Electronic Vehicle Industry Problem Analysis: Tesla's Electronic Vehicle as An Example

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Abstract. Tesla's global electric vehicle market share gradually decline in view of the increasingly fierce competition from traditional vehicle companies and new vehicle makers. This paper aims to analyze Tesla and why it would lose its position as a global leader in the electronic vehicle industry. The issues analysis points out two serious problems with Tesla. The first issue is regarding the unsolved concern of the safety index. The second issue is brand management negligence, as the price reduction strategy may influence the brand image and value of Tesla, which may cause the conflict with the brand image and value and the original image of the enterprise. There is a limitation of this report, which is the time lag issue, and the brand value and image may not improve in the short run but may improve in the long run.

Keywords: Electronic Vehicle Industry; Problem Analysis; Tesla.

1. Introduction

As one of the pioneers of electric vehicles, the rapid development of the global electric car industry is driven by Tesla and has become the benchmark of this industry. But the competition in an industry does not stop, and many new and traditional car companies have made Tesla the target of their challenge. Tesla is a well-known multinational automotive company and clean energy, designing and manufacturing battery energy storage, electronic vehicles, solar roof tiles, and solar panels. The organizational goal of Tesla is to accelerate the world's evolution to sustainable energy. Due to the initial marketing notion of Tesla, it led Tesla ranked as the leading electric vehicle brand and has achieved a dominant position in the world market of the electronic vehicle industry (Source: Statista Web). According to the data, Tesla's core indicators, such as operating revenue and net profit, are continually growing.

On the contrary, they are quarter-to-quarter declined. For example, the number of Tesla vehicle sales was 310 thousand in the first quarter and 254.7 thousand in the second quarter, quarter-to-quarter declined by 17.9%. In the first half of this year, the sales volume of the Chinese brand BYD reached 641 thousand. BYD sold 487 thousand more cars in the first half of this year compared to the first half of 2021, an increase of 315%, which has surpassed Tesla and become the global sales leader in the field of new energy vehicles (Source: Yahoo Finance web). The research question of this case study is whether the price reduction strategy can effectively stimulate customers in the long term. Whether the price reduction strategy meanwhile can effectively help Tesla to achieve its organizational goals and its long-term development. Whether the strategy of Tesla conflicts with its long-term goals and growth.

2. Case Description

It is common to see Tesla fire issues worldwide in recent years. Tesla fires have already evolved into a battlefield for the enterprise's detractors and supporters, who consider that Tesla is not open enough information regarding the causation for the explanation. Some recent fire accidents caused by Model S occurred after a car crash and seemed to be without any reason (Source: Business Insider web). In 2021, a Tesla Model 3 also happened a similar phenomenon, exploding in underground residential parking in Shanghai, China (Source: Tesla web.).

At the same time, deserving attention is in 2022, Ediel Ruiz, who is the Tesla car owner was following a graduation celebration in California, USA. After he received a car alarm notification on his phone, he found the car which is only four months used was surrounded by smoke without reason (Source: iHeart web).

Most people in the automobile industry have questioned the Autopilot issues of Tesla. Especially on July 22, 2022, Tesla made headlines in the same way. Taiwan's celebrity and racer, Jimmy Lin, collided with the isolation facility, the vehicle caught fire, and the model x, which cost one hundred and fifty thousand dollars, was burned to the point where only the frame was left. Meanwhile, NHTSA indicates From July 2021 to June 2022, 866 L2 autopilot crashes were reported, and Tesla participated in 620 cases (Source: NHTSA web.). The report of Tesla crashes primarily comprised two factors: Autopilot involved car crashes and catches fire. Currently, 97 cases, including other products vehicles, are confirmed, and 38 fatalities have been reported (Source: Tesla Fire web.). Correspondingly, crashes caused by Autopilot-involved have a higher fatal or injury possibility. For example, 70% of level 2 driver assistance crashes may generate 60% of severe injuries, and 85% of crashes comprise fatalities (Source: NHTSA Web).

As the manufacturer, Tesla did not respond directly and settled the issues. Meanwhile, Tesla sustained price reductions; the most impressive is cutting prices twice a week (Source: CNBC Web.). It raises a question about whether consumers still trust and willing to choose Tesla and purchase at lower prices but with safety issues Tesla cars. Consumers concerned about their life safety may be relatively more likely to reject purchasing these discounted cars.

3. Case Analysis

3.1 Issue Identified

Tesla reduced the price of its products rather than improving safety after potential safety hazards and used price reduction to maintain market share. Tesla may not consider the safety issue and the benefit to consumers. In terms of price and personal safety, which consumers care more? Is it practical for Tesla to maintain market share by reducing costs long-term? As the company that guides social development, Tesla should consider every stakeholder's benefit[1].

3.2 Issue Analysis

3.2.1 Potential Safety Hazard

The technology of Tesla is still in an immature stage. Since 2010, although they have spent millions of dollars on their Research & Development department, safety accidents still occurred . Meanwhile, Tesla launched the new Model X in 2016, the new Model 3 in 2016, and the new Model Y in 2019, which means the Research & Development department of Tesla may have mainly been focused on launching new products and did not face up to the current safety issue.

Equally notable is that, in the mid-1960s, Ford did not choose to solve the Pinto fuel tank design problem and, when it was known that there were potential safety hazards in the fuel tank, still decided to launch the new product “Pinto” for profit (Source: Mother Jones News Magazine). As a result, the accident resulted in a large number of fatalities and burns (Source: Washington Post). From 1971 to 1980, Ford faced over 100 lawsuits, and hundreds of deaths occurred. In 1972, the most well-known Grimshaw case, Pinto, stalled while merging onto a freeway, resulting in death and jury. Ford, therefore, needs to pay $3 million in compensation to the victims and $125 million in punitive damages.

From the perspective of Tesla, Tesla could draw lessons from the Pinto case of Ford, and the safety issue needs to be solved; some potential seemingly distant issues may eventually affect the company's interests. Although the cost expenditures may increase in the short term, in the long run, if Tesla does not plan to improve the safety issue, Tesla’s ending may finally like the Pinto with a negative reputation and result in a sales decline. Tesla needs to consider the benefits of all stakeholders.

Likewise, enterprises need to consider all stakeholders, sacrifice short-term benefits, then exchange for the development and long-term goals and benefits [2].

There is also one thing different between the Ford and the Tesla issues: the environment between the mid-1960 and now is different. With the rapid progress of the Internet, people's interactive information, propagation velocity, and grasp of the information are increasing. In an e-business environment and with the speed of the information, e-Word-of-mouth marketing becomes more important. Nowadays, consumers' voices have become a critical factor in influencing purchase decision-making [3], which means the current customers tend to move to another brand more quickly than in the past. In the short term, a price reduction may temporarily maintain market share due to the information asymmetry. Still, for a long time, the development of the Internet has accelerated the speed of people's access to information, and price reduction is not an appropriate marketing strategy.

3.2.2 Marketing issues

The price reduction of Tesla tends to have a negative influence on brand value and image. According to the data of high-end car brands and customer behaviour analysis in German by Schaefers and Zoellner, the outcomes indicate that even though price promotions can grow sales revenue, they tend to have a negative influence on consumers' perceptions of high-end products brands [4]. Therefore, it is a question worthy of consideration "People tend to think whether the price reduction of a product is a marketing strategy or product promotion?"

In the face of the safety of life, people tend to choose survival, not price. Underlying the concept of Maslow's Hierarchy of Needs model[5], it seems easy to deduce that people tend to put safety in front of any other factor. It is critical to consider the basic human needs in a marketing promotion, as satisfying customers' underlying needs is crucial to motivate a purchase [6].

From the perspective of consumers, the essence of marketing is not to fawn on consumers but to discover what consumers need and then solve it or create consumer needs. The great success of Unilever in the Indian soap market is an excellent example of discovering the needs of consumers and then solving them. While in India, Unilever found that Indians were more likely to suffer from dysentery due to their unhygienic hand habits, and the disease has been prevalent in some villages in India[7]. It follows that Unilever launched the "lifebuoy" soap and defined the marketing strategy - the "lifebuoy improves health" project, which made Unilever a great success in the soap market in India and made "lifebuoy" become a brand with the most significant market share in India, accounting for 17.7% market shares of the soap market in India (Source: INDIAN companies). De Beers diamond marketing is an excellent example of creating consumer demand. De Beers makes the diamond scarce by controlling supply, production, and price[8]. Meanwhile, films publicize related information and hints between love and diamonds, making people think diamonds symbolize love[8]. Increasing diamonds' exposure rate by sponsoring stars and spokespersons makes the diamond visible and can stimulate customers' purchase decisions. According to STEPPS principles by Berger, Visible means "the easier something is to see, and the more people talk about it," and spurs purchase and action[9].

Tesla can become the leading enterprise in electric cars because it found social needs and invented the concept of electric cars to guide social development. This proves again that the essence of marketing is to discover the needs of people. It follows that Tesla should maintain the original marketing concept of the company and back to start by finding and meeting consumer needs to fulfill the customer's need.

3.3 Suggestions

For internal, the company could improve and perfect or redesign each part with potential safety performance. For example, Tesla could be forming different groups aimed at each position with potential safety performance to research and improve. If possible, Tesla can use the designed modification strategy to pacify the people who feel anxious about the safety performance of Tesla. Although Tesla already applies the recall strategy as the recall is the only way to protect the customers, Tesla should solve the safety performance issue to avoid the similar situation. According to the cost-benefit analysis of the Pinto issue by Dardis and Zent, the design modification strategy seems more cost-effective than the recall strategy. Still, the initial investment in the design modification strategy would be more than the recall strategy[10]. Therefore, Ford did not choose to redesign the fuel tank. The management of Ford underestimated the loss of potential defective products (Pinto). It was unwilling to redesign the fuel tank, which caused unnecessary expense and accidence and negatively impacted the brand image[10].

For External, Tesla should take the initiative to face the explosion incident, call a press conference to apologize, and strictly promise to solve and improve safety performance. When the safety performance issues are improved, a new generation Tesla event can be held, which can imitate the Apple event organized by Apple. Furthermore, Tesla could give a prominent introduction and advertising to the specific value number of the safety performance improvement so that consumers can better understand and comprehend the improvement of the new generation of Tesla. Meanwhile, Tesla can respond to the issue of safety performance by comparing the specific safety values number of the new generation of Tesla with the average number of other cars. This can reassure consumers and enhance the corporate image and brand value.

In the short term, the cost expenditure of the marketing and R&D department will increase, and the solution of root causes (safety performance) may temporarily not play a prominent role in improving the corporate image and brand value. On the contrary, in the long run, satisfying the fundamental needs of consumers is the proper direction for enterprises. Solving the safety issues can make consumers feel reassured about Tesla again. Although it is difficult to improve the corporate image in the short term, it may be practical to improve the brand value and corporate image if Tesla could persist for a long time.

4. Summary

In recent years, Tesla is no longer the only electric vehicle option, and more and more automakers are flooding the electric vehicle space. Tesla is already losing market share as traditional car companies transition to electric vehicles. Tesla may find it challenging to improve the brand value in the short run. As it needs time to improve its safety performance, and it may not finish in a short period, Tesla may find it hard to increase the brand image or value during this period. However, what can be compensated for is that Tesla can give a deadline date to people and promise it can provide a satisfactory reply. During the improvement period, Tesla also can update the progress report to increase customer engagement and attract attention. In addition, it is necessary to make great publicity before the Tesla event, which may be a reminder to people.

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