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Determining the Effectiveness of Tesla's Strategy

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Determining the Effectiveness of Tesla’s Strategy

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Abstract:

The purpose of my Senior Comprehensive project is to determine the effectiveness of Tesla’s strategy. The United States automobile industry is notorious for its extremely high barriers to entry and oligopolistic competition that has historically made it very difficult for new companies to succeed in the market. Tesla Motors, however, is the one exception to this, because since 2004, it has been a legitimate player in the U.S. auto industry with a market cap of $39.4 billion. Using the case study methodology, I applied the existing literature on business strategy and management, along with historically relevant information regarding new entrant firms in the U.S. auto industry to analyze Tesla’s strategy and performance thus far. I conclude that Tesla’s strategy provides the organization with a clear identity that gives the company a distinct competitive advantage that helps the firm leverage its core competencies, and allows the company’s stockholders to effectively make intelligent tradeoff and helps to link activities within the company.
Chapter 1: Introduction

Tesla (formerly known as Tesla Motors) is one of the most intriguing new companies in the United States. The Silicon Valley-based energy and automobile company entered the market in 2002, and within fifteen years Tesla has shown to be a credible threat to the existing U.S. automakers in Fiat-Chrysler, Ford, and General Motors. Having dominated the automobile industry in the United States, the big three auto companies are likely not used to competition from others within the same country. Similarly, the U.S. auto industry is not easily entered as a result of the oligopolistic nature, and high barriers to entry. It is because of this meteoric rise in an industry that is difficult to enter that Tesla presents such a unique and exciting research opportunity (Halla, 2015).

In August of 2006, Tesla’s CEO, Elon Musk sent out a letter to his shareholders entitled, “The Secret Tesla Motors Master Plan (just between you and me)”, that outlines the company’s overarching strategy. Recognizing that environmental issues would soon change the way people viewed car buying; Musk was bold in his approach because he truly believed that what he was doing was worth it. In this letter, Musk contends that, “The strategy of Tesla is to enter at the high end of the market, where customers are prepared to pay a premium, and then drive down market as fast as possible to higher unit volume and lower prices with each successive model” (Musk, August 2006). This was met with applause, as people thought he was revolutionary in his idea of bringing a low priced electric car to the market, which may very well be true. However, what I am more interested in is determining if the strategy that Elon Musk laid out will be effective in achieving the firm’s long-term goals.

It is very difficult, to use Tesla’s revenue, income, profits, and other financial data to try and predict their future success. This is because, despite only having a few profitable quarters since the company began, they are expanding, building massive factories, achieving economies
of scale, and innovating the industry (Isidore, 2016). Tesla has never been able to reach a production deadline, and they have rarely come close to financial forecasts, which is for a few reasons. First, this is because Musk knowingly sets unrealistic expectations for his company, with the belief that in order to bring their products to market as quickly as possible, they need to set deadlines that will hold their feet to the fire and deliver the best results (Randall, 2016).

Tesla has only achieved two profitable quarters since the company began in 2002. Despite this lack of revenue, the company has not only been able to survive in the U.S. auto industry for fifteen years, but has also expanded its product line, and achieved economies of scale through the construction of a $5 billion battery production plant in Nevada. Such massive amounts of spending would be unsustainable without the proper investor contributions (in addition to other forms of cash, such as government subsidies). Naturally, with only two profitable quarters in the fifteen-year history of Tesla, many question why investors still have faith in the company’s ability to deliver on its promises. Forecasting models only go so far in determining a company’s future, and as a result it is my intention to look into the effectiveness of the strategy that Elon Musk laid out for Tesla to determine the future success of the company itself.

In order to understand the strategy of Tesla and determine its effectiveness and future, it is crucial to first understand the framework of strategy as explained in business strategy literature. Existing literature has shown that it is very difficult to enter into the automobile industry, which is a very important topic of discussion for a number of reasons. First, Tesla is a company unlike any other, specifically in terms of the product that it sells-- electric vehicles. In addition, the massive pressure of climate change has greatly increased the demand for energy efficient cars. With that in mind, then, it is crucial to understand what strategy the company has
implemented and trying to determine the future success of the company. I will be using a case study as the methodology in order to determine Tesla’s effectiveness.

Effective strategy begins with efficient business practices that can generate the revenue that is required of a new firm that is entering in a market. However, these measurements of success only go so far in analyzing whether or not a company can be successful, and so a more theoretical examination of strategic theory is required. Porter (1996) argues that operational effectiveness is not sufficient, but that “the essence of strategy is choosing to do activities differently than rivals do” (p. 64). The next step is to find what Collins and Porras (1996) outline as the idea of core purpose and core vision, which are the foundational pieces of the company’s ideology and practices. The core components must be flexible enough to constantly maintain a competitive advantage and be different than competitors, through the implementation of strategic positioning and well executed trade-offs, both requiring intelligent and careful leadership from the company’s executives. To further capitalize on the dynamic capabilities of the firm and to shift the production frontier outwards, there must be a link between the short-term and long-term actions of the firms, in what Kaplan and Norton (1996) define as the balanced scorecard. The aggregation of these characteristics forms an effective strategy, keeping a company on track to achieve its goals.

In order for a business to be successful, there are many things that have to go right. Such complex networks require careful organization and planning in order to ensure that all of the company’s resources are being utilized effectively and efficiently. However, something that is often overlooked in the pursuit of this efficiency within specific operations is effective strategy that consistently allows the company to succeed in the industry through sustained competitive advantage.
Therefore, it is my intention to look into ideas on business strategy and management by first examining the existing literature on this subject, as well as the literature relating to Tesla. From there, I will be able to formulate an outline of what an effective strategy is through the framework of the literature. After this, I will gather a historical understanding of the U.S. auto market, by looking at aspects of the previous automotive companies that attempted to enter the auto industry, but ultimately failed. This will provide me with a historical framework from which to view Tesla’s strategy, as outlined in the previous section, which I can then cross-reference with Tesla’s operations and financial performance using Tesla’s 10-k reports, and overall market performance. Moreover, using business strategy literature, historically relevant evidence regarding entry into the U.S. auto market, and Tesla’s financial information, will allow me to determine the effectiveness of Tesla’s strategy, and therefore provide an indication as to their future success.
Chapter 2: Literature Review

Much has been written about the usefulness of business strategy, as a number of different economic theorists have predicated their theories on what determines a successful and effective strategy that allows firms to constantly maintain their competitive advantage. While the later portions of this essay will be dealing primarily with this strategic theory and examining the effectiveness of Tesla Motor’s strategy through the framework of existing literature, it is important to mention those articles about strategy, so that there is a better understanding of what my essay is trying to accomplish. Moreover, by setting up the strategic framework now, we can better grasp the vacuum that exists in the most recent literature on Tesla Motors.

Section I: Regarding Business and Management Strategy

Porter (1996) states that there are many misconceptions within the business world that are leading companies away from success, and explains that, “Positioning…is rejected as too static for today’s dynamic markets” (p. 61), and that many believe “rivals can quickly copy any market position, and competitive advantage is, at best, temporary” (p. 61). Moreover, he argues that the bigger issue in modern business strategies is failure to distinguish between operational effectiveness and strategy (Porter, 1996, p. 61). Although, recognizing that operational effectiveness (performing an activity better than your competition) is crucial to the success of a company, Porter argues that strategy is what keeps a company from succumbing to competitive forces, benchmarking, and ultimately, failure. Moreover, Porter (1996) argues, “Constant improvement in operational effectiveness is necessary to achieve superior profitability. However, it is not usually sufficient [for sustained success]” (p. 63). The reason for this is largely because
technology keeps advancing, and imitation within an industry grows and ultimately eliminates competitive advantage.

Furthermore, Porter (1996) explains that the key to strategy is being different, doing things differently than your competitors so that you can constantly maintain a state of competitive advantage. The productivity frontier (see Figure 2.1 below) is a good illustration for differentiating operational effectiveness and strategy, as it encompasses the sum of existing best practices at a given time but is constantly being shifted right as soon as an organization improves its operational effectiveness (Porter, 1996). As a result, companies are constantly trying to catch up to one another rather than pursuing their own unique strategy. Porter continues and breaks down the key concepts of strategy into three different functions: strategic positioning, trade-offs, and fit.

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**Figure 2.1:**

*Productivity Frontier, (Porter, 1996, p. 5)*

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Strategic positioning, Porter (1996) argues, emerges from three distinct sources, the first of which being variety-based, meaning that a company specializes in only one part of the market. The needs-based source, as its name implies, is the idea to only focus on a group of customers...
that need a specific thing or service. The third and final source is access-based, and focuses on many different ways to reach out to the customer (Porter, 1996). Once a company has defined which one of these (or some combination of the three) it wants to operate under, it gives it a roadmap to follow when considering the trade-offs and fit required for overall strategy.

In terms of trade-offs, Porter explains that companies, and specifically the people running the company, have grown to dislike making trade-offs. This is, in my opinion, the most interesting aspect of this piece because of how important trade-offs are to the continued success of companies and, yet, how reluctant most managers are to make concessions. Moreover, as it relates to Elon Musk, the CEO of Tesla, we will later get a strong understanding as to the importance of strong leadership. Moreover, Porter points out that the essence of strategy is what not to do and that without it companies have to, “run faster and faster just to stay in the same place” (Porter, 1996). I believe that, when viewed through the eyes of the manager's, trade-offs can seem like compromise or failure, but it takes strong leadership to recognize that trade-offs actually prevent failure. Trades-offs are also a way to narrowly focus a company’s activities, and deterring what Porter (1996) calls, “straddling or repositioning, because competitors that engage in those approaches undermine their strategies and degrade the value of their existing activities” (Porter, p. 78). This happens all the time in business, and guides firms away from what they should be doing. For instance, as it relates to the auto industry, Chevrolet’s electric vehicle, the Volt, is an example of straddling, as GM is attempting to produce an electric vehicle, while it has historically only ever produced internal combustion engine cars and trucks.

The third aspect Porter mentions is the idea of fit, which is described as being “a chain that is as strong as its strongest link, or in other words, figure out what you do best and then mold the other aspects of your company around those strengths (Porter, 1996). Essentially, Porter is
saying that each individual function of a company’s operation should be complementary, thus making each other operation stronger. He breaks fit into three categories as well; First-Order fit (simple consistency between each activity), Second-Order (activities that are reinforcing), and Third-Order (optimizing effort) (Porter, 1996). Porter effectively argues that, by focusing on all of those things (in addition to preserving operational effectiveness) a company should be able to succeed in developing and maintain an effective, enduring strategy.

Although Porter’s (1996) theories on business management have been very influential, there are areas of his work that deserve critiquing. First, Porter’s guiding principles and theories that permeate his work are simply theories, and lack step by step processes on how to implement them. In his efforts to distinguish between strategy and operational effectiveness, Porter fails to give specific details as to what specific actions should be taken in order to achieve enduring strategy and competitive advantage. As we will soon see, however, there have been other authors that help fill in the gaps, and give a more dynamic, well-rounded view of strategy. In addition, Merchant (2012) points out that certain aspects of Porter’s (1996) value chain theories are antiquated. Specifically, Merchant (2012) mentions that his opinions regarding strategy treat consumers as being outside of the decision making process. Interestingly, however, the author points out that this has been changing since the advent of social media, and requires that companies include aspects of consumers into the strategy formulating process (Merchant, 2012).

In terms of management strategy, Kaplan and Norton (1996) post their theories, which pick up where Porter’s (1996) leave off. In their article, Kaplan and Norton develop a system called the balanced scorecard that helps to give Porter’s strategy ideas a tangible way in which to implement them. The authors explain that the purpose of their article was to complement the existing literature as they felt that there were pieces missing as it related to business strategy.
More specifically, the article mentions that, “the scorecard addresses a serious deficiency in traditional management systems: their inability to link a company’s long-term strategy with its short-term actions” (Kaplan & Norton, 1996, p. 75). The authors then outline the four components that they believe would better allow an organization to link its short term strategies with its long term goals -- translating vision, communication and linking, business planning, and lastly feedback and learning.

According to Kaplan and Norton (1996), translating vision is the first component in aligning long-term strategy with short-term goals. Since big lofty goals are not easy to put into action, management must be deliberate and decisive in agreeing upon and laying out the drivers of success. The authors state that consensus among an organization’s leadership is the most crucial aspect to translating vision, as division within management would not provide the rest of those with a company with a clear understanding of where to go (Kaplan & Norton, 1996, p. 172). The second component of Kaplan and Norton’s article is communication and linking, which, in and of itself, contains communicating and educating, setting goals and linking rewards to performance measures. When combined, these three parts of the communication and linking component of the balanced scorecard ensure that everyone in an organization understands his or her role in, what choices they are responsible for making, and the possible outcomes of their decisions (Kaplan & Norton, 1996, p. 172). This system of communication and education allows for efficient operations within a company and serves to eliminate any confusion amongst a company’s employees as to their responsibilities.

The third section of the balanced scorecard idea is that of business planning. According to Kaplan and Norton (1996), the business planning section is simply the process of an organization’s management sitting down and outlining where they would like their company to
be. Most importantly, that management links the procedures and organization of strategic planning when allocating resources and budgeting. In order to do this the management must set targets and align strategic initiatives, along with allocating the proper resources and establishing milestones (Kaplan & Norton, 1996, p. 184). I believe that this is where the article is its weakest, and where the authors do not go far enough in explaining their ideas. More specifically, despite containing ideas that sound like they could work to help create an effective strategy, they fall short in terms of laying out a detailed approach on how to do those exactly. For example, as it relates to strategic planning, arguably the most important part of the business planning section, Kaplan and Norton describe that generally, “senior executives go off-site annually and engage for several days in active discussions facilitated by senior planning and development managers or external consultants” (Kaplan & Norton, 1996, p. 183). This only suggests an idea, but does not go into explaining the details of what those executives should discuss, and how to lay out a strategic plan.

Nonetheless, I found that one of the greatest strengths of this article was in its ability to take strategy theory such as Michael Porter’s, and compliment that theory with a clear system of tangible actions that outline how to be effective in implementing the theory. However, in terms of business planning, the authors fail in this regard. Feedback and learning is the fourth and final section of the balanced scorecard, and is the idea that constant testing of the scorecard is necessary for long-term success. Moreover, by always testing the scorecard in terms of its strategic alignment, a company can be sure that it is operating efficiently and that the overall direction of the organization is still aligned with its goals and objectives.

Collins and Porras (1996) also helped add to the literature on business management by laying out a plan for building a company’s vision. The authors describe that throughout their
research, it has been made clear that the great companies they have studied had a few things in common. Specifically, great companies such as Hewlett-Packard, 3M, Merck, Johnson and Johnson, and many others, exemplify core values and a core purpose, which do not change, in addition to strategies, and practices that perpetually adapt to the changes that occur in the world of business (Collins & Porras, 1996). While this definition of strategy sounds incredibly close to that of Porter’s strategy concept, it is distinguished by the way in which the strategic vision is defined. Collin and Porras (1996) believe that the idea of vision as it relates to management strategy is a grossly overused term, and in turn the understanding of what a vision should be has been misconstrued. The authors define vision as the guiding idea about “what core to preserve and what future to stimulate progress toward” (Collins & Porras, 1996, p. 2). More specifically, they outline vision as being broken into two separate, but equally important components, of core ideology and envisioned future.

Core ideology is defined as the “consistent identity that transcends product or market life cycles, technological breakthroughs, management fads, and individual leaders” (Collins & Porras, 1996, p. 2). Operating under the assumption that it is more important to have an understanding of who you are as a company, rather than where your company is going in the future, because changes are bound to occur to any company as changes occur in the world, core ideology is what holds a company together as it grows and changes. There are two components that together constitute core ideology; core values and core purpose. According to Collins and Porras (1996), core values are the “handful of guiding principles by which a company navigates” and require no justification from the organization (p. 2). It is also important to note that great companies do not change their core values, but rather try to change the market around them by
looking for new opportunities or customers, and in doing so remain steadfast in to their core values.

In addition to core values, core ideology also consists of core purpose. According to Collins and Porras (1996) “Core purpose is an organization’s most fundamental reason for being” (p. 2). In other words, the core purpose of a company is the reason that exists and although can be reflected in its products, it is more idealistic so it gives the company’s employees and management a true reason for their work. For example, Collins and Porras (1996) argue that Walt Disney’s core purpose is, simply, to “make people happy” (p. 10), but through this, everyone else in the company understands the reason they are working. Not only can this allow people to work more effectively and passionately for an organization, but it can also attract the types of workers whose personal values are compatible with that organization's core values. Together, core values and core purpose create one-half of an organization’s vision, and offers an idealistic framework for the company to work within. The other half of the vision, according to Collins and Porras, is the envisioned future.

The envisioned future component of a strategic vision contains two specific parts -- the adoption of what the authors describe as Big Hairy Audacious Goals (BHAG), and a vivid description of what those goals are and how to achieve them (Collin & Porras, 1996). In combination, they set up a both a tangible result that an organization is working towards while also conveying, “a time yet unrealized-- with its dreams, hopes and aspirations. (Collins & Porras, 1996, p. 94). In terms of Big Hairy Audacious Goals (BHAG), which are meant to be a ten to thirty year goal that stimulates consistent progress. The authors distinguish these large goals from a normal set of objectives by stating that they are meant to be extremely daunting and challenging, even comparing them the idea of climbing Mount Everest (Collins & Porras, 1996).
It is clear that this idea is consistent, and even complementary with that of the core ideology component of having a strategic vision because by having both core values and core purpose, the BHAG’s of a company represent them as well as provide the workers with a concrete program with which to live out the values and purpose. It is important to mention that the authors state that the BHAGs of an organization should be so audacious that achieving the goal should not be an eventuality. Rather, the goals should be so big that there is a legitimate possibility for failure, which would provide a perpetual source of motivation for those within the organization, and allow it to constantly move forward in their desired direction.

In addition to the identification of a Big Hairy Audacious Goal, Collins and Porras (1996) describe the that an organization must have a vivid description of the BHAG, which is defined as, “a vibrant, engaging and specific description of what it will be like to achieve the BHAG” (p. 95). Essentially, this part of the envisioned future component of the strategic vision that Collins and Porras lay out is far less tangible, but is meant to motivate everyone within an organization and empower them to take on the responsibility entailed in achieving large tasks. Vivid descriptions must be passionate and emotionally charged in order to be effective in motivating others to take on the BHAG that has been established, and always comes from the company’s leadership (Collins & Porras, 1996). One great example of a vivid description that the authors point out is that of Henry Ford, the founder of Ford Motors, describing what his company would accomplish saying that,

“I will build a motor car for the great multitude. . . . It will be so low in price that no man making a good salary will be unable to own one and enjoy with his family the blessing of hours of pleasure in God’s great open spaces. . . . When I’m through, everybody will be able to afford one, and everyone will have one. The horse will have disappeared from our high- ways, the automobile will be taken for granted . . . [and we will] give a large number of men employment at good wages.” (Collins & Porras, 1996).
The business model is another component to business and management strategy that can have a great impact on where an organization is, and where it is going in the future. Johnson, et al., (2008) examine the business model and all of its components in great detail and provide a helpful outline as to what a successful one should look like. The article begins by pointing out that the very little formal study had been done on the specifics regarding the analysis of organizational business models. Despite many top executives understanding that business models are crucial to the growth of an organization (50% reported in the Economist Intelligence Unit), as well as many of them facing slow growth in their respective companies, a recent study conducted by the American Management Association showed that, “no more than 10% of innovation investment at global companies is focused on new business models” (Johnson, et al., 2008, p. 104). The authors suggest that this is the result of two factors -- top executives lack a formal definition of the process of business model development and an understanding of their own current business model (Johnson et al., 2008).

This lack of understanding of business models creates issues for any organization’s leadership, as if they do not know what their company’s business model, they do not know what they can leverage their existing model or if it's time for a change in their model. The article presents a three-step solution to this problem. The first step in solving the problem, is to clearly articulate what makes the current model a successful one, followed by the need to constantly look for future threats like new entrants in the industry, and lastly to decide whether or not the current model needs changing. A company should only change its business model if the model will bring a change to the market or industry that the organization is a part of (Johnson, et al., 2008, p. 104). The authors then outline their definition of a business model.
The way the authors identify whether or not a company has a business model that will be successful is by outlining four determinants: customer value proposition, profit formula, key resources and key processes. The customer value proposition (CVP) is the most important facet of the model to get right, as it is the determining factor from which the rest of the activities will be molded, and is defined as the way that a company will bring value to its customers. The CVP essentially fills a vacuum in the market and offers customers a valuable product that is specific to that company (Johnson et al., 2008, p. 104). Furthermore, Johnson et al., (2008) argue that the most important and most difficult aspect of CVP is precision, as they describe, “Companies trying to create the new often neglect to focus on one job; they dilute their efforts by attempting to do lots of things. In doing lots of things, they do nothing really well” (p. 111).

The next component of a successful business model is the profit formula. The idea of a profit formula is defined as “how the company creates value for itself while providing value to its customer”(Johnson et al., 2008, p. 108). The authors describe that building a profit formula is done by having a revenue model (price multiplied by volume), cost structure (identifying all costs), margin model (what the price needs to be in order to achieve desired profit) and understanding resource velocity (how quickly to move inventory in order to achieve anticipated profits) (Johnson et al., 2008, p. 108). Together, all four parts make up a whole that determine desired profits and prices. Key resources and key processes are defined as proprietary aspects of a company that bring it specific advantages over other companies in terms of offering customers value. These key elements of the business model not generic, and so they differentiate the company in this way, offering a unique competitive advantage (Johnson et al., 2008). The authors conclude this article by outlining how to identify when a new business model is needed, and argue that it can be identified as when significant changes need to be made in the model.
Examining a model using the previous four sections as a template from which to judge can identify this. If an organization’s business model is very different from that of the article’s description, then it is likely time to adopt a new one.

Neilson et al., (2008) point out that great strategy is meaningless if the organization cannot follow through on its promises. In addition to this, they point out that most of the time when trying to fix problems within a company, management focuses on addressing issues in terms of its structure. For example, Neilson et al., (2008), describe how a global consumer packaged goods company restructured during a period of difficulty saying, “They eliminated some layers of management and broadened spans of control...Eight years later, however, it was déjà vu. The layers had crept back in, and spans of control had once again narrowed” (p. 144). This was because, despite having a quality strategy, they addressed their issues incorrectly by only correcting the visible symptoms. Instead, the authors argue that clarifying how and what decisions are made in the company, and how decision makers are held accountable is what is most important (Neilson et al., 2008). This article, although more focused on the internal activities of an organization, it still serves to complement the existing pieces of management strategy literature, different and unique aspects on how to achieve a successful strategy.

Section II: Regarding Tesla

Much of the existing literature on Tesla Motors focuses on how impressive their entrance into the market has been, but ultimately many of them end up asking the same questions at the end — what does the future hold for Tesla? Now that we have an understanding of the strategy framework that the whole project should be seen, we can better understand how the current
literature fails to address certain questions, what those questions could mean to the longevity of Tesla, and how we can reasonably go about answering them.

Rothaermel and King (2015) essentially lay out the history of the Tesla Motor Company and attempt to flesh out the many factors that affect the company’s success. This is by far the most comprehensive study that has been done on the company since its inception in 2003 and begins with an overview on the Tesla Motor’s chief executive officer (CEO), Elon Musk. Born in South Africa, moving to Canada, and later graduating from the University of Pennsylvania, the authors describe Elon Musk as a “serial entrepreneur”, with a prolifically energetic spirit and drive for success (Rothaermel & King, 2015). Perhaps most interestingly, the article mentions that the CEO is a self-described “engineer and entrepreneur who builds and operates companies to solve environmental, social, and economic challenges”, whose main driving force is to leave a legacy of success through his ventures (Rothaermel & King, 2015). It is clear that this case study is intended to heavily feature Elon Musk, almost as if it is being written using his point of view as the framework. I believe this to be both problematic and important, as it leaves out the opinions of the other executives (including the three that Musk fired), but gives a perspective on how the management of Tesla Motors handles the operations of the company.

After giving a brief (but dense) overview of the company, the article moves into discussing the automobile industry in the United States, which has been a well researched area of study for economists. Specifically, the oligopolistic nature of the industry, with the “big three” automobile companies controlling a large portion of market for decades is something that is important to consider when thinking about Tesla’s strategy (Rothaermel & King, 2015). Briefly turning to Klepper (2002) who provides a more nuanced explanation of how the auto industry evolved and, historically, what forces affect the industry, that relate specifically to the
performance of a company within the industry, based on the previous industry and experience as it relates to the firm’s founder(s). Despite the fact that Klepper’s work focused more on diversification and the types of firms that entered the auto industry, the insight into the details of the industry still prove to be very useful. The study showed that not only is the first mover effect an important determinant of success in the auto industry, but that the backgrounds of the firms and founders had lasting effects on the performance of the companies (Klepper, 2002, p. 664).

Later in the piece, Klepper’s findings tend to show that newer firms have an incredibly difficult time entering the market because of high barriers to entry relating to economies of scale and industry knowledge that is gained over time. However his data set only goes until 1961, which leaves out a large number of foreign firms that entered the market in the 1980’s, and that I will discuss in more detail in Chapter four (Klepper, 2002). Nonetheless, the article offers a valuable framework from which to understand the difficulties of new firms who are entering into the U.S. auto market, which can be applied when evaluating Tesla’s strategy and overall performance in the industry thus far.

Returning to the Rothaermel and King article and the way in which they outline the auto industry, it is very apparent that the trends that Klepper’s article pointed out, which showed the auto industry being an extremely difficult one to enter are still very much a factor, as the article really only looks into General Motors, Ford and Chrysler, and briefly touches on foreign competition (Rothaermel & King 2015). The authors then discuss the alternative propulsion for cars, which unfortunately tends to stray from the main point of the article, which is to discuss the reason for Tesla’s success. Too much attention is paid on the technology that is behind the innovation of electric cars, rather than discussing how Tesla revolutionized the industry, and goes on for a number of pages without mentioning Tesla whatsoever. The article regains focus,
however, and quickly breaks down some of what it considers to be Tesla’s strategic choices and mentions some strategic partnerships it has made such as Panasonic and Toyota, with both partnerships offering to help all parties involved (Rothaermel & King, 2015). It then turns to some of the difficulties that Tesla has been facing in the pricing of their products, as well as the production, indicating that there was a certain lack of efficiency involved. Lastly, the authors pose some very intriguing questions that show the vacuum that exists in the current literature perfectly asking,

“Will Tesla be able to make the transition to higher production volumes in a relatively short time frame? Larger automakers have a significant competitive advantage: they have the financial and technological resources to produce automobiles at a much lower cost and get them to the market and customer more quickly….Finally, how can Tesla hold off new competitors at for high-price electric cars as it simultaneously enters the market for lower-price electric cars with other firms?” (Rothaermel & King, 2015, p. 17)

With so many questions remaining, it is clear that Tesla Motors offers an intriguing perspective into a completely new area of a market that has long been controlled by only a few companies. In terms of the strategy framework from Porter (1996), there are trends that begin to emerge, such as the importance of ownership, the performing things differently than competitors, offering a distinct value, and maintaining focus on the core values of the firm. However, with so much of the literature focusing on the operational effectiveness aspects of Tesla, there is also a lot of room with which to work, especially in trying to determine the future of the company through their strategic choices.

These trends are continued further when looking at Eric Van Den Steen’s (2015) work, which closely mirrors the previous article but contains a few important distinctions. The first noticeable difference between the two articles is that Van Den Steen (2015) focuses on the initial strategy of the Tesla motors. Specifically, the author stresses the fact that despite none of the Tesla Motors’ founders having a background in the automobile industry, they have a remarkably
clear vision for their company, which is still in place today (Van Den Steen, 2015). Despite this, though, the article focuses far too much on the operational aspects of the firm, and in doing this fails to capture the meaningful questions that need to be answered. The article ends with an interesting quote from Elon Musk about Tesla’s “secret master plan”, which I mentioned earlier in Chapter 1, and how the original idea was to “build a sports car, use that money to build an affordable car, and then use that money to buy an even more affordable car” (Van Den Steen, 2015). In doing this, the authors only open the door to more questions about whether or not the strategy of Tesla can be at all effective and deliver on the promises it has made.

Some issues relating to strategy as it relates to Tesla Motors begin to be discussed by Stringham et al., (2015), as they almost immediately mention Porter’s (1996) five forces that shape competitive strategy. However they do not go on to use Porter’s theories (nor any work on strategy) as a framework from which to work. Instead, the authors strictly focus on the things that they believe have allowed Tesla to overcome the barriers to entry in the market. The first thing that they mention is strong entrepreneurial leadership from Tesla CEO, Elon Musk, which is certainly in the same vein as some of Porter’s (1996) theories relating to the importance of strong leadership. However, like many of the article’s that came before, they quickly switch to discussing operational effectiveness and, in my opinion, conflate this with strategy. This does not necessarily hurt the overall point of the essay, as it is not rooted in strategy theory, but rather offers a careful documentation on some of the ways that Musk and Tesla have been able to overcome the barriers of entry within the United States auto market (Stringham et al., 2015, p. 87). In fact, this only serves to further point out the overall lack of attention that Tesla’s strategy has actually received because there is a tendency to only look at operational effectiveness. As the article progresses, the authors mention that Tesla’s early success can be attributed to their ability
to bring their first product to the market “quickly and efficiently” by creating and leveraging relationships (Stringham et al., 2015, p. 92). We have already encountered some of these relationships earlier, and it does seem there are certain elements of strategy at play here. However, overall the article does not focus on strategy as a way to constantly achieve competitive advantage and avoid imitation. It is for this reason that my project will be able to fill that void and complement this existing literature.

The next article that I found useful for my literature covers, the general innovation of Tesla and how they have been implementing their strategy, specifically with the new Model X and Model 3 car designs. However much like the already existing literature, this piece, again discusses only the operational effectiveness of Tesla and fails to truly grasp the overall strategy and trajectory of the Silicon Valley car company. Nonetheless, Dyer et al., (2016) do an effective job in outlining Tesla’s operations. Perhaps most interesting about this piece is the fact that they even describe an instance in which the company clearly demonstrates a lack of any sort of continuity in its strategic planning, but glazed over its importance writing it off as a mistake. More specifically, the article mentions Tesla first patenting its technology and then later removing those patents. The article says that by doing this, the company’s open platform policy would force other people to do it, allowing Tesla to become the market leader in this area (Dyer, et al., 2016). While this might be the case, it is still important to recognize the fact that throughout the literature there tends to be a massive blind spot in terms of strategy, where the authors either don't mention it, or find another way in which to explain the company’s departure from a previous strategic goal. This is not to say that the firm isn’t allowed to change its mind on occasion, but simply that the lack of commentary about the dissonance in strategy is concerning.
Authors Putros and Pirouz (2014) give a similar backstory to the other articles I have covered so far, however it puts a far greater emphasis on the marketing strategy of Tesla. Specifically, they talk about and how they avoided to spend money on advertising, because Musk felt that his presence in the company would be enough to generate marketing exposure (Putros & Pirouz, 2014) This, again, comes remarkably close to strategic theory, that has been discussed previously, but still suggests that there are aspects of Tesla that fall into the business strategy model as Porter and other scholars have posited. Much like it has been in other articles, there is only a fleeting mention of any kind of strategic vision that is distinctly different from simply operational effectiveness.

Having reviewed the literature on business and management strategy, as well as the literature regarding the Tesla Motor Company, there is a clearly a vacuum in the literature. Specifically, a careful and formulaic analysis of Tesla Motor Company’s operations through the framework of existing strategy literature is required. I will then compare the strategic actions that have been taken by Tesla Motors with previous U.S. auto industry entrants that failed. In the next chapter, I offer an outline and explanation of the case study methodology. Specifically, I will be discussing the aspects of the methodology that I will be implementing in the subsequent chapters, and how it will allow me to analyze Tesla’s strategy.
Chapter 3: The Case Study Methodology

In order to more fully understand the approach of this paper, it is important to first understand reasons behind utilizing the case study method. Yin (2014) explains, “a case study allows investigators to focus on a ‘case’ and retain a holistic and real-world perspective” (Yin, 2014, p. 44). Moreover, case studies allow researchers the freedom and ability to examine aspects of social phenomena within the context of certain theoretical frameworks. As it relates to my research, the case study will allow me to examine the Tesla’s strategy by comparing it with other “new entrant” companies in the U.S. auto industry throughout history, few of which have been effective in long-term success. Using some financial reports, analyst reports and primarily the implemented strategy methods, the effectiveness of Tesla Motors strategy can be analyzed. Using the case study will enable the research to be more “holistic” and can supplement the existing literature in a field in different ways. The freedom that comes along with the case study methodology, however, also brings with it a few pitfalls that can challenge the validity. One of those issues is the potential for bias in reporting and collecting evidence on the subject at hand.

It has been shown that personal bias can affect a case study, often more than other methods of study, simply because the amount of existing literature is vast, and the discretion of the researcher can determine what is reported and what is not. Very simply, Yin (2014) argues that in order to solve this issue, “you must work hard to report all evidence fairly” (p. 68). In order to report the evidence fairly, it comes down to the collection of data and evidence as it relates to the area of study. Moreover, the importance of using multiple sources of evidence can help to eliminate bias in the case study and add validity to the findings (Yin, 2014, p. 230). In light of this, I will be using multiple sources of evidence, as previously mentioned, and will be cross-referencing numerical data from all companies in the industry in order to efficiently study
the strategies of auto companies and what makes them successful. In addition to including multiple sources of evidence in the case study, Yin (2014) also argues that establishing a chain of evidence is a helpful way to stress that the findings of the research are valid, and constitutes legitimate evidence. The importance of avoiding bias when constructing a case study is crucial, and as Yin later explains, there are several methods of analysis that can be employed to avoid this issue.

I will be incorporating aspects of two of the analytical models of case study research and analysis that Yin (2014) outlines; Pattern-matching and time series. Pattern-matching is very useful, specifically when establishing a “chain of evidence” as previously described. Yin (2014) describes that the strength of the pattern-matching technique is that it, “compares an empirically based pattern—that is, one based on the findings from your case study—with a predicted one made before you collected your data (or with several alternative predictions)”. This relates to my study by way of comparing the strategy and reports of Tesla motors to that of other automotive companies that fall into the “new entrant” category, in the endeavor to determine the ostensible success or failures of those companies, and then relate that information to what Tesla has been doing. In other words, I will be examining the patterns of automotive companies that tried to enter the United States auto industry and compare them to what has Tesla Motors has done up to this point. In addition, I will also use the literature on business strategy as a baseline of the theory behind successful strategy and what it looks like. Specifically, I will rely heavily on the articles that I covered in my literature review, and compare the strategic methods that the new entrant automotive companies took with those definitions of strategy.

I also will be utilizing aspects of the time-series analytical method in this case, specifically I will be looking at the companies that attempted to enter the U.S. auto industry and
track their activities over a period of time. In this way, as Yin (2014) suggests, it will be easier to identify one or two variables of the performance of a company and draw some conclusions based on that information. Furthermore, using the time-series method, and what Yin (2014) describes as a “single case” method, “for instance, two opposing time patterns may have been hypothesized” (Yin, 2014, p. 282). In the chapter that follows, the U.S. auto industry will be examined, and I will be looking at the qualitative aspects of the DeLorean, Tucker, and Fisker companies, as well as the quantitative areas of the financial reports of all companies in trying to identify what their failure was a result of.
Chapter 4: New Entrants in U.S. Auto Industry

In this chapter, I will be covering a few topics regarding the history of the automobile industry in the United States. I will be giving a brief overview of Klepper’s (2002) findings regarding the types of firms that survive in the automobile industry up to 1966, followed by an analysis of how foreign automobile makers entered the market and the response by the domestic companies. Through this I will then examine the three specialized entrants who attempted to enter the U.S. auto industry: Tucker Motor Company, DeLorean Motor Company and Fisker Automotive. In doing this, I will be able to gather evidence as to why those companies failed, which can then be applied to the analysis on Tesla’s strategy. More specifically, such historical evidence regarding the failure of these firms should provide a useful framework for understanding the primary reasons that the U.S. automobile industry is so difficult to enter.

The United States automobile industry has long been dominated by the big three Detroit based companies-- Ford Motor Company, General Motors and Fiat Chrysler Automotive Company. Although foreign automakers such as Toyota, Honda and Nissan have made a strong impression in the United States automobile industry, but are still behind the Detroit the domestic U.S. car manufacturers still led the United States’ in market shares for 2017 with General Motors, Ford and Fiat-Chrysler being the top three market share holders respectively (Statista Dossier, 2016). The questions that I am interested in are how, despite the massive amounts of competition in terms of foreign automakers, have the “Big Three” been so successful; why have other new entrant companies have been so unsuccessful, and what this means for Tesla and its strategy in the future?

Section I: Overview of U.S. Auto Industry Forces
The evolution of the U.S. auto industry and the formation of its oligopolistic market structure are crucial to the understanding of how new entrants must behave in the market. Klepper (2002) explain this process by taking every firm that entered into the U.S. auto industry between 1895 and 1966, and organizing them into categories based on their founder’s previous industry experience and their success in entering the market (p. 645). The four categories that are used are experienced firms (diversified from other industries), experienced entrepreneurs (started by a leader in another industry), spinoffs (started by a prominent figure in the automobile industry) and inexperienced firms (no real connection to any industry) (Klepper, 2002). In most industries, it makes sense that the firms with the more experience would perform better because of the tacit knowledge that exists and that is gained only through having experience in the industry. This was very much the same in the auto industry as it specifically relates to the leaders of the organizations, and where they worked previously. Klepper’s (2002) findings show that in the early part of the twentieth century, the most successful firms were those that had founders with some degree of experience, as he explains, “Certain types of founders of new firms, particularly those with experience in incumbent auto firms or that had headed bicycle, engine or carriage and wagon companies, were able to start firms that were competitive with, if not superior to, diversifying firms” (p. 646). This is a very important component of Klepper’s findings as it relates to the success of new firms entering into the auto industry, showing the importance of the tacit knowledge that is required to be successful. In my study, I will examine the role that experience plays in Tesla’s success in the electric car industry.

In addition to this, Klepper (2002) points out that the firms that entered earlier tended to be more successful than those that did not, which was attributed to a high price-cost margin that in turn allowed these young firms to invest heavily into research and development. This
investment into research and development was a large factor in the success of the young firms. According to Klepper (2002), “firms that enter early have an advantage because they begin growing earlier, which provides them with a greater output over which they can apply their R&D” (p. 655). While the data and analysis of Klepper’s study was generated between 1895 and 1966, the usefulness of the information is still incredibly applicable to today’s auto industry in the United States. This is because, as Klepper mentions early on, the study is more of an analysis of the capability of new firms rather than a look at how strategy affects the longevity of a new entrant into the auto industry. As a result of this, the information and findings that Klepper (2002) made are relevant to my research, providing some historical context as to what kinds of firms are successful in the U.S auto industry, and why they achieve success.

One component that Klepper does not cover is the ability of foreign firms to enter the U.S. auto industry and why they succeed. I believe that it is critical to examine this part of the industry’s history as it relates to business strategy from the perspective of the big three U.S. automakers. Furthermore, Tesla’s success is somewhat dictated by the way the big three U.S. companies respond, and how its current strategy holds up. Therefore, the analysis of Tesla’s strategy will be more fully developed by learning more about how the foreign companies achieved success in the United States, what the incumbent U.S. firms did in response, and what similarities or differences exist between Tesla’s entrance into the market, as compared with the foreign automakers. Research by Eden and Molot (1996) on the United States auto industry and the introduction of foreign automakers contradicts the idea that the “Big Three” are impervious to the threats of new entrants. It is important to mention that this piece covers foreign automakers and not U.S. based companies, so comparing the way the companies entered the market in relation to U.S. companies, and ultimately Tesla, would not carry any significant academic
weight. However, analyzing how the foreign auto manufacturers were so successful in staying in the market and evading the pressures of the long-standing U.S. companies is useful, and should provide good insight into the potential weakness of Tesla’s competition (GM, Ford and Chrysler).

Eden and Molot (1996) pick up in the era that Klepper ends with his research, beginning in the 1950’s and going up until the 1990’s. The authors start off by mentioning how critical the automobile industry was to the overall United States economy, saying the U.S. was the world leader in automobiles up until this point, and their (Eden & Molot, 1996, p. 502). Then, during the 1970’s and 1980’s, the U.S. auto industry began to struggle, as the introduction of foreign auto manufacturers into the market proved to be a serious threat. It is interesting that up until this point, the U.S. auto industry had proven to be an industry, which was almost impossible to enter. The economies of scale that are required to successfully compete against the big three automakers, and the investments into research and development as previously mentioned, were too great to overcome for new entrants. Despite this, however, it was the foreign companies that found a way to enter the market, and successfully compete against General Motors, Ford and Chrysler auto companies. Eden and Molot (1996) explain the success of the foreign competitors by using a model of competition as a framework with which to examine the industry called the “Technological Competition Model”. In this model, it is assumed that the incumbent firms dominate the industry, and all sell similar products, and that the entrants gain market power through the introduction of new technology rather than by using cheaper labor or underpricing (Eden & Molot, 1996, p. 506).

Furthermore, the authors conclude that this is what happened to U.S. auto industry because the incumbent big three U.S. auto companies were too slow to recognize the threat of
entry from the foreign companies, and allowed them to gain substantial market presence as a result. More specifically, the authors contend that the incumbent firms mistook the foreign entrants as a temporary threat, and as a result took short-run approaches that focused on cost-reduction, rather than addressing the issue of technological change and the superiority of the entrants in that regard (Eden & Molot, 1996, p. 535). In addition to this and perhaps more importantly is that the foreign automakers used what is known as lean production, which emphasizes eliminating the unnecessary waste of resources and is completely different in terms of the process of making vehicles compared to the heavyweight production of the incumbent firms (Eden & Molot, 1996, p. 511). Eden and Molot (1996) describe this innovation as very difficult for the U.S. firms to duplicate, in which “The distinctive set of product characteristics came from differences in concept, design, materials, components, equipment and procedures...the competitive advantage of the Japanese was firm embodied and partly noncodifiable or tacit” (p. 535).

Interestingly, Porter (1996) briefly mentions the rise in success of Japanese companies in the 1980’s, which made up a large portion of the foreign auto competition that the U.S. faced at that time. However, Porter attributes these companies success to simply superior operational effectiveness, saying that they “could offer lower cost and superior quality at the same time” (Porter, 1996, p. 62). Perhaps that is true about other Japanese industries in the 1980’s, but the way Eden and Molot (1996) describe the Japanese firms at that time suggests operational effectiveness cannot account for their impressive, and sustained success. Rather, the Japanese firms displayed both operational effectiveness and effective strategy, which when combined allowed them to penetrate the market, and be successful. The total market shares of Toyota,
Nissan, Honda and Hyundai in the U.S. as of January 2017 was 38.8% -- more than one third in a foreign market.

Looking back at Porter’s (1996) theories on firm strategy relating to the stagnation of one’s operations and how operational effectiveness is not sufficient enough to maintain market power, there are many similarities. Additionally, the idea that the innovation and production was a “firm embodied” trait, resonates with Porter’s (1996) theory on strategic fit, where the goal is to create a system in which each activity within a firm supports the others (p. 91). The incumbent U.S. based firms either did not know about the foreign company’s lean production innovation (which is unlikely), or knew about it and mistakenly underestimated it. This theory regarding strategic fit, along with this time period within U.S. auto industry are important because they offers important suggestions about the industry as it relates to new entrant firms and incumbent’s attitude towards them (both domestically and internationally). Specifically, this demonstrates that despite high barriers to entry, the U.S. auto industry is not impervious to outside threats and from new firms entering the market. The key to entering successfully partially lies in whether or not the firm’s competitive advantage is through technological advancements, and whether or not they are able to leverage them. In addition to technology as a primary reason for successful entry into the auto market, it also demonstrates the ease of entry for new firms when the incumbent firms do not respond quickly or effectively to new entrants. While this may seem obvious, the lack of U.S. based entrants tends to suggest Ford, General Motors and Fiat-Chrysler are not capable of succumbing to threats of entry, but in actuality that is not the case.

The second of Porter’s (1996) theories suggests that implementing a strategy that creates a distinct competitive advantage and is also very difficult to imitate by others in the market, it is
theoretically possible to enter (and survive) in the U.S. auto industry as a domestic firm. That being said, it has nonetheless been incredibly difficult for United States-based auto companies to enter and be successful in the U.S. auto industry, even if they have a technologically advanced product, which suggests that perhaps having superior technology is not sufficient to be successful. In order to get an idea as to the reasons with a more specific focus, I will be examining the demise of three United States automakers; Tucker Automobile Company, the DeLorean Motor Company, and Fisker Automotive, and subsequently draw implications for my analysis of Tesla’s strategy.

Section II: History of New Entrants

In this section I will lay out a brief history of three different U.S. automotive companies that attempted to enter into the industry--Tucker Motor Corporation, DeLorean Motor Company and Fisker Automotive. I will focus on the steps that led to each company’s bankruptcy and subsequently caused them to exit the industry, the founder’s backgrounds and prior experience, as well as any important information as to overarching strategy. Using the previously examined articles from Klepper (2002), and Eden and Molot (1996) as a basis from which to examine specific actions by these firms, we can gain an understanding of what led to each company’s failure and apply that to the analysis of Tesla’s strategy.

Tucker Automotive Company was founded by Preston Tucker, a Michigan native and self made man who after graduating from college, went straight into the auto industry, becoming a salesman for the Studebaker automobile company (Lehto, 2016). A talented man, Tucker not only had the aptitude to understand the mechanics and engineering of automobiles, but also had the ability to sell them because he was simply so likeable, as one of his business partners once
described him as, “the archetypal salesman who could not only sell refrigerators to Eskimos, but also have them liking the refrigerators after the purchase” (Lehto, 2016, p. 72). Tucker quickly rose up the rankings in the industry and by 1935 at the age of thirty-two, he met Harry Miller who was an incredibly talented engineer and designer of automobiles, who specialized in the design and production of internal combustion engines (Lehto, 2016). Together the two formed the Tucker-Miller Corporation, building engines for the Ford racing team in Indianapolis, until Miller died in 1943 at which point Ford cancelled the contract between the two companies (Langelett, 2008, p. 5). As a result of this, Preston Tucker was forced to try something new and given the fact that World War II was still raging in Europe, he saw an opportunity to build a new type of combat vehicle for the U.S. military, that emphasized speed and agility (Langelett, 2008, p. 6). After achieving some success in this military endeavor and with World War II slowly coming to an end, Tucker then turned his attention to what he called “the car of tomorrow”, which ended up being the model known as the Tucker ‘48 (Lehto, 2008, p. 71).

The design of the car was based around older models from other firms in the industry, but included many new safety features that, up until that point, had not been seen in any vehicles. A few of these features were pop-out safety windows, seat belts, a third headlight that turned when the wheel of the car was turned, four-wheel independent suspension and many other features that are still used today, and were ahead of their time (Lehto, 2008, p. 71-72). Ultimately, the Tucker Corporation’s failure can be attributed to the fact that they simply did not have the capital requirements that were needed to sustain production of automobiles, which was directly a result of the owner’s mismanagement. It began with Preston Tucker not being able to make any lease payments on the plant he was using to develop his car, and in an attempt to raise the money, Tucker began to start selling dealerships (Langelett, 2008, p. 7). Specifically, Langelett...
(2008) states that, “Tucker was allowed to move into the Dodge plant and agreed to pay $1 million by October 1, 1946, for two years rent and $2.4 million a year thereafter” (p. 6). Nonetheless, however, Tucker failed to make this payment and eventually, the War Assets Administration (WAA) pushed the payment date back to July 1, 1947, with the stipulation that Tucker’s company have $15 million in an escrow account (Langelett, 2008, p. 6). Instead of taking out $15 million in bank loans, and turning control of the company over to the banks, Tucker decided to try and sell dealerships to raise the money (Langelett, 2008, p. 6). This, however, was determined to be illegal since Tucker did not even have a legitimate prototype at this time, and as a result the SEC began to investigate the company and Preston Tucker himself, forcing them to “amend all dealer contracts to state that there was a significant risk of bankruptcy” (Langelett, 2008, p. 6). In an attempt to raise the additional money, the SEC agreed to let Tucker sell stock under the condition that he had a working prototype, which was first introduced on June 19, 1947, known as the Tucker ’48 (Langelett, 2008). After a period of more legal issues that involved the payment for the WAA lease, and amidst a conspiracy that involved the Detroit based incumbent automakers and the SEC working together to bring down Tucker’s company, Tucker attempted to raise more money by “pre-selling” accessories. Suspicious of Tucker’s idea, the SEC subsequently shut down the production of the Tucker ’48 and conducted an investigation. They ultimately acquitted Tucker, finding nothing criminal about his activities, but also left him broke, and as a result the company went bankrupt in 1950 (Lehto, 2016, p. 8).

There is some debate as to what the downfall of Tucker Motor Corporation was actually a result of, but when looking at the details of the company’s failure as reported above there are a few important considerations. The first of these is that the company’s founder, Preston Tucker, had been involved in the auto industry prior to his creation of the Tucker Corporation. Looking
back at Klepper’s (2002) findings, the Tucker Corporation would fall under the category of a spinoff firm, which was the category that achieved the most success. It is interesting then that an experienced firm, with a technologically superior product only made it two years before declaring bankruptcy. Moreover, I believe that the failure of the Tucker Motor Corporation was a result of Preston Tucker’s inability to leverage the core competencies of his company, and lack of foresight as explained above. Although Tucker tried to take advantage of the low cost of the Dodge plant and sign the lease, he was ultimately unable to pay for it, “Tucker's refusal to utilize conventional bank loans combined with the company's attempt to sell dealerships and stock before building a car prototype scared away normal venture capital” (Langelett, 2008, p. 8). Although it is clear that the SEC had a hand in the firm’s demise by halting the production and operations of the Tucker Motor Corporation, that likely would not have happened if Tucker was able to pay for the WAA lease, or at the very least have a prototype ready before the lease payment was due that would provide the company with enough investor capital.

Therefore, I conclude that the corporation’s failure was a result of many things, but primarily it was the founder’s failure to properly and effectively run the business, because his only focus was to make his dream car. It was even reported that, when it came time to make the first prototype, Tucker decided to skip crucial steps in the designing process such as clay modeling, because he set a personal (and impossible) deadline of creating a car in sixty days (Lehto, 2016, p. 72). While it is true that trade offs are a crucial component to successful strategy, Tucker was more guilty of neglecting important processes in the design phase of a car rather than making tradeoffs that would help to leverage certain core competencies.

This brings me to the overarching point regarding the failure of Tucker, as well as its application to Tesla Motors. I believe that, regardless of how much experience a company’s
founder has, or what industry he or she came from, the business will fail if the founder does not properly apply their knowledge to the new firm. Moreover, this knowledge must be implemented in a way that is advantageous, leveraging core competencies, which in turn could create a distinct competitive advantage. The dream of making the “car of tomorrow”, and the drive that Tucker had to see his idea become a reality overcame the sensibilities required to achieve long-term success, starting with simply ensuring that revenue is being generated. In this way, Preston Tucker is a good example of why it is so important to consider that the people who run organizations can fall prey to delusions of grandeur, without first attempting to establish operational effectiveness, and laying out a strategy. Economist Melvin Barger (1989) echoed this sentiment when he stated, “...one of Tucker’s problems was in being carried away by a ‘dream’ while ignoring the practical work needed to apply it for useful purposes. Mere possession of a dream does not excuse a person from exercising prudence in business relationships”. The next new entrant firm in the US auto market that I will be looking at is the DeLorean Motor Company.

The DeLorean Motor Company was similar to the Tucker Motor Corporation, in that its founder, John DeLorean, was a young eccentric man who was the product of General Motors training, much like Preston Tucker and his experience with Ford Motors (Bernstein, 2005). When John DeLorean first arrived at General Motors, he was hailed as the company’s savior and is credited with coming up with several new ideas that the company used in many of its models. Among these innovations were, “the overhead-cam engine, concealed windshield wipers, the lane-change turn signal, vertically stacked headlights, racing stripes and an emphasis on cockpit like driver's consoles” (Bernstein, 2005). In addition to this, DeLorean is also credited with having a large role in the development of Pontiac’s Firebird and Grand Prix sports cars
(Severson, 2010). However, the success that John DeLorean achieved at General Motors encouraged him to take his talents and start his own firm, as he left GM in the 1970’s. In 1977, John DeLorean announced his intention to enter the U.S. auto industry; specifically intending to fill a niche he believed as being between the Chevrolet Corvette and the Porsche 911, wherein his vehicle would be expensive enough to be profitable at small volumes, but not expensive enough to compete with the high-end foreign cars (Severson, 2010). DeLorean attempted to avoid the financial mistakes Tucker experienced, and took advantage of financial support from the English government (the government was attempting to encourage employment in Belfast to curb the IRA activity) in the form of one hundred million pounds. Then, four years later, in 1981 the first vehicle produced by the DeLorean Motor Company, the DMC-12 sports car, was put out on the market for the first time (Bernstein, 2005). Nonetheless, the DeLorean Motor Company the company did not last long, and was bankrupt only one year later.

The first issue with the DeLorean Company was that it was apparently undercapitalized, and had many mechanical flaws that contributed to poor performance (Bernstein, 2005). In addition to this, the cars tried to enter the sports car market, but were not necessarily nice enough to attract a lot of customers, but were too expensive to appeal to the broader market. Looking back at Porter’s (1996) production possibilities frontier, the DeLorean DMC-12’s strategic position would lie somewhere between the middle and the top of the graph, having a moderately high-perceived value but at a moderately high cost. This left a very small and ultimately unfeasible market of customers for the DeLorean DMC-12. In addition, as we saw with Preston Tucker, the visionary leader can be a detriment to the company by not taking the proper steps in terms of business strategy because of his or her attachment to the product or company. This was epitomized by John DeLorean where, in an attempt to make money to save his company, was
arrested for selling drugs (and later acquitted) and in 1982, one year after it first put a car out in the market, the DeLorean Motor Company was bankrupt (Bernstein, 2005).

The Fisker Motor Company is that last new entrant automobile company that I will be examining in this chapter. Continuing with the theme of eccentric owners, Danish entrepreneur Henrik Fisker founded his firm in 2007 as a California based electric vehicle company, much like Tesla (Korsec, 2016). Fisker got his start as one of the main designers of BMW and Aston Martin sports cars, and then in 2007 decided that he wanted to create a startup electric vehicle company in Silicon Valley (Korsec, 2016). Tesla CEO Elon Musk and Fisker had actually even had a working relationship at one point, and Fisker assisted in the designs of the Tesla model S, which encouraged him to start Fisker Automotive (Ferhenbacher, 2013). Early on, the residents of Silicon Valley were generous enough to support Fisker, as he reportedly raised $1.2 billion from them, in addition to $200 million he received from the United States Department of Energy. With such a large amount of capital investment earlier on, many people were very intrigued by Fisker’s long-term prospects. In 2011, the new company was introducing its first vehicle, which was the electric-hybrid sports car called the Karma, at the same time as gas prices were rising, and the sales of fuel-efficient vehicles (specifically Tesla’s Model S and the Nissan Leaf) were also increasing (Ferhenbacher, 2013). Nonetheless, Fisker Automotive was officially out of business by 2013. The steps that led up to the demise of the company were largely to do with Fisker’s production strategy, which involved forming a strategic alliance with the technology company, Quantum.

The original strategy is described as, “The idea was to design a gorgeous car, and have suppliers like Quantum provide the technology because off-the-shelf parts from suppliers would help keep costs down” (Ferhenbacher, 2013). This is not a bad idea, in theory, however in
practice it proved to be disastrous for Fisker and his company for a few reasons. The first reason is that, “many of the parts were owned by the suppliers themselves, so Fisker didn’t own a lot of the internal technology” (Ferhenbacher, 2013). Although this kind of partnership in which Fisker built the vehicles, and Quantum supplied the technology could work, there were ultimately too many issues for the company to handle that earlier on in the production of the Karma.

Specifically, Henrik Fisker made the assumption that all of the parts were going to be the same, but that was not the case. Sometimes, the parts needed to be adjusted, or sometimes they were damaged, and this resulted in increased costs from suppliers that Fisker could not escape. Furthermore, this resulted in unnecessary amounts of spending to the suppliers, and not enough in research and development and other areas of the company (Ferhenbacher, 2013). In turn, this led to issues with reliability and in 2012 many of the Fisker cars were being recalled for a number of different issues, among them issues with the battery (Ferhenbacher, 2013). In the end, all Fisker had left over was a number of poorly constructed vehicles (the Karma received one of the worst ratings ever from Consumer Reports) and no proprietary technology to be able to salvage.

Moreover, the reasons that Fisker automotive failed can primarily be attributed to their strategy of rely too heavily on strategic partnerships. Where Tesla began with a background in technology, and then formed a partnership with a car company to get their company started, Fisker was the other way around. Making matters worse, Fisker began with roughly $1.4 billion and was bankrupt after only a few years. In comparison, Tesla’s strategic partnership with Lotus did not handcuff them into paying obscene amounts of money on supplier’s relations. Instead, it allowed Tesla the ability to get involved in the process of making vehicles, while giving them the freedom to properly invest in research and development early on (Ferhenbacher, 2013).
In the next chapter, I will be looking at Tesla’s strategy from a number of different viewpoints, including interviews with CEO Elon Musk, as well as other publications that touch on activities of the company. In doing this, Tesla’s strategy is easier to analyze because it is broken up into a few pieces. I will also be using information that I gathered in this chapter relating to the effects of ownership on a company’s abilities, the importance of technological advancements for new entrants, as well as how well the company has positioned itself to succeed through partnerships and important trade-offs relating to the operational effectiveness of Tesla.
Chapter 5 -- Analyzing Tesla’s Strategy

5.1: Defining What an Effective Strategy Is

Up to this point, Tesla’s existence in the United States auto market has been quite remarkable, as Porter (1979) explains the difficulty of entering the industry, saying, “In the auto industry economies of scale increased enormously with post-World War II automation and vertical integration-- virtually stopping successful new entry” (p. 137). This statement echoes the findings from the previous chapter, and helps to support the importance of Tesla’s entry into the auto industry. However, there are many risks involved, as is the case with almost all new entrant firms, both short term and long term that are concerning for Tesla’s success. Specifically, the “unveiling” of Tesla's new Model 3, in addition to it’s recent heavy investment into research and development along with construction of the company’s gigawatt factory are encouraging signs of long-term success.

However, the short-term success is necessary in order to reap the benefits of the investments being made into the long-term goals. With each of the three companies mentioned in the previous chapter --Tucker, DeLorean and Fisker-- the problem they faced in the short term ultimately kept those companies from any kind of long term success. While Tesla has lasted longer than any three of those companies up to this point, they certainly are not immune to the same pitfalls of mismanagement and struggles regarding the competitiveness of the incumbent firms. Moreover, Tesla’s history has been rife with constant praise and criticism, making it difficult to reasonably predict what lies in store for the company (and its shareholders). In the following sections, I will analyze these points of contention, and in doing so I will attempt to
determine whether or not Tesla’s strategy is effective in maintaining competitiveness in the U.S. auto industry.

Effective strategy begins with responsible, effective business practices, as the previous chapter presents examples as to how long-term strategy and goals of a company are meaningless without the proper financing and resources to achieve them in the short-run. In addition to this, the previous chapter frequently covers the issues of financial stability in the fledgling years of each company. Tesla has also had problems with this, but has received a considerable amount of government assistance. What cannot be overlooked in this situation, and likely has something to do with Tesla’s ability to stick around for so long, is the substantial amount of government subsidies it has received.

As of 2015, the total mount of government subsidies that Elon Musk’s three companies (Tesla, SolarCity, Space-X) received was estimated to be roughly $5 billion, with $2.9 billion going to Tesla (at the time was Tesla Motors), and $2.5 going to SolarCity, where on rough $20 million directed towards Space-X. That is a considerable amount of money, and although DeLorean and his company was receiving early financing from the English government, it was only $100 million, which pales in comparison to Tesla’s $2.9 billion. Ever since Tesla and SolarCity merged, this possibly has an even bigger financial impact on the company. The specifics of the merger indicate that the deal was valued to be around $2 billion, and was done with the intentions of linking supply-chains of the two companies (Hull & Martin, 2016). Musk explained that the idea behind the merger was to help make an integrated product and a one-stop shop for people looking to eliminate fossil fuels (Hull & Martin, 2016). This vertical integration likely implies that the subsidies Tesla (and what was previously SolarCity) receives are going to
be utilized to help Tesla in the production and development of the Model 3, and that the links in supply chains will help lower costs.

The merger with SolarCity does not necessarily mark a shift in Tesla’s strategy as I have described it, because the underlying and core purpose of Tesla is to help expedite the transition to environmentally sustainable transportation, and is represented in almost everything the company does. SolarCity specializes in the development and production of solar panels, which in the future could help power the electric vehicles that Tesla produces. Tesla’s core identity is consistent with the products of SolarCity, and therefore I would argue that the merger potentially added to Tesla’s strategy, insofar as it expanded the firm’s focus on environmentally sustainable solutions.

However, it was also true that Fisker Automotive ($200 million) and the DeLorean Motor Company ($100 million) received government assistance, with Fisker raising $1.2 billion in funds in addition to the government’s help. However, despite receiving these investments just like Tesla has, both companies failed within a few years. This suggests that measuring success based solely on financial data can only go so far when trying to determine a firm’s strategy, and furthermore, its future success. Therefore, a more theoretical examination of strategic management theory is required for this analysis. Porter (1996) argues, “the essence of strategy is choosing to do activities differently than rivals do” (p. 64). Being different than rivals, and offering a new service than what already exists, while also having operational effectiveness, is the first component to a successful strategy. The next step is to find what Collins and Porras (1996) outline as the idea of core purpose and core vision, which are the foundational pieces of the company’s ideology and practices. The core components must be flexible enough to constantly maintain a competitive advantage and be different than competitors, through the
implementation of strategic positioning and well executed trade-offs, both requiring intelligent and careful leadership from the company’s executives. To further capitalize on the dynamic capabilities of the firm and to shift the production frontier outwards, there must be a link between the short-term and long-term actions of the firms, in what Kaplan and Norton (1996) define as the balanced scorecard. The aggregation of these characteristics forms an effective strategy that should lead a company to success.

5. Section II: Tesla’s History and Identity

Tesla Motors Inc. (now simply “Tesla”) was founded in 2003 in California by a group of engineers who had the idea of developing electric cars that were unlike any others at the time (Rothaermel & King, 2015). Elon Musk, the current CEO of Tesla, was only an investor at this time, and as a result, he did not have much control or oversight of the company, but was still involved in the planning and production of the Roadster, Tesla’s first vehicle. The Roadster was produced in 2006, along with the British company Lotus Cars, and was received with positive reviews, winning Time magazine’s award for best invention of the year (Rothaermel & King, 2015). However, it wasn't long until the company was suffering losses --roughly $50,000 a car-- and this is where Elon Musk stepped in after realizing the mistakes that were being made by then CEO Martin Eberhard. Interestingly, Eberhard, who was an engineer first who did not come from another auto manufacturer, was truly the original founder of Tesla, despite Musk now being the face of the company. Despite this, Rothaermel and King (2015) report that Eberhard,

“led investors to believe that the manufacturing of the Roadster cost only $65,000 per car, which appeared to justify the $92,000 sticker price...Musk found that it cost Tesla $140,000 just for the parts, subassemblies, and supplies to make each vehicle, and that the Roadster could not even be built with Tesla’s current tools” (p. 3).
In 2007, Musk, and members of the board of directors, met and convinced Eberhard to step down as CEO, while another executive named Martin Marks, was appointed the interim CEO of Tesla Motors (Baer, 2014). Marks’s tenure as CEO did not last long, however, and Musk took over shortly thereafter (Baer, 2014). When Elon Musk took over, he made many changes to the way Tesla had been operating up until this point, and essentially restructured the company from the top down. I believe this moment in which Musk took over as the head engineer and CEO was the moment that Tesla began to truly implement an effective strategy that has allowed the firm to survive this long in the U.S. auto industry. More specifically, it was at this time that Tesla embraced the fact that they were different than their competitors, and so they began to do things differently as it related to their operations. Tesla appears to have a clear vision of its goals, and has strategically positioned itself well to achieve them by being different than the incumbent firms in terms of the development, production and distribution of its vehicles.

The foundation of Tesla’s strategy lies in the understanding of the company’s identity, and purpose, upon which everything else is built. Elon Musk wrote a letter to Tesla shareholders in 2006 explaining what the company’s plans were, in which he stated that the overarching goal of Tesla Motors is to “expedite the move from a mine-and-burn hydrocarbon economy towards a solar electric economy, which I believe to be the primary, but not exclusive, sustainable solution” (Musk, 2006). This is a very important component to Tesla’s strategy, as it gives both the shareholders and the employees a clear “vision” of what their goal is, as well as sets them apart from the existing auto companies. Moreover, this means that the core competencies of the company are far different than that of incumbents, providing Tesla with a distinct competitive advantage. Collins and Porras (1996) explain that the most successful companies have a very
clear vision and ideology that consists of core values and a core purpose, which do not change, in addition to strategies and practices that perpetually adapt to the changing business world.

What Musk defines as the “overarching goal” is very much the same as the core purpose as defined by Collins and Porras (1996), which they argue is both “the company’s fundamental reason for being...reflecting the people’s idealistic motivations for doing the company’s work” (p. 80). This is very much in line with what Musk said in the note above as the “overarching goal” that Musk outlines gives the company a broader idea of who they are and provides an important incentive for the whole company, as well as giving the employees a philosophical guide to ensure consistent decision making. Musk has even said that he tells his employees, specifically those who are selling and servicing the vehicles, to not focus on making profits but instead to provide quality service to the customer (Stringham et. al, 2015). In turn, this would likely make Tesla a more enjoyable company to work for, helping to attract high quality employees, leading to potentially more innovation, which could bring greater financial success in the long run. In addition, this serves to create a distinct place in the auto market, where consumers do not feel pressured by salesmen into purchasing a car, which again offers a unique customer experience. Tesla, therefore crafted their identity by articulating the company’s vision and purpose, providing both the company’s management and workers with a clear blueprint for decision making, and assisting in providing Tesla with a strong organizational cohesiveness that helps to link activities and operations within the company.

Kaplan and Norton (1996) and Porter (1996) discuss the idea of “linking” activities in their respective frameworks for strategy and business management. Kaplan and Norton’s (1996) idea of communicating and linking, and business planning encapsulate the idea of linking activities within a company so that every company employee has an understanding as to what
their role is and what they are responsible for. Porter (1996) defines strategic fit in slightly
different terms, where activities are linked together so that they become mutually beneficial to
one another, thus creating competitive advantage when the whole is more important than its parts
which allows information to be exchanged quickly, and coordination within the company is
strong.

Identity, purpose and vision are very important components to crafting a successful
strategy, as they provide the foundation, which gives everyone in an organization a strong sense
of direction regarding their role in the company. However, a “vision” as defined by the authors
above only goes so far in terms of offering any sort of successful plan for a consistently effective
strategy, in terms of day-to-day operations. The company’s identity articulates why a company
exists, but it does not specify how one intends to stay profitable in an extremely competitive and
dynamic market such as the U.S. auto industry. A good example of this disconnects between
vision and action was Preston Tucker and the Tucker Motor Corporation. Tucker had a clear
vision of what he wanted to do in developing the “car of tomorrow”, and even had a plan on how
to complete his vision. However, Tucker’s obsession with building his “car of tomorrow” came
at the expense of the company’s financial stability and operational aspects, which were grossly
neglected or mismanaged. No company should expect to last very long in any industry (not to
mention the U.S. auto industry).

The longest surviving company between the specialized new entrants of the Tucker,
DeLorean and Fisker auto companies was the DeLorean Motor Company. Lasting a total of
seven years in the industry, DeLorean and his company could not financially maintain the levels
of spending, despite the owner’s skill and highly coveted innovative capabilities with
automobiles. This is why a key component of an effective, must be creating shareholder wealth
and generating revenue early on, as a vision is meaningless without the ability to sustain it financially. In order to create wealth early on, it is the responsibility of the ownership to establish the company’s identity through core vision and purpose, and ensure that it is consistent among all the organization’s activities. In doing this, a company maintains its core competencies that, subsequently creates a unique market position that provides value to the customers. Furthermore, this identity then helps the organization’s ownership to make intelligent tradeoffs that further leverage the company’s abilities, and should provide stability that leads to a successful future.

Section III: Strategic Positioning- Unique Value, Tradeoffs and Fit

The three companies that were covered in the previous chapter --Tucker Motor Corporation, DeLorean Motor Company, Fisker Automotive-- were all unique, innovative, and provided customers with a distinctive product, but they failed in sustaining any significant financial success that would allow them to survive long enough. Tesla on the other hand has been able to successfully do just that: offer its customers with a distinct value while still suffering losses. One of the primary reasons behind this success is the unique value that Tesla offers through its powertrain and technologically advanced products, and the way it has been able to leverage this uniqueness by successfully identifying its core competencies to motivate investor support.

The Tucker Motor Corporation and its founder, Preston Tucker, were certainly offering a unique product with a car that was markedly different (and more advanced) than anything on the market, but failed to succeed because, simply, the money was never there to support the idea. Elon Musk has referenced the importance of early capital investments, saying, ‘What is the difference between really believing in your ideals and sticking to them versus pursuing some
unrealistic dream that doesn’t actually have merit?... If the economics don’t work, you’re not going to have an effect on the future” (Stringham, et al., 2015, p. 89). Furthermore, much of the success that Tesla has achieved thus far can be largely attributed to the strategic positioning that occurred during the first few years of the company, and was established by the organization’s management. Specifically, Tesla’s ownership showed a phenomenal ability to do things differently, make effective and carefully planned tradeoffs, and create links between the company’s many activities.

Specifically, looking to when Tesla began operations in 2004, they knew they had to somehow obtain the ability to partner with another company (Lotus), so they could save time and money, and learn about the industry’s operational, distributional, and logistical aspects (Stringham et al., 2015). This is another great example of how Tesla’s leadership made prudent decisions early that gave it the chance to survive long-term. Moreover, the partnership with Lotus allowed Tesla to focus on what they knew well, therefore not overextending themselves and risk financial trouble like we saw with Tucker and DeLorean, which in 2004 likely meant failure. Moreover, Martin Eberhard specifically mentioned in 2004 that, “Much as I love cars, I am the first to admit that neither I, my co-founder, Marc Tarpenning, nor our original investor (and chairman of our board), Elon Musk, is an automotive engineer” (Stringham et al., 2005, p. 92). This component of Tesla’s history is often overlooked, but it is crucial in understanding how they were so successful at entering and disrupting the U.S auto industry.

Unlike the management of the Tucker, DeLorean and Fisker companies, Tesla’s leadership understood they had inherent limitations resulting from lack of industry knowledge and experience, and so they decided to strategically partner with Lotus in order to keep costs low, while at the same time gaining the knowledge required to be successful in the industry. This
was one of the first and most important, trade-offs Tesla’s management made. This partnership gave Tesla’s ownership a chance to learn how to start small and create a mutually beneficial partnership between Tesla and Lotus in the development, production and selling of the Roadster. Although some of the money that was made would go to the Lotus company, it also allowed Tesla the proper amount of time to learn the nuances of the auto industry and save money, while still keeping an eye on their ultimate goal of moving the world towards more sustainable forms of energy.

Nonetheless, Tesla’s ownership understood that in order to achieve success in the long term, there needed to be many smaller steps taken in the short term, providing the financial stability that Tucker, DeLorean and Fisker all lacked in order to achieve their goals and succeed. In reference to this very idea, Elon Musk said that,

“The reason for strategy is that in order to take any technology to mass market it takes time and you’ve got to go through major design iterations...you also need economies of scale, so you’ve got to have much bigger factories. In order to afford those factories you have to raise a ton of money, and people will only give you money if you have shown some prior success. Otherwise, they [look at you with a doubting look and] they don’t believe you” (Stringham et al., 2015).

Clearly, this statement represents how Elon Musk understood the importance of effective strategy to a company that is entering a market, which has been difficult to enter. It is important to note that by simply recognizing that strategy is important, and implementing an effective strategy are two very different things. However, Musk’s explanation regarding the strategy required for taking new technologies into the market make it clear that Tesla’s long-term strategy has always been linked with the short-term actions and success. This reflects the Kaplan and Norton (1996) theory of linking short-term and long-term activities through the utilization of the balanced scorecard. Moreover, through the use of the balanced scorecard, an organization can link long-term and short-term activities through constant feedback, which Musk said was a large
part of Tesla’s strategy, “I think it’s very important to have a feedback loop, where you’re constantly thinking about what you’ve done and how you could be doing it better” (Stringham, 2015, p. 90). This type of activity is important to really any aspect of life, as improvement in any area first requires the understanding where there is room to improve, which in this sense is obtained through the feedback loop Musk mentions. Through constantly seeking out constructive criticism and asking customers what they do not like as opposed to what they do like, Musk appears to be constantly striving to be innovative. In turn, asking those types of questions gives Musk the ability to more effectively make tradeoffs that are relevant and beneficial to Tesla.

In the previous chapter, there was a very clear link between the ownership’s decisions about what to do, as well as what not to do, and the success of the company. Tucker, DeLorean and Fisker all seemed to make a crucial error at one point in the development of their company that led each of them to fail. The high barriers to entry and lack of economies of scale for all three of the companies forced costs to be too high for the emerging organizations, and some of it was the result of not making tradeoffs, or making tradeoffs that proved to be unwise. The idea of being different and doing things differently is something that Tesla has seemed to embrace from the beginning when they teamed up with Lotus car manufacturer to help design their first car, the Roadster (2015, Van Den Steen, p. 7) This is an early example of Tesla’s rational decision making and understanding of their strategy. Rather than trying to design the chassis and styling themselves, thereby venturing into uncharted territory for employees, Tesla only focused on the battery and powertrain development. This is an example of tradeoffs, which Porter (1996) explains are a crucial component to successful strategic positioning.

According to Porter (1996), trade-offs are very important to an organization’s strategy and success because the things a company decides not to do are equally as important as what it is
they actually do. The decisions about what not to do can make or break a company, though, when an organization’s operations don’t align with, or cannot support its identity. This is what occurred to Preston Tucker when he decided to skip the sculpting process of his vehicle, and therefore did not have a blueprint and model for all future applications. A tradeoff of such nature does nothing to improve the overall success of a company long-term, because its short-term application is to try and improve the operational effectiveness of the company, and did not help solve any issues the company was having regarding financial issues.

Section IV: Tesla’s Financial Performance

Having previously looked at some of the attempted entrants into the U.S. auto market, along with some important existing literature and theories on firms entering new markets, it is now time to look at Tesla’s performance. Tesla, and CEO Elon Musk’s, understanding of the finer details of business strategy impressive, and helps to explain how they have been able to enter the auto industry where so many have failed before. It is clear that Tesla’s ownership has a very strong grasp on the theoretical aspects of business management strategy, as evidenced by the clearly articulated strategy and the unwavering commitment to the company’s overarching goal of introducing sustainable transportation solutions. Up to this point the strategy framework has been outlined, as well as some of the existing literature on Tesla, but there has not been a detailed analysis of Tesla’s financial reports, or an examination of the company’s proposed strategies and future endeavors. In doing this and then comparing it with the previous new entrants, we will hopefully gain a greater understanding of how effective Tesla’s strategy is. In order to examine the success of Tesla Motors it is important to look at the company’s annual 10-k reports, along with other market analysis. The company’s financial reports should give us an
indication as to whether or not Elon Musk and Tesla follows through with the lofty promises that have been made in the past, therefore giving us an indication on their future performance.

Tesla’s most recent annual report states that its core competencies are “powertrain engineering, vehicle engineering, innovative manufacturing and energy storage” (2016, 10-k, p. 5). It is important to note that as evidenced by the statement above, Tesla’s ownership truly considers itself to be just as much of a technology company as it does an automobile company. It is this distinction that provides Tesla the core competencies, and unique market positioning as listed above. It also led CEO Elon Musk to merge Tesla with his other company that I will be covering more later named, SolarCity, which designs and manufactures solar energy storage devices (2016, 10-k). Moreover, it is these core competencies that provide Tesla with what Michael Porter (1996) would define as a unique set of activities that gives Tesla a special place in the market, offering consumers a product that is similar but offers a completely different value. Tesla’s first vehicle, the Roadster, took three years to develop before there was a finished product and was designed to be a high-price, low-volume car (Rothaermel & King, 2015). Using strategic partnerships with Lotus, and leveraging what technology they had at that point, Tesla’s first car was sold 2,400 units at a price of $110,000, and started the company down the road it remains on today (Brown, 2016). When looking at Porter’s (1996) productivity frontier curve (see figure 2.1) this pricing strategy is represented at the upper-left portion of the curve. Tesla chose a point that is meant to represent a high perceived value, but at a high cost.

The current product line of Tesla Motors consists of the company’s flagship vehicle, the Model S as well as the small SUV-Model X, with the highly anticipated Model 3 in production and expected to be available by late 2017 (2015, 10-k). The Model S, which is a four-door midsize sedan, carries a price of roughly $60,000 MSRP, its debut in 2012 was very well
received, both critically and commercially, receiving nearly the highest grade possible (99 out of 100) from consumer reports, with its limited 208 mile range the reason for the one deducted point (Van Den Steen, 2015). The development and production of the Model S was very different from that of the Roadster, as Tesla decided it was time to make to jump and took on the responsibility that Lotus shouldered during production of the Roadster. The assembly of the vehicles, creation of much of the interior plastics, and the manufacturing of their innovative powertrain was all done in house for the first time (Van Den Steen, 2015). Part of this decision was a result of luck (relative to Tesla) as the 2008 recession allowed Tesla to purchase and fully operate a manufacturing plant from General Motors, for what many people believe to be a third of the normal price of one billion dollars (Van Den Steen, 2015).

After half a year on the market in 2013, the Model S sold 10,500 units total, which fared well against the less expensive electric car competition in the form of the Nissan Leaf, which sold 9,800 units at roughly $20,000 (Van Den Steen, 2015). However, the BMW 5 series, which was the intended competition of the Tesla Model S, sold roughly 25,900 units at a price point of $50,000, showing that despite improvements, Tesla still had a long to go. Today, Tesla tries to constantly develop and improve on their products, as the range of the battery has improved in the Model S from 208 miles (in 2012) to 288 miles, and it is now offered in the all-wheel drive electric powertrain (Tesla, 2015). The Model X which was introduced in 2015, and has been somewhat successful, however the lack of production from Tesla, and failure to meet its predictions of delivering 80,000 vehicles in 2016 (produced 76,230) was caused by the increase in production of the anxiously awaited new Model 3 (Lambert, 2017). It remains to be seen whether or not this was a wise tradeoff by Tesla and Musk, however with how important the Model 3 is to the future of the company it is more likely than not that it was a prudent decision.
The Model 3 is Tesla’s new electric vehicle that is scheduled to debut in late 2017, and be the first low-price, high-volume electric vehicle Tesla has every produced (Kota, 2016). With an expected price point of $35,000, Tesla’s Model 3 seems to offer consumers a spectacular value. This represents a significant shift in Tesla’s long-term pricing strategy, moving them from high-priced and a high perceived value, to a moderate price point with an above average value. This represents a gradual shift towards the middle of Porter’s (1996) production possibilities frontier (see figure 2.1). Along with the Model 3 is the construction of a one billion dollar battery factory, or gigawatt factory, that Tesla and Panasonic have built in Nevada. The idea behind the gigawatt factory is that it will be a “facility where we work together with our suppliers to integrate battery material, cell, module and battery pack production in one location” (Kota p. 9). Moreover, it is a way to lower costs in production on the batteries and drive units of the upcoming Model 3, while at the same time obtaining economies of scale in the industry. Development of such massive assets certainly make it seem as though Tesla is positioning itself well, creating fit among activities, leveraging core competencies and strategic partnerships, all the while still holding true to their overarching goal. The issue with the Model 3 and the gigawatt factory is that Tesla’s future seems to rely immensely on their success. The previously mentioned trade offs that Tesla has made, foregoing the production of the Model S and Model X to ensure that the Model 3 will be successful is the first sign of trouble on the horizon for Elon Musk and Tesla. Looking at the company’s most recent 10-k, it seems that they are aware of the challenges that could arise citing the supply chain as one primary area of concern noting, “The negative impact of any delays or other constraints with respect to our suppliers for Model 3 could be substantially greater than any such issues experienced with respect to our products to date. As some of our suppliers for our current production vehicles do not have the resources, equipment or capability to provide components for the Model 3 in line with our requirements, we have engaged a significant number of new suppliers, and such suppliers will also have to ramp to achieve our needs in a short period of time” (p. 15)
Moreover, Tesla has suffered from issues relating to delivery failure and component shortages in 2012 and 2016 specifically, which was a direct result of Tesla’s limited supply chain and their inability to obtain the products from anywhere else. The biggest issue that Fisker automotive faced was essentially exactly the same thing Musk describes above, as the supply chain that Fisker decided to try and leverage by creating strategic partnerships ultimately backfired, as the costs were simply too much for the start-up to handle. It is likely that the new gigawatt factory is Tesla’s future answer to the tricky supply chain issue, which could potentially handicap the production of the Model 3 if the suppliers do not meet the necessary demand. With such a massive factory, it should provide Tesla the economies of scale to necessary to integrate and leverage new abilities that Tesla was not able to have before. In addition to this, Tesla is eligible to receive $1.29 billion in incentive based subsidies (in the form of tax breaks) from the State of Nevada over the next twenty years, as long as Tesla is able to create 6,500 jobs at their factory in Nevada by the year 2020 (Lambert, 2015).

Section V: Tesla’s Financial Reports (continued)

Tesla, Inc.
Consolidated Statements of Comprehensive Loss (in thousands)

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<td></td>
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<td>Net Loss attributable to common stockholders</td>
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<td>$43,220</td>
</tr>
<tr>
<td>Less: Reclassification adjustment for net (gains) losses into net loss</td>
<td>(44,904)</td>
</tr>
<tr>
<td>Net realized gain (loss) on derivatives and short-term marketable securities</td>
<td>(1,684)</td>
</tr>
<tr>
<td>Foreign currency translation adjustment</td>
<td>(18,500)</td>
</tr>
</tbody>
</table>
Looking at Tesla’s financial reports for the 2016 year, revenues increased significantly from $4 billion to $7 billion. This increase in revenue likely has something to do with the SolarCity merger, and as a result, should not be considered as representative of overall performance for the 2016 year. The company is still operating at a loss of nearly $700 million dollars, however, despite this Tesla has recently seen very encouraging investment behavior.

Tesla’s market capitalization as of Tuesday, April 4 was $49.47 billion, overtaking Ford Motors who were at $45.19 billion, and reaching General Motors at $49.61 billion, with Fiat-Chrysler

<table>
<thead>
<tr>
<th>Year Ended December 31,</th>
<th>2016</th>
<th>2015</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>$5,589,007</td>
<td>$3,431,587</td>
<td>$2,874,448</td>
</tr>
<tr>
<td>Automotive leasing</td>
<td>761,759</td>
<td>309,386</td>
<td>132,564</td>
</tr>
<tr>
<td>Service and other</td>
<td>467,972</td>
<td>290,575</td>
<td>187,136</td>
</tr>
<tr>
<td><strong>Total automotive revenue</strong></td>
<td>6,818,738</td>
<td>4,031,548</td>
<td>3,194,148</td>
</tr>
<tr>
<td>Energy generation and storage</td>
<td>181,394</td>
<td>14,477</td>
<td>4,208</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td>$7,000,132</td>
<td>$4,046,025</td>
<td>$3,198,356</td>
</tr>
</tbody>
</table>

*Image 5.2(above): Tesla Consolidated Statements of Operations Data: for years 2016-2013(in thousands)*
*Source: Data retrieved from https://www.last10k.com/sec-filings/tsla/0001564590-17-003118.htm#fullReport*
still sitting at $15.77 billion (April 4, 2017, CNN Money). This set a new record for the market valuation of the Silicon Valley based company. In addition to this, Tesla’s stock price reached $303 per share on the same day, also representing a new record to Tesla (April 4, 2017, CNN Money), which is also a record high for the company. Analysts largely attribute this rise in stock to Tesla’s unprecedented increase in deliveries in Q1 of 2017, as they delivered 25,418 vehicles (their highest quarterly number yet), which makes up for the lack of production in the fourth quarter of 2016, and suggests increasing investor confidence in Tesla’s future.

This increase in Tesla’s valuation can largely be attributed to investor’s faith in Tesla, because of the company’s strong Q1 performance, however it is also possible that will be short-lived success. Many analysts have discussed the danger in relying too much on Tesla’s valuation as a metric for success, and that analyzing and suggesting investment decisions based on it would be unwise. However, as Musk recently stated “Tesla is absurdly overvalued if based on the past, but that's irrelevant. A stock price represents risk-adjusted future cash flows” (Niu, 2017). While the past is not completely irrelevant in determining the future of a company, the point remains that Tesla, and Musk, are constantly looking into the future to try and find what could be done next to move the company forward.

Encouraging investors to bet on the future is crucial in financing the Model 3 and the gigawatt factory, but puts even more pressure on the company to ensure that the new, low-priced model will be available for purchase for the original time frame of late 2017 (Kota, p. 2). According to the most recent earnings release, the Model 3 is on track so far, with production to being in July 2017, and by September production is to exceed 5,000 vehicles per week in the fourth quarter and 10,000 vehicles per week in at some point in 2018 (Tesla, Inc. 2016, Model 3). That kind of production would be incredible for Tesla, who have struggled to hit their targets
for vehicle production; with the most recent quarter being an exception, as it actually exceeded
the company’s expectations. In addition, it would suggest that the gigawatt factory was indeed a
wise investment, and give Tesla the economies of scale necessary to be successful in the long-
term. The long-term success of Tesla will largely be determined by whether or not Tesla can
successfully follow through with its plan to mass-produce the Model 3, and therefore move
towards the middle of Porter’s (1996) production possibilities frontier. Moreover, this will help
them succeed in achieving the goal of expediting the process towards environmentally
sustainable transportation by producing the moderately priced, mass produced, and unique
Model 3.
Chapter 6: Conclusions:

I: Is Tesla’s Strategy Effective?

In order to determine the effectiveness of Tesla’s strategy, I used existing literature on business strategy, definition of what a successful strategy was. I also looked at Tucker Motor Corporation, the DeLorean Motor Company, and Fisker Automotive to see where those companies went wrong and compare that with Tesla’s strategy.

I argued that effective strategy begins with efficient business practices, which includes creating shareholder wealth through proper asset, and wealth management of an organization. Although Tesla has only made a profit twice in the entirety of its existence, they are still in the industry and are still making progress. As for right now it seems that Tesla is here to stay, as the investments into their gigawatt factory, and acquisition of SolarCity suggest growing market power. However, as I have previously stated, determining the effectiveness of Tesla’s strategy requires more than financial evidence because Tesla is unlike any other company to have entered the market. Their commitment to technological advancements and creating environmentally sustainable transportation for the masses is entirely different, and therefore a more theoretical approach is also required.

Porter (1996) argues, “the essence of strategy is choosing to do activities differently than rivals do” (p. 64). Being different than rivals, and offering a new service than what already exists, while also having operational effectiveness, is the first component to a successful strategy.
Tesla was created under the assumption that they would be doing many things differently, and is rooted in their identity of accelerating the shift to sustainable transportation. A good example of this is Tesla’s open market platform, wherein the company’s patents are available to anyone because the Tesla’s overarching goal and identity is not to make the money but to help the world by creating better electric vehicles (Belfiore, 2015). While most people agree that by doing this Tesla is not giving up all proprietary knowledge that would be found in the engineering reports, but it remains a sign of good faith and friendly competition, while holding fast to the core of it’s strategy.

This ties into Collins and Porras (1996), with their definition of core purpose and core vision, which are the foundational pieces of the company’s ideology and practices. The core components must be flexible enough to constantly maintain a competitive advantage and be different than competitors, through the implementation of strategic positioning and well executed trade-offs, both requiring intelligent and careful leadership from the company’s executives. Tesla’s strategy exemplifies these characteristics in almost everything they do, as Elon Musk argued that constant feedback and collecting information on what is was that people did not like is necessary to success, as it allows for constant innovation which therefore accelerates development and creates competitive advantage (Stringham et. al, 2015).

Tesla embodies all of the things that make up an effective strategy by having a clear and powerful identity, whose purpose is to accelerate the shift to environmentally sustainable transportation and make the world better in doing so. In addition, this clear identity helps to link short and long-term activities, therefore eliminating waste and confusion regarding decisions, and disseminating knowledge, which gives the employees a reference for decisions and clear understanding of their value. Tesla also creates unique competitive advantage and performs
activities differently while not losing sight of the importance of operational effectiveness, which is where Preston Tucker and John DeLorean failed in their inability to make trade offs, or understand that starting small was the best way to enter to the United States auto industry. Therefore, I believe Tesla’s strategy to be very effective at maintaining competitive advantage in the auto industry. However, that does not necessarily mean that I am completely convinced that Tesla will be able achieve its goals in the production of the Model 3.

Section II: The Model 3 and the Future of Tesla

The strategic vision that Elon Musk and company started with in 2004 is now becoming a reality, with the Model 3 representing the shift in Tesla’s strategy from high-priced vehicles targeted for the wealthiest consumers (top-left of PPF, see figure 2.1), to an electric vehicle with broad market appeal (shifts towards the middle of PPF, see figure 2.1). Quite simply, the Model 3 could be the vehicle that accelerates the shift to electric vehicles for all auto manufacturers, and be the primary force behind other companies moving to produce more environmentally sustainable vehicles. If Tesla can maintain the success they have experienced recently, and continue to increase their deliveries, while also ramping up production of the Model 3 they, could successfully move towards the middle of the production possibilities frontier while also keeping true to their goal of successfully expediting the transition to sustainable transportation.

The big question is, assuming Tesla’s supply chain does not experience anything that would prevent them from following up with the orders, whether or not the Model 3 will live up to expectations. If it does not live up to the expectations, then Tesla will have to act quickly to make sure that it does as the incumbent firms have not been stagnant in the world of electric cars, as General Motor’s vice president of global propulsion systems, Dan Nicholson, recently poked fun at Tesla by saying “[the Bolt] will be in production by the end of 2016, so it’s not necessary
to put down $1,000 and wait until 2018 or sometime after that” (Baron, 2016). General Motors boasts both the Chevrolet Volt and also the new Bolt, which is more expensive than the Model 3 at $37,000 and has a range of 238 miles, which is more expensive than the Model 3 but also has an extra 20 miles in range (Baron, 2016). Tesla and CEO Elon Musk maintain investor loyalty because his vision and mission are noble, and there is a very real chance that he will succeed. However, no company can stay in business while also operating at a loss, and especially not in an industry as competitive as the U.S. auto industry. Nonetheless, I believe it is likely that Tesla will see continued success in the future because the strategy that Elon Musk laid out for his company display’s the components necessary (leveraging core competencies, creating fit among activities) to maintain competitive advantage through its core purpose. This should provide the firm with a steady strategy for achieving its vision of speeding up the transition to sustainable transportation and offering the new competitively priced, and mass-produced Model 3.
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