Electric Car Brand Positioning in the Automotive Industry: Recommendations for Sustainable and Innovative Marketing Strategies

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Tesla is the market-leader and best-recognized brand in the electric car market. It has established itself as a must-have item for early adopters. While the car manufacturing industry has begun to pivot to sustainable eco-friendly cars to compete for Tesla's customer base, the company continues to be positioned competitively in the market. We used Michael's Porter's five Forces to conduct industry analysis and we selected, justified and recommended sustainable strategies that are consistent with Tesla's mission and goals. The changing market and cultural environment is mostly accepting to electric vehicles, and potential customers are attracted by its innovation and design.

EXECUTIVE SUMMARY

Tesla, Inc. is an American automotive and energy-company based in Palo Alto, California (Fortune, 2018). The company was founded in July 2003, by engineers Martin Eberhard and Marc Tarpenning, under the name Tesla Motors, Inc. Tesla Motors shortened its name to Tesla in February 2017 and by 2018, U.S. sales increased from 48,000 to 182,400 (Automotive News, 2019). The company specializes in electric car manufacturing and operates multiple production and assembly plants in Nevada and California. "Tesla's mission is to accelerate the world's transition to sustainable energy and as the world's only fully integrated sustainable energy company. Tesla is at the vanguard of the world's inevitable shift towards a sustainable energy platform" (Tesla.Com).

Although the automotive industry is highly competitive, Tesla has positioned itself as the brand which offers pure electric, impeccably designed vehicles. Currently Toyota's Rav4 Hybrid and Prius, the Chevrolet Volt, and the Nissan Leaf are available in the market. Even though the market is growing, the threat of new entry is moderate because research and development costs are extremely high. For the same reasons the current threat of substitute is very low. Bargaining power of suppliers is high because Tesla relies heavily on its suppliers to manufactures its products. For buyers, bargaining power of buyers is moderate. So, this industry will be attractive for current players in the market.

Tesla's strengths are its second-to-none brand recognition and an increasing number of sales at a global level. Most importantly though is its Supercharger network which has no competition and is the functional equivalent of GM owning every gas station. Tesla's weaknesses are increasing operating costs and the productions costs as well as immense and increasing competition from other automobile

manufacturers. Furthermore, it has yet to meet the benchmark of being profitable more often than it loses money and its CEO has become unstable and something of a rolling publicity disaster for the company. Tesla has several strategic alternatives it can use to address these weaknesses and capitalize on these strengths. Cost efficient manufacturing, new product development, nationwide charger network, and fresh leadership all have the potential to overcome the firm's current problems.

While new leadership would likely benefit the company in the most concrete way, the strategic alternative which is most likely is to introduce a new product such as a motorcycle. The market for motorcycles is very large because many people in less developed countries cannot afford cars but can afford motorcycles. Tesla is already a market leader in the manufacture of batteries, the most expensive stumbling block for electric motorcycle development. Additionally, if done right, the influx of capital from essentially creating a new market could allow Tesla to shore up any existing cash-flow problems and address its production difficulties. In the meantime, the firm could use its Supercharger network as an entry barrier to keep other electric car manufacturers at bay.

ENVIRONMENT

The car manufacturing industry has become very competitive especially regarding eco-friendly cars. Awareness about environment concerns have increased, thus fuel efficient and eco-friendly cars are becoming more popular. Tesla Inc. was founded by a group of engineers in 2003 to prove that electric cars could be better than gasoline cars with respect to speed and efficiency, comfort and environment protection. Tesla Inc. is not only producing electric cars but also clean energy generation and storage products on large scale. Revenue of Tesla Inc. from its products, like electric cars, solar panels and batteries, is increasing significantly despite the presence of strong competition with large companies like General Motors, Toyota, Honda, Nissan, Volkswagen and BMW. External environment of Tesla Inc. is diverse due to vast variety of products and target markets.

Economic Conditions and Trends

Rise in fuel prices and growth in the alternative energy industry has made the economic environment more feasible for Tesla Inc. Demand for fuel-efficient and green energy products, like electric cars, solar panels and batteries to store clean energy has increased significantly. Recovery of GDP and consumer purchasing power from the economic crisis of 2008-2009 also shows the favorable economic conditions for Tesla Inc. Improvement in the global economy has boosted the sales of electric cars already. Tesla has great opportunity to invest more in research and development to make the batteries and cars more efficient and affordable.

Cultural and Social Values and Trends

Cultural and social trends show that people are concerned about the climate and want to give a clean environment to the next generations. People know the costs and other disadvantages of using gasoline. That's why their preference for renewable energy, fuel-efficient cars and other green products over gasoline-based products is increasing. People now even judge others on the basis of the type of car they use and change their perceptions accordingly. If they use green products, then their social status increases and vice versa. Another trend is that people who have more wealth, spend more money on environmentally friendly cars to improve their image.

Political and Legal Issues

Tesla is operating in more than 17 countries of Western Europe, North America and Asia. So different political and legal issues affect its operations. One of the most important common factors which affects the operations of Tesla is the strict implementation of Environment Protection Laws. Standards of environmental safety regarding emission level caps and demand for low carbon footprints are also important factors to be considered for the industry in which Tesla Inc. is operating. Some governments

may offer support like the US government's energy loan programs. Initiatives taken by state or national governments may encourage or discourage manufacturing and sale of electric cars.

Politically, the firm's short-term problems are likely outweighed by long-term opportunities. In the long term, most developed nations are attempting to phase out fossil-fuel powered vehicles in the near future. With the passage of the Paris Climate Accords, almost every nation agreed to take the problem of Global Warming seriously, guaranteeing a long-term and growing market for electric vehicles. In the short-term however, a populist backlash against, among other things, climate science, has thrown Tesla's subsidy-dependent business model into peril. However, if it can survive these next few years, the company's political and legal future looks bright, especially in the United States.

Implications for Strategy Development

External environment analyses show that all factors are in favor of the industry in which Tesla Inc. is operating. The global economy is better and people have improved purchasing power. Moreover, people have awareness about environmental concerns, so the demand for electric cars is increasing significantly. Political and legal environments also favor Tesla Inc. Considering the external environment, Tesla Inc. has the opportunity to enhance market share by offering better and more affordable batteries and cars.

INDUSTRY

Industry Classification

Tesla Inc. is operating in the energy sector and automobile industry. It manufactures not only electric cars, but also manufactures solar panels and batteries. Its slogan is "Burn tires not gasoline". Tesla Inc. falls in the automotive industry as it manufactures a full range of electric vehicles. The automotive is considered one of the most important economic sectors and represents those companies that design, develop, manufacture and market motor vehicles. Tesla is also becoming an energy company. This sector includes those companies which manufacture solar panels to produce energy and manufacture energy storage systems and batteries.

Analysis of Existing Competitors

Although the automotive industry is highly competitive, Tesla Inc. has positioned itself as the brand which offers pure electric, sporty and luxurious vehicles. Its target market includes those people who look for and can spend extra money on premium electric and sporty/luxury cars. The company is currently working on more affordable models to make the transition away from gasoline power as economically feasible as possible. Due to its position in market, Tesla Inc. has moderated its competition. Currently the Toyota Rav4 Hybrid, Toyota Prius, Chevrolet Volt and Honda Civic are available in the market as full or partial alternatives. Other car manufacturers have spawned their own niche by offering partial alternatives like turbo diesel and hybrid cars, but Tesla remains the premier brand in the electric vehicle market.

Analysis of Potential New Entrants

Volkswagen, Audi and BMW have the potential to enter into this market. However, in the presence of existing car manufacturers in this market, new entrants would have to bring something new to enter and survive. However, the overall situation shows that the threat of new entry is low because Tesla Inc. has invested a lot on research and development and is utilizing this research as well. That's why many companies are collaborating with Tesla Inc. to manufacture electric cars and batteries. Additionally, the company's Supercharger network sets it apart from the competition and creates a barrier to entry comparable to GM owning every gas station.

Analysis of Substitute Products

The threat of substitute is very low because there are few substitutions for environment friendly cars. One substitute could be a bicycle, but it is not feasible for long distance journeys or life outside urban areas. Other substitutes could include public transportation such as busses and trains. Although these

substitutes are more suitable for long distance journeys, people prefer their personal means of transportation. The Chevy Volt and Nissan Leaf are significantly cheaper than every Tesla vehicle which is reflected in their lesser quality. Additionally, they cannot access Tesla's charging network and so lack the effective range of the company's lineup.

Analysis of Suppliers

The business in which Tesla Inc. is involved is the type that is highly dependent on the reliability of suppliers. Forward integration, size of the supplier and level of supply are important factors to determine the influence of suppliers. Considering the forward integration, suppliers of Tesla Inc. have moderate influencing power as some of the supplier use third parties for distribution and some transact directly with Tesla Inc. It is operating its production using more than 200 suppliers (SEC, 2016). Most of these suppliers are of moderate size and thus unable to influence the industry. As Tesla Inc. purchases material from more than 200 suppliers, no one supplier has enough power to influence the company, not even its major suppliers like Panasonic. Hence, the overall bargaining power of suppliers is moderate because all three factors have moderate force to influence the industry.

Analysis of Buyers

Buyers of Tesla Inc. products have direct influence on the sales of Tesla Inc. To determine the influencing power of buyers three factors are important to consider: switching cost, volume of purchase and the availability of substitutes. In the case of Tesla Inc. the switching cost from a product of Tesla to a product of some competitor is moderate. Buyers can easily switch to other products as the switching cost is low but the other electric vehicles lack the extensive charging network Tesla offers. The 'cost' then, includes spending a lot more time planning routes around the scarce charging nodes. Additionally, buyers purchase in low volume, further weakening their power. Moreover, the influencing power of buyers is limited considering the third important factor which is availability of substitutes. Electric vehicles offered by various other brands and public transport are good substitutes (Colmorn & Hülsmann, 2014). However, these substitutes are not accessible for many buyers. For example, for the residents of suburban areas access to public transport is limited, making this force moderate. As a result, the overall bargaining power of buyers is moderate.

Summary of Industry Opportunities and Threats

Currently eco-friendly cars are available in market at relatively higher prices than the traditional gasoline-powered cars. By investing in R&D and controlling the production processes, costs can be reduced further to offer these cars at more affordable prices. This industry also has a significant opportunity to utilize government support to make vehicles efficient and affordable. Maintenance of these cars is expensive as well which deters customers. Moreover, the high research and development cost is major factor behind the high prices of eco-friendly cars.

Strategy Development

From the overall industry analysis, it can be inferred that Tesla is facing moderate competition in the industry. Although it has attained a position in the market as the brand of premium electric cars, to gain more market share Tesla Inc. would have to offer lower prices as well. Otherwise people won't be able to shift from gasoline to renewable energy despite the fact they are aware of environmental concerns. So, a major opportunity in the industry, is to reduce cost and offer low priced fuel-efficient cars.

ORGANIZATION

Objectives and Constraints

The primary objectives of the company include generating demand for electric vehicles and clean energy products as well as making the production process efficient enough to meet this demand. Another major objective of the firm is to increase sales of its product so as to attain long-term profitability.

Another objective of the firm is that the company is trying to build longer-term brand awareness and manage the reputation of the organization.

There are some secondary objectives also, which include the increase of the market share of the company. The other secondary objective is to educate its customers about its mission, objectives and goals sustainable superior quality products. There are some constraints which are limiting the scope of the company. The main issue is the increasing costs of production when the company should be expanding its business. If the company has to increase the sales volume of its products to cover these production costs, then they may have to move their business to some other country like China.

Financial Condition

The financial condition of Tesla is not going well. The shares of the company are falling in the stock market. The main issue for the decreasing financial position of the company is related to the decreasing value of its bonds. The constraints which are responsible for the bad condition of the company may also include the delays in the production of the company's products and their delayed sales in the market. Changing the name of the company does not help the company increase its value of shares as Apple did in the past. When Tesla did the same they didn't get that value increase which apple got when they did the same. These were the issues which deteriorated the financial position of the company in the past.

Management Philosophy

The philosophy of the company management is in better shape and the company emphasizes this matter: that the employees must be kept updated when new systems are introduced in the market. The company's policy is to focus on the feedback of the customers and work on them so that their employees would be updated.

Organizational Structure

The organizational structure of Tesla is a functional construction. The structure of the organization is divided into three categories related to function. First is the global hierarchy, then the global centralization, and finally the regional divisions.

Organizational Culture

The organizational culture of the company is at the best level and it creates the competent human resources and their innovative ideas for the production of the products in a global automobile business. This culture of the company basically depicts the customs and the values of the company which they give to their employees and that helps them improve their behaviors as well as their decisions. This further gives power to the employees so that they would be able to enhance their qualities and find the solutions for those ideas which would help the company to reach its peak. This practice encourages the workforce to make efforts for the continuous growth of the company.

Summary of the Firm's Strengths and Weaknesses

The main strengths of the company include the recognition of the brand of Tesla motors. Tesla brand name is well recognized and respected all over the world. Tesla brand has obtained worldwide recognition because of the products and services provided by the company. Another strength of the company is its increasing number of sales at a global level. Also, the company is well-known for its fast-growing Supercharger network. The charger network plays a very important role for the sale of the products of the company. The main weaknesses of the company include the increasing operating costs and productions costs which pressures the company to increase the selling prices of its finished goods. Moreover, the company is facing an immense competition in the country as well as globally. Nissan and Ford motor companies are fiercely competing to get some of Tesla's market share.

Implications for Strategic Development

The organizational structure of Tesla emphasizes the concept of innovation. As a result, this cultural aspect of the company helps the company to develop products with the highest innovative and sustainable technology and to attract new customers. This aspect of the company joins with the generic competitive strategy as well as the intensive growth strategies implied by the company. For the provision of the rapid response along with the problem solving, this culture is more beneficial. This culture also helps the company apply latest technologies by making effective products which meet the needs of the customers. Innovation is good for the company but puts stress on the employees who are on work and if it is implemented perfectly then this culture claims to be beneficial for the company to ensure long term business competition and survival in the market.

MARKETING STRATEGY

Analysis of Sales, Profits, and Market Share

The main financial objective of Tesla is to increase its market share. They are trying to increase their market share by 3% so that the volume of sales would be increased. The company has been focusing on the increase of the sales for some time because after changing its name, the company has been facing some issues regarding deterioration of its financial position. The financial position has been disturbed because of the decreasing market capitalization value of the company. The company has been focusing on issues like educating people so that they would be persuaded to buy the company's products and increase the volume of sales.

Analysis of Target Market

Tesla is trying to achieve a greater portion of the market and they are taken relative measures to do so. Their target for the primary market includes the people who are in the age range 30-60. Also, the cars they are producing are for the people whose household income is more \$80000 per annum-upper middle-class families. Focusing on the production of affordable luxury, safe electric cars will decrease fossil-fuel consumption, and will also provide high value to the customers.

Analysis of Marketing Mix Variables

Product: The first variable of the company is that Tesla's products are being sold nationwide and also they are sold in many countries other than the home country. The company has been producing a wide range of products with the help of the latest technology. Price: For the purpose of price, Tesla usually targets wealthy buyers and they have maintained higher prices for the premium products. The company has also launched some mid-scale products for the customers who are not very wealthy. Promotion: To create a massive awareness, Tesla has taken the platform of social media to launch its promotional strategies. The company deals through its websites, blogs and many other social platforms. The company is also working on the media releases to create brand awareness in the general public. Tesla always tries to create a viral buzz just before the launching of their new products. The company has uploaded more than 100 videos on their official YouTube channel and has more than 300k followers.

Summary of Marketing Strategy's Strengths and Weaknesses

The main strengths for the marketing strategy is its awareness of brand through social media. The company has been working on its promotional channels for a very long time. Its channel has been showing videos to a lot of people on YouTube. The company has used social media very effectively and efficiently. The software on the company website has been updated at regular intervals to be kept updated to the customers' demands. The main weakness for the company is the increasing operational costs related to the promotional activities.

Implications for Strategy Development

The strategy of Tesla is that they have been targeting both sets of the customers who are wealthy as well as the middle-class earners. This strategy enables them to create high performance-cars which help them to build a brand identity, establish high price and increase significantly unit gross margins. Also, diversification plays a fundamental role in Tesla's strategy development. It allows Tesla to develop the company through new business creation. Tesla concentrates the vast majority of its activities on entering new markets and developing new advanced technologies for its cars and future. To reach their goals, Tesla increases the R&D investment to distinguish new opportunities. They also concentrated their strategies on purchasing firms or establishing joint ventures to develop new products (Rowland, 2016).

PROBLEMS FOUND IN SITUATION ANALYSIS

Statement of Primary Problem

The environment for Tesla is good and business growth is expected, but Tesla is failing in managing the customer demand well.

Evidence of Problem

Last year, Tesla sold about 100,000 of its luxury all-electric vehicles, the Model S sedan and Model X SUV. That was a record, but it also represented as many cars as Tesla can comfortably produce in a 12-month period, using the design of its current production system for the assembly line where the S and X are manufactured. Tesla will have to ask S and X buyers to wait for their vehicles, just as it's asking customers who've pre-ordered the Model 3 mass-market sedan to wait, in some cases for a year and half. (Business Insider, Matthew DeBord, 2018)

Effects of Problem

It is expected that Tesla will keep their customers waiting for getting their new cars. These long waits might make customers turn their interest to another alternative like BMW's new hybrid SUV. Tesla needs to manage its customers' demands by providing new products in a reasonable amount of time.

Statement of Secondary Problem

Tesla experienced delays in realizing projected timelines, cost and volume targets for the production and ramp, which harm Tesla's financial condition.

Evidence of Problem

It's already 15 years since Tesla set up, and only two seasons had positive profit. The first season 2018, its deficit reached \$0.78 billion. Tesla burned \$6500 per minute. Tesla has already invested billions of dollars on the Model 3, but it can't improve its productivity target as planned.

Effects of Problem

On June 13, 2018, Tesla announced it would lay off about 9% of its employees, which is about 4000 people. CEO Elon Musk said the company would restructure operations to boost profitability. A Sep 7, 2018 stock plunge puts Tesla's stock value more than 30% below its all-time high of \$389.61. Now the price of its stock is 263.24 USD. Tesla's stock has lost more than 20% of its value since the close of market on August 7, 2018.

Statement of Tertiary Problem

Tesla's business model is highly reliant on government subsidies and green energy policies which are vulnerable to shifts in the political climate.

Evidence of Problem

Tesla receives grants, tax breaks, and marketable environmental credits among other government subsidies (Hirsch, 2015). In addition, government rebates for clean-energy vehicles provide a big incentive for people to try Tesla in the first place. Together, these supply and demand subsidies make Tesla extremely vulnerable to the political climate, as demonstrated when Ontario, Canada cancelled its clean-vehicle rebate. The potential losses to Tesla's business were severe enough to prompt the company to sue (CBC, 2018)

Effects of Problem

This issue makes Tesla deeply vulnerable to the populist backlash affecting politics all over the world. Given that this backlash involves skepticism and sometimes outright denial of the need for clean energy, subsidies that have become structurally integral to the company may become unstable or even disappear entirely. Together with its existing difficulties turning a profit, this issue spells trouble for the company until it can become self-sufficient.

STRATEGIC ALTERNATIVES FOR SOLVING PROBLEMS

Description of Strategic Alternative 1

The factory of Tesla is located in California, which has the highest average cost in the USA, and it's not easy to hire enough proficient workers there. Obviously, it's not a good selection to place a big factory there. In order to save cost and improve productivity, one strategic alternative way is to move or build another factory in a place with lower costs, such as China, India, or Mexico.

Benefits of Alternative 1

It is beneficial to reduce costs and improve efficiency by moving/rebuilding factory to lower cost places, as well as avoiding tariffs which increased greatly recently. Tesla products contain numerous purchased parts, the majority of which are currently single-source suppliers with higher cost, the new strategic alternative can make Tesla obtain components from multiple sources easier. All of these tactics can help Tesla to ameliorate its financial status.

Costs of Alternative 1

Some governments are very interested to cooperate with Tesla: The government of Shanghai promised to provide free field and low interest rate loans to support building a new factory. Savings in the long term and greatly improved efficiency make the cost of this alternative bearable.

Description of Strategic Alternative 2

Tesla could release a low production cost product to break into a new market, generate excitement and raise new revenue to shore up its existing production problems. An electric motorcycle would fit these constraints.

Benefits of Alternative 2

Motorcycles are simple to manufacture, relative to cars, and the hardest production problem they face, the battery, is already something the company specializes in. In fact, their production line for the Powerwall, a huge home battery, could likely be modified to produce motorcycles.

Costs of Alternative 2

The market for electric motorcycles is very small and the existing models tend to be expensive products for a niche customer base. The company would need something very cheap to compete with petrol motorcycles and would need a big advertising push to draw customers away from established brands like Honda or Yamaha. Additionally, the biggest motorcycle markets are in Southeast Asia and the technology likely doesn't exist yet to make an electric bike at a price that can compete with a petrol one.

Strategic Alternative 3

Increasing their Supercharger station to provide customers more comfortable experience in fueling up their cars. Currently, Tesla has 1,260 Supercharger stations with over 9,800 Superchargers around the world. Tesla has updated its map of planned Supercharger locations to show the upcoming stations in its 2018-2019 expansion (https://electrek.co/2018/05/26/).

Northwestern
Passages

Greenland

Canada

Hudson Bay

Labrador Sea

Sel Na.

Labrador Sea

Sel Na.

Continual Sea Output

Romania

North

All antic

Ocean

Mexico

Guif of Mexico

Cutta

Port Rico

Cutta

Port Rico

Mauritania

Mall

Niger

Chad

Sweden

Finland

Sweden

Finland

Sweden

Finland

North

All antic

Ocean

Morocco

Algeria

Libya

Egypt

Saudi Al

Saudi Al

Western

Mauritania

Mall

Niger

Chad

Sudan

Ye

FIGURE 1
TESLA PLANNED SUPERCHARGES LOCATIONS FOR 2018-2019

Source: www.tesla.com, 2018

Benefits of Alternative 3

This will provide customers with more convenient access to charging network and will have positive favorable reviews and better sales.

Costs of Alternative 3

If Tesla wanted to make fast-charging its cars as convenient as going to a gas station, it would have to spend nearly \$8 billion more in the U.S. alone. Based on geospatial imaging of the U.S., the UBS analysis estimated that the current average drive time to a Tesla Supercharger station is around 30 minutes, compared to an average of 4 minutes for the nearest gas stations. To close that gap, Tesla would need to add around 30,000 new individual charging stations. (Green Car Report, 2017 May)

FIGURE 2



SELECTION OF STRATEGIC ALTERNATIVE AND IMPLEMENTATION

Statement of Selected Strategy

Tesla needs a new plan to improve its financial condition quickly. It's obvious that it isn't enough to just fix and iterate on the old way. Comparing cost and efficiency, Tesla could release a low-cost product to penetrate a new market, generate excitement and raise new revenue to shore up its existing production problems.

Justification for Selection of Strategy

To overcome current bad business situation, Tesla needs to find a new product with new stimulation. The customers of Tesla are mainly from those avant-garde youngsters, who want not only a Tesla product but also a lower price product with faster production. If Tesla produces a motorcycle, it can satisfy the customers' needs, especially those of young adults, who are savvy and want a Tesla at lower price, with fast delivery.

Description of Implementation of Strategy

The target market should be $20\sim30$ -year-old people, relatively younger than general car owners. They are usually price-sensitive and enjoy extreme experiences like speeding on the road while riding a motorcycle. TV and social media advertisements will have a strong effect on those customers if a famous young movie star or popular singer is hired. Displaying the motorcycle at avant-garde shopping malls could also draw the attention of youngsters and expand the marketing influence of the new product at the same time.

SUMMARY AND CONCLUSION

Tesla is the market-leader and best-recognized brand in the electric car market. It has established itself as a must-have item for early adopters. While the car manufacturing industry has begun to pivot to eco-friendly cars to compete for Tesla's customer base, the company continues to be positioned competitively in the market. The cultural environment is also mostly accepting to electric vehicles. More importantly, many potential consumers are attracted by Tesla's sleek and high-tech design as well as its near perfect safety ratings. Politically, the firm's short-term problems are outweighed by long-term opportunities. In the long run, most developed nations will be attempt to phase out fossil-fuel powered vehicles. Although the automotive industry is highly competitive, Tesla has positioned itself as the brand which offers pure electric, impeccably designed vehicles. The threat of new entry is moderate because the

market is growing but research and development costs are extremely high. For the same reasons the current threat of substitute is very low. Bargaining power of suppliers is high because Tesla relies heavily on its suppliers to manufactures its products. For buyers, bargaining power of buyers is moderate. So, this industry will be attractive for current players in the market. This paper analyzes Tesla's marketing strategies and provides strategic alternatives to overcome the firm's current problems. We use a case analysis approach to address and analyze marketing strategies in the Electric Vehicle's industry in general, and Tesla in particular. We used Michael Porter's Five Forces to conduct industry analysis and we conducted a thorough evaluation. We selected, justified and recommended sustainable and innovative alternatives strategies that are consistent with Tesla's mission, goals and objectives.

REFERENCES

- Automotive News (2019). FCA, Honda, Nissan Dec. Sales Rise-GM, Ford, Toyota Slip. Retrieved 2019-01-03.
- Collins, J. (2018, March 27). Tesla's Weak Financials: Are Finally Being Exposed in Its Stock Price? Retrieved from https://www.forbes.com/sites/jimcollins/2018/03/27/teslas-weak-financials-are-finally-being-exposed-in-its-stock-price/#4e1faae575f2
- Colmorn, R., & Hülsmann, M. (2013). Strategic Perspectives for Electric mobility: Some Considerations about the Automotive Industry. In: Hülsmann M, Fornahl D (eds) Evolutionary Paths Towards the Mobility Patterns of the Future. *Springer*, Berlin, pp 155–168.
- Colmorn, R., & Hülsmann, M. (2014). Facing the Complexity for Future Concepts of Mobility: the Total Cost of Ownership-Approach for the Evaluation of Business Models. In: Fornahl D, Hülsmann M (eds) Electric Mobility Evolution: Theoretical, Empirical and Political Aspects. *Springer*, Berlin.
- DeBord, M. (2018, April 30). Tesla is burning through billions, and it's revealing an ugly reality about the company's financial situation. Retrieved from https://www.businessinsider.com/tesla-cash-problem-raises-questions-2018-4
- Hirsch, J. (2015, May 30). Elon Musk's growing empire is fueled by \$4.9 billion in government subsidies. Retrieved from http://www.latimes.com/business/la-fi-hy-musk-subsidies-20150531-story.html#
- Lambert, F. (2018, May 26). First up-close look at Tesla solar roof tiles. Retrieved from https://electrek.co/2018/05/26/
- Meyer, P. (2016). Tesla Inc.'s Organizational Structure & Its Characteristics (Analysis). Retrieved from http://panmore.com/tesla-motors-inc-organizational-structure-characteristics-analysis
- Murphy, Jr, B. (2018). Elon Musk Says He Isn't Sleeping and Hasn't Taken Off More Than a Week Since 2001. But He Just Can't Stop. Retrieved from https://www.inc.com/bill-murphy-jr/elon-musk-says-he-isnt-sleeping-hasnt-taken-off-more-than-a-week-since-2001.html
- Rowland, C. (2016, June 24). Tesla, Inc.'s Generic Strategy & Intensive Growth Strategies (Analysis). Retrieved from http://panmore.com/tesla-motors-inc-generic-strategy-intensive-growth-strategies-analysis
- SELECTED SECTIONS OF TESLA MOTORS, INC.'S PRELIMINARY PROSPECTUS. (2016). SUPPLEMENT. (2016). SEC. Retrieved from https://www.sec.gov/Archives/edgar/data/1318605/000119312512402293/d413621dex991.htm

Tesla (n.d.). Fortune. Retrieved 2018-11-25.

- Tesla Motors. (n.d.). Objectives. Retrieved from https://teslamotorsdeca.weebly.com/secondary.html
- Tesla Sues Ontario Government, Alleging Customers Denied Incentives. (2018, August 16). CBC News. Retrieved from https://www.cbc.ca/news/canada/toronto/tesla-canada-sues-ontario-government-1.4788073
- Walsh, T. (2014). Challenges Facing Tesla Motors in 2014. Retrieved from https://www.fool.com/investing/general/2014/01/07/3-challenges-facing-tesla-motors-in-2014.aspx

APPENDICES

TABLE 1 QUARTERLY FINANCIALS FOR TESLA INC.

All values USD millions.	30-Sep- 2017	31-Dec- 2017	31-Mar- 2018	30-Jun- 2018	30-Sep- 2018	5-qtr trend
Sales/Revenue	2.98B	3.29B	3.41B	4B	6.82B	
Cost of Goods Sold (COGS) incl. D&A	2.52B	2.84B	2.95B	3.38B	5.3B	
COGS excluding D&A	2.12B	2.37B	2.53B	3.12B	5B	
Depreciation & Amortization Expense	400.62M	469.61M	416.23M	251.8M	300M	
Depreciation	-	-	-	-	-	
Amortization of Intangibles	-	-	-	-	-	
Gross Income	459.94M	449.99M	462.33M	625.93M	1.53B	
	30-Sep- 2017	31-Dec- 2017	31-Mar- 2018	30-Jun- 2018	30-Sep- 2018	5-qtr trend
SG&A Expense	984.62M	1.04B	1.05B	1.14B	1.08B	
Research & Development	331.62M	354.64M	367.1M	386.13M	350.85M	
Other SG&A	653M	682.29M	686.4M	750.76M	729.88M	
Other Operating Expense	10.8M	11.2M	5.8M	7M	4.6M	
Unusual Expense	-	-	-	103.43M	20.82M	
EBIT after Unusual Expense	-	-	-	(103.43M)	(20.82M)	
Non Operating Income/Expense	(24.39M)	(41.68M)	(37.72M)	50.91M	17.51M	
Non-Operating Interest Income	-	-	-	-	-	
Equity in Affiliates (Pretax)	-	-	-	-	-	
Interest Expense	117.11M	146.36M	149.55M	163.58M	175.22M	
Gross Interest Expense	154.41M	175.26M	168.35M	179.28M	187.22M	
Interest Capitalized	-	-	-	-	-	
Pretax Income	(671.45M)	(779.9M)	(779.02M)	(729M)	271.32M	
Income Tax	(285,000)	(9.09M)	5.61M	13.71M	16.65M	
Income Tax - Current Domestic	=	-	-	-	-	
Income Tax - Current Foreign	-	-	-	-	-	
Income Tax - Deferred Domestic	-	-	-	-	-	
Income Tax - Deferred Foreign	-	-	-	-	-	
Income Tax Credits	-	-	-	-	-	
Equity in Affiliates	-	-	-	-	-	
Other After Tax Income (Expense)	-	-	-	-	-	
Consolidated Net Income	(671.16M)	(770.81M)	(784.63M)	(742.71M)	254.67M	
Minority Interest Expense	(51.79M)	(95.46M)	(75.08M)	(25.17M)	(56.84M)	

	30-Sep- 2017	31-Dec- 2017	31-Mar- 2018	30-Jun- 2018	30-Sep- 2018	5-qtr trend
Net Income	(619.38M)	(675.35M)	(709.55M)	(717.54M)	311.52M	
Extraordinaries & Discontinued Operations	_	-	-	-	-	
Extra Items & Gain/Loss Sale Of Assets	-	-	-	-	-	
Cumulative Effect - Accounting Chg	5_	-	-	-	-	
Discontinued Operations	-	-	-	-	-	
Net Income After Extraordinaries	(619.38M)	(675.35M)	(709.55M)	(717.54M)	311.52M	
Preferred Dividends	-	-	-	-	-	
Net Income Available to Common	(619.38M)	(675.35M)	(709.55M)	(717.54M)	311.52M	
EPS (Basic)	(3.70)	(4.01)	(4.19)	(4.22)	1.82	
Basic Shares Outstanding	167.29M	168.31M	169.15M	170M	170.89M	
EPS (Diluted)	(3.70)	(4.01)	(4.19)	(4.22)	1.75	
Diluted Shares Outstanding	167.29M	168.31M	169.15M	170M	178.2M	
EBITDA	(134.86M)	(128.54M)	(180.74M)	(266.16M)	742.94M	

Source: https://www.marketwatch.com/investing/stock/tsla/financials/income/quarter

TABLE 2 ANNUAL INCOME STATEMENT (VALUES IN 000's)

Current Assets Cash and Cash Equivalents \$3,523,237 \$3,498,735 \$1,219,536 \$1,923,660 Short-Term Investments \$0 \$0 \$0 \$0 \$0 Net Receivables \$515,538 \$499,142 \$168,965 \$226,604 Inventory \$2,263,537 \$2,067,454 \$1,277,838 \$953,675 Other Current Assets \$268,365 \$194,465 \$115,667 \$76,134 Total Current Assets \$65,570,520 \$62,59,796 \$2,782,006 \$3,180,073 Long-Term Investments \$456,652 \$506,302 \$0 \$0 Fixed Assets \$14,144,126 \$9,117,037 \$5,194,737 \$2,596,011 Goodwill \$60,237 \$0 \$0 \$0 Intangible Assets \$361,502 \$376,145 \$12,816 \$0 Other Assets \$7,062,335 \$6,404,796 \$78,380 \$54,583 Deferred Asset Charges \$28,655,372 \$22,664,076 \$8,067,939 \$5,830,667 Current Liabilities \$4,121,616 \$3,070,369 \$	Period Ending:	Trend	12/31/2017	12/31/2016	12/31/2015	12/31/2014	
Short-Term Investments							
Net Receivables	Cash and Cash Equivalents		\$3,523,237	\$3,498,735	\$1,219,536	\$1,923,660	
Inventory	Short-Term Investments		\$0	\$0	\$0	\$0	
Other Current Assets \$268,365 \$194,465 \$115,667 \$76,134 Total Current Assets \$6,570,520 \$6,259,796 \$2,782,006 \$3,180,073 Long-Term Investments \$456,652 \$506,302 \$0 \$0 Fixed Assets \$456,652 \$506,302 \$0 \$0 Goodwill \$662,237 \$0 \$0 \$0 Intangible Assets \$361,502 \$376,145 \$12,816 \$0 Other Assets \$7,062,335 \$6,404,796 \$78,380 \$54,583 Deferred Asset Charges \$0 \$0 \$0 \$0 Current Liabilities Accounts Payable \$4,121,616 \$3,070,369 \$1,338,946 \$1,046,829 Short-Term Debt / Current Portion of Long-Term Debt \$896,549 \$1,150,147 \$627,927 \$611,099 Other Current Liabilities \$2,656,505 \$1,606,489 \$844,162 \$449,238 Total Current Liabilities \$2,656,505 \$1,606,489 \$844,162 \$449,238							

Source: https://www.nasdaq.com/symbol/tsla/financials?query=balance-sheet