

Analysis of the Investment Value of New Energy Vehicle Enterprises Based on the Analysis of Barringer/Ireland Business Model

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ABSTRACT

The purpose of this report is to decide which company between Xpeng or Nio to invest in based on the analysis of Barringer/Ireland Business Model. Firstly, according to the research and data collection, the report briefly introduces the general situation and development of the new energy vehicle market and the background of the two companies Xpeng and Nio. Then, through the reliable and real information of Xpeng and Nio, the report applies all 12 parts of the theory to Xpeng and Nio, and analyzes the advantages and disadvantages of these two companies in these 12 factors. Thirdly, the two companies are compared based on theoretical analysis of 12 factors in Barringer/Ireland Business Model. Finally, the report figures out which company to invest in, and speculates and analyzes the future development trend of this company according to analysis of Barringer/Ireland Business Model. All in all, the whole report is completed based on numbers of reliable and real data, analysis of articles and researches.

KEYWORDS

New energy; Barringer/Ireland Business Model; Vehicle enterprises

1. INTRODUCTION

The development of Chinese new energy vehicle industry is not mature enough, but it still cannot ignore its impact on the social economy, the new energy vehicle industry can drive the development and progress of the national economy, the new energy industry in the process of development, should make full use of various national support policies, increase investment in the new energy vehicle industry, and at the same time start from the technical aspect, promote transformation and upgrading, establish an effective new energy vehicle support system, and constantly improve the industrial chain. The new energy automobile industry is the expansion and extension of the traditional automobile industry, and has a close relationship with the national economic development, so the development of the new energy automobile industry should be more clear about its own development status, so as to lay a good foundation for the sustainable development of the subsequent new energy automobile industry. On the whole, relying on the relatively mature industrial chain and technology formed by continuous cultivation, the position of Chinese new energy vehicle manufacturers in the global market may continue to improve. However, it is worth noting that international mainstream car companies have released long-term plans for electrification, and clearly regard China as the potential largest market for electrification.

In this article, we will select two typical and famous new energy vehicle companies for comparative analysis and consider which one is more worthy of investment.

Xpeng is a Chinese intelligent electric vehicle design and manufacturing company that integrates high-tech such as the Internet and artificial intelligence. It is committed to driving the transformation of smart electric vehicles through data and leading the way of future travel. Nio is a global smart electric vehicle company. Nio is committed to creating a pleasant lifestyle for users by providing high-performance smart electric vehicles and the ultimate user experience.

The electric vehicle market is an emerging market[4]. With the popularization of environmental protection concepts, the prospect of electric vehicles is quite good. However, the development of electric vehicle company has both opportunities and challenges[5], consumers have not yet fully understood and adapted to this market for this emerging electric vehicle. At present, competition in the electric vehicle market is also very fierce, and there are many gasoline vehicle companies that make electric vehicles. Among ordinary brands, BYD and Roewe are better at making electric vehicles. Among the high-end brands, there are not many companies engaged in electric vehicles. At present, BMW has just prepared one for the market, and Porsche also has one. At present, the mainstream direction of the automobile market is hybrid power, which uses both electricity and oil. Therefore, there are a lot of space and opportunities for the development of electric vehicles in the automotive market[8].

2. XPENG

Xpeng is a Chinese intelligent electric vehicle company. It combines the Internet, artificial intelligence and electric vehicles in the driving process of consumers to bring new experiences. In addition, Xpeng is committed to making smart cars that understand China better. The company uses data to drive the transformation of smart electric vehicles to create new travel modes and new driving experiences, and to manufacture smart cars that are more suitable for Chinese road conditions.

According to Barringer/Ireland Business Model[1], The business mission of Xpeng is to build a different car for young people, adding new energy, artificial intelligence, AI learning, remote control, autonomous driving and other high-tech elements to the design of the car to satisfy people's desire for a perfect car. In addition, Xpeng wants to make smart cars that understand China better, and according to China's road conditions, make smart cars more suitable for China's road conditions. Besides, the company uses data to change smart electric vehicles and innovate future travel modes[9].

The basis of differentiation is obviously. The most differentiated feature of Xpeng's products is the Internet gene intelligent electric vehicle that combines digitalization and electrification. Xpeng believes that new energy vehicles are not equal to the next automobile era[9]. Smart cars (AI+Internet+cars) are the new track of the next automobile era. The company takes autonomous driving and intelligent networking as its core differentiation, and is committed to creating highly intelligent and evolutionary Internet cars with high appearance, high quality, high endurance and high cost performance. For example, whether it is G3 or P7, intelligence is the main differentiation advantage. Firstly, the company has made many different interactive elements or autonomous driving elements on this platform. Secondly, the company puts a lot of energy into the development of the highlights of each model. These highlights will make the customers of Xpeng feel that his car is really different, so the company focuses on differentiation Intelligent and interaction. Xpeng has invested a lot of research energy in the development of entertainment systems, intelligent systems, and power systems. The purpose is to ensure that Xpeng differentiates itself from others in entertainment systems, power systems, and smart systems[10].

The target market of Xpeng is mainly young Internet users in China and urban residents of technology enthusiasts in first- and second-tier cities born in the 80s and 90s with moderate consumption levels. It focuses on the research and development of Internet electric vehicles for young people in first-tier cities.

The product/market scope of Xpeng is relatively small. Xpeng mainly has two models, they include P7 and G3, Its business scope includes online car-hailing passenger transport services; car navigation system installation; ticketing services; automobiles, second-hand cars, car charging modules, car charging piles and so on. In addition, Xpeng entered the online car-hailing market in 2019.

Core Competencies of Xpeng include comprehensive capital chain, pure electric drive system, intelligent system, rapid iteration of independent research. Intelligence is a very important label of Xpeng, and its core technology is pure electric drive system and intelligent system. The first is the pure electric drive system. Xpeng's pure electric drive system is based on motors, batteries, and electronic control. In terms of batteries, the battery pack of Xpeng has undergone 4 iterations of development. Xpeng has designed a liquid-cooled battery pack, which can effectively solve the problem of battery temperature rise after the exposure test. Many tests have been carried out on this pure electric drive system, and the cumulative test mileage exceeds 5000 kilometers. The second is an intelligent system. The Xpeng's car intelligent system is based on the central control large screen. In addition to being an Internet portal and terminal, it is more of an intelligent platform. The large central control screen has replaced the traditional central control physical buttons, and replaced by a series of virtual buttons. Xpeng focuses on the intelligent control of the car itself, rather than simple Internet entertainment. Through the large central control screen, Customers can conveniently control the steering wheel position, seat position, light switch, window lift, air conditioning settings, and customers can also choose the driving style. More importantly, combining peripheral sensor resources such as smart cameras, radars, GPS and so on, a smart driving platform can be built, and this platform can be configured, tailored or expanded according to user needs.

The key assets are easy to find. As a technology company that develops and manufactures electrified, intelligent, and networked cars, Xpeng has applied for more than 250 patents, 116 invention patents. The company has authorized more than 100 patents and 10 invention patents, covering multiple core technical fields such as batteries, motors, electronic control, automotive Internet, intelligent driving and so on which strongly supports the entire vehicle development process and the innovation of automotive Internet products.

Xpeng has many revenue streams. It includes online car-hailing passenger transport services; car navigation system installation; ticketing services; automobiles, second-hand cars, car charging modules, car charging piles and so on. In addition, Xpeng entered the online car-hailing market in 2019.

Like most startups, Xpeng is still at a loss. The main reason for the loss came from the early high R&D expenses of the company. In 2018, 2019 and the first half of 2020, Xpeng's R&D expenses were as high as 1.051 billion yuan, 2.07 billion yuan and 631 million yuan respectively. Therefore, the cost of Xiaopeng Motors is mainly in technology research and development.

In July 2020, Xpeng announced that it had completed a C+ round of financing of nearly US\$500 million. Investors in this round of financing include Aspex, Coatue, Hillhouse Capital and Sequoia Capital China, while other existing backers of Xpeng include Foxconn, Xiaomi, Jiyuan Capital, Morningside Venture Capital, IDG Capital and Chunhua Capital. This round of financing will bring the company's financing to 1.7 billion US dollars. The funds will help Xpeng further develop smart car technology and will lay a solid foundation for the company's next stage of development.

Product (or Service) Production is advanced, Xpeng cooperated to open the Xpeng Haima Smart Factory, and invested in the construction of an intelligent technology industrial park, which integrates autonomous driving R&D and demonstration, intelligent networked big data platform building, automobile research and development, parts manufacturing, supply chain cooperation, vehicle production and Multi-services such as trial production and testing. As a young car manufacturer, Xpeng respects tradition and firmly believes that quality manufacturing is the foundation. While polishing the product quality, Xpeng comprehensively arranges sales, after-sales, and charging

services. Through closed-loop product operation and closed-loop service operation, it satisfies the full-touch experience of users throughout the product life cycle.

Channels of Xpeng is diverse. They include offline traditional media, online new media such as Tiktok, Qijia, Diaochedi, Weibo, WeChat, and its own team.

Key Partners are really strong. Xpeng's initial team is very strong, they are different management teams from three areas of the Internet, automobile manufacturing and strategic financing. Xpeng was established in 2014. The main team members come from well-known vehicle and large parts companies such as GAC, Ford, BMW, Tesla, Delphi, Valeo, and well-known Internet technology companies such as Alibaba, Tencent, Xiaomi, Samsung, and Huawei. Xpeng has built a smart ecosystem with excellent partners to provide users with a convenient travel charging experience and effectively solve the mileage anxiety of smart electric vehicle users. Up to now, Xpeng has won the support of top domestic and foreign investors such as Alibaba Group, Xiaomi Group, IDG Capital, Morningside Capital, GGV Jiyuan Capital, and Chunhua Capital.

3. BUSINESS MODEL ANALYSIS OF NIO

Nio is a global smart electric vehicle company, which is committed to creating a pleasant driving experience and lifestyle for users by providing high-performance smart electric vehicles and a good user experience. Compared to Xpeng, Nio is more famous in China and more successful in current market, it has bigger customer groups than Xpeng.

Business mission of Nio is to provide customers with a pleasant driving experience and lifestyle. It pays special attention to user experience and is committed to providing quality user experience.

Basis of differentiation of Nio is obviously, Nio's battery is very good. Among its competitors, Nio's battery life are excellent. As NIO's biggest differentiated competitive advantage, the battery swap system has exerted great power[10]. Nio believes that the greatest value of the battery swap system is battery as a service. Users can flexibly match the required battery power according to their different usage scenarios. This will significantly improve the user experience. At the same time, battery replacement can ensure that users keep up with the progress of battery technology and can use lower-cost batteries, which is very valuable to users. At the same time, the separation of vehicle and electricity is conducive to the valuation of second-hand vehicles and improves vehicle value retention

For target market, NIO's current products ES6 and ES8 are mainly for family-oriented users. Many of them are born in the 70s, 80s, and nuclear families in first- and second-tier cities. With regard to product/market scope, Nio's main products include NIO ES6, NIO ES8, NIO EC6, NIO EVE, NIO EP9 and so on. Compared with Xpeng, Nio's product range is broader and more diversified.

For resources of Nio, core competencies of Nio includes two competencies[7]. The first is the ability to manage financing and user relationships. These two capabilities have bought time and space for this company to continuously improve its product level and corporate management level. The second is brand, which is another core competitiveness of NIO. Everything about Nio is actually done around this brand barrier. The brand of Nio has penetrated into the minds of its target users.

With regard to the component of financial, selling cars is the main source of Nio's revenue streams. For cost structure, Nio's losses in the past two years have been a bit serious [2]. The continued large losses are mainly due to costs above the selling price and exaggerated operating expenses. In terms of sales, research and development, sales and management, Nio has invested a lot of expenditure. Funding is a thorny issue for Nio. In 2019 and 2020, Nio is very difficult in financing[3].

About operations, in order to save unnecessary expenses, Nio canceled its own factory. It mainly cooperates with partners for production. For example, the production bases of Jianghuai and Nio already have a production capacity of 100,000 ES8 and ES6 vehicles a year. After further transformation and upgrading of the production line, Nio does not need to build its own factory. The

annual production capacity of the joint venture factory of the two parties of 150,000 can already meet the production needs of two to three models in the next few years. Channels of Nio include online and offline channels[6], the number of Nio spaces focused on sales and test rides reached 55, expanding from the first-tier city of Shanghai to the new first-tier, second-tier and third-tier cities, plus 22 established Nio Center for brand display, product experience, and car owner clubs, Nio Auto has opened physical sales stores in 57 cities across the country. Key partners of Nio is relatively strong, it was founded by top Internet companies and entrepreneurs that understand users, such as Tencent, and has received investment from dozens of well-known institutions such as Lenovo Group, TPG, GIC, IDG and so on. But it is not as good as Xpeng.

4. SUMMARY

Based on the analysis of the model, investing Xpeng is the better choice for the company. Although both companies are focused on electrical cars, there several differences between them. Firstly, the biggest advantage of Nio is battery and brand, but it has met some obstacles and negative news recent years. If the company invests Nio, the possibility may be smaller than Xpeng, Nio has less and limited potential to create possibilities and develop[11].

According to business model analysis of Xpeng[1], investing Xpeng is the better choice for the company. It is obviously that Xpeng has many advantages. However, the product scope is relatively small. Xpeng has four main advantages. The first is the industry trend. The development of emerging fields will attract more investors' attention. The second is that Xpeng has a strong initial team. And the investors behind it include Alibaba. In addition to institutional investors, Xpeng's individual investors are also very strong, such as the founder of 58.com, the founder of Dianping, and the founder of Liepin. Thirdly, automotive design focuses on high-tech intelligence. Fourthly, Xpeng's capital chain is relatively comprehensive, Xpeng has independent research and rapid iteration.

All in all, Xpeng has more possibilities to create a miracle, it has more space and opportunities to make the progress and has many good factors which can help it success. Therefore, investing Xpeng is better.

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