

SWOT Model Analysis of Tesla Company

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Abstract: Tesla has not only made breakthroughs in products, but also played an active role in the field of sustainable development and environmental protection. The company's vision is to move the world towards a more sustainable and environmentally friendly future, with less reliance on fossil fuels. This paper delves into Tesla, Inc.'s strategic approach towards innovation and sustainability. It conducts a comprehensive case study of Tesla's Gigafactory in Nevada, dissecting Tesla's operational methods and underlining its dedication to large-scale sustainable manufacturing. By juxtaposing Tesla's practices with industry norms, the paper reveals how the company's groundbreaking initiatives are not only revolutionizing the automotive sector but also establishing new benchmarks across various industries globally. Additionally, the research scrutinizes Tesla's product portfolio and renewable energy endeavors, spotlighting the diverse strategies employed by Tesla to propel the global shift towards sustainable energy and transportation solutions. In terms of qualitative analysis, we delved into a comprehensive case study of the Nevada Gigafactory, conducting interviews with key personnel and conducting on-site observations to gain insights into Tesla's operational strategies. On the quantitative front, we made use of exclusive datasets to compare Tesla's performance metrics with industry benchmarks.

Keywords: SWOT model, Tesla company, new product

1. Introduction

Tesla, Inc. is a world-renowned electric vehicle manufacturer and renewable energy company headquartered in Palo Alto, California, United States. The company was founded in 2003 by Elon Musk and others to advance the development of electric mobility and sustainable energy.

Tesla is known for its superior electric vehicle technology, with models including the Model S, Model 3, Model X, Model Y, and the upcoming CyberTrust and Roadster. These models are known for high performance, excellent range and advanced autonomous driving features. Tesla's battery technology, motor technology and charging facilities all lead the industry to provide users with convenient charging solutions.

In addition to electric vehicles, Tesla is also working in the renewable energy sector, launching products such as solar panels and Powerwall for energy storage and reducing its carbon footprint. The company has also built large-scale battery factories, such as the Gigafactory, to increase battery capacity and reduce manufacturing costs.

As a leader in the electric vehicle industry, Tesla has outstanding technological advantages and a world-leading charging infrastructure. Its proven battery management system and high-performance

battery technology provide outstanding stability and range for electric vehicles. Tesla's charging network is spread all over the world, including the Chinese market, providing users with convenient charging solutions. In addition, Tesla has made significant progress in autonomous driving technology, offering the prospect of driverless cars in the future [1].

However, Tesla also faces a series of disadvantages and threats. These include production complexity, supply-demand balance issues, battery supply shortages, lack of experience in large-scale production, financial uncertainty, employee safety issues, and leadership conflicts. In addition, technological innovation from competitors, competition from new entrants, controversy, and increased competition could also pose a threat to Tesla's market share and profitability.

Still, there are opportunities in areas such as Tesla's potential in the Chinese market, expansion in the Asian market, affordable models, autonomous battery production, technology development, demand for environmentally friendly cars, cheap cars and battery technology improvements. Tesla will need to proactively respond to threats and seize opportunities to continue its leadership in the electric vehicle industry.

2. About Tesla's strengths

Tesla has technological advantages, which is a key to ensure that Tesla can compete in the market. Tesla's electric vehicle technology is at the most advanced level in the world's electric vehicle production, among which the battery management system technology is the most mature and advantageous. Tesla electric cars use Panasonic 18650 lithium cobalt acid battery, this battery also contains thousands of independent batteries, with a high safety factor, large energy density and the number of repeated charging times, which can be a good help to the stability of the car during operation. On the contrary, China's domestic production of new energy vehicle production technology and innovation research and development ability compared with Tesla is still lack of advantages.

Electric cars can get fast power from Tesla's superchargers, so they can run longer distances with less time and effort. The Tesla Powerwall in Tesla can be stored by solar panels and then supplied to the electric vehicle for use, so that unlimited solar energy can be used to effectively reduce the carbon footprint. Tesla has also developed a significant autopilot system, which has truly realized the first step of driverless driving to a certain extent.

With perfect charging facilities, perfect charging equipment facilities are necessary for electric vehicles. If the charging facilities are not perfect or cannot meet the needs of all people, it will affect the sales of local electric vehicles. Tesla's charging supporting systems and facilities are relatively complete. In December 2019, Tesla has nearly 300 supercharging stations across China, including more than 140 cities, including more than 2,200 supercharging piles, which have a good solution to the impact of Tesla users on charging [2].

In the gradually rising sales, Tesla's sales have gradually increased from 2016 to 2022, indicating that more people have chosen Tesla's electric vehicles, indicating that Tesla has made the public accept this brand through its leading technology and different innovations. Thus, these people who buy Tesla can effectively help themselves go further after taking root in the electric vehicle industry.

3. Tesla's disadvantage

Tesla (TSLA) is a company known for its innovative electric vehicles and unique market positioning, but it also faces some important disadvantages that could have implications for its long-term competitiveness and business growth. In this article, we will discuss some of Tesla's major weaknesses and analyze how these factors affect the company's growth.

First, Tesla faces challenges in manufacturing complexity. Although the company has always prided itself on its high innovation standards, this has led to certain production and mechanical delays

in the introduction of new products [3]. For example, Tesla's Model X manufacturing was delayed due to frequent innovation changes, which negatively impacted the company's reputation and sales. In addition, highly innovative products tend to be accompanied by greater mechanical complexity and production risk, which means that Tesla constantly faces challenges in bringing new cars and other products to market, manufacturing and production delays.

Second, Tesla's supply-demand issues could affect its brand value. Because the company's products are experimental and complex, Tesla sometimes fails to meet the demand for its products. This can lead to the loss of potential customers, reducing the company's sales and market share. While Tesla has been working to increase production capacity, the imbalance between supply and demand remains a concern.

Tesla is also facing a shortage of battery supplies. Since most of the company's business relies on pure electric vehicles and plug-in electric vehicles, the shortage of batteries directly affects sales of electric vehicles and energy storage systems. This makes it necessary for Tesla to actively seek a reliable battery supply source to meet market demand [4].

Another disadvantage is Tesla's lack of experience in mass production. Although Tesla is a true electric vehicle pioneer, the company has yet to achieve mass vehicle production. Even with the planned mass production of Model 3, there are still problems with production costs, management resources, and factory space expansion. This may limit the company's ability to compete in the marketplace.

Tesla's financial uncertainty is also an issue. Despite the company's excellent performance in the market, its large outstanding debts expose it to certain financial risks. If Tesla is unable to generate enough cash flow to pay down debt, it could face delays in expansion, reduced investments, and asset sales, which pose a threat to the company's long-term growth prospects.

In addition, Tesla was recently fined for employee safety issues, which is another obvious disadvantage. The company-built production lines without permission or safety inspections, leading to safety risks such as breathing problems for some employees. This not only affects the health and safety of employees but can also damage the company's reputation.

Finally, friction and conflict between Tesla's leadership and board could threaten the company's productivity and long-term success. Power struggles between management and the board have occurred several times, which can lead to instability and internal discord.

Overall, Tesla, as a highly innovative company, faces a number of important disadvantages that could pose challenges to its future competitiveness and business growth. Companies need to proactively address these issues and find solutions to ensure their continued success and sustainable growth.

4. A comprehensive analysis of Tesla's future development opportunities

China market potential: China is one of the key markets for Tesla's future growth. The Chinese government supports new energy vehicles, the economy continues to grow, and Chinese consumers are increasingly concerned about environmental protection. Tesla has established a strong manufacturing and sales base in China and is expected to continue to expand its market share.

Asian market expansion: Tesla is making an aggressive push into Asian markets, including India. The electric vehicle market and the renewable energy market in Asia are growing rapidly, and Tesla has the opportunity to become a major player in the region and continue to increase its global market share [5].

Affordable cars: Tesla is committed to introducing more affordable car models, such as the Model 3, to appeal to a wider audience. This helps expand Tesla's user base and increase sales and market share.

Independent battery production: Tesla plans to achieve its own battery production to reduce dependence on suppliers. This will increase production efficiency, reduce costs, and enhance the competitiveness of the company.

Technology development: Tesla is a leader in autopilot technology and constantly improves its autopilot system. This is expected to improve security and convenience, attracting more trust from consumers and investors.

Demand for environmentally friendly vehicles: Increasing awareness of environmental protection will drive increased demand for electric vehicles. Tesla, as a representative of environmentally friendly cars, will benefit from this trend and meet the needs of more consumers.

Affordable cars: Tesla's economy models, such as the Model 3, make the convenience of electric vehicles accessible to more people. This is expected to expand Tesla's market share and drive mass adoption of electric vehicles [6].

Battery technology: Tesla continues to improve battery technology to improve range and performance. This will increase the appeal of electric vehicles, especially among potential consumers who are concerned about their range [7].

Energy solutions: Tesla is also developing renewable energy and storage solutions, such as solar panels and Powerwall. These solutions will help reduce energy costs and drive the adoption of renewable energy.

In short, Tesla has broad opportunities in multiple areas, from growing market share to increasing technological innovation and driving the adoption of electric vehicles. Tesla will continue to lead the electric vehicle industry and achieve even greater success in the future. These opportunities open up bright prospects for Tesla that will help realize its vision and move the world toward a more sustainable future.

5. The threat to Tesla

Tesla (TSLA), the leader in the electric vehicle industry, while performing well in terms of market share and technological innovation, still faces a number of potential threats that could affect its future growth and competitive position.

First, technological developments from competitors pose an important threat. While Tesla has been leading the way in electric vehicle technology, a handful of competitors have also been innovating. These competitors could introduce new technologies that appeal to buyers, reducing Tesla's overall market share. Tesla needs to maintain a keen sense of competition and constantly improve the speed of technological innovation to meet the challenges of competitors.

Second, new entrants also pose a threat. The electric vehicle market has attracted a variety of players who are trying to enter the market by gaining market share from existing companies. This competition is challenging for Tesla because new entrants may compete for buyers' attention by offering competitive products in terms of price, technology, or market positioning. Tesla needs to constantly strengthen its brand and market share to fend off competition from new entrants [8].

In addition, the controversy could also have a negative impact on Tesla. CEO Elon Musk's comments and actions, as well as allegations of creative accounting, whistleblower retaliation, worker rights violations, and technical issues with products, have led to multiple lawsuits and controversies. The controversies could damage Tesla's reputation, affecting its market image and stock price.

Increased competition is also a threat. Increased competition within the EV market could lead to downward pressure on prices, and Tesla may have to lower prices to maintain market share, which could negatively impact on its earnings. Tesla needs to carefully manage its pricing strategy to maintain profitability in a highly competitive market.

On top of that, currency fluctuations are also a risk factor, especially for companies like Tesla that sell internationally but whose supply chain involves multiple countries. Currency instability could affect cost and pricing strategies, negatively impacting Tesla's profitability.

Competition from established car brands is also a threat that cannot be ignored. Luxury car manufacturers such as Mercedes, BMW, Audi and others are actively entering the electric car market, while economy car brands such as Toyota, Ford and General Motors are also launching electric vehicles [9]. These competitors have strong brand strength and market penetration and could compete for Tesla's market share.

Finally, uncertainty in the electric vehicle market is also a threat. While increased environmental awareness has prompted more people to switch to electric vehicles, the development of policies, regulations and technologies remains uncertain [10]. Tesla needs to be flexible in responding to market changes while actively participating in policy development to ensure the sustainable development of environmentally friendly transportation.

In conclusion, while Tesla has achieved remarkable success in the electric vehicle market, it still needs to deal with multiple threats from competitors, new entrants, controversy, increased competition, exchange rate fluctuations, competition from well-known brands, and market uncertainty. By maintaining innovation, improving product quality, maintaining its reputation and responding flexibly to market changes, Tesla is poised to continue its leadership and achieve long-term success.

6. Conclusion

Tesla, as the leader in electric vehicles, has excellent technological advantages, especially in battery management systems. Its highly mature battery technology and innovative battery composition provide Tesla models with excellent performance, stability and driving range, which has obvious advantages compared with domestic new energy vehicles. In addition, Tesla performs well in the construction of charging facilities, and has a perfect network of charging stations to provide owners with a convenient charging experience. In addition, Tesla is also ahead of the autopilot technology to achieve the initial goal of driverless.

However, Tesla also faces some threats. Technological challenges from competitors, the rise of new entrants and the potential for controversy and litigation to damage its reputation are all issues that need to be taken seriously. In addition, supply chain battery shortages, management complexity, financial uncertainty and internal leadership conflicts are also disadvantages that need to be addressed. Increased competition and uncertainty in the electric vehicle market are also threats to watch.

Tesla has enjoyed considerable success in the electric vehicle market but needs to constantly address these threats to stay ahead. By continuously improving its technological innovation, maintaining its brand reputation and responding flexibly to market changes, Tesla is expected to continue to lead the electric vehicle industry and achieve sustainable growth in the future.

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