

Analysis of China's New Energy Vehicle Marketing Strategy

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Abstract. With the advent of the digital era, the traditional automobile industry and marketing methods are facing severe challenges. The conventional automobile giants have also begun to learn the marketing mode of new energy automobile brands and embarked on the road of digital marketing. Therefore, it is urgent to analyze the marketing mode of new energy automobile brands and find out more specific marketing strategies. This paper explores this and makes an initial understanding by studying the development of the new energy vehicle industry. Through the 4c marketing theory, this paper examines the product positioning direction of new energy vehicles and the NEV market demand to find the relevant problems. It provides complementary marketing strategies in customer, cost, convenience, and communication. At the end of the study, based on the current marketing mode of some new energy automobile enterprises, this paper puts forward some new ideas and suggestions for the marketing strategy of China's automobile new energy business layout.

Keywords: New energy vehicle; marketing strategy; digital marketing; 4c marketing theory.

1. Introduction

The novel coronavirus pandemic has severely impacted the automobile industry. Under the multiple impacts of the epidemic, the automobile industry faced a series of difficulties including the lack of a core, the sudden change in the international situation, and the economic outlook in the first half of the year. Automobile manufacturers were forced to stop production and had no cars to sell. In Shanghai, a major city in the domestic automobile industry, the production suspension of Tesla during the epidemic has directly changed the delivery time from 6-8 weeks to 16-20 weeks. Saic-Volkswagen and SAIC-GM brands have been affected to varying degrees. In addition to Shanghai, the production end of Changchun, Shenyang, and other places are also affected. The month-on-month decline in April alone was 38.5 percent [1].

On the other hand, compared with other traditional automobile companies, although affected by the epidemic, the sales of new energy vehicles are still on the rise. By the end of 2021, the number of new energy vehicles in China reached 7.84 million, accounting for 2.60 percent of the total, an increase of 59.25 percent compared with the previous year [2]. Among them, there are 6.4 million pure electric vehicles, accounting for 81.63 percent of the total number of new energy vehicles. In 2021, China added 2.95 million new energy vehicles, accounting for 11.25 percent of the completely new cars in 2021, an increase of 1.78 million vehicles over the previous year, a rise of 151.61 percent [2]. In the past five years, the number of newly registered new energy vehicles has increased from 650,000 in 2017 to 2.95 million in 2021 [2].

This study will focus on the promotion and marketing strategy of new energy vehicles by analyzing the marketing mode of new energy vehicles, finding out their advantages and disadvantages, and putting forward reasonable suggestions. This study will provide some references and recommendations for the marketing of new energy vehicle brands sold in China to attract more consumers to buy new energy vehicles. The increase in new energy vehicles will likely affect the sales of traditional cars, and the market share of new vehicles will gradually increase. In addition, it

plays a positive role in breaking people's inherent wrong impression of new energy vehicles. Whether commercial or social, a more efficient promotion strategy positively affects the brand of new energy vehicles and environmental protection.

2. Literature Review

There are some articles or papers that can analyze the marketing strategy of new energy vehicle companies. Examining the business model of NEV, it was found that traditional automobile giants have begun to digitize and expand new energy business [3]. The current business model of Tesla and NIO was analyzed and the profit model of data services, OTA upgrades, and subscriptions in the future was emphasized [3]. He Jiacheng analyzed the marketing strategy of the BYD brand and found that the target customer group and Tesla are the challenges faced by BYD [4]. The importance of after-sales service and customer groups is emphasized [4]. Bai Hua analyzed the purchase intention of new energy vehicles and found that age, education level, and average annual household income significantly impact consumers' willingness to purchase new energy vehicles [5]. Product content can improve customer purchase intention and satisfaction [5]. Shao Hongyu analyzed the reasons affecting the sales market of new energy vehicles in China and found that the main incentives for the large purchase of new energy vehicles are vehicles, demographic characteristics, and national policies [6]. It is suggested that these factors around them easily influence consumers' willingness to buy [6]. Liu Jinpeng analyzed their competitive strategies using Tesla and NIO as examples and found that Tesla and NIO the gap between the two can be shortened by improving vehicle design and product performance [7]. The impact of car production plants and marketing prices was emphasized [7].

3. China's NEV Development

At present, China's NEV development prospects are good. The "Electric innovation capital enabling - 2021 new energy resources automotive industry investment analysis report" shows, the NEV market in China is gradually expanding, more and more enterprises such as Xiaomi Group, Baidu, 360 and Skyworth have accelerated the transformation of traditional fuel vehicles, planning to create their own brand of NEV [8]. In terms of sales, it rose dramatically in China's NEV market. According to data from the China Passenger Car Association, in the first half of 2021, China's cumulative sales volume of NEV is 1.001 million units in total, with a year-on-year growth of 218.9 percent [8]. The report also indicates that the number of NEV in China has reached 6.7 million, while that of fuel-powered vehicles is nearly 290 million. Although there is a huge gap between these cars, the growth rate of electric vehicles is increasing, whereas the growth of fuel vehicles has slowed down. It is predicted that sales of NEV in China are expected to reach 7.8 million vehicles in 2025 [8].

Among these Chinese cars, most of them have made brilliant achievements through marketing. For example, according to the global new energy resources passenger vehicle sales data published by EV SALES in March 2022, BYD ranked first in the world again, with 93,263 monthly sales, which is 1.8 times the sales of Tesla (51,302) [9]. Besides, its newly released DM-i model has burst on the market with the advantages of low fuel consumption, long battery life and pure electric driving [9]. Another example is that the NIO easily resolves mileage anxiety, it uses the NIO Power Cloud based on artificial intelligence technology support. Realizing functions such as intelligent location, intelligent operation and maintenance, intelligent planning and intelligent application through big data, reducing people's concerns about cruising mileage [10]. There are also examples of digital marketing. Geely recently announced the geometry C new energy resources automotive products. Compared to Geometry A, this product is obviously younger. The conference invited internet celebrity talent and the band GALA, which is famous among young people [11]. In addition, Geely also put a large number of NEV ads in the elevator and invited Yibo Wang, via and other celebrities to help promote the sales [11].

However, there are still many problems in the marketing of the NEV industry that cannot be solved easily. Firstly, the product positioning of NEV is too centralized, and it is necessary to tap into the individual needs of consumers. At present, China's NEV product is mainly positioned as a low-grade or intermediate car with a price between 150,000 and 300,000 RMB [12]. As a result, there is a substitution effect between the products, increasing the competitiveness in the NEV market. Moreover, compared with traditional cars, NEV still has many disadvantages such as the security threats that existed in the electronic system and the accuracy of the endurance. These problems have seriously influenced the consumer's decision-making, which also affected the sales of products. Therefore, for the Chinese NEV market, it is significant to analyze and change their marketing plan.

4. Marketing Strategy Analysis

4.1 Product orientation of new energy vehicles

The energy crisis issues and global warming issues have raised environmental concerns due to which new energy vehicles have received an increasing amount of importance in the present years. The product orientation of new energy vehicles is expected to ensure the quality of NEV products in order to fulfill the expectations and demands of the market. The main concern of product orientation would be the role of new energy vehicles in carbon reduction. It can be said that the electrification of cars significantly reduces carbon dioxide emissions and improves efficiency [13]. Until 2019, it has been observed that greenhouse gas emissions have increased by 43% whereas industrial operation emissions climbed quickly, by 121% [14]. These industries collectively are responsible for 32% of greenhouse gas emissions in China [14]. The five main types of emissions from new energy vehicles are tailpipe emissions, zero direct emissions, greenhouse gas emissions, carbon dioxide emissions, and nitrous emissions. These emissions are the result of the consumption of fuel along with electric battery use. The consumption of fuel is less in new energy vehicles because of this the carbon emissions are reduced significantly [15]. The previous data shows that the government in China implemented a number of innovative initiatives between 2012 and 2017 to encourage the use of NEVs [15]. Between these years, the use of these vehicles was not significant. However, the steps taken by the government resulted in a sharp increase in NEV sales which went from 298 cars in 2012 to 61,354 NEVs in 2017 [13].

4.2 SWOT analysis of new energy vehicles

The new energy vehicles have advantages which can be seen from their high-quality maintenance service. It offers standard components. Another advantage is that less fuel is required which makes it economical in terms of fuel consumption. New energy vehicles are environmentally friendly. Less maintenance is required and offers better performance. The disadvantages of new energy vehicles are limited sale models which in turn limits the varieties in these vehicles. The endurance ability is insufficient. The opportunities for new energy in China are the support from the government. The government is providing various subsidies to the industry [7]. Another opportunity for these vehicles is environmental protection from pollution and emissions. It reduces carbon emissions and contributes to a clean environment. The government in China expected to provide between 16,200 and 22,500 RMB in 2020 [7]. Despite a 20% reduction from 2020 to 2021, the government still offers around 18,000 RMB subsidy [7]. The threats of new energy vehicles are increased competitors in the world. Other countries are also aiming for the same vehicles and investing highly in R&D to innovate electric vehicles and introduce new energy vehicles in their respective lands. In the present time, the companies producing new energy vehicles are going through a lot of strain. It is challenging for conventional insurance products so that the new energy vehicles can adapt to the risk management requirements and align with the NEV technology and usage situations. Therefore, the disadvantages of new energy vehicles are well understood by their threats and challenges.

4.3 NEV market demand

The models chosen by consumers in recent years comprise the vehicle itself, demographics, national policy, safety awareness, battery technology, infrastructure, and environmental awareness [6]. Under the vehicle itself, the consumers focus on the appearance of NEVs, cost performance, power, space, endurance, consumption, brand, configuration, and manipulation. The national policy with subsidies, loans, and purchase tax influence the cost of the vehicles which directly impacts the decision of the customers. Then the infrastructure of the car is not as significant a factor as the demographics, battery technology, safety awareness, and environmental awareness. The NEV manufacturers also refer to these factors while targeting the market. This enhances their sales and reduces advertising costs. The demographic distribution covers the region, social relationship, and occupation of the consumers. This highly influences the purchasing behaviour and demands of the customers. The top priority among the demographics is social connections. It helps in finding the target locations which can lead to substantial cost savings. The interest of customers in buying NEV is the vehicle itself as they focus mainly on the cost performance and appearance of these vehicles [6]. Then comes the importance of demographics in which social relationships, family members, and friends are more likely to affect NEV purchase decisions. It is also found that married women are comparatively more interested in buying NEVs [6]. Along with these environmental awareness and safety concerns adds to the list of purposes customers refer to before purchasing NEVs.

5. Suggestion

5.1 Expand target customer groups

Based on the results of the weakness analysis, it can be seen that the domestic NEV brands have a limited selection of car models, which restricts the choices of consumers. Take Leading Ideal One as an example, there are only 4 model types on sale and its price is on the high side of the market, thus the customer group consists primarily of middle- or high-spending customers, hardly confining the sales districts to first- and second-tier cities. Therefore, Leading Ideal One should therefore expand its range of sales to cater for a larger customer market. Besides, with the rise of media, using online platforms to promote sales is the trend. For different age groups of target consumers, different online platforms should be used for promotion. The average age of NIO's users, for example, is 37.2 years old, with 75% of post-80s users. For the older generations who tend to use social media less frequently than youngsters, they focus more on real-world experience, so NIO can use VR to allow customers to have a more realistic online product experience and provide full offline service. Whereas for younger consumers, using live streaming and short videos about the fancy design is more effective. Therefore, expanding the target customer range requires different strategies for the different ages.

5.2 Use ESG strategy to increase brand value

In the context of environmental pollution and the energy crisis, the reduction of carbon emissions has emerged as a global consensus. Therefore, the environmentally friendly trait is both an advantage and an opportunity for NEV. ESG marketing strategy seeks to create a green concept and social responsibility, including environmental, social, and governance strategies. From the performance side, on the one hand, industries have to center on the R&D period, which involves improving the battery, motor and other core technologies. On the other hand, with the number of new energy vehicles increasing, a feasible and effective mechanism for recycling new energy vehicles' batteries should be established [16]. Second, social strategy. This is a key element in enhancing brand value. Public welfare projects can convey good brand ideas to consumers. For example, on September 27, NIO announced a partnership with The Danish Society for Nature Conservation. NIO will supply smart electric vehicles and build clean energy infrastructure to promote green energy and sustainable development. Such action will leave a good impression on people and give them an in-depth

understanding of a brand's core values. Third, governance strategy. This is the internal management of the company, but it is also an indirect marketing strategy. A good working atmosphere brings a good brand image to a company. To begin with, optimize the staff welfare. Secondly, shoot videos about the work routine and release them on various social media platforms. It can get people to know the real company image. The above three strategies must be used together, otherwise it will bring the reverse effect.

5.3 Using the 4Cs marketing model to improve customer experience

4Cs marketing model is a customer-guided approach, including customer, cost, convenience and communication. 4Cs is an effective strategy for companies to position a place in the market and gain a better understanding of the customer. The first step is to satisfy consumers. New energy car users are concentrated at 31-40 years old, accounting for nearly 50% [17]. Based on this data, it can be known that the consumers tend to be young, and married women are more interested in buying new energy vehicles, which means that the design of the car should be more fashionable and the marketing strategy should keep up with the trend. Under the wave of meta-universe and AI technology, the virtual human is popular and will be the future of brand marketing. The virtual human with brand DNA has a more perfect persona, more stable positive image, and more accurate brand image positioning so that it can attract more young consumers of Gen Z and have more positive effects on the brand. Secondly, it is suggested to reduce the purchase cost of consumers. Consumer costs can be broken down into explicit costs-economic costs; and hidden costs, including choice costs, transportation costs, etc. The only way to reduce the former is to improve technology to reduce manufacturing costs, thereby reducing the purchase price. As for transportation costs, if customers can have a good experience when shopping online, then they can go to the 4s store less, saving both time and money. Moreover, each car model with 3D models and videos can be displayed on the website so that customers can understand the product well and feel more convenient when choosing, thus reducing the selection cost. For instance, NIO makes users feel at home in after-sales services, such as free car wash and free price, which can improve the customer experience and enhance customer loyalty [18]. Third, it is suggested to provide convenient services for customers. Despite the rapid acceptance in China's NEVs market, Chinese consumers still have various perceived risks with negative emotions, particularly time risks [19]. Time problems are the most likely to give users a bad experience. So it is important to serve customers for the first time in the online sales process and ensure that customer service is online 24 hours a day. Hence, customer questions can be answered in one go, which can save waiting time of customers. In addition, the companies should increase the number of directly managed stores and delivery centers, so that customers can more conveniently experience offline services, such as test drives and deliveries. The fourth is to communicate with customers. Among the consumers' considerations when buying NEVs, social connection is one of the most important factors [19]. This requires brands to strengthen interaction with consumers in order to understand their needs. Feedback and opinions can be obtained through the brand's APP and various social software. Furthermore, using live platforms to interact with online users and collaborate with KOL can make customers more involved, and thus enhance the user experience.

6. Conclusion

The study identified that there are problems in Chinese NEV marketing and to improve the sales of products, enterprises need to develop a corresponding marketing plan according to the needs and positioning of the car. First of all, the status of China's NEV is centralized. Secondly, the domestic NEV has some disadvantages that affect sales severely. Thirdly, most NEV cannot meet consumers' demands. To solve these problems, NEV companies can promote sales by expanding their range and using the online platform. Besides, the NEV enterprise should make up for the disadvantages of the domestic NEV market by formulating tactical evasion strategies and developing a strategy to strengthen the advantages of the domestic NEV market to maximize the use of opportunities.

Moreover, this paper analyzes the type of selected NEV, the population distribution of consumers, usage area and usage purpose in recent years. According to the 4c theory, the NEV enterprise should provide more marketing advice that is in order to meet consumer demand as the core.

This paper has provided a deeper insight into the marketing strategy of NEV in China. It aims to analyze the positioning direction of Chinese NEV and its market demand. Meanwhile, the study put forward some new ideas and suggestions for Chinese automobile new energy business layout marketing strategy based on the current marketing model of Chinese NEV enterprises. This paper does not subdivide different kinds of new energy vehicles when analyzing the marketing strategy of new energy vehicles. Energy vehicles can be roughly divided into hybrid electric vehicles, pure electric vehicles such as solar cars, fuel cell electric vehicles and other new energy vehicles, such as super capacitors, flywheels and other efficient energy storage vehicles. In the future, the marketing strategies and development suggestions of different kinds of new energy vehicles can be studied according to the classification of new energy vehicles.

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