

# Analysis of Key Factors for Tesla's Success

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## ABSTRACT

Tesla has occupied a strong position in the new round of electric vehicle technology revolution all over the world. As a high-tech company without any automobile industry background, it has become the leading enterprise of new energy vehicles in the world in only 10 years. This paper expounds the development advantages of Tesla, and analyzes its success factors. This study provides implications for enterprises in the electric vehicle industry to learn from key successful factors of Tesla.

**Keywords:** Tesla, Success Factors, SWOT Model.

## 1. INTRODUCTION

In 2019, EU countries and Canada put forward the concept and goal of "carbon neutrality". After that, major countries and regions in the world have put forward their own goals of "carbon neutralization". According to the carbon emission statistics released by the International Energy Agency in 2017[1], countries and regions that have committed to "carbon neutrality" have generated more than two-thirds of the global total carbon emissions. The United States has long been the world's largest energy consumer. With the increasing pressure on the world's climate and environment, coupled with the unsustainability of traditional energy, there is a growing voice in the United States for finding wells and using new energy. In order to promote the domestic economic recovery and development of Kyrgyzstan and support the public opinion, the United States chose the energy industry as tianpo four, made a series of laws and regulations on new energy and energy conservation, and formed the new energy strategy of the United States.

As a leading enterprise in the new energy vehicle industry, Tesla occupies a large market share, and the market scale is still expanding. Therefore, taking Tesla as the research object can better analyze the new energy vehicle industry and get the reasons for Tesla's success.

This paper will explore the factors of Tesla's success through the analysis of the new energy vehicle industry and Tesla. In the first part of the article, the research background will be briefly introduced, including the overview of the new energy industry, the importance of the industry and the reasons for choosing Tesla. The second part of the article observes the current competitive

situation and other characteristics of the new energy vehicle industry through Porter's five forces analysis. The third part of the article analyzes the SWOT model and finance of Tesla, which can see the current development situation and trend of Tesla. Based on the analysis of the above three parts, the fourth part analyzes five factors of Tesla's success, and these five factors affect Tesla both internally and externally. The last part, the fifth part, puts forward some suggestions on the development of new energy vehicles in China.

## 2. ANALYSIS ON THE DEVELOPMENT TREND OF NEW ENERGY VEHICLES BASED ON PORTER'S FIVE FORCES MODEL

Electric vehicle is not only an important means of transportation but also an important power consumption facility. As an important energy storage equipment, electric vehicle plays a more and more significant role in the development of energy Internet. During the development period, through the connection with the decentralized and cooperative energy interactive network, electric vehicles not only give full play to the advantages and characteristics of the energy Internet but also become an important pillar in the development of the energy Internet. In the current social development, the problems of energy crisis and environmental degradation are becoming more and more prominent, so accelerating the development of electric vehicles has become the focus of countries all over the world. Therefore, electric vehicles will have a broader market[2].

**Table 1** Porter's Five Forces Analysis of Tesla

Porter's Five Forces Analysis of Tesla	
Bargaining power of suppliers	Low
Threat of new entrants	Low
Bargaining power of buyers	Uncertain
Threat of substitutes	High
Industry rivalry	Low But Increasing

## **2.1 Bargaining Power of Suppliers--Low**

### **2.1.1 Supplier Concentration--Low but Increasing**

Nowadays, the number of brands producing electric cars is increasing rapidly such as ARCFOX and BYD, so the supplier concentration is getting stronger.

### **2.1.2 Customer Switching Costs--Low**

There are few costs for customers to switch the brand of electric cars because of different kinds of cars and brands, and the low customer switching costs gives more pressure to suppliers to bargain prices.

### **2.1.3 Whether Suppliers Offer a Differentiated Product**

The traditional electric cars industry has developed for a long time, the market mechanism is relatively perfect, and there is almost no technical monopoly.

In conclusion, the bargaining power of suppliers of the new energy vehicle industry is low.

## **2.2 Threat of New Entrants--Low**

### **2.2.1 Economies of Scales**

As can be seen from the following pictures, the market scale of electric vehicles is expanding year by year. Electric vehicles are becoming more and more popular.

### **2.2.2 Capital Requirements**

The manufacturing cost of electric vehicles is high and needs a lot of financial support. Compared with other industries, as a new entrant, they must have strong capital. Therefore, the industry threshold is relatively high.

## **2.2.3 Technical Requirements**

As an emerging industry, electric vehicles have high requirements for technology. Without certain technology, it is difficult to enter the electric vehicle industry.

In short, the threat of new entrants to the electric vehicle industry is relatively small.

## **2.3 Bargaining Power of Buyers--Uncertain**

### **2.3.1 Customer Concentration**

In recent years, the popularity of new energy vehicles has become higher and higher.

### **2.3.2 Undifferentiated Products**

There are few competitors of pure electric vehicles, and customers lack reference when buying, resulting in unilateral pricing by electric vehicle companies. Therefore, compared with ordinary cars, the price of electric vehicles is generally higher.

### **2.3.3 Customer's Profits**

In addition to the price, people who buy energy vehicles also pursue car experience, new technology, and even some people are trying to be innovative.

## **2.4 Threat of Substitutes--High**

From the perspective of environmental protection and energy utilization, hybrid electric vehicles are Tesla's main alternative products, which have been developed for a long time, with increasingly mature technology and high safety. Therefore, it can be concluded that the threat of alternatives is great.

## **2.5 Industry Rivalry--Low But Increasing**

### **2.5.1 Competition on Price**

Compared with other cars, the price of electric vehicles is higher. However, in recent years, due to the progress of technology to reduce the cost, the price of many electric vehicles is declining, and people's acceptance of the price is getting higher and higher.

### **2.5.2 Many Competitors of Roughly Equal Size and Power**

At present, there are few pure electric vehicle manufacturers in the development stage. Therefore, the electric vehicle market is not very competitive.

### **2.5.3 Diversity of Rival's Approaches**

The development of new energy vehicles requires

certain technology, so there are not many competitive means for competitors.

To sum up, the competition in this industry is not very fierce at this stage. However, with the development of energy, the competition will become more and more fierce.

### 3. TESLA ANALYSIS

#### 3.1 Strategic Analysis Based on SWOT Model

Table 2 SWOT Model Analysis of Tesla

SWOT Model Analysis of Tesla	
Strength	Best electric car
	Economies of scale
	Environment protection
Weakness	Batteries
	Safety
	Higher cost
	Insufficient capacity
Opportunity	Price
	Self-driving
	Multinational factories
Threat	Competition

##### 3.1.1 Strength

Tesla has advanced R & D technology and R & D capital, so it is called the enterprise producing the best electric vehicles. At the same time, Tesla's sales revenue is increasing year by year, and the market scale is expanding, which provides financial support for the good development of the enterprise[3]. Besides, Tesla has set up its own factories in many countries to produce cars, thus avoiding the collection of tariffs to reduce costs.

##### 3.1.2 Weakness

At present, the development of batteries still needs a breakthrough. In the cold environment, the battery power decreases faster, which reduces the vehicle's endurance. Meanwhile, as an emerging industry, new energy vehicles use innovative technologies, but they also bring safety problems. Accidents such as car fires often occur, which worries consumers. Tesla needs to pay high

material and labor costs when producing electric vehicles. At the same time, the construction of charging devices also needs a lot of funds. Even though Tesla's current production efficiency continues to improve, people are still unable to achieve fully automated production, resulting in the problem of not meeting the market demand.

##### 3.1.3 Opportunity

With the development of new energy technology, the price of Tesla electric vehicles is getting lower and lower, which improves the competitiveness of its electric vehicles in the industry[4]. Secondly, Tesla is currently studying automatic driving technology. Once the research and success, it will be loved by many consumers, so as to improve brand awareness and sales.

##### 3.1.4 Threat

The new energy vehicle industry is developing more and more comprehensively, and Tesla will have more competitors. Therefore, Tesla needs to continuously improve its own advantages to enhance its competitiveness [5].

### 3.2 Tesla Financial Analysis

#### 3.2.1 Revenue Analysis

According to Tesla's historical revenue, revenue has grown every year. Looking at Tesla's historical revenue, revenue has grown every year. The highest growth rate was 0.79 and the lowest was 0.19. Judging from the demand for electric vehicles, the demand is also increasing year by year.

Table 3 Growth Rate Analysis of Tesla

Growth Rate Analysis of Tesla					
2016	2017	2018	2019	2020	2021
0.74	0.68	0.79	0.19	0.28	0.71

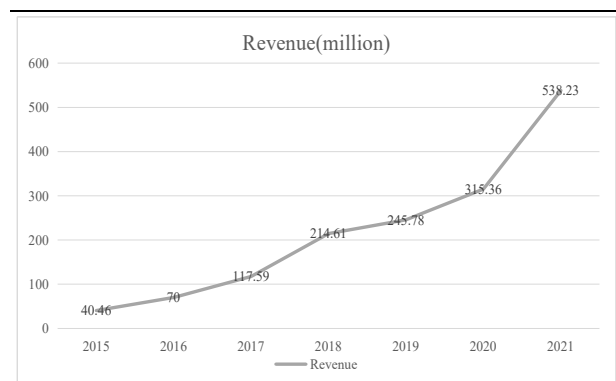


Figure 1 Tesla Annual Revenue Line Chart

### 3.2.2 Solvency Analysis

Tesla's current ratio has increased first and then decreased in the past three years, reaching 1.38 at the end of 2021. The quick and current ratios also followed the same trend, at 1.08 at the end of 2021. From the values of the current ratio and quick ratio, it can be seen that the proportion of inventory is not large. And there is a certain short-term account repayment problem.

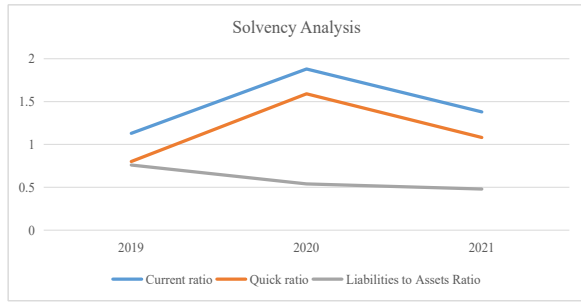


Figure 2 Solvency Analysis

### 3.2.3 Operational Capability Analysis

Accounts receivable turnover days and accounts payable turnover days stabilized over the three-year period. The other two ratios showed a downward trend. On the whole, the operation situation tends to be a good trend of slow rise, and the financial pressure of enterprises is gradually reducing. This is also in line with the current situation of the automobile industry to a certain extent. It is an industry that is heavy on assets and burns money. It is enough to have enough cash on hand.

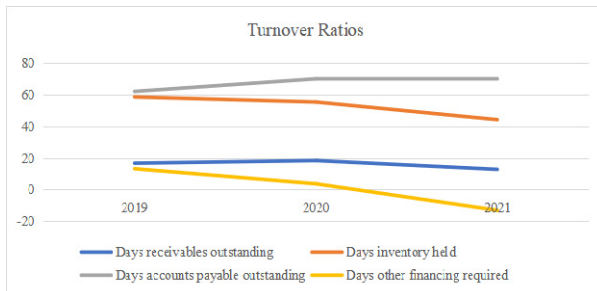


Figure 3 Turnover Ratios Analysis

### 3.2.4 Profitability Analysis

It is shown that Tesla's profitability has increased rapidly year by year. In 2020, Tesla's net profit turned from negative to positive and continued to rise. Compared to other brands of cars, Tesla's gross profit margin is still low. But this phenomenon is related to Tesla's high research expenditure and factory expansion, so it cannot be concluded that profitability is not good just because of low gross profit margins.

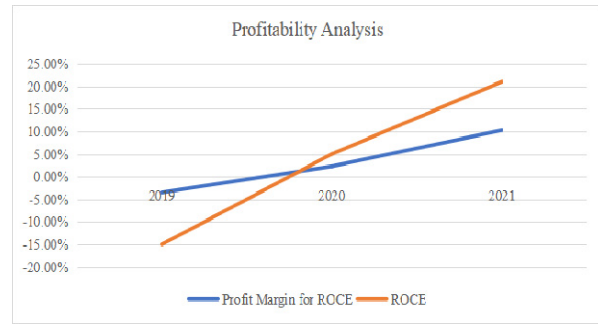


Figure 4 Profitability Analysis

## 3.3 Tesla Revenue Forecast

### 3.3.1 Revenue Drivers Analysis

Tesla's revenue mainly comes from automotive segment, which accounts for about 86% of total revenues. So, it can be regarded as the determinant revenue driver. Therefore, it can be assumed that total revenue and revenue from automotive segment grow at the same rate.

### 3.3.2 Uncertainties Analysis

Tesla safety issues are frequently in the news, driving consumers away. If Tesla continues to have frequent safety incidents over the next five years, that could hurt sales.

Moreover, Tesla bought SolarCity in 2019. The acquisition is seen not only as a blessing for the solar business but also as a combination of solar energy, electric vehicles and energy storage, which is expected to generate cash flow in the future. The problem is, none of these benefits of acquisition works for Tesla. Selling solar in Tesla's retail store is a disaster, as witnessed by the installation and shrinking market share of Tesla's solar systems. It also leaves Tesla in huge debts which public investors don't want to see.

### 3.3.3 Growth Rate Analysis

According to Tesla's official report, Tesla expects that the number of vehicle deliveries will increase by 50% [6] in the next few years. Therefore, the annual growth rate can be estimated at 50%.

## 4. KEY FACTORS FOR TESLA'S SUCCESS

### 4.1 Advanced R & D Technology

Tesla founder Elon Musk said that Tesla spent about \$20 billion on R & D in the past 10 years, which was an investment that traditional giants did not have. The electrification Investment announced by Ford recently was only \$11.5 billion.

Strong scientific research and innovation ability is the most important factor for Tesla's success. Tesla announced its R & D investment in 2020. In 2020, Tesla invested \$1.491 billion in R & D, a year-on-year increase of 11%[7]. At present, Tesla is still developing self driving electric vehicles. Once the research and development is successful, it will bring a broader market.

#### **4.2 High Coverage Price Positioning**

Tesla models with different prices have laid a good foundation for high customer traffic. The price of cars sold by Tesla is generally high, which can meet many personalized needs of the rich to improve its brand. At the same time, there are also cheaper models that can be recommended to customers with lower budgets[8]. Tesla can provide different products according to different needs of customers, so as to expand sales and improve profits.

**Table 4** Tesla Model Prices

Tesla Model Prices	
Model 3	\$44,990
Model Y	\$52,990
Model S	\$79,990
Model X	\$80,700

#### **4.3 Support from National Policies**

The state's support has provided conditions for Tesla's market development. Tesla's development of electric vehicles started from scratch. Its rapid rise has been strongly supported by the U.S. government. Tesla received a low interest loan of \$465 million from the federal government in the early stage of development, which greatly helped Tesla overcome the financial difficulties in the initial stage. In recent years, environmental protection has become one of the main topics in the world. The United States, China and many other countries have constantly introduced new policies to protect the environment, so energy vehicles are also more supported by the government.

#### **4.4 Online and Offline Marketing Channels**

Online and offline marketing channels have increased Tesla's sales to Tesla. Online, customers can customize personalized models through Tesla's official website, and then pick up the car in the store. Online customization process brings great convenience to consumers. At the same time, Tesla has established experience stores all over the country. Customers can drive cars offline and better understand the functions of each model.

#### **4.5 Unique Customer Service Concept**

The unique customer service concept has won the trust and loyalty of customers. Battery warranty and charging service is the core and competitiveness of electric vehicle service. Tesla has set up charging piles for car owners free of charge to provide charging services. Moreover, Tesla provides warranty services for car owners, reducing customers' maintenance costs.

According to statistics, over the past year, Tesla's online solution rate of after-sales service problems in China has been 89%, the 3-second answer rate of 400 customer service has been 89%, the one-time repair rate of after-sales service center has been 97.4%, and the user feedback satisfaction has continued to exceed 98%. In this industry wide service reform, Tesla's approach provides new ideas, which will jointly improve the user experience and break the shackles of traditional models.

### **5. CONCLUSION**

It is undeniable that Tesla's successful model cannot be completely copied in China, but there are still places to learn from. The following three points can be used for reference:

First, companies should pay more attention to technology and service innovation to create a unique position of the enterprises[9]. With vigorous development technology, enterprises have the dominant power of the market to a certain extent. Moreover, enterprises can appropriately increase scientific research funds and constantly try to launch new products to adapt to the times.

Second, the company should carry out marketing planning according to its own nature, and pay attention to differentiated market positioning and competitive advantage. Just like Tesla's unique customer service strategy, continuously improving service quality and customer satisfaction will help to improve enterprise customer loyalty.

Finally, enterprises can comply with national policies and continuously expand the market. In 2021, China's national energy administration and the Ministry of science and Technology issued the notice on printing and distributing the plan for scientific and technological innovation in the energy field during the 14th five year plan. The document said that energy is a key area related to national security and development. China has become the world's largest energy producer and consumer for many years. Under the overall requirements of "carbon peak and carbon neutralization", ecological civilization construction and "six stability and six guarantees", China's energy development is facing severe challenges such as ensuring security, changing mode, adjusting structure and making up for weaknesses. The demand for scientific and technological innovation is more urgent

than at any previous stage. In the next few years, protecting the environment and developing new energy will be the focus of China's development. Therefore, grasping the trend of the times and complying with national policies will help the development of new energy enterprises.

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