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MGT401 Final Case Analysis: TESLA

What are Tesla's competitive advantages and disadvantages; and how will competition from BMW, Nissan, and Toyota play-out?

With the rise in need for companies to promote sustainability, EV's are going to become more and more popular in the near future. Tesla's modifiable software allows Tesla to ensure that their models are up to date - similar to how Microsoft and Apple update their products - giving them a competitive edge. Tesla's Model S is capable of accelerating from 0-60 mph in just 5.6 seconds, which is faster than the acceleration capabilities of the Nissan Leaf and the BMW5. Although the BMW5 is only half a second slower, its annual fuel cost is 5 times greater than that of the Tesla Model S. The Tesla Model S also has a cargo capacity with all seats of 26.3 cubic feet which beats out the Nissan Leaf and BMW 5 as well. On top of that, the max cargo capacity of the Tesla Model S is larger than the Nissan Leaf and BMW5's max cargo capacity combined.

Tesla's capability of a fast recharge also sets it apart from its competitors. The case study mentioned, "On any regular outlet, EVs would recharge between 5 and 10 miles of range per hour. But higher-amp household outlets could double or triple that, while Tesla's Supercharger could charge 150 miles of range in 30 minutes". A concern for potential electric vehicle buyers is that they will have to recharge for long periods of time or even inconveniently. The capability of recharging 150 miles of range in just 30 minutes gives Tesla a huge advantage and will allow them to win over those concerned consumers.

By conducting a PESTEL analysis, we are able to look at how Tesla is affected by external factors. On a political level, the rise in popularity of sustainability helps Tesla because their cars are more environmentally friendly. Government incentives and tax-benefits persuade consumers to purchase teslas.

Due to teslas high-price, consumers will base their decisions based on the current economy. This is inconsistent due to the economy's instability. Electric vehicles have boosted the economy because of their high price as well. Socially, Tesla needs to be conscious of where they are targeting their marketing. Teslas software and advanced technology fit into the future. Due to recent technological advancements, other companies have the opportunity to come up with something extremely similar. Tesla has a strong image when it comes to helping to prevent climate change. Tesla vehicles make use of many sustainable features which only plan to becoming more popular. Legally, Tesla has to ensure that they are maintaining guidelines and following the rules in other countries.

Cost, manufacturing complications, supply shortages, debt, and other key competitors, all play a role in the disadvantages that Tesla faces. Starting with cost, Tesla does not use ready-off-the-shelf standard materials for certain components of their vehicles when manufacturing personalized design. Producing a high volume of cars with the specificity of Tesla's designs, makes them at a disadvantage for cost of manufacturing. Tesla also faces complications with their manufacturing due to production risks. Specifically, Model X led to constant delays for distribution because of the troubles they ran into with Model X's battery. This battery has caused decreases in production rates due to its limited supply, yet another disadvantage which Tesla faces. Tesla introduced their Gigafactory which will make it easier to mass produce these batteries, However, Tesla still has to deal with regulatory and logistical hurdles for the Gigafactory. Tesla will also need to keep up with producing batteries which means they would want to open more Gigafactory facilities. This, again, can cause issues if Tesla cannot get those factories up and running.

Although this is not the case currently, Tesla has faced problems with competing against low gas prices. Low gas prices are economically attractive and will keep "legacy cars" on the road as competitors. Along with those competitors, there is also an increase in competition with big tech companies such as Google and Apple, both of which are manufacturing electric cars. The Nissan Leaf and BMW 5-Series are also direct competitors of Tesla. With this broad consumer basis, it could make Tesla

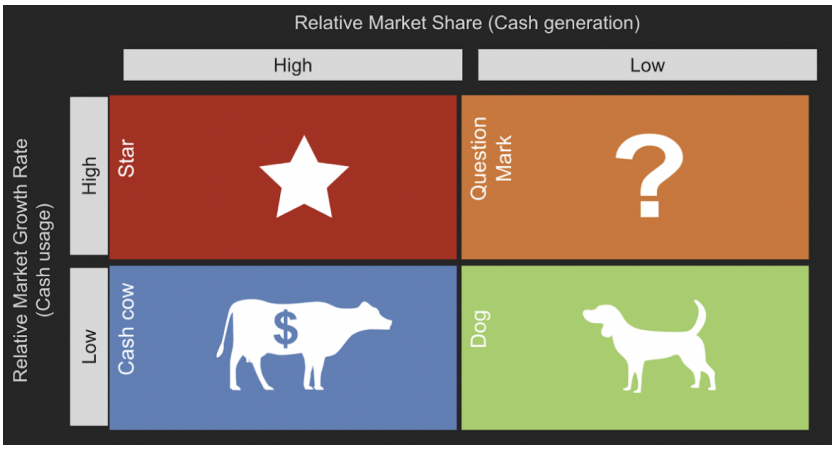
concerned. The BMW 5-Series is a similar cost to Tesla's Model S. They both have a high initial price, but low maintenance costs. Tesla has tough competition in the market, and they must be able to differentiate to beat these disadvantages.

Describe Tesla's entry strategy to the market, and what barriers to entry specifically will other firms follow?

Scope of competition refers to whether to pursue a specific, narrow segment of the market or to pursue a broader market. Tesla's mission is to enter the high end of the market where customers are prepared to pay a premium, and then drive the market down as fast as possible to increase the number and lower the price of each successive model. Elon Musk is clear that he wants to go farther and build a lower end mass-produced electric car. His plan is to use that money to build affordable cars by building high end sports cars, and subsequently use that money to build even more affordable cars. Looking at Tesla's strategy in recent years, this is indeed how Musk has executed Tesla's strategic plan as well. Tesla first developed its high-end sports car, the Roadster, which can accelerate from 0 to 60 mph in 4 seconds, which is faster than the Ferrari Testarossa and in the same range as recent sports cars. Revenue from sales of the roadster financed the development of the Model S X Y and the Model 3 at a time when all other models were successful. Instead of building independent dealers as other automakers have done, Tesla has built a network of company-owned stores where salespeople receive salaries rather than commissions. The existing franchised dealers had a fundamental conflict of interest, and Musk wanted Tesla's salespeople to explain the benefits of electric vehicles without also disrupting its traditional business. This allows Tesla to differentiate its products from competitors, increase customer understanding of the Tesla philosophy, foster customer relationships, and develop a sticky customer base.

The BCG model can be considered into Tesla. If a product has a high relative market share and low market growth. Its earnings will be high and stable, as well as its cash flow. We call this a cash cow, and our strategy for it is to hold it, which generates a stable profit return that far exceeds the cash outlay required to acquire or launch it. We will use the returns to invest in Stars. Model S X Y are already

mature products with low market growth and high market share, and these three models can be seen as the cash cow to finance model 3. Model 3 is the current star of Tesla, with high market growth and low market share. Looking back at the early days of Tesla, when the Roadster was the cash cow and the Model SXY was the star of the show.

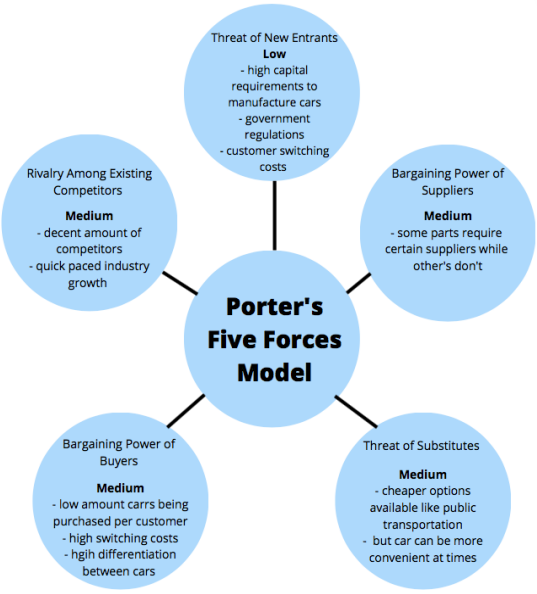


Tesla's **power of suppliers** were huge in the past, and after Tesla's early success, it purchased the NUMMI plant in California from Toyota for $42 million to reduce the power of suppliers. Tesla has then continued to diminish its power of suppliers, such as when Tesla purchased a $50 million hydraulic press for $6 million. Tesla has brought much of its parts production in-house-90 percent of its Model S-specific plastic parts are produced on its injection molding machines-and its entire powertrain is produced in-house. These actions by Tesla are all vertically integrated, referring to the company's expansion into another stage of production. It has done a **forward vertical integration**, adding quality control, while moving ownership of activities closer to the end customer.

Tesla utilizes lithium batteries as a power source, and the **experience curve** for lithium-ion batteries is estimated to be between 85% and 90%. The slope of the learning curve represents the rate at which new skills are learned. As the learning curve decreases, it takes less and less time to produce the same output as workers learn how to become more efficient, thus reducing unit costs. In other words

when Tesla will have low profits in the beginning and then slowly increase. Tesla must achieve upfront commercial success to attract capital to invest in it, which is one of its biggest barriers.

It is crucial for Tesla to be aware of the potential of competitors entering the market in order to prepare for how to differentiate and limit the competitive threat. When evaluating whether or not to enter the market, there are financial and logistic barriers that have the power to prevent new firms from entering and attempting to compete with Tesla. The Porter's Five Forces model is a beneficial way to evaluate these barriers and judge what firms should expect when entering the new market. The threat of new entrants is low due to high capital requirements needed for manufacturing, design, and more to build and market the car. There are high customer switching prices when buying new cars and government regulations. The bargaining power of suppliers is medium with multiple suppliers being available for certain parts, but some, such as battery packs, only being from a certain supplier. The bargaining power of buyers is medium. There are many buyers purchasing a very low amount of the product, high switching costs as the buyer; however, the car manufacturers can be differentiated based on physical and operational components of cars. The threat of substitutes is medium. With options such as public transportation and car services, cheaper options are there for customers. The industry rivalry among competitors is medium with a decent amount of competitors in the industry, such as Volvo and Nissan, but quick paced industry growth among electric vehicles with increased conscientiousness of the environment globally.



Ultimately, how will the industry evolve and who will be the dominant participants?

Advances in technology, movement towards sustainability and climate consciousness, changes in work priorities and preferences, as well as the overall world climate, all have greatly impacted various

industries. The car industry is no exception and digital technologies have greatly affected current car trends towards the future. The automotive industry will continue to evolve with technological changes and trends that are at the forefront of the dominant participants involved. Shifts in the car industry will most likely continue to trends towards embracing technology within the production of any new vehicle.

Currently, the car industry has been defined by major participants such as Tesla, who have aimed to blend software with car manufacturing, a great influence on the future of the car industry. Elon Musk, chief executive of Tesla, wanted to marry technology and the idea of consistent updates or changes to software, with a vehicle. Tesla's car software innovations are a pillar of their impact on the car industry. The car industry will continue to evolve towards software innovations within vehicles as the benefit of this is that cars can be changed and updated, even after they are bought. As teredata.com says, "the software core turns every Tesla car into a learning machine" and companies such as Lucid and Revian seem to be making strides in the digital development of software for cars, following in Tesla's suit.

As technology advances, and more innovations in software are created, cars get smarter and more personal to each user, enhancing vehicles as more than a way to get from here to there, but as an extension of one's digital footprint. This might mean that developments within cars might lead to personal car preferences that a user could change easily from their phone. Connection, ie. to Wifi, other people, or even the Metaverse, and electric, ie. eco friendly cars are the two main trends that seem to impact the future of the car industry. The VRIO model can be used to determine the value of these potential features.

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