

## **Research on the Development Strategy of New Energy Automobile Industry from the Perspective of SWOT Analysis Method**

Zhe Wang

Fuzhou University of International Studies and Trade, Fuzhou, Fujian, China

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*Abstract: With the advancement of science and technology and the improvement of civil environmental awareness, a more environmentally friendly and energy-efficient development path has become a consensus among the people for the manufacturing industry. With the support of national policies, China's new energy automobile industry has developed rapidly in recent years. Due to certain controversy in the new energy vehicle technology route, China's new energy vehicle market is also full of variables in the future. Based on the SWOT analysis method, this paper sorts out and analyzes the advantages, disadvantages, opportunities and threats that may be faced in process of the development of China's new energy automobile industry, and then proposes corresponding development strategies.*

*Keywords: SWOT analysis; new energy; automobile industry; development strategy.*

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### **1. INTRODUCTION**

China is the world's largest developing country, with 13 billion people. Under the big change of the new energy automobile industry, China will also become the world's largest new energy vehicle market. In view of the current stimulating effect of government subsidies in China's domestic new energy vehicles, instead of not making revolutionary technological innovations, there have been scandals from time to time. At the same time, the foreign car companies headed by Tesla have made great progress in technology and stepped into the Chinese market step by step, threatening the survival of domestic car companies. This paper uses SWOT analysis method to sort out and analyze the internal and external environment of domestic new energy automobile industry's advantages, disadvantages, opportunities and threats, and explore the development strategy of new energy automobile industry.

### **2. THE DEVELOPMENT OF NEW ENERGY AUTOMOBILE INDUSTRY— BASED ON SWOT ANALYSIS**

#### **2.1 Analysis of advantages**

##### **2.1.1 Chinese market prospects for new energy vehicles**

The number of Chinese population of about 13 billion, the potential market for all car companies are very concerned about. After years of catalysis, the new energy automobile

industry has moved from the introduction period to the high-speed growth stage. According to 2017 data, China's new energy vehicle sales of more than 50 million. Along with China to enhance the spending power of the middle class, this high growth trend still continues. Foreign companies have also set their sights on China's huge market. For example, US new energy giant Tesla has also set up a production base in Shanghai. In addition, the domestic automotive enterprise product technology has also reached a new level, the quality of new products is rising, and the price is falling, which further stimulates the market demand. For example, Chinese companies such as Geely and BYD will launch new products every year to stimulate young people's desire to purchase.

#### 2.1.2 Chinese government's policy support

As the new energy automobile industry is the future development trend, China has given policy encouragement and support from the national, provincial and municipal levels. These governments generally include six aspects, as follows: infrastructure construction policies, road rights policies, automobile local industrial policies, subsidy policies, other policies, and promotion policies. Infrastructure construction includes construction of charging piles, intelligent management systems, etc.; road rights policies include special lanes for new energy vehicles, bus lanes for buses, etc.; local industrial policies for automobiles include subsidies for parts and components; subsidies include state subsidies and local subsidies; others Relevant policies include vehicle and vessel tax reductions, purchase tax reductions, etc. Because the subsidy policy has the characteristics of rapid stimulation and significant market effectiveness, it is the largest share.

### 2.2 Analysis of disadvantages

#### 2.2.1 The strength of research and development of domestic car companies is weak

Because most of the domestic car companies are state-owned enterprises, there are shortcomings in market reaction speed, innovation atmosphere, talents and technology reserves. Compared with world-class companies such as Toyota and Mercedes-Benz, the pace of technological upgrading is slow. At present, the development direction of new energy vehicle technology in the world generally includes pure electric vehicles, hybrid vehicles, fuel cell vehicles, hydrogen engine vehicles, and other new energy vehicles. The research direction of domestic auto companies in new energy vehicles is pure electric vehicle technology, which is mainly powered by lithium batteries. This direction has been developed by domestic enterprises such as BYD, Geely, and FAW for many years. It has encountered a large bottleneck in the cruising range. It is difficult to make major breakthroughs, and the situation of lithium batteries has not alleviated the environmental pollution.

#### 2.2.2 A good brand image has not been established

For a long time, domestic brands have not given high image to the public. The main performance is the low-end of product positioning, product quality problems, poor after-sales service. Even the joint venture car has many problems. On the contrary, the international brand image such as Mercedes-Benz and Toyota has always been the best. Domestic car companies have little chance of surpassing traditional energy vehicles. Therefore, new energy vehicles are

the best opportunity for domestic auto companies to achieve cornering overtaking in the world. Recently, there have been many scandals in new energy vehicles produced by domestic car companies, such as false propaganda and free after-sales service charges, which have seriously affected the brand image of domestic car companies.

## **2.3 Analysis of opportunity**

### **2.3.1 Rebound in oil prices, highlighting the cost of new energy vehicles**

In recent years, oil prices have begun to pick up and the cost of using cars has gradually increased. With the government's strong implementation of the new energy vehicle subsidy policy, the price of new energy vehicles has been greatly reduced, further highlighting the cost performance of new energy vehicles. At the same time, the continuous improvement of energy technology is also continuously compressing the cost of new energy vehicles, allowing more new energy vehicles to enter ordinary households. Therefore, oil prices are also an important opportunity for auto companies to promote new energy vehicles faster.

### **2.3.2 New energy vehicle market demand is strong**

Energy conservation, emission reduction and environmental protection have become the mainstream consensus on the development path of all countries in the world. The emergence and development of new energy vehicles is in line with the needs of environmental protection themes. Besides, the design of new energy vehicles is mostly avant-garde, full of fashion sense, and is quite popular among young people. In the market demand, it has always been a popular product type.

## **2.4 Analysis of threat**

### **2.4.1 Hydrogen energy automobile market is booming**

Hydrogen energy vehicles are vehicles that use hydrogen as an energy source and are regarded by many experts as the ultimate solution for new energy vehicles. The advantage of hydrogen energy vehicles is mainly reflected in the longer cruising range, no pollution, and the final emission is water. At present, hydrogen energy technology is mainly in the hands of Japanese car companies. Key development stage of new domestic energy source is placed on the research and development of lithium battery technology, hydrogen energy research and development in areas lagging behind. Toyota early in 2014 introduced a called Mirai hydrogen fuel cell vehicles, after many improvements, its single life up to 550KM. At the same price, the contrast between the two is very obvious.

### **2.4.2 Well-known car companies have settled into the Chinese new energy market**

As we all know, China will be the world's largest new energy vehicle market with amazing potential. Foreign entrepreneurs represented by Tesla have invested in R&D bases or production bases in China. The other hand, domestic car prices, still immersed in the hotbed of subsidies, progress is slow, and some enterprises are still keen on the heat to complete the sales target of new energy vehicles by way of deceiving consumers.

### **3. STRATEGY FOR THE DEVELOPMENT OF NEW ENERGY AUTOMOTIVE INDUSTRY**

#### **3.1 The government should optimize the policy environment and change the incentive method**

The government's support for subsidies has largely solved the problem of incubation in the new energy market, but it is difficult to cultivate a market that is healthy, orderly and stable. After many domestic car companies have defrauded domestic subsidies, the government should reduce the direct subsidies, and should also slant resources to the construction of infrastructure, and strive to improve the operating environment of new energy vehicles. In addition, when supporting the development of the lithium battery industry, the government should also shift its focus to the research and development and market support of hydrogen energy vehicles to achieve a breakthrough in the hydrogen energy automobile industry.

#### **3.2 Domestic automobile enterprises should pay close attention to the development trend of the latest technology and new energy vehicles**

New energy vehicles have multiple development paths, but in general they can be divided into two categories. One type is a rechargeable type represented by a lithium battery; the other type is an inflatable type represented by a hydrogen source. The former has simple structure design and high driving safety, but the cruising range is limited. The lithium battery is seriously polluted by the environment; the latter has complex structure design, long cruising range, and no pollution during the driving process, but the technical threshold is high and the difficulty of tackling is difficult. Hydrogen energy vehicles are called the ultimate solution for the new energy vehicle market by experts. This type is the direction that should be focused and researched in China.

#### **3.3 Strengthen international cooperation, complement resources and achieve mutual benefit**

China has the world's largest new energy market with great potential, but domestic auto companies are always lagging behind in technology. Therefore, at the macro level, China can encourage foreign excellent enterprises to set up R&D bases and start production bases in China, and carry out technical cooperation and joint operations with the vast number of Chinese enterprises. Generally speaking, it is said that technology is used for market exchange and resource exchange to achieve mutual benefit and win-win. This approach can quickly improve the development of China's new energy vehicle industry.

### **4. CONCLUSION**

The replacement of traditional fuel vehicles by new energy vehicles is the general trend. Vigorously developing new energy vehicles has also entered China's high-end manufacturing plans. There are certain doubts about whether the mainstream is charging or hydrogen energy in the future. For the Chinese government, two bets and support at the same time, and finally the market decides who is the mainstream, which will be the most sensible plan to some extent.

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