands, this may affect NIO's sales in Europe. At the same time, European consumers often have high expectations and requirements for car brands, and NIO needs more time and effort to establish its own brand image in this market. Insufficient brand awareness will increase its sales difficulty, increase marketing costs, and encounter more difficulties in building its brand image.

(c) Single product market

NIO has the disadvantage of a single product market. From the perspective of the overall target market, NIO is constrained by the inherent limitations of the high-end market, and its market share in the entire automotive industry is relatively low. On this basis, NIO's product lineup is not rich, and the homogeneity phenomenon is serious. Most of its models are positioned in the medium and large levels. This product strategy is contrary to the car-using habits of European consumers, which undoubtedly constitutes an obstacle to the increase in sales and limits the breadth of NIO's target market.

(3) O-Opportunities

(a) Policy support

In order to support the development of the new energy vehicle industry,

European countries have formulated policies to encourage the development of new energy vehicles, which are mainly divided into purchase subsidies or tax incentives, use subsidies or tax incentives, infrastructure support, etc., to reduce the purchase cost and use cost of electric vehicles, and also provide subsidies and discounts for charging infrastructure. At the same time, European countries have implemented strict automobile emission regulations. The EU requires all passenger cars to apply Euro 7 emission standards from July 1, 2025, and the sale of non-zero carbon emission new fuels will be banned in the EU from 2035. These policies provide NIO with market opportunities.

(b) Large market demand

Globally, the new energy vehicle market is showing a trend of rapid growth. China, Europe and the United States are the main markets for new energy vehicles in the world. In 2022, China, Europe and the United States accounted for 64%, 22% and 9% of the global new energy vehicle sales respectively, and the sales of the three markets accounted for 95% of the global new energy vehicle sales. At present, NIO is mainly sold in China and Europe, the two main bases of new energy vehicles, and there is a large market space. According to Clean Technica data, the global new energy vehicle market penetration rate continues to increase, less than 5% in 2020, about 9% in 2021, and global new energy vehicle sales in 2022 exceeded 10 million, with a penetration rate of 14%. This trend provides NIO with favorable opportunities to increase sales and expand market share.

(c) Cooperation in battery swap business

NIO's battery swap model is becoming more and more mature, and it is gradually opening up its battery swap business. After years of technology and experience accumulation, NIO has a relatively complete battery swap system and battery asset management mechanism, but due to the high investment cost, the company's cash flow is under pressure. NIO can reach cooperation with other car companies in the battery swap business. Opening up the battery swap business to the outside world can effectively ease the cash flow pressure, form economies of scale to reduce costs, and expand market share, making the battery swap business

profitable. In addition, opening up the battery swap business to expand the scope of cooperation will promote the industry to unify standards such as battery size, battery capacity and battery swap efficiency. As the leader of the battery swap business, promoting NIO's battery swap standards to become the industry standard will bring it huge advantages.

(4) T-Threat

(a) Unpredictable policy changes

In 2023, some European countries will see a trend of subsidy reduction. Germany canceled subsidies for plug-in hybrid electric vehicles; the UK canceled subsidies for all new energy vehicles; France's subsidies were reduced from 6,000 euros to 5,000 euros; Norway no longer implements a tax-free policy for all new energy vehicles, and new energy vehicles priced above 500,000 Norwegian kroner are required to pay value-added tax, etc. Changes in subsidies and support policies for new energy vehicles may affect NIO's sales and profitability. In addition, some countries may introduce trade barriers and restrictions, and may initiate anti-subsidy investigations against electric vehicles from China, posing a threat to NIO's entry into the international market.

(b) Fierce industry competition

The new energy vehicle market is highly competitive. Many traditional automakers, emerging electric vehicle manufacturers, and electronics companies have entered this field. These companies have their own competitive advantages, and the main export and investment location for Chinese new energy vehicle companies is Europe. Brands competing for market share in the European market include not only European local brands, but also foreign brands from China, South Korea, and Japan. The brand awareness and technical strength of these competitors have brought competitive pressure to NIO. They may have stronger brand influence, more advanced technology, and a wider sales network, which will hinder the speed of NIO's market expansion.

(c) Potential technical risks

NIO has achieved certain results in the fields of technological innovation and

autonomous driving, but technical risks still exist. New energy vehicle technology and autonomous driving technology are still in the process of continuous evolution and improvement, and may face some challenges and obstacles. For example, autonomous driving technology may face problems in safety, laws, regulations, and ethics. These technical risks need to be overcome before commercial applications can be achieved.

(d) Lack of stability in the supply chain

NIO relies on suppliers to provide key components and technical support. The instability and risks of the supply chain may have a negative impact on NIO's production and delivery capabilities. When there are problems such as frequent fluctuations in upstream raw material prices, supplier quality issues, and delivery delays, NIO's production, manufacturing, and sales will be affected, resulting in a decrease in user satisfaction.

SECTION 3: DIRECTIONS OF IMPROVEMENT AND PROSPECTS FOR THE DEVELOPMENT OF FOREIGN ECONOMIC ACTIVITY OF ENTERPRISES OF VEHICLE INDUSTRY

3.1. International experience of the strategy of improving the international economic activity of the enterprise

As a local American brand, Tesla's main target markets for internationalization are China and European countries (Chen, 2024). As early as before entering China in 2018, Tesla had already exported electric vehicles to China and some European countries. The formal cross-border investment began in 2018. The Shanghai Super Factory established in Shanghai, China in 2018 was Tesla's first overseas factory. Subsequently, the second overseas factory, the European Super Factory, was established in Berlin, Germany in 2019. The establishment of the two factories accelerated Tesla's expansion in the Chinese and European markets. As can be seen from the previous article, Tesla's total revenue in 2022 is US$81.462 billion, of which the revenue in the Chinese market is US$18.145 billion (see Table 6-1), accounting for 22.27%. Nearly 1/4 of the revenue shows that the Chinese market occupies an important position in Tesla's international market. Similarly, Tesla has achieved excellent results in the European market. In 2022, its sales exceeded 220,000 units, making it the top-selling brand in Europe and occupying 14.7% of the European new energy vehicle market share. Its Model Y and Model 3 models have gradually become best-selling models in Europe.

If Tesla wants to gain a foothold in the international market, it must pay attention to the two markets of China and Europe. In terms of policy, China and European countries focus on green development, have a strong awareness of energy conservation and emission reduction, and provide a lot of support and incentive policies for the new energy vehicle industry in its growth stage. In 2019, the Shanghai Municipal Government of China invested approximately RMB 540 million in manufacturing equipment for Tesla's Shanghai Super Factory, and Europe also provided a lot of policy support for it. Although the economy has been

affected by the COVID-19 pandemic and the Russia-Ukraine conflict in recent years, both have recovered at a relatively fast pace. In 2022, the GDP of China and the European Union will be 17.96 and 16.75 trillion US dollars respectively, and the per capita GDP will be 12,720.2 and 37,432.6 US dollars respectively. The economic development is stable, the people's living standards have improved, and the consumption capacity has increased. Socially and culturally, these two regions are the birthplaces of ancient civilizations, with high levels of education. Residents are increasingly pursuing healthy and green development concepts, and high-end brands have gradually become a symbol of status, creating conditions for Tesla's high-end pure electric vehicles to open up the market. Technically, China has its own advantages in pure electric vehicle platforms and power batteries, but lacks core technologies. At the same time, as the base of traditional fuel vehicles, Europe does not have strong advantages in the field of electric vehicles, but has a comprehensive basic supply chain. Tesla can use its technical advantages in core components such as batteries and chips to form complementary advantages in the Chinese and European markets, and use the local supply chains in Shanghai and Berlin to form an industrial cluster effect to exert its advantages.

Table 3.1

Tesla's Revenue in Different Sales Regions, 2020-2022 (Unit: Billion USD)

Year	USA	China	Others
2020	152.07	66.62	9.67
2021	239.73	138.44	160.06
2022	405.53	181.45	227.64
Total	315.36	538.23	814.62

Source: Tesla 2022 Annual Report

(2) Entry method

Tesla's way of entering the Chinese and European markets adopts a strategy that combines exports with greenfield investment (Glowik, 2020). Tesla's super factory in the United States operates efficiently, not only stably supplies the best-selling Model S, Model X, Model 3, Model Y and the highly anticipated Cybertruck, meeting the needs of the US domestic market, but also actively exports to multiple overseas markets such as China and Europe, further expanding

the company's sales territory. In order to reduce transportation and manufacturing costs and eliminate the impact of adverse tariffs, and to integrate more deeply into and serve the local market, Tesla invested in greenfield projects in China and Germany in 2018 and 2019, and built new super factories in Shanghai and Berlin. These factories took on the manufacturing and production tasks of some models locally, ensuring the high quality and timely supply of products, and effectively meeting the urgent needs of the local market.

Table 3.2

Tesla Production Models in Various Gigafactories

Production Location	Production Models
Fremont Gigafactory, California, USA	Model S / Model X / Model 3 / Model Y
Gigafactory Texas, USA	Model Y / Cybertruck
Gigafactory Shanghai, China	Model 3 / Model Y
Gigafactory Berlin, Germany	Model Y

Source: Tesla 2022 Annual Report

Tesla began to position itself as a high-end brand of new energy vehicles with the launch of the high-end sports car Roadster in 2008, creating a high-tech feel to gain consumer trust, and then launched the mid-to-large car Model S and mid-size SUV Model X for the mid-to-high-end market, and finally launched the economical product mid-size car Model 3 and compact SUV Model Y for mass consumers, gradually forming large-scale mass production and thus achieving profitability. In 2022, Tesla enriched its product line.

Table 3.3

Classification of Current Tesla Vehicle Models

Model	Model 3	Model Y	Model S	Model X	Semi	Cybertruck	Roadster
Classification / Category	Mid-size Car	Compact SUV	Full-size Car	Mid-size SUV	Commercial Truck	Electric Pickup Truck	Sports Car

Source: Tesla Annual Report

Tesla follows the principle of global unified pricing in its pricing strategy, but for different target markets, pricing will be slightly adjusted to adapt to local market characteristics. The Model S and Model X, which are oriented to the high-end market, are priced relatively high, with starting prices of RMB 684,900 and RMB 724,900 in China and EUR 92,990 and EUR 97,990 in Germany, respectively. In contrast, Tesla's mid-range models, Model 3 and Model Y, are priced more affordable to attract a wider range of consumers. The starting prices of these two models in the Chinese market are RMB 231,900 and RMB 249,900, respectively, and the starting prices in the German market are EUR 40,990 and EUR 44,990, respectively.

Table 3.4

Starting Prices of Selected Tesla Models in China and Germany

Model	China (10,000 RMB)	Germany (10,000 EUR)
Model 3	23.19	4.099
Model Y	24.99	4.499
Model S	68.49	9.299
Model X	72.49	9.799

Source: Tesla Official Website

Tesla pioneered the direct sales strategy in the automotive industry. This model not only unifies the purchase process, that is, customers can choose, experience and purchase electric vehicles through the online official website and offline showrooms, but also the direct sales model is based on a global unified price, preventing car dealers from making profits and helping consumers save time going to 4S stores to compare prices. At the same time, under this model, Tesla's sales team can face customers directly, understand customer needs and suggestions more quickly, and provide timely feedback to the R&D department for precise improvement and upgrading. Tesla's first direct sales channel in the automotive industry is welcomed by consumers and other car companies, especially most new car-making forces have adopted this new sales model to contact users through a

combination of online and offline methods.

Tesla's novel promotional methods have helped it become a leader in the industry. Tesla did not use traditional advertising methods, but instead focused on product design hot events to attract attention, and used media exposure to create a brand and product full of technology, which not only quickly increased product awareness, but also saved marketing costs. In February 2018, Space Exploration Technologies Corporation, founded by Musk, launched a Tesla sports car Roadster into the solar orbit during the launch of a rocket and broadcast it live. The audience watched it in real time from the driver's perspective, with a number of viewers reaching 17 million. Media reports came one after another, and continued to pay attention to the status and changes of Roadster in space, arousing people's curiosity and shaping a high-tech image. In November 2019, Tesla held a press conference for the Cybertruck electric pickup truck. When testing the strength of the glass on site, it demonstrated the use of a steel ball to smash the car window glass, but the result was not satisfactory and the glass cracked. This dramatic turn of events attracted media attention.

Tesla adopts a variety of financing methods, involving both internal and external financing. With the expansion of Tesla's business scale and the improvement of profitability, internal financing has gradually become one of its important financing methods. Tesla uses retained earnings financing to generate capital accumulation, thereby realizing the company's internal financing and reducing its dependence on external financing. In terms of external financing, Tesla also actively uses equity financing and debt financing, and conducts equity financing through private equity investment, public offering of new shares and employee equity incentives. In the early days of its establishment, Tesla mainly relied on private equity financing. In 2004, Musk invested $6.3 million and served as chairman of Tesla. In 2009, Daimler and Toyota both invested $50 million, obtaining nearly 9.1% and 3.15% of Tesla's equity respectively. Tesla's initial public offering in 2010 raised $226 million, and it has since issued new shares every year for financing. Tesla's equity incentive strategy applies to a wide range

of people, including CEOs, senior executives, and ordinary employees. The incentives are divided into options and stock rewards, and rewards are granted based on employee performance and company performance. In terms of debt financing, Tesla uses bank loans and debt markets to finance. Tesla successfully obtained loans from banks mainly by using existing assets and future accounts receivable as collateral. In terms of bond issuance, convertible bonds are an important financing method adopted by Tesla, and its holders can decide whether to convert them into the company's common stock at an agreed price after the bonds expire.

After analysis, it was found that Tesla's internationalization business strategy has many aspects that are worth learning from other car companies, such as target markets, product matrix, competitive advantages, marketing strategies, and financial management (Jiang-Min, 2023).

Tesla's target market range is very wide. From a geographical perspective, Tesla's main target markets for internationalization span North America, Europe, Asia, and Oceania. The specific countries are Canada, China, South Korea, Japan, Germany, the United Kingdom, France, Norway, Australia, etc. Its target markets are not only large in scale, but also have a high degree of acceptance of electric vehicles. From the perspective of market positioning, although Tesla is positioned as a high-end brand, it is not only aimed at the high-end market. After consolidating its high-end brand image, Tesla has successfully moved down to the mid-range market. Its economical models face the middle-income group, and due to its brand premium ability, Tesla is loved by consumers in both market segments.

Tesla has shown rich diversity in its product line. From the perspective of models, Tesla not only has high-end models Model X and Model S for high-income groups, but also economical models Model 3 and Model Y for middle-income groups. In addition to the above passenger cars, Tesla has also developed commercial vehicle models, and its product market is wide. From the perspective of vehicle level, Tesla has a rich level of cars, including mid-sized cars, mid-to-large cars, compact SUVs, mid-sized SUVs, sports cars, pickup trucks, etc.,

showing its comprehensive product market layout capabilities. (See Table 5-3)

The reason why Tesla is in a leading position in the global new energy vehicle industry is mainly because it has mastered the core technology of the industry, has a strong competitive advantage, and has the initiative to participate in global market competition. Tesla insists on independent research and development of the three-electric system, especially in battery technology. The large cylindrical battery it has developed has evolved to the third generation, with an energy density 5 times higher than the second generation. Tesla's battery management system (BMS) uses more sensors and monitoring points to manage batteries more finely.

Tesla is known for its innovative and cutting-edge brand image and technological product features, and its low-cost and efficient marketing strategy also fully demonstrates these characteristics. Tesla's marketing activities are relatively low-cost and do not rely on traditional advertising. Instead, it relies on the influence of its CEO Musk to achieve efficient communication of brands and products through media reports, social media interactions, etc., which not only reduces marketing costs, but also increases brand exposure and user participation.

Tesla's financial management system is very effective, especially in terms of fund raising and cost control. First, Tesla focuses on optimizing its capital structure and raises funds through various means such as internal financing and external financing to meet the company's operation and expansion needs. The diversified financing strategy helps reduce financial risks and provide the company with a stable cash flow. Secondly, Tesla's outstanding performance in cost control is mainly reflected in its technological innovation, production process optimization and supply chain management. Tesla reduces battery costs by continuously promoting battery technology innovation. In 2020, Tesla developed the 4680 battery. The new battery not only has higher energy density but also has lower manufacturing costs. In terms of production processes, Tesla reduces costs by improving production processes and improving production efficiency. The highly automated production lines it uses not only reduce labor costs, but also improve production speed and quality, thereby forming economies of scale. In terms of

supply chain management, Tesla has established a close cooperative relationship with suppliers to ensure a stable supply and price advantage of raw materials. It also produces some key components by itself through vertical integration to further reduce costs.

3.2. Problems facing the international development of NIO

Since NIO has initially entered the international market, it faces many problems and deficiencies in the process of international activities, especially in terms of policy integration, product matrix, marketing strategy, and corporate finance, which affect the breadth and depth of its internationalization (Zhao and Tang, 2024; Zhang, 2023).

Low policy integration. In the process of international development, NIO faces the problem of low integration with the host country's policies, which is particularly reflected in the construction of infrastructure in the European market. The battery swap model is an important feature of NIO. NIO has built a large number of battery swap stations in the Chinese and European markets, but this energy replenishment method is not only expensive to build, but also does not conform to the policy trend of infrastructure construction in European countries. The construction of the European electric vehicle energy replenishment system started late, and the infrastructure incentives are concentrated on the development and installation of charging facilities, and there is no clear subsidy policy for the construction of battery swap stations. On March 20, 2022, the European Automobile Manufacturers Association released the European Electric Vehicle Charging Infrastructure Master Plan, which pointed out that up to 14,000 public charging points will need to be installed per week by 2030, and up to 280 billion euros will be invested in installing public and private charging points, upgrading power grids and building renewable energy production capacity. From a national perspective, less than half of the countries in Europe subsidize new energy vehicle infrastructure, and the incentives are mainly focused on the development and installation of charging facilities. According to data released by the European

Automobile Manufacturers Association on July 5, 2023, among the 30 European countries surveyed, only 10 countries have clearly implemented incentive policies for new energy vehicle-related infrastructure, including Denmark and Sweden, where NIO provides products. The detailed policies proposed by these countries also focus on promoting and facilitating the construction of private and public charging networks (see Table 7-1), and none of them involve subsidies for battery swap stations.

Table 3.5

Charging Infrastructure Subsidies in European Countries, 2023

Country	Charging Infrastructure Subsidies
Denmark	Installation in employees' homes by company for EV chargers or charging sockets is tax-free.
Sweden	Rebates up to 50% of the cost for charging station installation at private residences (maximum 15,000 SEK).
Italy	Subsidies for individuals on EV charging equipment purchase and installation. Subsidy applies to total expenses incurred.
France	80% subsidy, with a cap of 1,500 EUR per charger.
Portugal	For individuals, communities, and public institutions (2021-2023): 70% of the total price covered.
Spain	For public chargers ≤50kW: large, medium, and small companies receive 35%, 45%, and 55% subsidies, respectively.
Spain (continued)	For public chargers >50kW: 30% subsidy; Higher subsidies for cities with populations <5,000.

Source: European Automobile Manufacturers Association

Due to the preferential policies of European countries for charging facilities, companies and individuals tend to install public and private charging piles. However, as of the beginning of 2023, NIO has deployed 6 supercharging stations and 11 battery swap stations in Europe, and the number of supercharging stations is lower than that of battery swap stations. It can be seen that NIO's behavior of spending huge sums of money to vigorously build battery swap stations in Europe does not match the current policy environment in Europe. This low degree of policy integration will not only affect NIO's capital chain situation, but may also

hinder its overall development strategy in the European market.

Imperfect product matrix. From the perspective of the product market, NIO's product market has great limitations. All its products are positioned in the high-end market, and there is a lack of products that compete in the mid- and low-end markets. Compared with the mid- and low-end markets, the high-end market not only has a small market share, but also has many industry participants and a limited consumer group. For start-ups like NIO, competing in the high-end market is full of challenges. From the perspective of product pricing, the starting price of NIO's existing models is around RMB 300,000. It lacks price competitive advantages in the entire new energy vehicle industry, ignoring that price is an important factor affecting consumer purchases. From the perspective of models, NIO's model levels are mainly medium-sized and medium-large (see Table 7-2). However, in the Chinese market, in addition to three medium-sized and one medium-large cars, there are four compact, one micro and one small models in the top ten sales in 2022, occupying six seats (see Table 7-3). Sales data in the European market further confirms this point. Among the top ten sales models in Europe in 2022, micro In short, NIO's product matrix faces problems such as product market limitations, overpriced products, and lack of models. As a start-up in the new energy vehicle industry and a preliminary entry into the international market, these problems have greatly limited the breadth and depth of NIO's international development.

Table 3.6

Sales Volume and Model Types for NIO in 2022 (Units: Thousands)

NIO Model	ES6	ET7	EC6	ES8	ET5
Sales Volume	42112	23075	10776	14351	11813
Vehicle Type	Mid-size SUV	Mid-size Sedan	Mid-size SUV	Large SUV	Mid-size Sedan

Table 3.7

Ranking of New Energy Vehicles in China, 2022 Sales (Units: 10,000)

Rank	Brand	Model	Vehicle Type
1	BYD	Song	Compact SUV
2	SAIC-GM-Wuling	MINI Hongguang	Microcar
3	Changan	Benben	Microcar
4	Tesla	Model Y	Mid-size SUV
5	BYD	Qin PLUS	Compact Car
6	BYD	Han	Full-size Sedan
7	GAC	AION Y	Compact SUV

Table 3.8

Rankings of New Energy Vehicle Models by Segment,2022

Rank	Brand	Vehicle Model and Segment
1	Tesla	Model Y - Mid-size SUV
2	Tesla	Model 3 - Mid-size Sedan
3	Fiat	500E - Microcar
4	Volkswagen	ID.3 - Compact Hatchback
5	Volkswagen	ID.4 - Mid-size SUV
6	Audi	E-Tron - Full-size SUV
7	Hyundai	Kona - Compact SUV

Sources: NIO Annual Report 2022, CPCA, Public Information

Lack of autonomy in marketing. NIO's marketing strategy shows a clear user orientation. Its existing marketing model is to promote old users to new users, and to continuously spread brand influence to the outside world through old users who are satisfied with products and services, and to create brand reputation to infect new users. This marketing method from small to large has played a key role in the sales process of NIO. Although the word-of-mouth marketing strategy adopted by NIO helps to establish close ties with existing users, it relies heavily on the spontaneous publicity of core users to promote the brand, and there is a problem of lack of autonomy. Overly handing over the initiative of brand promotion to users means that NIO has great uncertainty in brand communication. Although the spontaneous publicity of users is authentic and credible, its coverage and influence are difficult to control, resulting in the inability to effectively guarantee the effect of brand communication. At the same time, excessive reliance on word-of-mouth marketing also makes NIO's marketing strategy appear single and lack of innovation, and it is unable to make full use of other marketing channels such as social media and online platforms to expand its brand influence. This lack of autonomy in marketing strategy not only limits NIO's global recognition, but may also affect the consistency and accuracy of its brand image. 4. Intensified financial risks. As can be seen from the previous article, NIO has never been profitable since its establishment, and its financial risks have become more serious and its costs have remained high. Among them, high sales costs and operating expenses have always been the pain points of NIO. In 2022, due to the surge in battery costs in the upstream supply chain and large-scale investment in infrastructure such as charging stations and battery swap stations, the company's sales costs climbed to RMB 44.125 billion (see Figure 7-1). Although automobile sales and total revenue achieved steady growth of 34.0% and 36.3% respectively, sales costs soared by 50.5%, and gross profit also fell by 24.6% from RMB 6.821 billion in 2021 to RMB 5.144 billion, highlighting the negative impact of high sales costs on profitability. Operating expenses are also a major driver of NIO's increased financial risks, especially R&D expenses and sales, general and administrative

expenses. In 2022, the company invested RMB 10.836 billion in R&D, a year-on-year surge of 136.0%, mainly due to increased costs of R&D personnel and the design and development costs of new products and technologies. In addition, in order to expand its sales and service network, NIO has increased the salaries of its sales staff and strengthened its marketing promotion in the Chinese and European markets, which has led to a 53.2% increase in sales, general and administrative expenses in 2022 to RMB 10.537 billion, further increasing the company's financial burden.

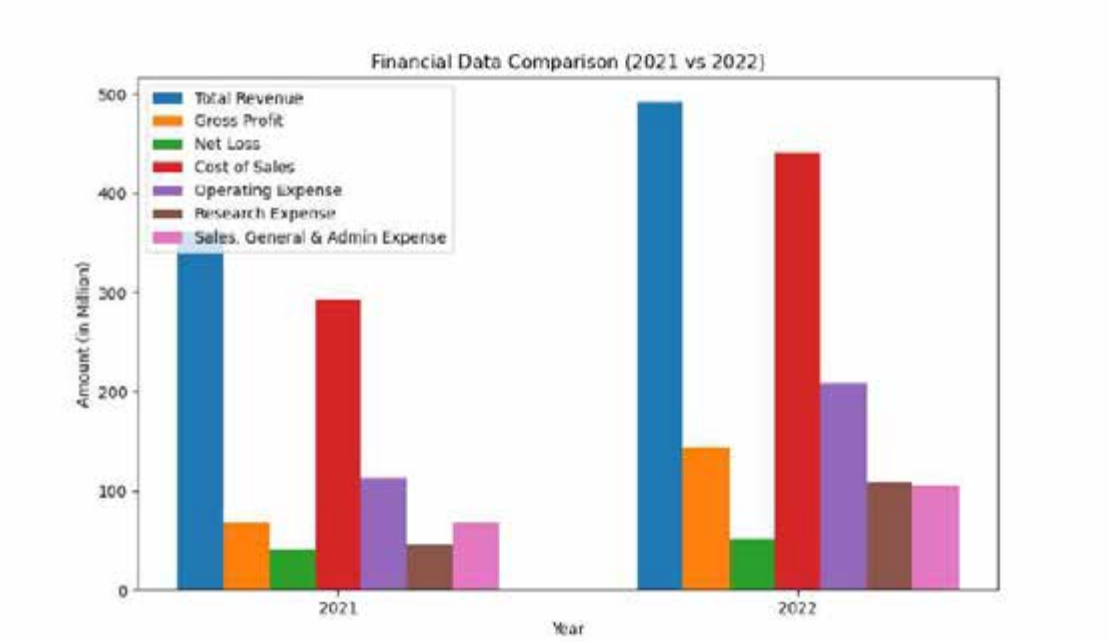

Figure 3.1 NIO's operating conditions in 2021-2022 (unit: RMB 100 million)
Data source: NIO's annual report

3.3. Countermeasures and Suggestions for NIO's International Development

Based on the policy integration, product matrix, marketing strategy, and corporate financial issues encountered by NIO in the process of internationalization (He et al., 2023), this section proposes specific countermeasures and suggestions to solve the problems it faces in a targeted manner .

Improve policy integration. Organizational governments play a vital role in promoting the internationalization of enterprises. In response to NIO's problems in

policy integration, NIO should set up a professional policy research team, establish a communication mechanism with the local government, and deeply understand the host country's policies, regulations and subsidies for electric vehicles and infrastructure construction, and give priority to projects with strong policy support and clear subsidies, so as to obtain policy dividends and gradually expand market share. In terms of creating a charging network in the European market, NIO should keep up with the European policy environment and focus on developing, selling and installing public or private charging facilities. After the market share is stabilized, NIO should actively communicate with the host government and relevant departments to further promote unique business models such as battery swapping and battery leasing to reduce dependence on a single model, thereby improving the effectiveness of the integration of the company's own strategy with the policy of the target market.

Balance between globalization and localization management. With the international expansion of new energy vehicle companies, the demand for globalization and localization management is increasing. In different countries and regions, there are significant differences in consumer demand, cultural background and market conditions. Companies can adopt a matrix structure to establish cross-regional business units around the world while retaining local management teams to respond to specific market needs. This structure can ensure the consistency of global strategies and improve the response speed in local markets. In addition, new energy vehicle companies can set up regional headquarters in important market areas (such as Europe, North America, and Asia), giving regional leaders certain decision-making power and autonomy to quickly respond to changes in local markets. At the same time, the central headquarters can continue to be responsible for global strategic planning and the allocation of core resources.

Improve the product matrix. From the analysis of Tesla and NIO in the previous article, we can see that Tesla has a wide range of market segments and a relatively complete product matrix. Although it is a high-end brand, it is not limited to the high-end market, but has successfully explored the mid-range market, and its

product line is rich and diverse, and the models are not the same. In contrast, NIO is a new high-end brand with relatively low international popularity. Its overly single product line makes it difficult to form diversified market competitiveness. Therefore, NIO should learn from Tesla's international experience on the basis of being fully familiar with the consumption trends of the host country's new energy vehicle industry, develop product lines in the mid- and low-end markets, launch models that are more affordable in pricing, and enrich car types and levels. NIO should actively explore the mid- and low-end markets and reduce the pricing of new product lines. NIO's current models positioned in the high-end market have a starting price of about 300,000 yuan in China and a starting price of more than 60,000 euros in Europe. Such models can be used as NIO's first product line, and NIO can be made into a brand with a sense of high technology and high-quality services with the help of the first product line. On this basis, NIO can launch a second product line, priced in the RMB 150,000-300,000 range in China and around 40,000 euros in Europe. With this product line, NIO can enter the mid-to-high-end market segment, compete with Tesla, Volkswagen and other European and American automakers, and stabilize the market in the European new energy vehicle industry. After the brand influence is formed, NIO can continue to release a third product line priced within RMB 150,000 in China and within 30,000 euros in Europe, explore the mid-to-low-end market, seize the main consumer groups in the industry, and compete for a larger market share with its stable brand image and affordable prices. At the same time, NIO should also recognize the demand for small and medium-sized models in the international market, actively develop models such as micro cars, small cars, compact cars, MPVs, sports cars, and pickup trucks to improve its product matrix, and conduct in-depth research on the consumption trends in the host country market to ensure that the new models launched can meet the preferences of local consumers, including detailed analysis of vehicle design, performance, etc., to ensure that new products can succeed in the international market. On the basis of launching more product lines and models, NIO needs to enhance its competitive advantages. NIO's existing competitive

advantage is mainly user service. Although this advantage is from the user's perspective, it cannot quickly help NIO expand its international market. Therefore, NIO can learn from Tesla's experience and make continuous breakthroughs in the field of core technology, first use the advantages of technology to expand the market, and then use the advantages of service to retain users.

In summary, in view of NIO's product problems, it is recommended that it expand its product line to the mid- and low-end markets through in-depth research on consumption trends in the international market, enrich the car level, especially the lack of small and medium-sized models, and at the same time enhance its technological advantages to help NIO quickly expand the international market. After the product line layout is clear, NIO can continue to expand its target market and enter the United States and other markets, thereby expanding the target customer group and rapidly increasing brand sales.

Master the initiative in marketing. It is not difficult to find from the previous analysis that Tesla's unique marketing method is not only low-cost, but also has excellent marketing effects. Tesla controls the marketing direction by creating hot events by itself, and through the media's publicity, consumers quickly accept the brand positioning and have a sense of admiration, thereby gaining more and more users. However, NIO's passive marketing strategy of spreading its brand image through core users is not only costly to cultivate core users, but also slow in promotion, which is difficult to match the pace of NIO's internationalization. Therefore, NIO can actively learn from Tesla's successful marketing experience, use low-cost media promotion methods, and actively create a brand image that is technologically advanced and user-oriented. When implementing this marketing strategy, NIO should carefully select appropriate occasions and hot events, especially large-scale events such as new car launches or NIO Day, and cleverly create new topics related to products, attract media attention through these hot topics, and then use the power of the media to widely promote the brand to consumers' vision and maximize brand value. In the fiercely competitive Internet era, NIO can also adopt other effective marketing methods to broaden its online

marketing channels. NIO's existing online marketing channels are single, and the platform mainly relies on the promotion of NIO APP. Although the number of registrations of NIO APP continues to increase, the audience is still small. NIO should cooperate with other online platforms to increase exposure. First, it can cooperate with the automobile e-commerce platforms in the countries where it operates. At present, automobile e-commerce platforms are mainly divided into two categories. One is the traditional e-commerce platform, such as Amazon, Tmall, JD.com, Taobao, etc. These platforms have a wide range of business, many dealers, and large customer traffic. The other is professional automobile operation platforms such as Autohome, Yiche, and Dongchedi. NIO can reach cooperation with these two types of e-commerce platforms, use their sales channels and customer traffic, and expand network marketing channels. After accumulating a certain amount of funds and popularity, it can learn from the experience of large automobile companies to build their own e-commerce platforms. For example, SAIC Group established the Chexiang platform in 2014, and Dongfeng Nissan launched the Chebaba platform in 2015, incorporating the group's models into the platform marketing. NIO can also build its own automobile e-commerce platform, not only marketing its own products, but also adding a second-hand car platform to further develop the second-hand car market. Secondly, NIO should seize the social platforms with huge user traffic. The development of social media platforms has enriched the ways for companies to reach customers. Companies can establish their own brands on different social media platforms and place content or advertisements that match the platform's tone to promote online connections between companies and customers to enhance brand loyalty. Companies can also use big data analysis to create targeted dynamic advertisements to reach users who are most likely to be interested in their products and promote people's purchases. NIO can create corporate brand homepages on popular global social media platforms such as Facebook, Instagram, Whats App, Twitter, We Chat, Tik Tok, etc., and take advantage of each platform, such as on We Chat's public account, mini program and video account, to increase exposure by regularly sharing product

photos and videos, and old users' daily use, and create digital stores to increase sales channels.

In summary, in view of NIO's problems in marketing strategy, it is recommended that it actively embrace diversified marketing strategies, reduce excessive reliance on word-of-mouth marketing, and enhance the initiative of brand communication. In addition to the existing spontaneous user publicity, brand publicity should also be combined with social media, online platforms, advertising and other channels. At the same time, NIO should set up a dedicated brand communication team to comprehensively plan and implement brand communication strategies, ensure the consistency and accuracy of brand image by independently mastering the rhythm and direction of brand communication, and achieve the effect of enhancing marketing autonomy and brand image consistency by diversifying and innovating marketing strategies and strengthening the initiative and consistency of brand communication.

Diversified financing channels and capital support. In the new energy vehicle industry, R&D investment is huge, and technological innovation and market expansion require continuous financial support. First, new energy vehicle companies can obtain funds through IPO (initial public offering) or issuing green bonds. These financing methods can not only provide companies with sufficient funds, but also enhance the public image and brand influence of the company. Especially in the field of green environmental protection, green bonds, as an environmental financing tool, can attract more environmental investors and support companies in the research and development of environmental protection technologies. Secondly, the policy support of governments of various countries for new energy vehicle companies varies, and companies should actively strive for policy subsidies and tax incentives. For example, many countries provide subsidies for the research and development and production of new energy vehicles, tax reductions or exemptions, or provide funds for technological innovation. Companies can obtain more financial support by cooperating with the government, thereby reducing operating costs and accelerating technological research and

development. Finally, new energy vehicle companies can seek strategic investors or partners to obtain financial and resource support. For example, they can cooperate with battery manufacturers, charging facility operators and other related industry chain companies to jointly invest in R&D funds and marketing resources to form synergy and promote the sustainable development of the new energy vehicle industry.

Reduce financial risks. Summarizing the analysis of Tesla's operating conditions in the previous article, Tesla has taken into account both the improvement of profitability and the reasonable control of costs. It has brought it a steady stream of income through various means such as increasing business scope through vertical integration and continuously improving the product matrix. At the same time, it has reduced costs in terms of technological innovation and supply chain management. The combination of the two has enabled Tesla's revenue to continue to rise. Learning from Tesla's experience, NIO is also expected to obtain more revenue by increasing revenue and reducing expenditure, thereby reducing financial risks. From the perspective of increasing revenue, NIO should increase sales and achieve profitability through the aforementioned method of enriching the product matrix. In 2022, NIO delivered 122,000 vehicles. Although it increased by 34.0% over 2021, it is far behind Tesla. Tesla delivered 131.4 consumer vehicles in 2022, which is 10.7 times the sales volume of NIO. Therefore, if NIO wants to turn losses into profits, it must focus on increasing sales. In terms of products, NIO can continue to expand its market share in the industry by releasing the second and third product lines, exploring the mid- and low-end markets, and lowering the prices of new cars as mentioned above, and gradually form economies of scale and cost advantages in order to achieve profitability. In terms of competitive advantages, NIO should give full play to its technical and service advantages. Technically, NIO can plan its unique battery replacement mode in detail, detect the newness of all batteries and divide them into grades. Different grades of batteries charge different fees during the battery replacement process, and clearly issue grade certificates and charging standards. This will not only dispel users' doubts

about the newness of the replaced batteries, but also broaden NIO's revenue channels. In terms of services, NIO can expand the scope of services to more new energy vehicle brands in the APP, realize a wider range of vehicle maintenance, repair, travel and other services, expand the market of service business, and bring high-quality services to more users. When NIO's revenue increases, NIO should also learn from Tesla's financing experience in a timely manner to balance the financing structure, use retained earnings to increase the company's internal financing, and reduce excessive dependence on external financing. From the perspective of reducing expenditures, reasonable control of sales costs and operating expenses is a difficult problem that NIO needs to overcome. In terms of sales costs, given the increase in upstream battery procurement costs, NIO should strengthen negotiations with upstream suppliers, strive for more favorable procurement prices, and explore diversified supply channels to reduce dependence on a single supplier. NIO can refer to Tesla's experience to achieve vertical integration of the supply chain and acquire upstream raw material companies, which can not only control its own supply costs, but also realize profits as a separate business. At the same time, in view of the huge investment in infrastructure such as charging stations, battery swap stations, and service centers, NIO should optimize the site layout and improve the utilization efficiency of facilities to reduce unit costs. In terms of operating expenses, as the marginal utility of R&D input-output decreases, NIO should strengthen the optimization and management of R&D processes, improve R&D efficiency, and reduce unnecessary R&D expenses. In the process of expanding its sales and service network, NIO should pay more attention to the refinement of marketing strategies and improve the pertinence and effectiveness of marketing activities. In addition, NIO can actively seek technical partners to jointly bear R&D costs and share R&D results. In terms of infrastructure construction, it should also consider cooperating with third parties to build infrastructure and share cost pressure. In short, in the face of increasingly severe financial risks, it is recommended that NIO increase sales by exploring new profit models, while reasonably controlling costs, finely managing

the supply chain, optimizing R&D processes, and strengthening capital operation management, so as to turn the company from loss to profit as soon as possible and avoid a break in the capital chain.

CONCLUSIONS

Following our study of the topic "Organizational and Economic Support for the Development of the International Economic Activity of the Enterprise," we can present the following conclusions:

1. Analysis of the theoretical foundations of the organizational and economic support of foreign economic activity confirms its importance for ensuring the competitiveness of enterprises in the international arena. Modern approaches emphasize innovative methods of management and adaptation of strategies to the rapidly changing business environment.

2. The study of the internal environment of the NIO enterprise revealed not only strong aspects such as innovative technologies, but also challenges related to management practices and organizational structure. This emphasizes the importance of a deep analysis of internal resources for the formation of effective competitive strategies.

3. The assessment of the international business environment indicates the complexity of modern global markets, where enterprises face a high level of competition and unpredictable changes. Paying attention to risk analysis becomes critical for successful management of international activities.

4. Analysis of the industry of new energy cars shows the dynamic development of technologies, where innovation is the driving force of competitiveness. This poses a challenge to enterprises to constantly improve products and production processes to meet the demands of modern consumers.

5. The development of practical recommendations for NIO based on the conducted analysis emphasizes the importance of strategic planning and flexibility in business production processes. In the face of globalization and changing consumer preferences, businesses need to adapt their strategies to remain competitive.

6. Determining mechanisms for the improvement of international strategy It was found that the use of international experience in the improvement of

international economic activity is a key success factor. It is important for NIO to implement proven practices, adapting them to the specifics of the market, which will reduce risks and increase the efficiency of export operations.

7. Analyzing the solution to competition problems, we identified the problems facing NIO in the international market, demonstrating the need for a detailed analysis of the competitive environment. The development of anti-crisis strategies and adaptation of the product portfolio can significantly reduce the impact of competitive pressure.

8. Today, one of the most important success factors is flexibility in operations, which is an important factor in a changing global environment. NIO must rely on quick decisions and adaptation in response to changing consumer preferences and technological news, thus ensuring stability and competitiveness.

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