

# Research on Marketing Strategy of New energy Vehicles in China -- Take BYD Brand as an Example

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## ABSTRACT

As the background of the exacerbation of climate change and various pollution, the development of new energy vehicles is gradually on the right track. The study used Secondary market and case study two methods to collect and analyze the data. The study cited BYD as an example and first discussed the Chinese NEV Car Market and showed the market trend. At the same time, the great intention of high-end NEV cars about the consumer and supply sides of the market was shown. As BYD's advantage of charging stations and its five performance are also facing challenges from Tesla and other enterprises. Based on these, this study proposed some solutions. The first is that BYD's strategy mainly focuses on the middle and high-end customer groups, while the current middle and low-end customers are inconsistent with its strategic goals. According to the 4C theory, BYD must understand and design customer products at different demand levels. Secondly, from customer cost management, BYD needs to provide excellent after-sales service to eliminate customers' concerns and provide free maintenance and vehicle repair in the first few years after purchase. BYD will carefully consider issues related to cost, as its pricing focuses on low - and mid-range customers. Although price sensitiveness appear in all customer groups, lower-end customers are much more price-sensitive than high-end customers. Also, BYD needs to properly train its staff to answer any questions from customers and show them expertise and service. At the same time, BYD can also open stores in large shopping malls to attract more people and link brands that can identify regions to a complete marketing strategy.

**Keywords:** Chinese market, New energy Vehicle, 4C theory, BYD

## 1. INTRODUCTION

### 1.1 Research Background

With the exacerbation of climate change and various pollution, China has emphasized environmental protection and introduced a new value called "Green Development". It means that economic development should not sacrifice the environment, and our production activities should be more environmentally friendly than before to strengthen the sustainability of nature. Air pollution is one of the most severe types, primarily arising from the exhaust of petrol-powered motor cars. The Chinese government has conducted some measures to control air pollution, especially about the change of

motor cars industry. Therefore, new energy vehicles (NEV) will play a significant role in the environmental protection and the transformation of the vehicles industry, which is worth studying nowadays.

On the one hand, in February 2020, the COVID-19 and the decrease of NEV's subsidies negatively influenced NEV sales. The sales of NEV just reached 13,000 and reduced by 75.6% compared to the same period in 2019, which was the lowest increasing rate in history[1]. However, in July of 2020, due to the control and relief of the pandemic and some measures launched by governments, the increasing rate of that became gradually positive. And in August of 2021, the sales increased to 321,000, surging by 193.6%[1]. On the other hand, in 2019, the production of NEV was 1.27 million,

and it also was 910,000 in 2020 under the effect of the COVID-19[2]. These data about sales and production states clearly that the market of NEV will be promising in the future despite the effect of some emergencies. According to IHS Markit's (2021) prediction, the NEV market in China will increase considerably based on the twice speed from 2021 to 2025[3].

However, the Chinese brands' market faces some difficulties, such as the competition with overseas brands, technological innovation, and the promotion strategy, which are closely related to sales. Domestic brands have less competitiveness and strengths than some overseas brands because of their technology and marketing plans. In 2020, the three new giants in the Chinese NEV brands, NIO, ONE (Li Xiang), and Xiao Peng, their sales of NEV in China were 43,700, 32,600, and 27,000 respectively, adding up to less than 110,000, while Tesla sold approximately 150,000[4]. In addition to the Chinese market, about the worldwide sales, the foreign brand, Tesla, produced 509,700 NEV and sold 499,600, accounting for around 16% in the global production and sales [4]. In addition to Tesla, other foreign brands like Benz and Toyota are competing seriously with Chinese brands like NIO and Xiao Peng.

Meanwhile, the promotion strategy is also essential in the competition. Impacted by the Internet, some NEV companies create new channels and methods to promote their products, such as using social media and inviting celebrities. This research will revolve around the promotion and marketing strategy, based on BYD company, to discover the advantages and drawbacks and make some suggestions. This research will provide some references and advice about marketing for the Chinese brands, attracting more consumers to purchase NEV. More NEV sales may reduce the sales of petrol-powered cars, which benefits environmental protection. Also, the growth of Chinese NEV brands can encourage the development and image of Chinese products at home and abroad. Therefore, from both the commercial and social aspects, the more useful promotion strategy is good for the evolution of the Chinese brand, the protection of nature, and China's influence.

### **1.2 Literature Review**

There are some papers or articles to analyse the promotion strategy of NEV companies. Jiang Ming (2021) analysed the marketing of Tesla, finding that it mainly uses four aspects to promote its products, creating differential values for consumers, nurturing the image of the brand, using the influence of Musk, and emphasizing the effect of social events[5]. Pan Yongjie (2021) discovered using the case of NIO that the traditional promotion method was not suitable for NEV companies nowadays, and the social groups' method had both advantages and shortcomings [6]. Using the SWOT model, Mou Yuzhuang(2021) found that the promotion

method to combine offline with online wasn't perfect, which still needs to be improved through some measures[7]. Dong Xuelin(2021) found the differences between conventional and experiential marketing and stressed the importance of the coincidence between product characteristics and the consumers' needs[8]. Li Kangxing (2021) discovered that combining different types of media to advertise, such as newspaper and social platforms, can enlarge the number of consumers, strengthen brand awareness, and influence NEV[9].

### **1.3 Research Gap**

Most scholars or articles studied how to promote NEV successfully, paying most attention to the online form and social media function. Also, some articles illustrated the disadvantages of the traditional marketing method, lacking its critical view. Lastly, some authors concentrated on the NEV, neglecting the differences between Chinese and foreign brands. Few scholars studied the marketing strategy of Chinese NEV brands, which is related to competition with overseas brands, global influence. Therefore, the topic concerning the promotion strategy still needs to be studied by them.

### **1.4 Research Framework**

In this research, we will choose the BYD company as the research subject because BYD is one of the most famous and successful Chinese motor car brands, and it can stand for the Chinese NEV brands. Firstly, we will find some secondary data and information from some essays, news, and the quantitative and qualitative methods that will use these data. Secondly, through the data and data we collect, we will make a case study, analyzing the strengths and drawbacks in the promotion strategy of BYD. Finally, we will suggest BYD and even other Chinese NEV brands. This research aims to help the Chinese NEV companies establish creative and useful marketing plans and to help them accelerate their reputation domestically and overseas.

## **2. METHODOLOGY**

The heart of our study is to help the Chinese NEV companies develop some innovative and helpful marketing plans and accelerate their reputation domestically and overseas. But our approach to data collection is limited to time. We have to abandon the Participant Observation and Qualitative research. Considering our current situation and practical needs, Secondary data and Case study are good choices.

### **2.1 Secondary market**

This study could search from Baidu, Google, and other browsers to find news reports about BYD and analysis reports about the new energy vehicle industry.

And the study can use some data from other papers like Research on "NIO Car" community Marketing Model from "YongJie Pan" or China's new energy vehicle market recovery situation and promotion strategy from "HouMing Zhang".

This study can analyze some information related to the business cooperation and the future development of the BYD by the news about BYD enterprise. Similarly, the study could find data on similar topics in the papers. The study can combine data from multiple reference papers for analysis if the paper provides original data.

After getting our data, the study needs to delete duplicate data and rearrange data extracted from different articles

## 2.2 Case study

BYD's annual report will be chosen on new energy vehicles as a typical case, based on the cases step by step, combining more business and marketing elements. Finally, we will plan a better plan or suggest more valuable advice.

### 2.2.1 Quantitative methods

Based on the data obtained by us, this study could sort and optimize the data. For example, checking for lost data eliminating outliers or converting variables and so on. Also, Data analysis software like Stata may help us analyze the data if needed.

### 2.2.2 Qualitative method

The text analysis is carried out in qualitative research methods based on observation results and language. Content analysis can be carried out by classifying and discussing the meanings of articles and sentences. For thematic analysis, this study can encode the data to distinguish the subject of the data.

The evaluation study method illustrates limitations. There is no actual survey in our research method, so the survey data may not be accurate. Because the data has been analyzed once, other people may influence this study.

## 3. RESULT

### 3.1 Chinese NEV Car Market

Following 2009, the State EV demonstration program begins (2009-2020), the Chinese government has put fiscal subsidies on NEV car companies. In 2020, the Chinese government retreat on electric vehicles subsidies from 22500 RMB (2019) to 18000 RMB (2020), planning to slash 20 more percent in 2021[10].

The NEV car market has faced a negative growth rate since 2019. As figure 1 shows, the total sales between 2018 and 2019 were 993 thousand and 1025 thousand cars, respectively [10]. In 2020 H1, the whole market was in a great recession stage due to the COVID-19 situation that only sold 313 thousand cars. However, at the end of 2020, the market is in the recovery stage, customers purchasing power and purchasing willingness face tremendous intensity. At the end of 2021, H3, NEV car sales have reached 2.4 million cars [11]. China is the only market that reached a recovery stage; from Q2 2020, the Chinese vehicle market had a 2% growth rate compared to last year [12].

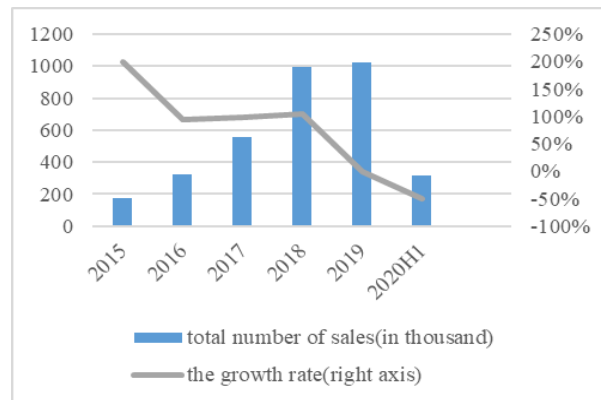


Figure1 The sales of NEV cars in China yearly and year on year growth [10]

### 3.2 Customer Side: the great intention of high-end NEV cars

The current significant customers are from Tier 1 & 2 cities; however, the number of customers in other towns increased from 2019. According to the number of insurances purchased in 2020 H1, the total number of cars with insurance was 298 thousand. The top 10 cities represent 53.4% of total sales [10].

The acceptance of NEV cars continuously increase. Compare 2019 & 2021, the percentage of respondents who are only concerned about EV cars grow from 55% to 63%, over 87% of high-income earners (>48k RMB per month) choose to purchase NEV car for their next car [12]. Chinese customers chose NEV cars instead of traditional fuel cars because of the quote on the <Road space Rationing Policy> car license plate. Another reason would be government subsidies [13]. Potential customers also believe the NEV cars benefit from car maintenance fees, such as oil.

Nowadays, customers are more willing to purchase a higher tier and more significant car. Chinese market separates EV cars into three categories by their size: A, B & C. From 2015 to 2020 H1, the market share of the lowest tier A has been decreased year by year. In contrast, the market share of tier B & tier C has increased[10].



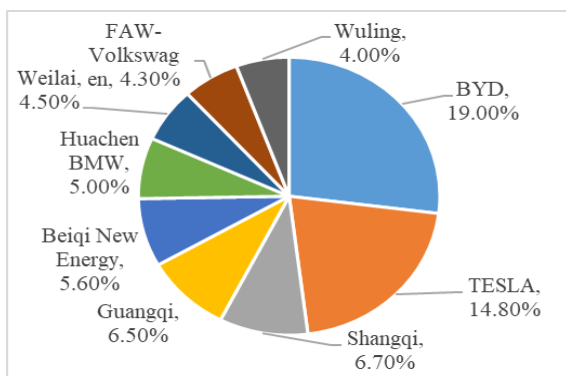
**Figure 2** The market share of each type of car from 2015-2020H1 [10]

Customers are more likely to choose to purchase a more expensive car from trading in; over 60% of the customers who previously owned a car price lower than 200k RMB are willing to increase their budget. 62% of the 150k-200k value car owner want to purchase a car price higher than 200k RMB [12].

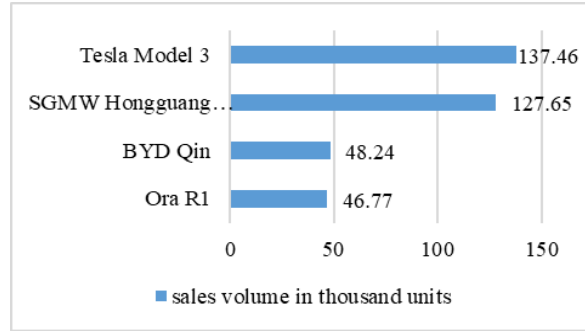
The customers' brand loyalty is low, and only 27% of the respondents chose to purchase the same brand car. However, this data rises to 40% when the customer group owns a 300k+ valued car [11].

**3.3 Supply Side of the Market**

In 2020 H1, BYD is the market leader who owned 19% of the market share, followed by Tesla with 14.8%. Considering the Car modeling, TESLA model 3 sold more than twice the BYD QIN EV's total sales in 2020 [14]. Many new companies have entered the market, for example, Xiaopeng, Weilai, these new companies earned a surprising number of sales. TESLA's Shanghai Factory has completed, making TESLA model 3 the domestic car model with any import taxes.



**Figure3** The Market Share of Top 10 Manufacturing company in 2020 [10]



**Figure4** Most Popular Alternative Energy Passenger vehicle models in China in 2020, based on sales volume (in 1000 units) [14]

**3.4 Infrastructure: Charging station**

In 2020, the proportion between cars and charging stations was 3:1. Until June 2020, there were 558 thousand public charging stations and 763 thousand private stations. The proportion of private stations has increased from 12.2% in 2015 to 57.8% in 2020. BYD contributed over 58% of the whole market share for these private charging stations. TESLA only owned 0.8% of the private charging stations. It is noticeable that BYD is charge-free on a 7kW charging station. [15] In comparison, TESLA costs 8000 RMB for a wall-conconnector [16].

**3.5 BYD performance**

BYD has a clear strategy to increase its average selling price from 2010 to 2020. In 2010, BYD's dominant model was F3 (47.9 thousand RMB). In 2018, BYD's Song Max became the champion of sales with an average price of 109.8 thousand RMB [17]. After 2018, BYD has faced a negative impact by subsidy cut, and their gross margins decreased to 23.9% in 2020 from 25.4% in 2018 [17]. BYD has started expanding its customer group, developing several different car types. In 2020, the leading model QIN BEV sold 48241 units, which count for 34% of the total sales. BYD stopped relying on a single product but balanced its product line [10]. In 2020, BYD will have 25 different selling models in China.

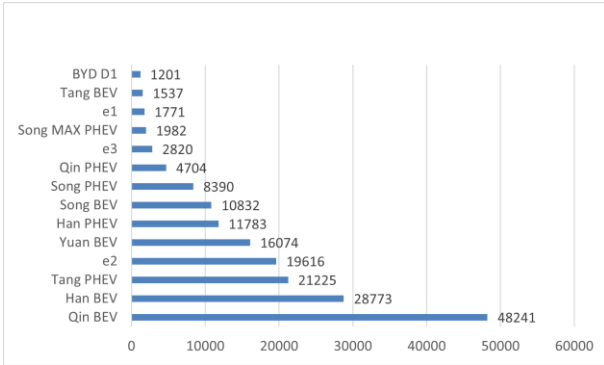


Figure 5 BYD Best-selling models in China in 2020, by type [18]

BYD has faced many challenges. TESLA has overcome BYD to become the best seller of 2020[14], with an average price of 250 thousand RMB. BYD developed their high-end model HanEV, and the possibility of beating TESLA Model 3 & Model Y in the future is still unknown. BYD also faced a slowdown in its revenue growth rate. There was an adverse increase in revenue between 2018 and 2019. Though revenue of 2020 is increasing, BYD must consider whether it is rational to continue improving their average price. According to Global Consumer Survey Brand Report (2021), BYD owners are less likely to have a high income than other car owners[20].

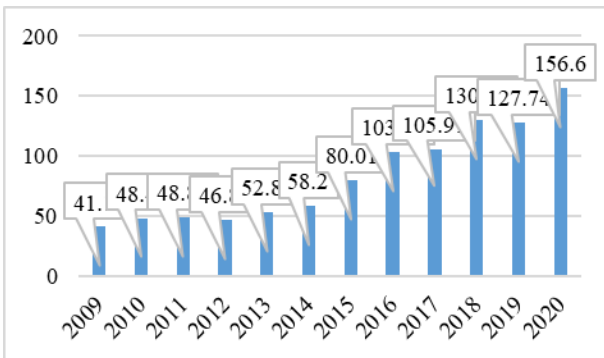


Figure6 Revenue of BYD Group in China from 2009-2020(in billion yuan) [19]

## 4. DISCUSSION

### 4.1 NEV market background

Due to global warming and the increased level of greenhouse gases, the Chinese government set targets on emissions - to reach an emission peak in 2030 and carbon neutrality in 2060. These strict emission targets change the way people live and businesses' strategies in all industries. Businesses always benefit from government regulations, and the NEV industry would be the typical example. The NEV firms receive subsidies from the government as they produce zero-emission products, helping the country achieve the carbon neutrality target. The firms also pass these benefits to customers, including

free car license registration, discounts on purchasing NEVs, subsidies on the electricity used on charging NEVs. As the firms and customers benefited from this market, the competition became fierce. The leading NEV manufacturer BYD has its future sights to target the middle and high-end market by advertising its technology and well-designed products. (Jill Shen, 2019) BYD made huge sales and product development progress as a first-mover to this market. However, it still needs a more robust marketing strategy to support its competitiveness. The rivals will not improve, and BYD will challenge market leaders like Tesla.

### 4.2 4C's marketing model for BYD

People might be familiar with the 4P matrix - a seller-oriented marketing theory around product, place, price, and promotion. Firms have popularly used it to carry out an early-staged marketing mix plan; the concepts are basic but efficient in creating a simple strategy. However, this framework puts sellers at heart to maximize sales volume, but neglecting customers' behavior will eventually cause the loss of future market share. Meanwhile, the 4C's model gives a chance for BYD to think about its products from a new perspective. The 4Cs are Customer, Cost, Convenience, and Communication. This framework considers service marketing because building relationships with customers may provide them with a brand experience, increasing their willingness to purchase. The rest of the 'Discussion' part will state the procedures in detail. (Micah Pratt, 2013)

#### 4.2.1 Meet customers' needs

As mentioned earlier, BYD's strategy mainly focuses on the middle and high-end customer segments. They believe it is difficult to move up once the brand positioning is made. However, the current pricing for BYD NEVs is pretty low; it seems to target the low and middle-end customer group. This pricing breaches BYD's original intention and has to be changed, although it would be very hard. The first thing to do according to the 4C theory is to satisfy customers' needs. Customers' needs are not easy to predict, and they could be differentiated down to each customer. Due to the variety and stages of customer's needs can be roughly categorized using Maslow's hierarchy of needs. The demand for cars can be as primary as a means of transport, people in this stage might need a private space when traveling from one place to another. This customer group will only consider the price when purchasing; their primary concern is its worth money. Customers in the upper stage may buy a car that can fit all family members to go on a trip. A relatively larger space and riding comfortableness would be considered in this case. The highest stage includes customers that purchase a car to

show their social status and personal taste. They are the least price-sensitive customers attracted by the most luxurious models to match their identity. BYD must know and design products for customers at the different hierarchy of needs.

#### *4.2.2 Manage customers' costs*

Usually, firms always consider the cost from the seller's perspective, whereas, in the 4C theory, it is more from the customer's point of view. Generally, the cost consideration includes Affordability, Satisfaction, and Value. First, customers will invest time and learning costs from knowing the product to get used to driving the car. The BYD customers may not be first-time drivers who had no experience driving cars from other brands. Due to the differences in design and driving experiences between car models, customers would need a long time to learn to drive a new car, especially the NEVs, based on newly developed technologies. BYD may provide tutorials or guidance videos to help customers understand the cars. Second, the amount of money paid for the product matters too. The payment of a car would not only be the car price, but the Chinese car manufacturers often charge customers for registration fees, decoration fees, insurance, and taxes. BYD could exempt some fees for customers to reduce their total costs. Also, customers will consider the opportunity cost for not buying from the other brands. The market is saturated, so BYD must let the customers know its product's differentiation, making customers forget about the opportunity costs. Last, as cars are sophisticated machinery, it is likely to break when there's an accident or when the product quality is overestimated. Therefore, BYD needs to provide excellent after-sales services to eliminate customers' concerns and possibly provide free repair and car maintenance in the first couple of years since the purchase. BYD will have to consider cost-related issues carefully because BYD's pricing focuses on the low and middle-end customers. Although price sensitiveness appear in all customer groups, lower-end customers are much more price-sensitive than high-end customers.

#### *4.2.3 Communication with customers*

The 'communication' step happens when customers are engaging with firms, and it could be the only opportunity that firms can gather opinions and suggestions from customers straightforwardly. This stage often occurs in the later period of the whole marketing strategy, when customers wish to hear more from firms to make purchase decisions. BYD needs to put advertisements close to the customers. For example, BYD could advertise their low-end NEV model online such as video websites, TikTok, or other social media, because those customers are likely to use these apps. And put a large poster of a high-end model on high streets, office buildings, and downtown as rich people tend to

have less time surfing the Internet. Also, set in-store experience activities may attract more customers. BYD could invite people to try its NEVs for free, communicate with them, and gather their opinions. This will build trust between the brand and customer, and the faith would become word-of-mouth. In this process, BYD must train its staff well to answer any questions from customers and show them professional knowledge and service.

#### *4.2.4 Create conveniences for customers*

Nowadays, convenience is quite valuable in this fast-paced world. In the 4C's theory, convenience can mean both physically and psychologically. BYD should find ways to shorten the physical and psychological distance between the customer and the product to increase product choice. The traditional car manufacturer always runs a store in suburban districts to save rent. However, customers would find it difficult to approach the store, especially when they don't have a car and wish to buy one. If other brands set a store on the high street, it is more likely to increase customer traffic and sales. BYD could open stores in major shopping malls to attract more people, and sometimes people will relate the brand to that area, building the brand image. When customers realize that the store is in the mall they always shop from, they will feel that the brand is close to their daily lives, so they might try the product as it's psychologically more intimate. If BYD combines the well-trained sales in the 'communication' part and physically convenience stores in this part, they've built a marketing strategy foundation.

## **5. CONCLUSION**

### *5.1 Summary findings*

The study analyzed China's new energy vehicle market demand, customer demand, infrastructure construction, and 5 BYD performance, which offered a different proposal from four parts. First of all, according to the 4C theory, BYD must understand and design products for customers at different levels of demand. Secondly, BYD needs to provide excellent after-sales service to eliminate customers' concerns from customer cost management. BYD will carefully consider issues related to cost, as its pricing focuses on low - and mid-range customers. Although price sensitiveness appear in all customer groups, lower-end customers are much more price-sensitive than high-end customers. Also, BYD needs to properly train its staff to answer any questions from customers and show them expertise and service. At the same time, BYD can also open stores in large shopping malls to attract more people and link brands that can identify regions to a complete marketing strategy.



## 5.2 Value of paper

This paper takes BYD as an example to discuss the market status quo and some problems facing China's new energy vehicles. After discussion and analysis, this research aims to help the Chinese NEV companies establish creative and useful marketing plans and accelerate their reputation domestically and overseas.

## 5.3 Limitations and future studies

First of all, we didn't carry out field investigation and research, so there may be errors in the secondary analysis of data. Secondly, we only take BYD's new energy vehicle industry as an example, which is too one-sided and inaccurate to reflect the current situation in China. If there is further research, we will collect more accurate and comprehensive data by issuing questionnaires and field visits for further analysis to put forward more efficient marketing strategies.

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