

ANALYSIS OF INTERNATIONALIZATION STRATEGY PROBLEMS AND COUNTERMEASURES OF NIO AUTOMOBILE

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Abstract: This paper first expounds the industrial development situation of new energy vehicles under the domestic and international political and economic background, and then introduces the development process of NIO Automobile. Secondly, it focuses on the analysis of NIO's current development status and internationalization strategy, deeply understands NIO's market opportunities in the international environment, studies NIO's international strategy, finds out NIO's problems in internationalization strategy, analyzes and discusses these problems, and puts forward feasible solutions. Finally, the article summarizes.

Keywords: NIO automobile; Internationalization strategy; Opportunity; Challenge

1. INTRODUCTION

With the continuous development and application of new energy vehicles, enterprises are increasingly scrambling for the new energy vehicle market. Exploring the positioning, development space and internationalization strategy of new energy vehicles is an important direction for the current reopening of the international market.

2. INDUSTRY DEVELOPMENT SITUATION OF NEW ENERGY VEHICLES

2.1 Overview of the Development of China's New Energy Automobile Industry

Under the domestic and international political environment, affected by the epidemic, the entire world economy is in a sluggish state, and my country's economic and social development is facing new difficulties and challenges. However, in the context of the cross-integration of information technology, biotechnology, new energy technology, and new material technology worldwide, a new round of technological revolution and industrial transformation momentum has been gradually released, which has really opened up a new world for my country's productivity progress. In this context, our country proposes to give full play to the advantages of large-scale markets and the potential of domestic demand, gradually form a new development pattern with the domestic cycle as the main body and the domestic and international dual cycles to promote each other, and cultivate new advantages for my country to participate in international cooperation and competition under the new situation[1-2]. At the same time, the executive meeting of the State Council in 2020 passed the "New Energy Vehicle Industry Development Plan (2022035)", which clarified the development direction of new energy vehicles in the next 15 years. According to the "Plan", by 2025, the competitiveness of the new energy vehicle market will be significantly improved, major breakthroughs will be made in key technologies such as power batteries, driving power, and operating systems, and new energy vehicle sales will account for about 25%. The sales accounted for 30%, and the highly autonomous driving intelligent networked vehicles realized the application in limited areas and specific scenarios (See Figure 1, Table 1).

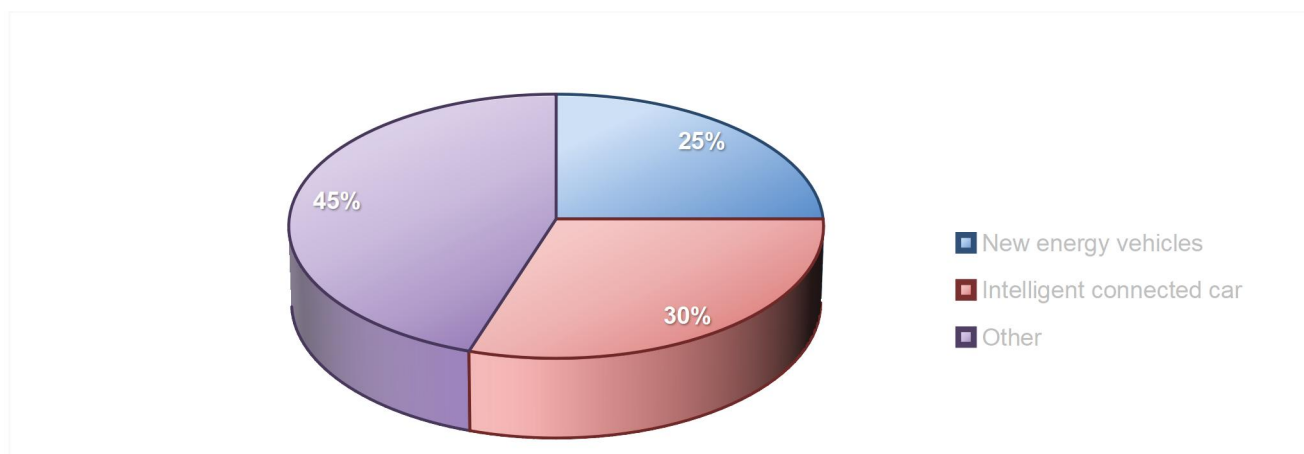


Figure 1 Expected New Energy Vehicle Sales in 2025
Data source: "New Energy Vehicle Industry Development Plan (2022035)"

Table 1 Sales completion of some new energy vehicles in 2022

Car companies	Sales in 2022 (units)	Sales volume in 2021 (units)	2022 sales target (10,000 vehicles)	Completion rate
Li Auto Inc.	133246	90491	17	78.38%
NIO	122486	91429	15	81.66%
Xpeng Inc	120757	98155	25	48.30%
HOZON	152073	69674	15	101.38%

Data source: http://lw.news.cn/2023-01/16/c_1310689176.htm**Table 2** Sales Volume of NIO Models

Project	Cumulative in 2022	January 2023	February 2023	March 2023
NIO	122485	8506	12157	10378
ES8	14380	178	395	346
ES6	42012	872	2848	853
ET7	23046	521	649	738
EC6	17076	179	852	734
ET5	11813	5795	6471	6437
ES7	14158	961	942	1267
EC7	0	0	0	3
Share of brands sold in China	0.44%	0.67%	0.89%	0.66%
Rank among all brands	44	30	23	32

Data source: China General Administration of Customs, Qianzhan Industry Research Institute

Table 3 NIO's overseas selling prices

	ES8	ET7 75kWh	ET7 100kWh	EL7 75kWh	EL7 100kWh	ET5 75kWh	ET5 100kWh
Price in Norway	380,000-444,000 yuan	-	-	-	-	-	-
Germany	-	602,300	668,500	631,700	697,900	455,100	521,300

Data source: <https://www.pcauto.com.cn/news/3404/34047497.html>

The inability of enterprises to achieve sales targets is affected by multiple factors. The bad market is indeed one of the reasons, but it is also a bad market. The completion rate of others is better than yours. For example, Neza, whose sales volume will exceed 150,000 in 2022, a year-on-year increase of 118%, exceeding the sales target. This is the problem. The reason is that they are better than you in terms of market forecast, own ability, competitiveness judgment and marketing. In short, it is the problem of the enterprise itself (See Table 2, Table 3).

2.2 Analysis of Import and Export of China's New Energy Vehicles

Based on the above background, under the background of the dual-cycle development strategy, the most important thing is to ensure the efficient and stable operation of the domestic supply chain and industrial chain of new energy vehicles. The industrial chain is intertwined, and if one link is blocked, upstream and downstream enterprises cannot operate. As the new energy automobile industry, it is necessary to speed up the improvement of the system and mechanism for the safe development of the enterprise supply chain, deploy the innovation chain around the industry chain, deploy the industry chain around the innovation chain, improve the modernization level of the industry chain and supply chain, vigorously promote technological innovation, and accelerate key core Technological research to create new advantages for future development[3-5]. In the first three quarters of 2022, domestic auto companies exported 2.117 million vehicles, which has exceeded the annual export volume of 2021. Among them, 389,000 new energy vehicles were exported, a year-on-year increase of more than double. In the context of the slowdown in the growth rate of global trade,

the substantial growth in the export of my country's automobiles, especially new energy vehicles, reflects that my country's industrial structure transformation and upgrading have achieved remarkable results, and major breakthroughs have been made in emerging industries.

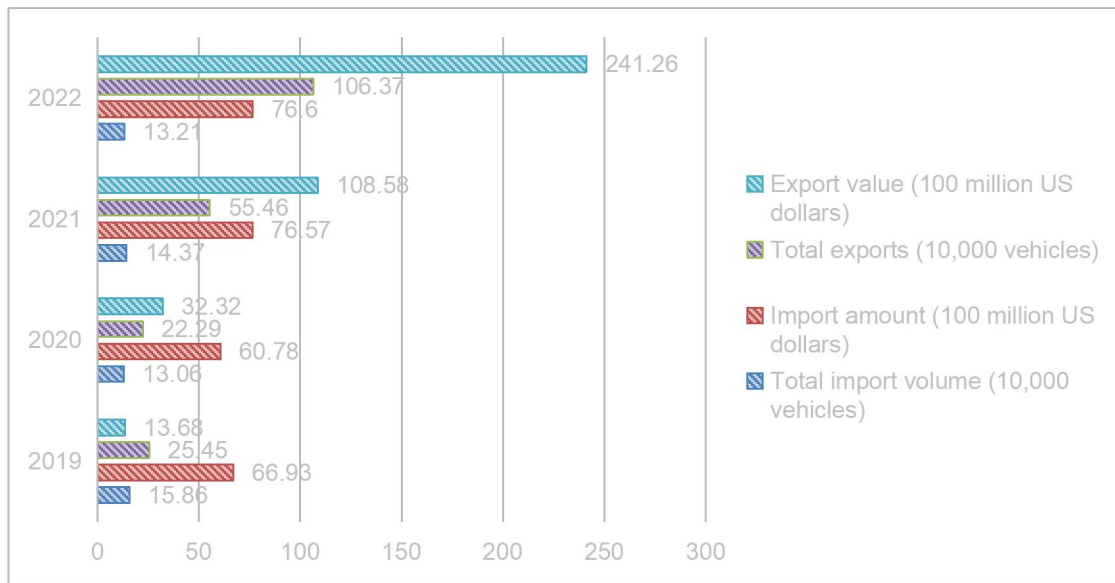


Figure 2 Import and export trade of new energy vehicles in China from 2019 to 2022
Data source: China General Administration of Customs, Qianzhan Industry Research Institute

The "Statistical Bulletin of the People's Republic of China on National Economic and Social Development in 2022" shows that in 2022, China's new energy vehicle production will be 7.003 million units, an increase of 90.5% over the previous year. From Figure 2, we can also clearly conclude that 2019- In 2022, the import and export volume of new energy vehicles will show an overall upward trend[6-10]. It is not difficult to conclude that workshops in various countries will continue to pay attention to the development and application of new energy in the international environment, and gradually apply new energy to car companies themselves. Increase research and development efforts and investment year by year, expand the output ratio, and realize the development of new energy fields under the new economic environment.

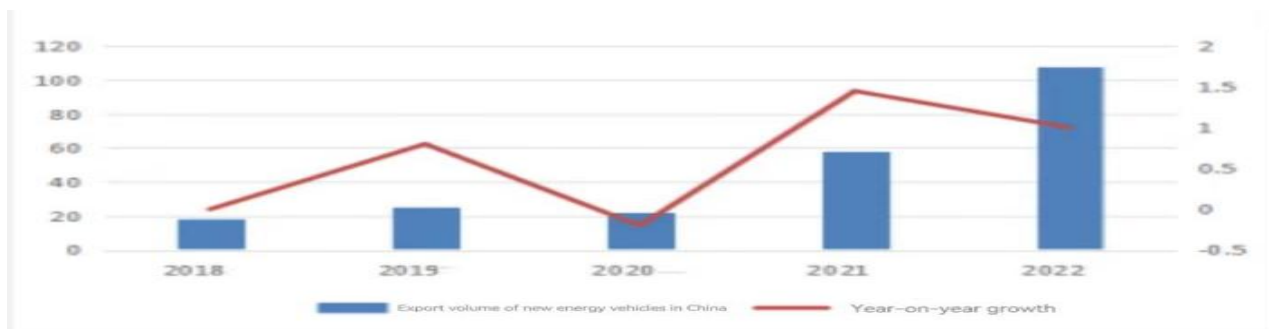


Figure 3 2018-2020 China's New Energy Vehicle industry Export Quantity Trend Chart(unit:10,000 vehicles,%)
Data source: China General Administration of Customs, Qianzhan Industry Research Institute

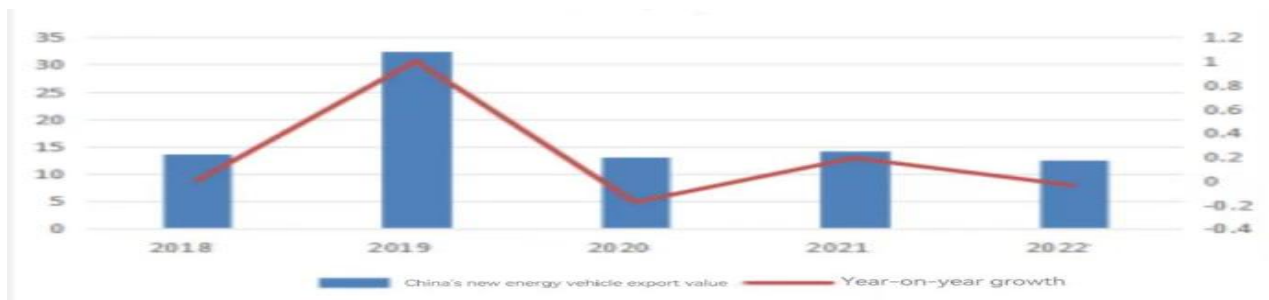


Figure 4 2018-2020 China's New Energy Vehicle industry Import Volume Trend Chart(unit:10,000 vehicles,%)
Data source: China General Administration of Customs, Qianzhan Industry Research Institute

According to Figure 3 and Figure 4, the import and export volume of China's new energy vehicles from 2018 to 2022 by the General Administration of Customs of the People's Republic of China shows a significant growth trend. This is a

historical opportunity for domestic new energy vehicle companies. In the relatively flat field of new energy vehicles, all kinds of domestic car companies should seize the opportunity to increase investment in the development of new energy and make Chinese brands famous in the world[11-13]. By comparing Figure 3 with Figure 4, we can clearly conclude that from 2018 to 2022, China's total export volume is greater than its total import volume, and it is currently showing a leading trend in the domestic new energy vehicle field. As required by the European carbon neutral policy, the domestic new energy field should grasp the quality control issue, and increase research and development efforts while reducing production costs.

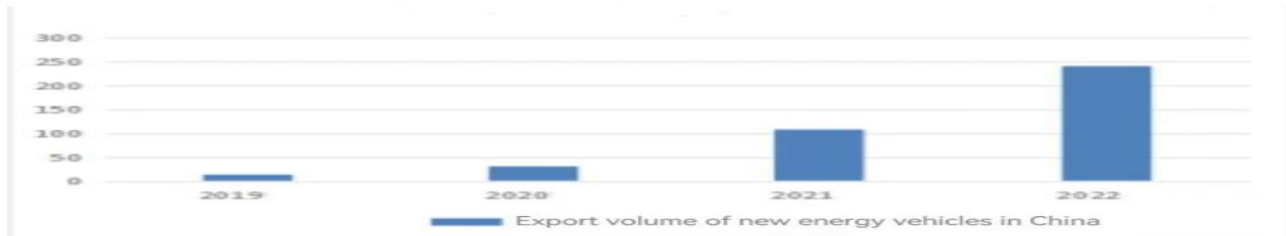


Figure 5 2018-2022 China's new energy vehicle industry export volume trend chart(unit:10,000 vehicles,%)
Data source: China General Administration of Customs, Qianzhan Industry Research Institute

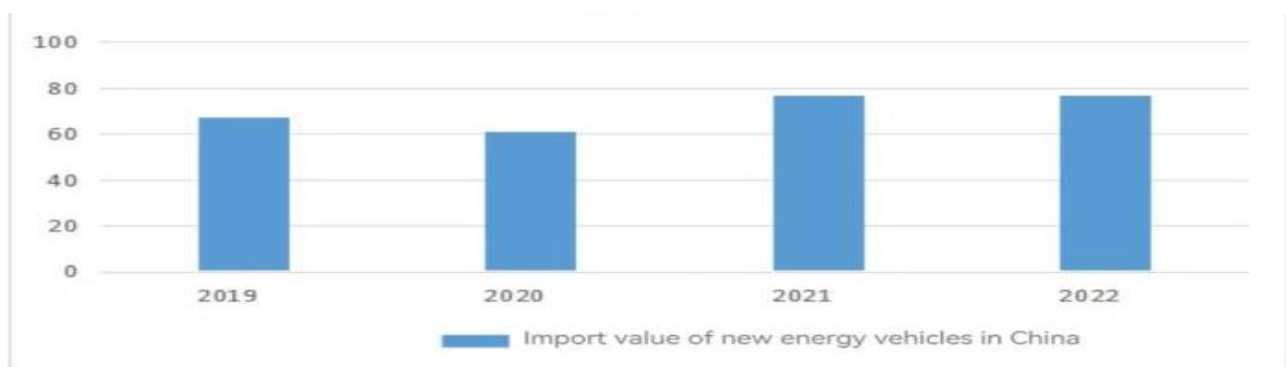


Figure 6 Import value of China's new energy vehicle industry from 2018 to 2022 Trend chart(unit:usd 100 million)
Data source: China General Administration of Customs, Qianzhan Industry Research Institute

Through the comparison of Figure 5 and Figure 6, we can conclude that while China's export volume is increasing sharply, China's export value will also reach a peak in 2022, which is four times as much as the import value. It has brought unprecedented growth value to China's new energy field. For the economic environment under the new situation: the new era economy under the development trend of the 21st century is a low-carbon economy, through a series of operations to reduce the use of petroleum and other substances, reduce carbon emissions, and finally realize the joint development of global economic development and environmental protection. . At present, the international sales of new energy vehicles are gradually expanding. In order to consolidate the achievements of ecological civilization construction and achieve the goal of "double carbon", my country gradually attaches importance to the development of new energy vehicles and supports them in practical actions. Automobile released targeted documents to create momentum for the development of new energy vehicles and future trends. The national document also pointed out that it is hoped that in 2025, China's new energy vehicles will occupy a share of 3,000,000 vehicles in the national auto market.

3. THE DEVELOPMENT HISTORY AND DEVELOPMENT STATUS OF NIO

3.1 Development Path

From the perspective of development prospects, if fuel-powered vehicles still want to stand out in the high-end market, the transformation to pure electric vehicles has become an inevitable trend. But as far as the current situation is concerned, further improvement in strategy is still needed[14]. For "Nio", which is based in the pure electric high-end market, if it wants to gain a larger market share in the fuel vehicle market, it needs to continue to work hard on products, engineering technology, and after-sales service. In the electricity market, which will gradually enter people's field of vision in 2022, NIO has already been planning for a long time, and has successfully created the "NIO" brand label. Its long-term vision strategy really shows it the "top brand" in the high-end market. " position, better planning the direction to be built in the future one step in advance. What's more worth mentioning is that NIO will take the strategic layout in the electricity market as a guideline, and continue to optimize and improve on the basis of ensuring the original, which will also make a great contribution to NIO's entry into the luxury market. Good foreshadowing. There are decades of gap between China's traditional automobiles and the world's advanced level, but in the field of electric vehicles, it is almost at the same starting line as the world. Therefore, this will be a good opportunity for NIO to expand its advantages on the same starting line.

In recent years, more and more auto brands have begun to focus on globalization. For example, Lincoln in the United States has placed more emphasis on "local culture" in its development in the Chinese market. Advantages, the brand spirit is highly compatible with the traditional Chinese culture rooted in the hearts of Chinese consumers; Japan's Toyota, facing the double carbon target and the growing demand of Chinese consumers for new energy products, is actively deploying new energy vehicles and formulating a two-line The parallel new energy strategy will continue to enrich the product matrix, continue to practice the corporate philosophy of the Toyota brand of environmentally friendly travel, and at the same time continue to introduce more new zero-emission products. As for the NIO series, by reformulating the strategy and opening up the market, the target is placed on the European plate. At the event site held at NIO Berlin 2022, NIO announced that its products, comprehensive system services and innovative business models will gradually be launched in the four European markets of Germany, the Netherlands, Sweden and Denmark. This is another global layout of NIO after going overseas for the first time in May 2021-this time NIO focused its globalization strategy on the German market.

Based on this, NIO focuses on launching the "subscription model" of "rent only, not sell". At present, NIO has signed a contract with Lease Plan, the largest car rental platform in Europe, and launched a subscription rental business at the same time[15-16]. The subscription model is actually a common consumption model in the European auto market. However, the three models currently launched by NIO in Germany, the Netherlands, Denmark and Sweden have no purchase option and only provide a subscription model. According to data surveys, Europe is currently the most likely to become the largest subscription market. Against this huge market background, brands such as Volkswagen, Polestar, and Lynk & Co have all launched "subscription models" in the European market. Compared with the monthly rent of electric vehicles such as Tesla Model Y and Mercedes-Benz EQB, NIO has a clear advantage. The monthly rental price of NIO remains comparable to that of Mercedes-Benz and Porsche. In fact, it revolves around bringing the product back to the essence of price. The operation difficulty of subscription service is much higher than that of vehicle buyout, so in the future, under the premise of opening up subscription service, it will be very simple to increase the whole vehicle buyout service; but from the latter to the former, the difficulty is completely different. It is not only in line with the consumption concept of the European auto market, but also the best choice for NIO at the moment. The subscription model is a better way for foreign users to learn about NIO. Consumers can try to subscribe first. If they feel better, they can choose long-term subscription or subsequent open purchase. This is a model for word-of-mouth accumulation.

3.2 Development Status

At present, the world is facing an increasing shortage of oil, and the development of new energy will gradually become a major issue in the future to break through. The exploration of new energy sources will largely affect the development prospects of the entire new energy vehicles. At present, all major car companies have captured the huge potential in the field of new energy research and have expanded their research investment. Coupled with the international environment, with the development of the global economy and the growth of the population base, people's development and utilization of energy has intensified, resulting in the production of various harmful gases, which in turn leads to global warming. Based on this phenomenon, the "low carbon" concept advocated by various scholars has gradually become a new era concept of current economic operation. "New energy" was born from this. While still promoting the growth of the world economy, it limits the development of energy from all walks of life to the greatest extent. In today's era, countries around the world include the concept of new energy in their economic development concepts, and for the automotive industry, new energy vehicles will become a new technology that countries and even the world are eager to break through. At the same time, this is also an important measure to achieve the "carbon neutrality" goals of various countries and the European carbon emission limit.

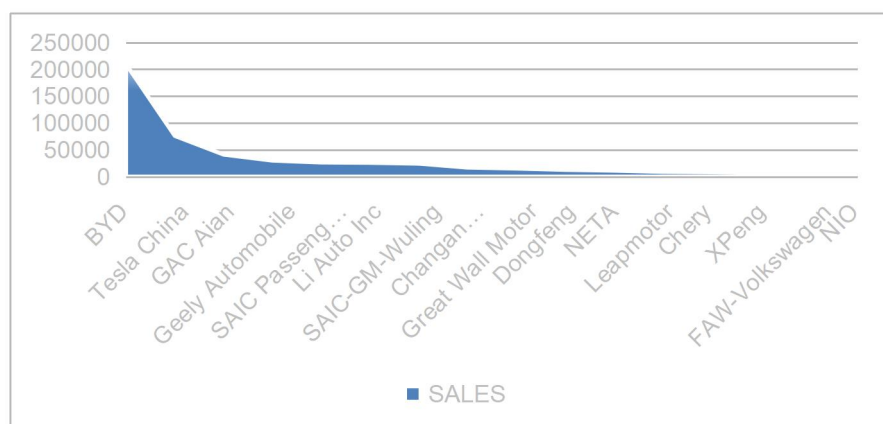


Figure 7 Wholesale sales of new energy passenger vehicles in April 2023
Data source: 2023 PCA wholesale volume announcement (including PCA estimates)

From Figure 7, it can be easily compared that in the field of new energy sales, BYD is firmly in the leading position, while NIO, as a "new star", still has a lot of room for development. As for NIO In terms of development model: NIO

intends to provide customers with high-performance smart electric vehicles and the ultimate user experience by integrating the ultimate user experience into all aspects of corporate strategy, operations, technology, products, services, and business models, so that users can enjoy beyond expectations The whole process of pleasant experience. Going to enter the new energy vehicle market with high-end products, establish a high-end brand image, and gradually penetrate into popular products to expand the market share in the field of new energy vehicles. Facing the global layout of NIO: NIO Lai will set up its global headquarters in Shanghai and its Chinese headquarters in Hefei. It has established autonomous driving R&D centers, forward-looking concept R&D centers, modeling design centers and Norwegian branches in San Jose, Oxford, Munich and Oslo.

Its vision and mission: Blue Sky Coming, NIO has come, is our vision for a bright future and a clear sky, and it is also our original intention since the company was founded. By providing high-quality smart electric vehicles, we will become the best user experience company and create a pleasant lifestyle for users. Relying on its original aspirations that it has always adhered to, even if it encountered bottlenecks in the growth process, NIO did not give up lightly. It continued to raise funds, obtained multi-party capital investment, and completed the US stock + Hefei state-owned assets + Hong Kong stock listing.

NIO builds leading system competitiveness around cars, lifestyles beyond cars, digital experience and full life cycle services. Through the continuous improvement of brand power + product power + matrix, the sales volume continues to increase, and the intention is to gain a firm foothold in the luxury market above 350,000 yuan.

4. MARKET OPPORTUNITIES FOR NIO IN THE INTERNATIONAL ENVIRONMENT

4.1 Enter the European Market

From the perspective of global economic development trends, the best time for NIO to enter the European market is not the best. However, from the perspective of the development trend of global new energy vehicles, the development environment of new energy vehicles in Europe, and the upward dimension of Chinese auto brands, it is not to be missed. One of the reasons is that Europe is the second largest new energy vehicle market in the world. According to IHS data, from January to August 2022, the world's sales of new energy passenger vehicles reached 7.83 million, of which China's new energy passenger vehicles accounted for 38.6%; Europe was the second largest market with a market share of 27.2% (See Figure 8).

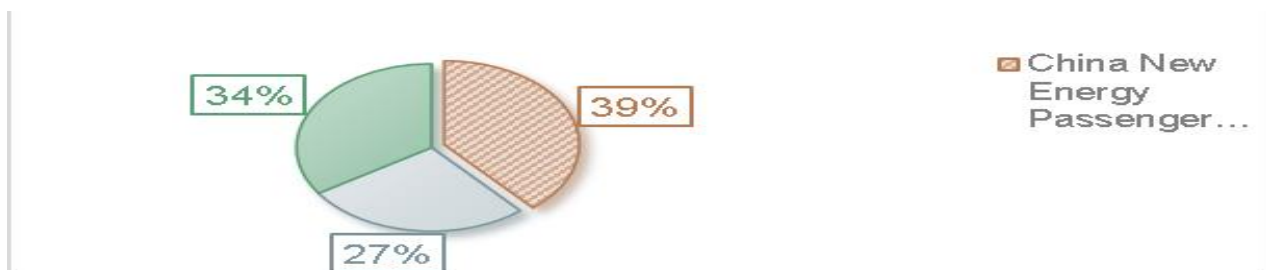


Figure 8 Market share of new energy vehicles from January to August 2022
Data source: IHS data

Moreover, the penetration rate of new energy vehicles in five countries including Germany, the Netherlands, Denmark, Sweden, and Norway is growing rapidly. Last year, the penetration rate of new energy vehicles in Norway was as high as 86.2%, ranking first in the world; Germany, the largest auto market in Europe, reached 26%, the Netherlands 30%, Sweden 45%, and Denmark 35%.

The second reason is that at present, China's overseas auto exports have surpassed Germany, becoming the second largest country in the world, and even surpassing the number one Japan. At the same time, China is realizing its transformation from a big auto country to a powerful auto country. The development of new energy vehicles is reshaping the global auto landscape. Chinese brands have more opportunities for mid-to-high-end new energy vehicles.

4.2 A Policy Different from the European Leasing Model

Under the background of Euro 7 emission and international requirements for carbon neutrality, NIO entered the European market and skillfully seized the market opportunity. Coupled with its own distinguishing characteristics from the existing European market leasing model, it flexibly highlights its own advantages.

Firstly, NIO does not use third-party subscription companies, third-party financial companies or dealers, but provides services directly to customers as a car company. This means that NIO can directly create value around usage rights and subscriptions, improve efficiency, and provide users with a better experience.

Second, users who adopt the subscription model can choose different configurations, including different battery packs. In addition to using NIO vehicles, you can also get services including full insurance, maintenance, battery replacement, flexible battery upgrade, and winter tire replacement. And these users can also participate in various user activities organized by NIO, use NIO Center, etc.

5. NIO'S INTERNATIONAL STRATEGY

5.1 External Environment Analysis

In terms of political policies: With regard to overseas markets' support for NIO's new energy vehicles, in recent years, under the global consensus on carbon neutrality, the subsidy policies and emission regulations of European governments have promoted the continuous growth of sales demand for new energy vehicles. Therefore, Europe has become a strategic commanding height for Chinese new energy vehicle manufacturers to deploy in overseas markets. After the Russo-Ukrainian War and the bombing of the Nord Stream pipeline, the European auto market was greatly impacted by energy supply, which had a greater impact on the production and supply of automobiles, and imported automobiles were needed to alleviate it. In addition, the current EU plan to stop the sale of new fuel vehicles in 2035 has further promoted the development of new energy vehicles are very conducive to NIO's entry into the European and even world auto markets.

In July 2022, Peter Sialto, Minister of Foreign Affairs and Economic Affairs of Hungary, and Zhang Hui, Vice President of NIO Europe, jointly announced in Budapest, the capital of Hungary, that the "NIO Energy European Factory" will be put into operation in September. Its main business includes the manufacture and after-sales service of NIO battery swapping stations, European power-up business training, and research and development of power-up products. This is NIO's first overseas factory, and it is also the European manufacturing center, service center and R&D center for NIO's power-added products. Improve the overall energy distribution of NIO in the European market and its current after-sales efficiency, so as to attract more customer experience value in the European market. In October 2022, according to news from Uzbekistan, President Mirziyoyev of Uzbekistan listened to a report on the development of projects in the field of electric vehicles and the expansion of electric vehicle services on October 10, and made relevant instructions. In this regard, the Uzbekistan President's Press Office stated that the government is studying relevant measures, and it is expected to provide government discounts for electric vehicle purchase loans, so as to reduce the interest rate of car loans and encourage the development of new energy vehicles.

In March 2023, according to Thailand's "China Daily" report, the Thai government's tax reduction measures to stimulate the consumption of new energy vehicles such as EVs have been discussed. According to sources from the Ministry of Finance, the rate of profit sharing is as high as 500,000 to 800,000 baht, and the measure will use 40 billion baht in government fiscal revenues. Whether it is Chinese, Japanese, or European and American cars, it will benefit.

By February 2023, when the epidemic is unblocked, Chen Xiang, Minister of the Economic and Commercial Office of the Chinese Embassy in France, also met with Zhang Hui, Vice President of NIO Europe, and Jin Ge, Assistant Vice President of Strategic New Business, to discuss the business development of NIO in France and Europe communicated. This also shows that under the attention of the Economic and Commercial Office of the European Embassy, NIO will continue to advance the investment process.

Based on the introduction of NIO's new energy policies at home and abroad, coupled with the inevitable trend of domestic and foreign fuel vehicles transforming into pure electric vehicles in the high-end market, NIO has independently developed batteries internally, invested in overseas market factory construction and With the subscription or leasing model that is highly recommended, NIO will gain a firm foothold in the auto market to a great extent.

Economically: In the European sector, the conflict between Russia and Ukraine will directly cause a substantial increase in electricity prices in the European market, which to a certain extent will block the development of new energy vehicles in the European market. Rising prices have also brought about an increase in production costs. Coupled with various factors such as the epidemic and core shortages, the supply of European automakers has declined to a certain extent. As a result, the supply of automobiles at home and abroad has declined, thus providing a very good market for imported cars. This is a great opportunity to alleviate the phenomenon of "car fever" in Europe.

Social and cultural: In January 2023, the Icelandic government has taken targeted measures to reduce air pollution, and the proportion of new energy vehicles in Iceland ranks second in the world. The local governments will gradually generate a consensus on the application of new energy vehicles, form a consistent national value, and increase the resonance of environmental protection issues.

Technically: China's auto companies are facing stagnation due to multiple unfavorable factors such as the domestic epidemic situation has not been completely controlled, and the price of raw materials for film production has risen due to the shortage of chips and chip shortages.

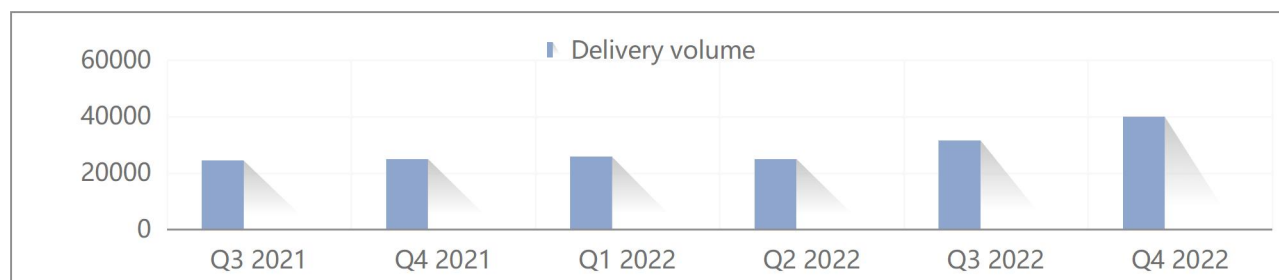


Figure 9 Quarterly transaction volume in 2022
Data source: NIO 2022 quarterly performance report

However, in the face of such a situation, as shown in Figure 9, NIO still achieved an increase in the number of transactions in the third and fourth quarters of 2022, which directly reflects the strength of its supply chain vertical integration capabilities. To completely eliminate the impact of the epidemic and achieve full-year profitability, NIO must make manufacturing adjustments in terms of production capacity and design its own solutions to provide batteries and chips. In the face of providing power batteries, NIO has invested a lot of manpower and material resources, and invested a lot of money in research and development. As a result, NIO Battery Technology (Anhui) Co., Ltd. was established and landed. On the technical level, NIO has set up a battery R&D team to deeply participate in the research and development of battery materials, battery cells and package design, battery management systems, manufacturing processes, etc., to comprehensively establish and enhance battery system R&D and industrialization capabilities, and Published the patent of "columnar battery". Under the premise of having funds, patents, vertical integration capabilities, core R&D technologies, and correct strategies, NIO will shine in the new energy vehicle industry just around the corner. In the European sector: According to the Swedish "Industry Today" report in 2022, Sweden's SKF will expand its strategic cooperation with Nio. This means that SKF will become Nio's preferred supplier of ceramic ball bearings and will provide a wide range of technical expertise to support Nio's product development and global expansion plans. The introduction of this policy by SKF means that with the technical support of fixed bearing suppliers and the promotion of overseas stable suppliers, NIO will accelerate its efforts in the face of new energy series. To sum up, many countries support the development of new energy vehicles, and the prospects are very promising. With the change of living standards and consumption concepts in various countries, the demand for energy-saving and environmental protection is also increasing, thus promoting the development of new energy vehicles to a large extent.

5.2 Industrial Environment Analysis

Competition among existing competitors:

At the beginning of 2023, Tesla, the "giant" of new energy vehicles, announced a price cut. After entering 2023, under the background of the withdrawal of the new energy vehicle subsidy policy, unlike Tesla's price cuts to stimulate purchases to a certain extent, Volkswagen, BMW and other joint venture car companies have increased their sales volume under a certain percentage. The sales price of some of its new energy vehicles. Tesla's choice to cut prices at this point in time will put pressure on NIO to some extent. NIO's ET5 model is included in a large category with Tesla's Model 3 and Model Y domestic models. And Tesla's first price reduction will bring its new energy vehicles, which belong to the same category, into a fierce stalemate. From the perspective of short-term goals, although it seems that some consumers have obtained a certain price preference, when looking at the development of the entire industry, it is undoubtedly a big deal for some car companies with small profit margins. A devastating blow, and thus in the face of the entire new energy vehicle development, it will even pull the stagnation. In the case of NIO facing deep losses, it will undoubtedly pose a greater threat. For other new energy vehicles, competitors Xiaopeng and Wenjie chose to quickly follow up on price cuts, including BYD, Jikrypton, Dongfeng Citroen, GAC Toyota, and more than 30 car companies have been involved in price cuts. To sum up, the entire new energy vehicle industry is facing the withdrawal of subsidies, which means that the new energy vehicle industry is developing towards maturity. Driven by policies, it is gradually integrated into people's daily life and has begun to change to market-driven. The mainstream fuel vehicles in the market are competing face to face. As a result, NIO and other new energy vehicles will enter a new round of survival of the fittest. The competition for NIO will be even greater, which will undoubtedly make things worse for NIO, which is already losing money. However, if you don't want to lose money and don't follow suit and lower prices, you will lose market share.

Bargaining Power of Suppliers:

On the supply side: The main challenge is chip supply. NIO needs roughly 1,000 chips for each car, and 10% of the chips will face tight supply from time to time, mainly some basic chips. For the price increase of battery raw materials such as lithium carbonate, the upstream of the industrial chain such as lithium mines and battery suppliers needs to consider the long-term interests of the entire industry to reduce the phenomenon of artificially rising prices.

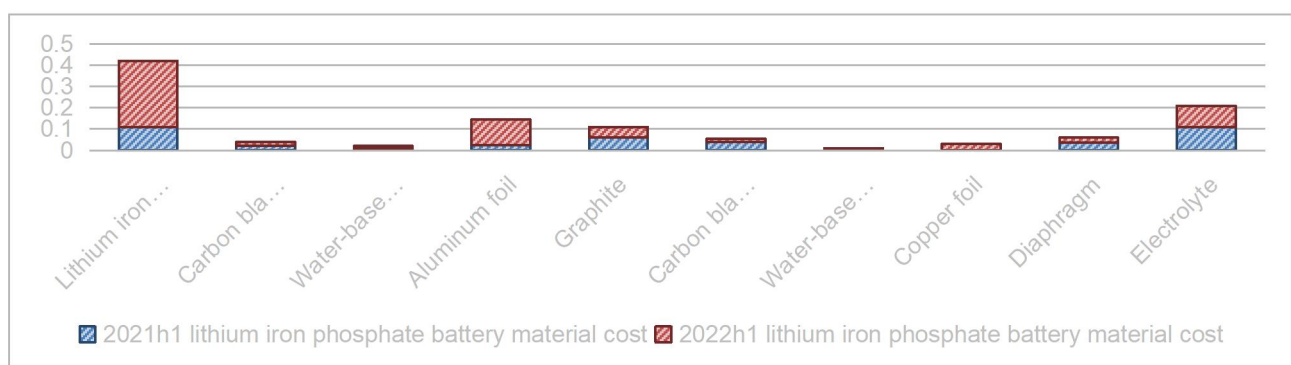


Figure 10 Cost of battery materials in 2022

Data source: Wanfang, wind, public information collation, Zhesang Securities Research Institute

It can be concluded from Figure 10 that in 2022, due to the price increase of lithium iron phosphate, the price of the entire battery material will be on the rise. Fortunately, since December last year, the price of lithium carbonate has continued to fall. And, this trend continues.

Substitution ability of substitutes: In March 2023, NIO Automobile issued an announcement that the Hefei Jianghuai Automobile Factory will temporarily suspend production for 5 days from the 29th due to the lack of chips. It can be seen that NIO needs to find "replacement" capabilities not only in terms of chip quality, but also in terms of quantity.

Bargaining power of buyers:

The initial market growth period of new car manufacturers has gradually come to an end with the withdrawal of subsidies for new energy vehicles, and the final stage of competition based on strength is about to begin. During this critical period, many car companies have set higher sales targets. As the number base of the new energy vehicle industry in more developed markets is increasing, under the premise of sufficient supply of new energy vehicles, the influence of buyers on the new energy vehicle industry will gradually expand, which forces many new energy vehicles to Adopted a "low price, low cost, high quality service" marketing strategy of one high and two low. In fact, since Tesla started the price cut war, rivals Xiaopeng and Wenjie chose to quickly follow up on price cuts. Even in response to the withdrawal of the new energy subsidy policy, foreign car companies such as Mercedes-Benz also chose to cut prices in order to increase market share. . This has also led to the entire new energy vehicle industry being swept away by price cuts since 2023, and a price war has begun[15]. Many car companies have participated in price reduction promotions. Therefore, it can be concluded that currently my country's NIO car companies are affected by the bargaining power of buyers, and under the guidance of their continuous price cuts, their market share will gradually favor new energy car companies with lower prices. In front of enterprises, they can only be forced to cut prices to cater to market trends.

Ability for potential entrants to enter:

Compared with traditional car companies, new energy vehicles are an emerging trend, but high cost and high initial investment are the main constraints for newcomers in the industry. This kind of restriction threshold should have attracted more attention, and in a certain period of time, it should even attract the necessary attention and strengthen it. While vigorously promoting new energy vehicles in the European market, introducing various car purchase subsidy policies, and gradually expanding the development of the new energy industry, Chinese manufacturers believe that as Europe tries to control the rapid growth of the new energy market and its car companies themselves are relatively slow China's transformation has given Chinese car companies a chance to enter the European market during the window period. Then during this window period, NIO should increase investment in its own research and development technology in a timely manner, and take defensive measures against potential entrants during the window period.

5.3 About NIO's SWOT Analysis

<div style="text-align: center;"> <p>Internal factors</p> <hr/> <p>External factors</p> </div>	Strength		Weakness		
	Key internal factors	Weighted score	Key internal factors	Weighted score	
	1. Technology: With long-term R&D strategic investment, NIO has established a complete smart electric vehicle R&D system, and has the ability to develop multiple vehicle models in parallel.	0.3	1. Insufficient supply: Each car needs about 1,000 chips, and 10% of the chips will face tight supply from time to time.	0.4	
	2. R&D intensity: Despite the high losses, <u>Weilai</u> still maintains high-intensity R&D investment, mainly in the fields of batteries, chips, new platforms and new models.	0.32	2. Increased cost: The cost of lithium carbonate batteries has risen, reducing the profit margins of car companies, and has not yet achieved profitability	0.32	
	3. Global layout to improve supply performance	0.22	3. The share is small: the price of electric vehicles is relatively high, and <u>Weilai</u> is positioned as a high-end brand, and the product price limits its market share.	0.38	
	4. Quality: front and rear dual motor combination, excellent technical quality, and extensive industrial chain layout	0.32			
5. <u>Famousness</u> : <u>Famousness</u> in new energy vehicles	0.18				
6. Service integration: after-sales supporting services	0.2				
Opportunities		SO		WO	
Key external factors	Weighted score				

<p>1. Domestic and international situation support: Uzbekistan, Iceland, Sweden and other countries study relevant measures, and provide government discounts for electric vehicle purchase loans, so as to reduce the interest rate of car loans and encourage the development of new energy vehicles; the background of the double carbon strategy and the wave of intelligence : The Russo-Ukraine War and the Nord Stream Pipeline incident promoted the development of new energy vehicles</p> <p>2. International layout: NIO plans to enter overseas markets, and the European market is expected to become its key expansion area, and is expected to further expand its market share.</p> <p>3. Geographical opportunities: NIO Energy' s European factories invested and constructed in Pest, Hungary, etc., will improve the efficiency of NIO' s energy layout and services in the European market</p> <p>4. Market potential: With the improvement of environmental protection awareness and the acceleration of urbanization, the market demand for electric vehicles is gradually increasing, which is expected to bring more market growth space for NIO.</p>	<p>0.32</p> <p>0.22</p> <p>0.2</p> <p>0.18</p>	<p>1. Combining Weilai' s own technology, investment in research and development and the market growth space of new energy vehicles, the technology has been continuously improved in the market, reaching a strong new energy level, and grasping its growth space (S1, S2, S4, O4)</p> <p>2. Make use of the advantages of regional investment to gain popularity abroad, enhance the brand strength of Weilai, and enhance the layout advantages (S5, O3, O4)</p> <p>3. Through the use of international layout, strengthen the use of local geographical advantages, and quickly occupy market share (S3, O2, O4)</p> <p>4. Through service integration and regional opportunities, promote NIO' s system services locally and strengthen publicity, so that NIO can occupy a stable market share in investment and construction and expand its brand building (S6, O3, O4)</p>	<p>1. Improve the supply efficiency of NIO chips by utilizing the investment and construction of European factories and market potential (W1, O1, O3)</p> <p>2. Take advantage of the national new energy vehicle subsidies, take advantage of the opportunity to expand business coverage and improve innovation, thereby alleviating and increasing NIO' s market share (W3, O1)</p> <p>3. By entering overseas markets, regional opportunities, looking for alternative battery raw materials or increasing R&D investment, in order to alleviate the shrinking profit margins caused by rising battery costs (W1, O2, O3)</p>
Threats		ST	WT
Key external factors	Weighted score		
<p>1. Policy risk: With the withdrawal of state subsidies, the new energy vehicle industry will compete head-on with the mainstream traditional fuel vehicles in the market, and new energy vehicle companies will enter a new round of survival of the fittest</p> <p>2. Peer threats: Competitor Tesla is the first to announce a price cut, which will bring the new energy vehicle market into a stage of fierce competition in 2023. If it does not follow suit and cut prices, it will lose market share.</p> <p>3. Supply chain risk: Weilai car companies need a large number of batteries and other components for production, and supply chain problems may have an impact on their production and delivery capabilities.</p> <p>4. Threat of rising fuel costs: Nio' s electric vehicles require battery power, and rising electricity prices or rising fuel prices could adversely affect the company' s costs and margins.</p>	<p>0.2</p> <p>0.35</p> <p>0.4</p> <p>0.22</p>	<p>1. Through the advantages of R&D technology and global layout, integrate its own quality advantages, and improve the supply of industrial components, so as to reduce the supply chain risk of NIO (S1, S2, S3, S4, T3)</p> <p>2. Enjoy a series of life-long free power replacement rights through global layout and constantly adjusted service system, so as to deal with the market share reduction caused by competitor Tesla' s price reduction (S3, S6, T2)</p> <p>3. By making use of Weilai' s own continuously improved innovative technology, continuously optimized quality, and supporting after-sales services, it can achieve self-sufficiency in all aspects and reduce the impact of policy changes on the entire enterprise (S1, S2, S4, S6, T1)</p> <p>4. Through R&D investment in batteries, chips and other fields, propose multiple power supply schemes to reduce risks caused by rising electricity prices or fuel prices (S2, T4)</p>	<p>1. Reduce threats from peers by increasing market share (W3, T2)</p> <p>2. Reduce supply chain risks in a timely manner by strengthening the supply of raw materials such as chips, or safety stocks (W1, T3)</p>

Figure 11 NIO SWOT

SO strategy (growth strategy): Rely on internal advantages and take advantage of external opportunities. Relying on NIO's own technology, investment in research and development, and making good use of the market growth space of new energy vehicles, the technology is continuously improved in the market, reaching a strong new energy level, and grasping its growth space; making good use of regional investment advantages, Build up the reputation abroad, enhance the brand strength of NIO, and enhance the layout advantages; through the use of international layout, strengthen the use of local geographical advantages, and quickly occupy market share; The strength of publicity enables NIO to occupy a stable market share in investment and construction and expand its brand building (See Figure 11).

WO strategy (reversal strategy): take advantage of external opportunities and overcome internal weaknesses. By making use of the investment in European factories and market potential, we can overcome the weakness of the supply efficiency of NIO chips; we will take advantage of the national new energy vehicle subsidies, take advantage of opportunities to expand business coverage, and improve innovation, thereby alleviating and enhancing NIO's market Proportion; By taking advantage of entering overseas markets and geographical opportunities, looking for alternative battery raw materials or increasing R&D investment, the phenomenon of shrinking profit margins caused by rising battery costs can be alleviated.

ST strategy (diversification strategy): use internal advantages to avoid external threats. By utilizing the advantages of R&D technology and global layout, integrating its own quality advantages, and improving the supply of industrial components, in order to reduce the supply chain risk of NIO; 2. Using the global layout and continuously adjusted service system to enjoy a series of lifelong products Free battery replacement rights, in order to deal with the decrease

in market share caused by competitor Tesla's price cuts; Azimuth realizes self-sufficiency and reduces the impact of policy changes on the entire enterprise; 4. By utilizing NIO's internal research and development investment in batteries, chips and other fields, multiple power supply schemes are proposed to reduce the impact caused by rising electricity prices or fuel prices. risks of.

WT strategy (defensive strategy): reduce internal weaknesses and avoid external threats. Reduce the threat from peers by increasing market share; reduce supply chain risks in a timely manner by strengthening the supply of raw materials such as chips, and even reserve safety stocks in a timely manner.

The above four strategic combinations provide a feasible practical solution for NIO to encounter real life, and the formulation of its strategy needs to combine the current resources and capabilities of the company as a prerequisite requirement. Therefore, when choosing a business layer strategy, it must be based on the company's Make a more precise analysis of the internal and external environment, threats and opportunities we face.

5.4 The International Strategy Adopted by NIO

Table 4 Three strategic models

	Cost leadership strategy	Differentiation Strategy	Centralized strategy
Main reason for taking	Barrier to entry	Barrier to entry	Large companies ignore small market share
	Enhance bargaining power	Reduce customer sensitivity	Firms may lack the market resources to compete in the industry as a whole
	Reduce the threat of substitutes	Increased bargaining power	Targeting a specific market segment may be more effective than entering an entire industry market
	Stay ahead of the competition	Protection against the threat of substitutes	Effectively avoid market competition

Cost leadership strategy: Cost leadership strategy, also known as low-cost strategy, means that the enterprise minimizes product, service and management costs in terms of production and R&D, finance, marketing, human resources and other management by strengthening internal cost control, so that the enterprise Costs are significantly lower than the industry average or the level of major competitors, thereby becoming the cost leader's strategy in the industry (See Table 4).

Advantages: Resist confrontation by existing competitors; resist bargaining power of buyers; have more flexibility in the face of powerful suppliers raising the price of resources needed by the enterprise; form barriers to entry; compete with substitutes When , low-cost enterprises are relatively in a more favorable position

Risks: breakthroughs and changes in technology; imitation of competitors; changes in user preferences; emergence of differentiated competitors; influence of external environment.

Misunderstandings that are easy to cause: deviation from strategic goals; excessive emphasis on the cost of production activities; excessive focus on cost reduction; lack of internal coordination and optimization; neglect of innovation activities.

Table 5 Analysis of cost leadership strategy under the five forces model

Five forces	Cost leadership strategy	Analyze	In conclusion

Competition among existing competitors	Being at a low-cost advantage, effectively resisting competition and confrontation, and still has a profit advantage when reducing prices	NIO has not yet realized a profit model, and has invested heavily in research and development, so it does not have a low-cost advantage	Not available
Bargaining Power of Suppliers	Get out of trouble with greater flexibility	At present, the supply of chips and other internal factories is insufficient, and has not yet reached saturation	Not available
Ability to substitute	Compared with other companies, low cost has more advantages	NIO is branded as a high-end car, and its investment is large, which does not match the low cost	Not available
Bargaining power of buyers	Low cost, large profit margins, hold the initiative	R&D efforts are intensive, and there is not enough profit margin for bargaining	Not available
Ability of potential entrants to enter	Form production scale and cost advantages, form foreign trade barriers	NIO has high input costs and does not have the advantage of low-cost external trade barriers	Not available

Differentiation strategy: Differentiation strategy is a strategy for enterprises to obtain competitive advantages by providing customers with unique products or services that cannot be provided by other companies in the industry, and with unique characteristics (See Table 5).

Advantages: Establish customers' awareness and trust of products or services. When the price of products or services changes, customers will be less sensitive; customers' trust and loyalty to trademarks form a strong barrier to industry entry; differentiation The high marginal income generated by the strategy enhances the ability of the enterprise to bargain with suppliers; through the differentiation strategy, the enterprise makes the buyer lack of comparable product choices and reduces the price sensitivity of the buyer; the enterprise establishes the price through the differentiation strategy Build customer trust in the product so that alternative products cannot compete with it in performance.

Risks: non-true differentiation or inappropriate differentiation; exceeding the customer's tolerance; imitation and threats of competitors; the degree of differentiation of customer demand decreases.

Misunderstandings that are easy to cause: high premium; excessive differentiation; wrong positioning of target customers.

Table 6 Differentiation strategy analysis under the five forces model

Five forces	Differentiation Strategy	Analyze	In conclusion
Competition among existing competitors	Differentiated products, easy to build customer loyalty and form an external "isolation zone"	The high-end new energy manufacturing created by NIO forms a difference from other new energy car companies and is attractive	Available
Bargaining Power of Suppliers	High Marginal Benefits Enhance Enterprises' Bargaining Power	NIO's high marginal benefits increase its room for bargaining with suppliers	Available
Ability to substitute	Creates customer dependence on the product so that alternatives cannot match it	The new energy differentiation created by NIO Automobile Company reduces the dependence on substitutes	Available

Bargaining power of buyers	Enterprises can reduce customers' sensitivity to price through differentiated products, which cannot be compared with other products	Consumers are less sensitive to prices and are more likely to accept prices	Available
Ability of potential entrants to enter	Customers' dependence on products and brands forms external barriers and increases the difficulty of entrants	Customers' dependence on NIO's products and brands increases the difficulty for potential entrants to enter the market	Available

Concentration strategy: Concentration strategy refers to a strategy in which the business activities of an enterprise are concentrated on a specific buyer group, a certain part of the product line or a certain geographical market (See Table 6).

Advantages: It is convenient to use the power and resources of the entire enterprise to better serve a specific target; to focus on a specific part of the market, the company can better investigate and study the technology, market, customers and competition related to the product. The opponents and other aspects of the situation, so as to "know the enemy"; the strategic goals are concentrated and clear, the economic effect is easy to evaluate, and the strategic management process is also easy to control, thus bringing about the simplicity of management.

Risks: When customer preferences change, technology innovates or new substitutes appear, the demand for products or services in a specific market declines, and the company will be greatly impacted; competitors enter some of the markets selected by the company, And adopted a more centralized strategy than the enterprise

Product sales may become smaller, and product requirements are constantly updated, resulting in an increase in production costs, which weakens the cost advantage of enterprises adopting a centralized strategy

Misunderstandings that are easy to cause: mistakes in choosing market segments; it is easy to ignore competitors.

Table 7 Centralization Strategy Analysis under the Five Forces Model

Five forces	Centralization strategy	Analyze	In conclusion
Competition among existing competitors	Existing competitors cannot meet the differentiated supply and demand, so the enterprise itself has an advantage	The integration of services provided in the future enables it to have advantages that other car companies do not have, but it has not reversed its profit margins in terms of core strength	Not available
Bargaining Power of Suppliers	The quantity of goods purchased by the centralized strategy is low, and it is easy to form a small room for bargaining	Loss of bargaining power	Not available
Ability to substitute	Some core technologies are not easy to be replaced	Part of the core technology can become an advantage	Partially available
Bargaining power of buyers	Mass production, loss of bargaining power	Achieve mass production and lose the initiative to negotiate prices	Not available
Ability of potential entrants to enter	Enhancement of core technologies to defend against potential entrants	The strengthening of core technology can become an advantage	Partially available

Based on the above five-force model and strategic analysis, NIO adopts a differentiation strategy, which can take advantage of its differentiated product advantages to form a monopoly in a certain technology or service field within the car company, and consolidate its position in the development of new energy (See Table 7).

6. PROBLEMS AND COUNTERMEASURES NIO ENCOUNTERED IN INTERNATIONALIZATION STRATEGY

6.1 Price Reduction

In the face of the new energy giant Tesla's sharp price cuts, traditional car companies such as Mercedes-Benz and BMW have successively launched new energy models. This kind of brand itself occupies the image of high-end car companies in the hearts of consumers. New energy vehicles have a more prominent impact. Tesla has recently seen multiple price cuts, which is a cost pricing mechanism, while NIO relies on the advantages of products and services.

Countermeasures: NIO is different from Tesla. NIO does not intend to make electric vehicles affordable for everyone. On the contrary, it provides high-performance smart electric vehicles, which means that NIO will stick to the route of high-end electric vehicles. Therefore, while maintaining the policy of adhering to high-end electric vehicles, NIO must strengthen the advantages of highlighting its products and services. Further strengthen the innovation capability of its industrial chain and supply chain. In contrast to other automakers who use price cuts to seize market share, NIO should strengthen the development of lithium resources to a greater extent and promote the recycling of power batteries.

6.2 The Pressure of Competition in Foreign Markets is High

Most Europeans are pragmatists. If Chinese brands want to gain a firm foothold in the European market, they need time and effort.

Countermeasures: During this period of time, enterprises should not try to achieve success overnight, but should have enough patience and determination to respond to the different needs of consumers in different markets, make timely feedback and adjust corresponding countermeasures.

Just like when Hyundai, Kia and other brands entered Europe, they really gained a foothold in the European market after more than ten years of continuous losses. It can be concluded that Chinese car companies that want to enter the European market need to take a long-term view and cannot care about Due to temporary gains and losses, there is a credit crisis caused by the lack of protection of user rights and interests.

6.3 Supply Chain Shortage

The problem of core shortage is prominent. In 2022, NIO's partner revealed that in July ET7 was short of production of thousands of vehicles due to insufficient supply of die-casting parts; The volume dropped to more than 5,000 vehicles. In the first half of 2023, due to the impact of the epidemic, NIO's cooperation with auto parts suppliers in Shanghai, Jilin, Jiangsu and other places was forced to stop. In addition to the chip shortage problem that the entire industry has yet to get rid of, NIO once again fell into mass production due to the supply chain. Difficult predicament.

The NIO OEM factory is Anhui Jianghuai Automobile located in Hefei. Its supply chain layout is very concentrated, mostly in the Yangtze River Delta. In Shanghai, there are Bosch, ThyssenKrupp, ZF, Braybo, Mekron, and Webas. Special key component suppliers. In addition, according to the prospectus for listing in Hong Kong, most of the parts used by NIO are provided by a single supplier, and there is no spare tire. This means that once an emergency occurs in the industrial chain, NIO will inevitably fall into crisis. .

Countermeasures: NIO's difficulty in quality control management actually stems from the fact that there is no communication between upstream and downstream information in the traditional supply chain. The supply chain in the automotive industry is very long, and information cannot be exchanged, which will reduce the controllability of quality and cause quality problems. Therefore, in terms of future layout, NIO should focus on controlling the information exchange between the upstream and downstream of the supply chain, do a good job in the communication details of the supply chain specialists, and make the supply chain data open and transparent, so as to measure the projects at each stage. It is an important and urgent matter for NIO to change thinking and pursue an innovative supply chain quality management model to achieve a long-term and stable win-win supply chain partnership.

6.4 The Differentiation is not Prominent Enough

Although NIO put a lot of energy into the R&D and creation of models and technologies after its establishment, it launched the ES8 model shortly after its launch, and then launched the ES6 model with L2 autonomous driving level. Car companies have also launched their flagship models one after another, such as Weimar EXS and EX6 Xiaopeng Motors P3 for SUVs, Lixiang Lixiang ONE, etc. In the face of similar models and similar functions, the product price is compared with that of NIO. lower. During the period from 2018 to 23, NIO launched the ES8, ES6, and EC6 series in June 2018, June 2019, and September 2020, and launched ET7 and ET5 in March and September 2022. , but compared with BYD, the new energy leader, it can be divided into many products according to energy category, product positioning, dynasty.com and oceannet. Yu NIO. NIO currently relies on ES8, ES6, and EC6, but the earliest of them has been on the market for 4 years, and the latest is nearly two years. In the new car market where new products are

emerging one after another and technology iterations are accelerating, this is directly As a result, there are too few NIO models and the audience has decreased. This has also led to the fact that in 2022, NIO's delivery volume has never returned to the first place, while competitors Ideal and Xiaopeng have come from behind. Facing the latecomers of competitors, NIO naturally cannot rely on its own opportunity to take the lead and a series of service systems to always occupy the pioneer advantage. How to improve the hard power of products and enhance the distinction between types of performance is the main problem for NIO. question. At present, the industry maturity and product homogeneity of the new energy automobile industry are very high, the industry has formed standards, and the competition pattern has taken shape.

Countermeasures: In the case of a small range of product differentiation, it is necessary to focus on improving the hard power of car companies in terms of product quality and highlighting performance optimization.

Table 8 NIO Sales Data

Serial number	Car model	01/02/2023	01/01/2023	01/12/2022	01/11/2022	01/10/2022	01/09/2022
1	ET5	6471	5795	7594	2968	1030	221
2	ES6	2848	872	1731	1927	1970	3507
3	ES7	942	961	4154	4897	2814	1895
4	EC6	852	179	419	501	460	915
5	ET7	649	521	1379	3180	3048	2928
6	ES8	395	178	538	705	737	1412

Data source: NIO official website data

According to Table 8, we can see that among all NIO series, NIO ET5 has huge room for growth, so NIO can focus on launching ET5 models and strengthen the research and development of other functions to make up for the gradual increase of other models. Sliding short board.

7. CONCLUSION

First of all, in the context of globalization, the characteristics of globalization and localization among auto companies conflict and influence each other, just like NIO's entry into the European market, the parallel and integration of the two will be a long-term process. Therefore, under the background of internationalization, NIO should constantly adjust the policy strategy of the target country market to adapt to the current consumption habits of the target country market. In the long run, successful multinational companies are well aware of the important relationship between globalization and localization. These companies have gently poured their corporate strategies into the local environment and successfully locked the market in the target country. NIO has done this very well. In the context of the European market, combined with regional consumption concepts, the launch of a subscription model of "rent only, not sell" will give NIO the highest strategic position in exports.

By sorting out the bargaining power of suppliers and buyers, the threat of potential entrants, the threat of substitutes, the competition from companies in the same industry, and the analysis of the three major strategies of NIO, it is concluded that NIO is at this stage Applicable to the differentiation strategy, the advantages of differentiation should be enhanced and external barriers should be formed.

In addition, the management of supply chain issues should be strengthened to reveal the characteristics of differentiation.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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