

ENVIRONMENTAL ANALYSIS OF TESLA

by MARIA NITA 2115777

Course

THE GLOBAL BUSINESS ENVIRONMENT

Professor's Name

DR.AKINSEYE ALUKO

Institution

UNIVERSITY OF WALES TRINITY SAINT DAVID

Location of Institution

LONDON

Date

9/05/2022

Table of Contents

Introduction	5
SWOT Analysis	5
Strengths	5
Weaknesses	6
Opportunities.....	6
Threats.....	7
PESTLE Analysis	8
Political	8
Economic	8
Social.....	8
Technological.....	9
Legal	9
Environmental.....	9

Porter's Five Forces	10
Industry Rivalry	10
Bargaining Power of Suppliers	10
Bargaining Power of Buyers	10
The threat of New Entrants	11
Threat of Substitutes	11
Value Chain	11
Primary Activities	11
Inbound logistics	11
Operations	12
Outbound Logistics	13
Tesla Marketing and Sales	13
Services	13
Supportive Activities	14
Technology Development	14
Infrastructure	14
Human Resource	14
Procurement	14
Competitive Advantages	15
References	16

Introduction

It is a California-based electric vehicle manufacturing corporation headed by Elon Musk, Tesla Inc. (Le and Ho., 2021). Solar panels and clean energy storage devices are two of this worldwide giant's other well-known products. In order to satisfy today's energy demands, Musk believes that innovation is essential. Electric vehicles were underlined as a realistic option by the company's CEO to combat rising energy usage and climate change. As a result, Tesla has produced a wide range of electric vehicles, such as the Roadster, the Model X, the Model S, and the newer Model 3 versions (Ahmad and Khan., 2019).

Tesla's innovative business model has elevated it above Nissan and General Motors as a serious competitor in the electric vehicle market (G.M.). As a result of its success, it has successfully reached the high-end market. As a result of Tesla's innovativeness, the company's stock price went up and its sales volume. Here, we examine Tesla's SWOT and PESTLE analyses using Porter's Five Forces, Value Chain, and its competitive advantages about the company's fundamental values of sustainability.

SWOT Analysis

Strengths

- 1) Energy conservation. Tesla is a pioneer for electric cars because of its effective use of renewable energy sources like solar power.
- 2) Partnership. In addition to Southeast APDA and Yes Energy, Tesla partnered with several other large corporations. As a result of these partnerships, Tesla can broaden its focus on renewable energy and expand its global reach.

- 3) Outstandingly creative. Their creations are of the highest quality. They worked hard to make the ride as pleasurable as possible for the people driving it.

Weaknesses

- 1) Limited Visibility. In the hypercompetitive automobile industry, Tesla is trying to establish itself, while at the same time, it is trying to expand worldwide.
- 2) Premium Product Selection. Tesla is a well-known name in the renewable energy industry for its high-end products. Price and consumer trust might be a challenge for electric vehicle manufacturers.
- 3) Succession Planning. Although Elon Musk has a lot on his plate, Tesla is seen as a one-person business because of its public face, Elon Musk.

Opportunities

- 1) Technology for self-driving vehicles. Autonomous technology has earned Tesla a reputation for safety and ease. It is increasing its credibility with consumers and the stock market.
- 2) Vehicles with less impact on the environment As more people become worried about the environment, the sales of electric vehicles and a need to minimize the number of gasoline-powered vehicles grows.
- 3) The Art and Science of Making Batteries. Tesla plans to manufacture its battery cells. This might be a game-changer since it will allow the company to reduce its manufacturing expenses.

Threats

- 1) Competition has increased. Big companies like BMW and Volkswagen, which conduct substantial research on vehicles driven by renewable energy, have become Tesla's competitors.
- 2) Advances in technology. Automobiles employ a variety of energy-saving strategies. Higher operational costs and reduced profit margins might be caused by increased competition.
- 3) Durability with time. A company producing automobiles powered by renewable energy must ensure its long-term viability. This is a possible concern because of Tesla's unpredictable production process and weak E.V. infrastructure support in North America and numerous Asian countries.



Figure 1 Tesla SWOT Analysis

PESTLE Analysis

Political

Before Tesla's debut in the automobiles sector, everything was in place for success and development. U.S. Government policies and activities toward environmental stability, fewer emissions, and innovative car technology-enabled Tesla Motors to collect federally supported grant money and loans, and tax advantages. By investing directly in improvements in the electric car industry, the U.S. Government is encouraging the adoption of electric vehicles. Rather than using Tesla's resources, this investment threatens the company and the industry.

Economic

The current political climate in the United States and the looming possibility of war create concern about the economy and the pricing of oil and other raw materials for automobile makers. Automotive sales in 2016 hit a record high of 88 million units, an increase of 4.8% over the year before, while profit margins for suppliers and manufacturers were at their highest levels in ten years (Perboli et al., 2018). On the other hand, automakers have difficulty meeting their financial goals. When it comes to recouping the investment in research and development, Tesla has and will continue to acknowledge that it will be challenging.

Social

Buyers fuel the electric vehicle market wish for an eco-friendlier substitute for traditional internal combustion engine cars. Tesla Motors' earliest clients were affluent men in their mid-to-late-thirties and early-fifties who were lured to expensive luxury supercars and were eager to own the latest and most advanced version on the market (Strickland et al., 1940).

Technological

Tesla is a pioneer in electric vehicle technology and is reshaping the industry. There are, however, certain limitations to the current battery technology. Model S Teslas can only go 230-300 miles between charges (Van Haaren, 2011). An infrastructure of supercharger stations is still being constructed to accomplish this. Users might also have "range anxiety" due to the lack of charging outlets in isolated places, despite stations being found along main routes.

Legal

As a result of Tesla's decision to sell directly to customers rather than through authorized retailers, Tesla has encountered legal and regulatory difficulties. As of this writing, 48 states have passed legislation that prohibits the capacity of car manufacturers to sell their vehicles straight to the general public. As a result, Tesla's showrooms, which provide sales and servicing, face strategic hurdles.

Environmental

As people become increasingly concerned about environmental issues and their consequences, including global warming and climate change, the demand for electric vehicles has grown. Both governments and customers have taken notice of these effects, which has resulted in increased use of electric vehicles as a result of government laws and shifting consumer preferences. Like many other electric, hybrid, and gasoline vehicles, Tesla's electric cars produce lower greenhouse gas emissions and not add to the overall carbon footprint.

Porter's Five Forces

Industry Rivalry

Multi-billion-dollar oligopolies in the U.S. automobile sector are well established. A record \$166.4 billion in revenue was generated by General Motors, the world's best-selling carmaker, in 2016. (Gudenau, 2018). Large corporations and well-known brands dominate the market, and competition is fierce. In order to maintain a constant percentage of the market, rival automakers create new models and rework older versions. They also offer enticing incentives to entice clients.

Bargaining Power of Suppliers

As a result of Tesla's existing production limitations and reliance on its suppliers, the company's suppliers have a limited amount of negotiating power. As a result, Tesla is heavily reliant on Panasonic, a supply arrangement with Tesla through 2017 (Cooke, 2020). Even though there are many other potential suppliers in the sector and Tesla expects to increase output considerably, the Gigafactory contract with Panasonic will allow Tesla to leverage their arrangement with Panasonic to manufacture additional lithium-ion batteries yearly manufactured globally.

Bargaining Power of Buyers

Since there are so many manufacturers, brands, and product lines to select from, and so many dealers are willing to haggle on price, purchasers have a lot of bargaining power in the automotive market. Various electric and hybrid vehicles are on the market, so Tesla buyers' bargaining power is limited. However, the firm does not bargain sale pricing.

The threat of New Entrants

Competitive pressures and many large rivals make it hard for new entrants to enter the marketplace. The enormous cost of manufacturing a vehicle, the high production cost (resources, labour), the high-cost competitiveness, and the high cost of brand management and marketing are all substantial barriers to entry for automobile manufacturers. New entrants might need significant up-front financing to construct an automobile and thrive in the business. Existing brand names gain from economies of scale and diverse product ranges. Thus, new competitors have a tough challenge in the marketplace.

Threat of Substitutes

The threat of Tesla equivalents in the automotive sector is modest due to the availability of alternatives from competitors and public transit. Public transportation alternatives, such as switching to a different automobile brand, are pretty inexpensive. Other electric/hybrid vehicles in a range of pricing points are available from competitors, and all of them operate admirably.

Value Chain

Primary Activities

Primary operations in Porter's value chain include manufacturing and providing services. Inbound and outbound logistics, operations, sales and marketing, and services are among a company's most important responsibilities.

Inbound logistics

Because Tesla is a manufacturing enterprise, many materials are required. Inbound logistics for a production plant to begin production includes getting simple ingredients, storing

inputs, and disseminating materials and supplies across the facility itself. Tesla's distinctive product line necessitates a vast range of raw materials, some of which are pretty rare.

As a result, Tesla has an extensive global supply chain. All inputs must be correctly recorded, stored, and transported across the plant. There are a lot of Tesla facilities in the United States. There is a second one in Taiwan as well. The Tesla is assembled mainly in the United States, California, and Fremont. In addition to manufacturing, these advantages can also be used in warehouses (Coffin and Horowitz, 2018).

Operations

Tesla has manufacturing sites in Fremont, California, the U.K., China, Shanghai, and the United States. Consequently, they necessitate internal process management and control among numerous workgroups. In terms of product lines, the operations can be broken down into two categories:

- The automotive industry includes the design, growth, production, and sale of electric automobiles.
- Renewable energy development encompasses the design, production, installation, and marketing of systems for storing and generating solar energy.

As a result of the heavy reliance on automated manufacturing processes at Tesla, the company has included operations in its value chain analysis. A competitive advantage is gained by implementing a high-level process.

Outbound Logistics

Transport, storage, and order entry are all included in outbound logistics, as are management, warehousing, and shipment to the final destination. Tesla's value chain relies on timely and cost-effective product delivery to guarantee the reliability of its products for end consumers. Outbound logistics must guarantee client satisfaction by ensuring timely and effective transportation and delivery of products. This could be a great way to add value to the product (Sarkis et al., 2004).

Tesla has also revolutionized the motor car marketing landscape through its online purchases. Rather than relying on traditional dealerships, Tesla Motors implemented a multi-channel strategy for procuring vehicles. Tesla's long-term vision includes e-commerce sites and brick-and-mortar locations modeled after Apple's. However, due to Tesla's concentration on vertical integration in its selling process, it cannot cut the price of its autos (Palmatier et al., 2019).

Tesla Marketing and Sales

Tesla relies on recommendations from friends from its pleased clients to market and sell its goods. The quality and distinctiveness of Tesla's goods have earned the brand a household name worldwide.

Services

Tesla's service centers offer after-sale support for its customers' vehicles. In addition, Tesla's value chain analysis would then incorporate nationwide on-demand maintenance units to provide speedy servicing (Liu et al., 2014).

Supportive Activities

Technology Development

Tesla's breakthrough automotive tech has helped it gain an exclusive place in the automotive industry. Consequently, the examination of Tesla Motors' value chain relies on the business's technological advancement. Tesla's innovation strategy revolves around product and process design and trademark technologies. Because of this technological breakthrough, Tesla Motors has carved out a distinct niche in the automotive industry.

Infrastructure

Two main sectors are focused on the things they produce, including the power generation division and the automobile industry. It is necessary to have a solid infrastructure to deal with quality control, legal issues, accounting, and funding. Because of a well-established structure, it is easier to manage expenses and costs.

Human Resource

Tesla needs to preserve its competitive advantage by maintaining its talented in-house workforce to continue developing its innovative product range. The HRM department is in charge of the hiring, training, and retraining personnel in the company.

Procurement

The procurement and storage of raw materials are critical to the success of Tesla's manufacturing operation. In Tesla's value chain analysis, the procurement of components and pieces from various vendors is the subject of discussion. All of these suppliers must be in constant communication with one another and collaborate in order for the Tesla value chain to function correctly (Hastig and Sodhi, 2020).

Competitive Advantages

- 1) They are getting Tesla's Batteries. The reliability of Panasonic's cells plus Tesla's constant upgrading of the packages and the battery composition make Tesla's batteries superior to their competitors (Malik et al., 2016).
- 2) Tesla's network of Superchargers. Tesla electric vehicle drivers profit from the effectiveness of the firm's different, superfast-charging terminals, which are available only through the company (Chen and Perez, 2018).
- 3) Software Upgrades. Like what we get on our mobile devices, tablets, and P.C.s, over-the-air upgrades keep Tesla's electric vehicles at the top of their game. Updates are made on a reasonably regular basis (Salgueiro, 2017).
- 4) The Branding of Tesla. Throughout the years, Tesla has built a reputation for manufacturing excellent goods.
- 5) A.I. by Tesla. While the "Full Self-Driving" package of Tesla's self-driving capabilities offers the maximum capability, it continues to improve quarter after quarter as new autonomous features are constantly added (Endsley, 2017).

References

- Ahmad, S. and Khan, M., 2019. Tesla: Disruptor or Sustaining Innovator. *Journal of Case Research*, 10(1).
- Chen, Y. and Perez, Y., 2018. Business model design: lessons learned from Tesla Motors. In *Towards a Sustainable Economy* (pp. 53-69). Springer, Cham.
- Coffin, D. and Horowitz, J., 2018. The supply chain for electric vehicle batteries. *J. Int'l Com. & Econ.*, p.1.
- Cooke, P., 2020. Gigafactory logistics in space and time: Tesla's fourth gigafactory and its rivals. *Sustainability*, 12(5), p.2044.
- Endsley, M.R., 2017. Autonomous driving systems: A preliminary naturalistic study of the Tesla Model S. *Journal of Cognitive Engineering and Decision Making*, 11(3), pp.225-238.
- Gudenau, D., 2018. Analysis and application of the Toyota Production System in American manufacturing (Doctoral dissertation).
- Hastig, G.M. and Sodhi, M.S., 2020. Blockchain for supply chain traceability: Business requirements and critical success factors. *Production and Operations Management*, 29(4), pp.935-954.
- Le, L. and Ho, Q., 2021. Factors affecting the valuation of electric vehicle company in 2020: case Tesla Inc.
- Liu, Y.E., Kang, Y., Wu, H., Chen, C. and Hon, E., 2014. Tesla Motors Inc. Case Synopsis.

- Malik, M., Dincer, I. and Rosen, M.A., 2016. Review on use of phase change materials in battery thermal management for electric and hybrid electric vehicles. *International Journal of Energy Research*, 40(8), pp.1011-1031.
- Palmatier, R.W., Sivadas, E., Stern, L.W. and El-Ansary, A.I., 2019. *Marketing Channel Strategy: An Omni-channel Approach*. Routledge.
- Perboli, G., Rosano, D.M. and Colonna, S., 2018. Blockchain opportunities in automotive market-spare parts case study (Doctoral dissertation, M.S. Thesis. POLITECNICO DI TORINO. webthesis.biblio.polito.it).
- Salgueiro, V.M., 2017. Tesla inc.: electric vehicles are just the start (Doctoral dissertation).
- Sarkis, J., Meade, L.M. and Talluri, S., 2004. E-logistics and the natural environment. *Supply Chain Management: An International Journal*.
- Strickland III, A.J., Thompson, S.A. and Gamble, J.E., 1940. *Crafting and Executing Strategy; The Quest for Competitive Advantage*.
- Van Haaren, R., 2011. Assessment of electric cars' range requirements and usage patterns based on driving behaviour recorded in the National Household Travel Survey of 2009. *Earth and Environmental Engineering Department, Columbia University, Fu Foundation School of Engineering and Applied Science*, 51, p.53.