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The Analysis of Strategic Development of Tesla in Chinese Electric Vehicles Market

Xintai Li [1,a,#,*], Ziyi He [2,b,#] and Yiming Wang [3,c,#]

[1] *Chengdu No.7 High School, Chengdu, 610041, China*
[2] *Changjun high school, Changsha,410221, China*
[3] *Nansha College Preparatory Academy, GuangZhou,511458, China*
a. 3096779300@qq.com, b. 3596789598@qq.com, c. 1970211385@qq.com
**corresponding author*
[#] *These authors are co-first author*

Abstract:

Since 2012, Tesla has established many factories and research and innovation centers in China. This paper examines the strategic development of Tesla in the Chinese electric vehicles (EV) market and reveals several key findings. As one of the world's leading EV manufacturers, Tesla's expansion into China has been a significant milestone in its global growth strategy. The analysis focuses on Tesla's market entry strategy, competitive positioning, localization efforts, and the impact of Chinese policies and market dynamics on its operations. By studying Tesla's strategic decisions and outcomes in the Chinese EV market, this paper provides insights into the opportunities and challenges faced by multinational companies in the rapidly evolving Chinese EV industry.

Keywords: Electric Vehicle, Tesla, Pricing Strategies, Business Strategies.

1. Introduction

The growing Electric vehicle industry in China has made its position more and more important, and more foreign companies have begun to realize the value of the Chinese market. Tesla has rapidly increased its investment in China since entering the country in 2012, and has set up several factories and research and innovation centers such as Tesla Gigafactory Shanghai[1, 2]. In the early days, Tesla led the new energy vehicle industry with its technological and cost advantages and gained a large amount of market share. However, with the rise of domestic Chinese companies and policy support from the central government, Tesla's advantage has been weakened. Moreover, as it employs many Chinese workers in China to reduce costs, its cultural inconsistencies and incomplete production lines are further amplified, which leads to low production efficiency. If Tesla does not change its management model or upgrade related industries, it can be met that it will gradually lose its leading position in China. By examining Tesla's strategic developments in the Chinese electric vehicle market, this analysis aims to provide valuable insights into the company's approach and shed light on the broader dynamics shaping the future of China's electric vehicle industry.

2. Market Overview

Affected by increasing environmental problems, countries are paying more and more attention to the new energy vehicle industry and actively promoting its development.

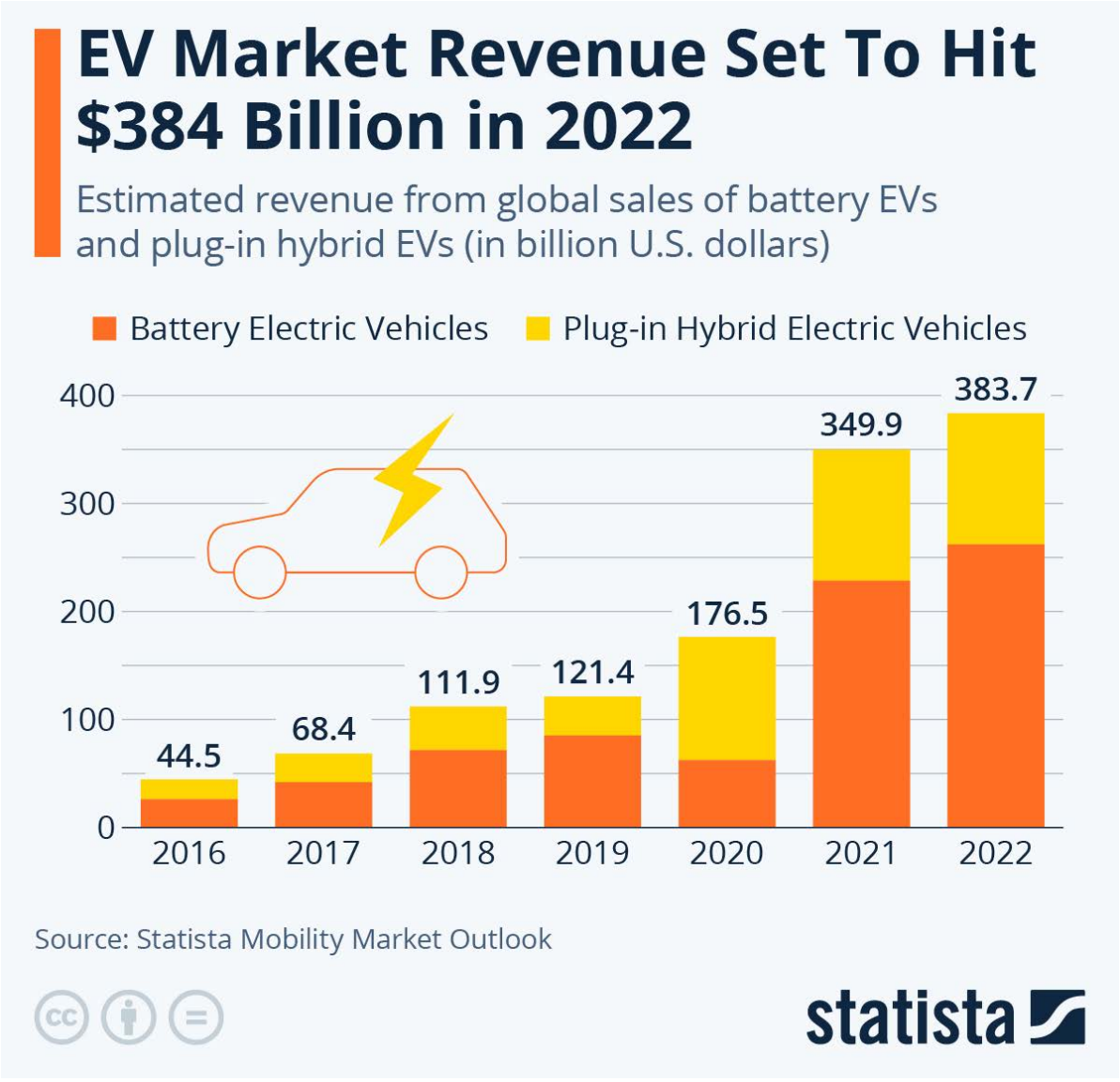

Figure 1: Estimated Revenue from global sales of battery EVs and plug-in hybrid EVs from 2016 to 2022. Source: Statista Mobility Market Outlook from Statista.com.

According to the data in Figure 1 released by the China Association of Automobile Manufacturers, in 2022, the scale of China's new energy vehicle production and sales has exceeded 6.5 million, and the compound growth rate of industry production and sales is as high as 14.36% and 14.32%, respectively. It is expected that by 2025, China's new energy vehicle production and sales will reach about 18 million and 16 million, respectively. The industry is currently in a period of rapid development, and China's new energy vehicle sales have surpassed the United States to become the world's largest new energy vehicle consumer market, indicating the huge potential of the Chinese market. Among them, foreign brands accounted for about 44 percent of the market share, the highest Chinese enterprises by BYD accounted for 21 percent of the market share, and foreign enterprises are Tesla, accounting for about 37 percent[3]. At present, China's new energy vehicles are mainly electric vehicles, accounting for about 80%. In 2022, the number of pure electric vehicles in China is 1045×104, accounting for 79.8%, and plug-in vehicles account for 20.1%, and the development direction is clear. According to the "New Energy Automobile Industry Development Plan (2021-2035)" issued by The State Council, the national government clearly supports the

development of the new energy automobile industry and implements it through financial subsidies, tax incentives, and government procurement. This has favorable policies for Chinese local enterprises and helps local enterprises compete with foreign enterprises[4, 5]. This move stimulated the new energy vehicle market in the initial stage, so that many small and medium-sized enterprises emerged, but with the withdrawal of purchase subsidies in 2022, the composition of China's new energy vehicle market sales enterprises will gradually freeze in the future, and small and medium-sized enterprises lacking competitive ability may exit the market. According to Tesla's third quarter 2020 earnings report, the company's revenue reached $8.268 billion, an increase of 39% over the same period last year. Among them, automobile sales revenue was $7.634 billion, an increase of 42%[2]. The current development trend of the enterprise is good, and it is a leading enterprise in the industry. Thanks to its early start time and leading technology advantages, Tesla actively expanded its market share and gained a good reputation in the Asian market, and it will continue to lead the global wave of vehicle electrification in the future. However, due to its production costs and lack of policy support and other problems, its inherent advantages are weakened, and it has to compete with Chinese enterprises. If it cannot maintain its technological edge and solve supply chain and production capacity problems in China, Tesla may face a loss of market share in China.

3. Business Model

From the Table 1, Tesla produced 479,700 electric vehicles worldwide and delivered 466,140 vehicles, an increase of 86% and 83% respectively in Q2 of 2023. Based on the Figure 1, Model 3 and Model Y delivered 446,915 units, and Model S and Model X delivered 19,225 units.

Table 1: Number of Tesla vehicles Produced worldwide from 2018 to 2023.

Year	Production
2018	254,530
2019	365,232
2020	509,737
2021	930,422
2022	1,369,611
Q1 2023	440,808
Q2 2023	479,700

Source: Tesla

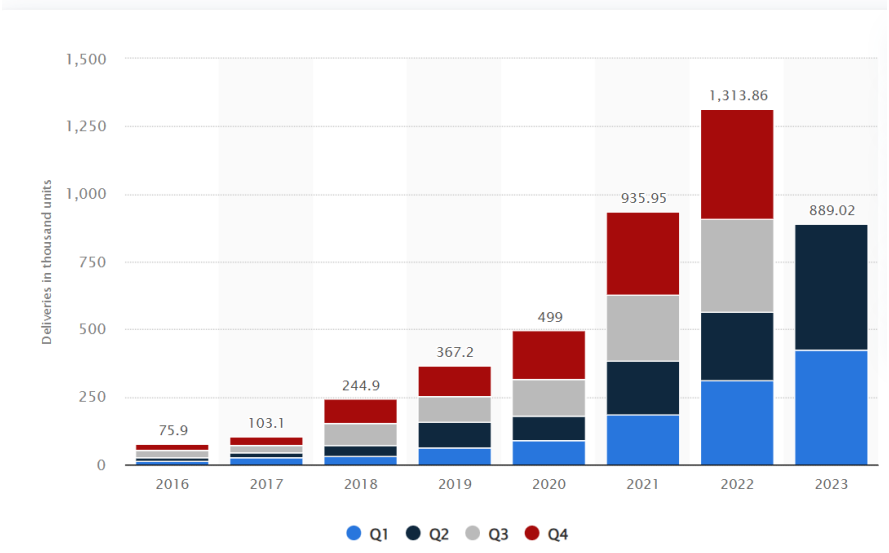

Figure 2*:* Number of Tesla vehicles delivered worldwide from 2016 to 2023 (in 1,000 units). Source: statista.com.

The part below will discuss the business strategy of Tesla.
First, Tesla have high-end brand positioning. Tesla' s initial positioning is a high-end new energy sports car. They want to sale cars to those people who have high environmental awareness or those high-income group. Tesla can do this is because their business strategy. This kind of business strategy of starting with impressively expensive products and gradually moving into the mass market as the core process technology improved further. Therefore, Tesla adopts a top-down product promotion form from high-end to low-end, first in the luxury sports car, luxury car and SUV market, positioning its products in the high-end fashion and green image, and then in the middle and low-end cars of the people to increase sales and expand brand awareness.
Second, high-end positioning to solve the dead cycle of low-cost performance. For most electric vehicle, they can solve the problems of range and manufacturing cost at the same time. But Tesla do this successfully. The standard range rear-drive (RWD) 18-inch wheels 438 km, 19-inch wheels 430 km. This is better than most of this king of cars.
Third, unique and innovative technology for a great experience. The reason why Tesla's business model can succeed is Tesla has broken through core technologies such as smart cars and autonomous driving. Technological innovation allows users to experience product characteristics that are completely different from traditional cars, and successfully implants brand and product concepts into the minds of consumers. Tesla's unique battery control management system is one of its core competencies. Tesla does not directly produce battery cells, but chooses mature batteries, develops its own battery system, and relies on its own core BMS technology to build barriers and solve the problem of driving range that consumers are worried about. In addition, intelligent driving technology is also one of Tesla's core advantages, the core of intelligent assisted driving technology is the chip and algorithm of the computing layer, Tesla has a certain first-mover advantage in these two fields, and has gradually switched to the stage of independent research and development of chips and algorithms.

3.1 The Model of Offline Experience and Online Direct Sales Online-to-offline (O2O)

Tesla have two kinds of sales method, which are online selling and offline physical selling. This way can give a much better experience to those customers, also this can save the middleman from the step of earning the difference. The shop always located at those busting mall and street market; this can help to maintain their image. The purchase mode is the first deposit and then manufacturing, which meets the individual needs and comfortable experience of the customer group for the product, and can speed up the capital turnover of Tesla.

3.2 The Channel of Whole Vehicle Sales and Self-charging Network New Profit

With the model of "whole vehicle sales + self-charging network", Tesla has established an electric vehicle energy supply model based on charging piles, opening new revenue channels after the rapid popularization of new energy vehicles. The vehicle leasing model can reduce the cost and risk of new energy vehicles for consumers, and improve the acceptability of users to new energy vehicles. The "naked car sales + battery rental" model can reduce the cost of buying a car for consumers, reduce the time and energy investment of consumers in battery maintenance, charging and other aspects, and attract more customers to choose its products.

4. The Competitor Analysis

4.1 Role of Government in EV Industry

With the attention to the greenhouse effect and air pollution, people are trying to reduce the emissions of greenhouse gases by avoiding using traditional vehicles. And the governments of different countries are caring about the problem of energy shortages. The environmental awareness provides a fast track for electric vehicle into the market. However, the high cost of electric vehicles and the lack of infrastructure have a negative influence on promotion of electric vehicles. Consequently, the role of government in supporting the EV industry is quite important.
To reduce the air pollution and dependence on traditional energy (such as fossil fuels), government in China has set relative regulations to encourage people to purchase and use electric vehicles. These regulations can help reduce emissions of carbon emissions. If individuals and enterprises purchase the standard electric vehicles, they will be able to enjoy a certain percentage of the car purchase subsidy. For example, the Beijing municipal government has set up the 'Electric Vehicle Purchase Subsidy Incentive Fund' to encourage residents to purchase electric vehicles. And some municipal governments have also introduced subsidy policies based on the floating proportion of the one-time purchase tax for ordinary household private cars to reduce the cost of purchasing new energy vehicles.

Table 2: The Summary of Government Polies.

Area	Policy	Impact
Beijing	Subsidy of 10,000 yuan for an electric vehicle.	Attract more customers and increase the demand for electric vehicles. Help the EV industries enhance their market competitiveness.
Tianjin	Increase the number of the car plate lottery.	
Hunan Province	Invest for local EV factories and EV research center. Set up the reward standard for new technology.	EV companies can more focus on the development
Shanghai	Plan for more infrastructure construction.	Improve the charging system. Make the process of using electric vehicle more convenient.

Difficulty in charging and high cost of charging have always been a key factor restricting the promotion of electric vehicle. These problems annoy the owners of electric vehicles very much. So, governments around the country have set up charging stations in different areas of the cities and promoted the development of fast charging and interchange technologies to meet the public's needs for convenient charging. For example, to solve the problem of charging, the Guangzhou municipal government has set the regulation about the renovation projects of some old elevator energy storage stations in residential areas for parking space and charging stations. Solving the charging problem will make people aware that electric vehicle is convenient than it before. And, it is more environmentally friendly.

The government also encourages electric vehicle enterprises to carry out innovative research to improve the function and quality of different types of electric vehicles. For example, the government has increased investment in the research and development of battery technology. This supports companies to improve battery energy density and fast charging technology. In the meantime, the government also encourages enterprises to reduce the manufacturing cost of new energy vehicles and enhance competitiveness.

4.2 Pricing Strategies Analysis

4.2.1 The Development of Price Strategy

On January 6, 2023, Tesla China's official website showed that the price of Model 3 and Model Y was reduced. Model 3 reduced from 265,900 yuan to 229,900 yuan. And the price of Model Y (rear-wheel drive) was 259,900 yuan, reduced by 29,000 yuan. The prices of Model Y long-range and high-performance were 309,900 yuan and 359,900 yuan, reduced by 48,000 yuan and 38,000 yuan.

After seven months, the prices of two types of Model Y were reduced again. On October 14, Tesla China announced that the price of Model Y long range was reduced to 299,900 yuan and the price of high performance was reduced to 349,900 yuan. What's more, Tesla China announced that there would be a time-limited insurance subsidy policy of Model 3. It means that people who purchase a Model 3 can choose to buy a car insurance of insurance company collaborated with Tesla for a subsidy of 8 thousand yuan.

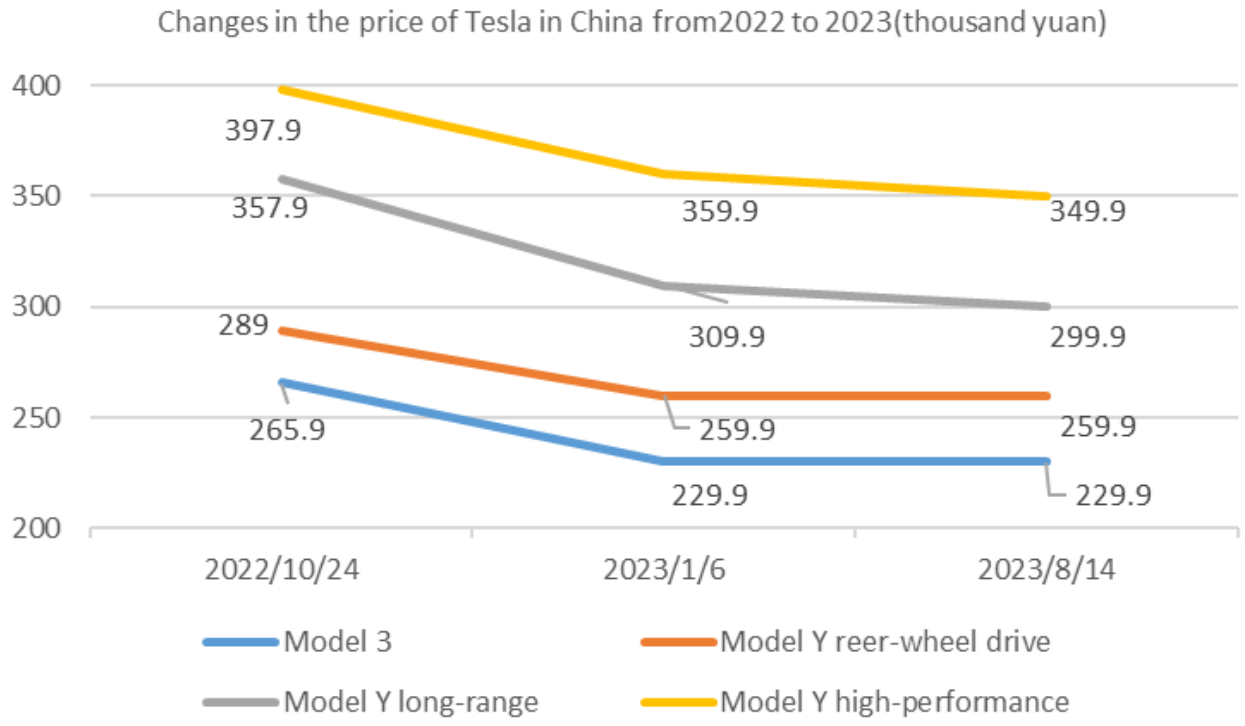

Figure 3: **Changes in the Price of Tesla in China from 2022 to 2023 (Unit in thousand RMB). Source: htisec.com.**

4.2.2 The Analysis of Price Strategy

Price cut is a common way to enhance the competitiveness in business. Tesla reduced the prices many times in the past years to attract more customers. There are many other electric vehicles in China, such as BYD and Xpeng. So, Tesla reduced the prices in order to make more sales and increase its share of the market. After Covid-19, the competition in EV market becomes more and more intense. Tesla has always been a leader in the electric vehicle market, but it also faces many challenges to get more competitiveness. More competitiveness is a good foundation for the future product to enter the market. This will help Tesla to increase its share of the market in the future.

Price cut can also help Tesla to reduce its inventory pressure. This allows Tesla to focus on product development and brand building. Tesla has been committed to making the vehicle industry get more environmentally friendly and more sustainable. So, Tesla can inspire the awareness of environmental protection and sustainability in this industry and propel the market.

In short, there are many different reasons for the price cut. The outcome of the price cut is still uncertain. Maybe Tesla will make other business strategies when there are new opportunities and challenges in the future.

5. Future Strategies for Tesla in China Mainland

Tesla's entry into the Chinese market has undoubtedly changed the rules of the game for the electric vehicle (EV) industry. The U.S.-based company has enjoyed extraordinary success in China, the world's largest auto market. However, Tesla's development in China has not been smooth sailing, and its management strategy in China may be adjusted in several aspects.

Tesla's customer service in China has been criticized for its lack of transparency and responsiveness. Recent quality control problems with Tesla vehicles, such as battery fires and Autopilot failures, have made consumers wary. Tesla should revamp its customer service strategy to be more proactive. Offering a 24/7 helpline service, transparent monitoring of service requirements and improving after-sales support are important steps.

Public opinion is crucial in a market where local competitors such as NIO and Xpeng are gaining ground. Tesla has been at the center of controversy in China from time to time, whether because of Elon Musk's comments or incidents involving its cars. A dedicated PR team familiar with the Chinese market and cultural nuances could help Tesla manage its image more effectively.

Recent global disruptions have underlined the need for

a strong supply chain. While Tesla has invested in the Shanghai Gigafactory to localize production, there is still room for improvement in sourcing raw materials and working with local suppliers. Strengthening relationships with local governments and businesses can ensure a more sustainable and efficient supply chain.

Tesla should consider adopting a more localized customer service model that caters to the specific needs and concerns of Chinese customers. This could include the integration of popular Chinese digital platforms like WeChat for service requests and updates, or even offering services through Alipay and other local payment platforms.

In a social media age where information travels at the speed of light, regular and transparent communication is key. Establishing regular communication channels through local platforms could offer Tesla an opportunity to nip controversies in the bud and highlight positive aspects of their operations and innovations.

Tesla has an advantage in terms of its data analytics capabilities. The company could leverage these to identify bottlenecks in the supply chain or to predict consumer demand more accurately. This data-driven approach could make the operation more efficient and cost-effective.

Forming partnerships with local suppliers and governmental bodies can help Tesla secure its supply chain and gain local expertise. Joint ventures or strategic alliances can also offer Tesla a quicker route to scale its operations in China.

Although Tesla's Model 3 and Model Y have been popular in China, there is room for more localized product offerings. Tesla could introduce models that cater specifically to Chinese consumers' preferences, which could include smaller-sized or more budget-friendly options.

Finally, establishing Research and Development centers in China would not only assist in understanding the local market better but would also provide the company with the technical expertise it needs to evolve. A local R&D center can focus on developing technologies that suit the Chinese topography, climate, and user behavior.

Tesla's foray into the Chinese market offers a significant opportunity but also comes with challenges. For sustained success, it is imperative that Tesla reassesses and adjusts its management strategy. By focusing on customer service, public relations, and supply chain optimization, and by taking a more localized approach, Tesla can solidify its standing in this crucial market.

6. Conclusion

The analysis of Tesla's strategic development in the Chinese electric vehicles market reveals several key findings. First, Tesla's market entry strategy in China, characterized by direct investment and establishing local manufacturing facilities, has allowed the company to gain a competitive advantage by circumventing import tariffs and reducing costs. This strategic approach has enabled Tesla to position itself as a premium EV brand in China, catering to the growing demand for high-quality electric vehicles in the market.

Second, Tesla's localization efforts in China, including setting up Gigafactories, developing local supply chains, and tailoring products to Chinese consumers' preferences, have been instrumental in enhancing its competitiveness and market penetration. By aligning with Chinese policies that prioritize domestic production and technological innovation, Tesla has been able to establish strong partnerships with local stakeholders and leverage government support.

However, Tesla's strategic development in the Chinese EV market has also faced challenges. Intense competition from domestic EV manufacturers, who benefit from strong government backing and incentives, poses a threat to Tesla's market share. Moreover, evolving Chinese regulations, such as changes in subsidy policies and the imposition of strict data localization requirements, create uncertainties and additional compliance burdens for Tesla's operations.

Nonetheless, Tesla's success in China demonstrates the potential opportunities for multinational companies in the Chinese EV market. By strategically adapting to local conditions, leveraging government support, and continuously innovating, Tesla has established a strong brand presence and a loyal customer base in China.

Overall, the analysis emphasizes the importance of understanding the unique dynamics of the Chinese EV market and tailoring strategies accordingly. Tesla's experience serves as a valuable case study for multinational companies seeking to navigate the complexities of the Chinese market and capitalize on the opportunities presented by the rapidly growing electric vehicles industry.

Acknowledgement

Xintai Li, Ziyi He and Yiming Wang contributed equally to this work and should be considered co-first authors.

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