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Sustainable and Clean Energy: The Case of Tesla Company[1]

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ABSTRACT: Tesla is considered the leading electric vehicle manufacturing company in the market. It was the first company to recognize the need for a more sustainable vehicle than traditional gasoline-powered vehicles and offer its solution to the market. The company has combined the generation of electrical energy through solar cells and other SolarCity products with its vehicles, giving it a competitive advantage that none of its competitors have. Tesla's cars are the result of continued investment in research and development and a forward-thinking approach. The company has made such an impact with its innovations that it has also changed the paths of its competitors and the industry as a whole. Within the green economy movement, Tesla has definitely been one of the pioneers influencing companies in other industries and inspiring them to take a greener and more sustainable approach.

KEYWORDS: sustainability, electric vehicles, green economy, innovation

I. INTRODUCTION

The global economy is undergoing a transformation due to shifts in collective consumers' views of the products they exchange and consume and their impact on the environment have changed. This change has hit different markets that now have to adapt. In the automotive industry, the main problem in terms of sustainability is the use of fossil fuels, which cause harmful emissions to the environment, nature and humans alike.

The solution to this problem is electric cars, but for a long time they were considered to be of lower quality and performance than gasoline-powered vehicles. Drivers have therefore been reluctant to buy them because of the many difficulties associated with them, including a high price and a short range that can be achieved on a single charge, combined with the scarcity of charging facilities. The first company to tackle these problems was Tesla, founded in 2003. The company's mission was to produce electric vehicles that actually outperformed traditional gasoline cars, making them the best option for cars in every way. Tesla quickly dominated the electric vehicle market and contributed significantly to its expansion (Tesla, 2020).

Today, the company not only builds electric cars, but also infinitely scalable clean energy generation and storage products. The sooner the world stops relying on fossil fuels, the better - that's Tesla's core belief. The company offers products that make the transition to a greener and more sustainable future easier than ever before; it has impacted entire markets and all their players, changing the way they operate forever.

The purpose of this paper is to provide a qualitative analysis of the market position of Tesla, the electric car company, and determine its impact on the global automotive market.

II. THE IMPORTANCE OF GREEN ECONOMY IN MODERN SOCIETY

The world we live in is undergoing fundamental change, no matter from which perspective you look at it. The population on our planet has increased greatly in recent years, but the number of products and services offered to it has increased even more. In this extremely fast-paced environment, markets are changing and so are their players. However, they all have one thing in common: the use of natural resources. Living things need food, water and air to survive, while companies need a variety of materials and fuels to function and maintain their production processes. These resources are treated as if they are in infinite supply, but they are not (SustainabilityX, 2018).

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Right now, it claims that the world economy is growing, when in fact it has no real growth. It creates growth by depleting resources and depriving future generations of opportunities (Commissioner Hedegaard). There is a growing general awareness of this problem among the world's population, and consumers are demanding an economy that improves their well-being while reducing environmental risks and scarcity. What is needed is an economy that provides its customers with the products and services they need, while also being mindful of how it treats the natural world on which everyone depends. The concept of sustainable development first appeared in the 1980s, and since then the idea of a green economy has continued to evolve (United Nations Environment Program, 2020).

The concept of the green economy supports the harmonious interaction of nature and man, seeking to meet the needs of both simultaneously. The approach to this reciprocal relationship between people and their environment recognizes that one cannot increase if the other decreases. Humanity cannot thrive in a depleted ecosystem, and therefore natural capital and ecological services must be recognized as an economic value. To prevent the loss of biodiversity on Earth, large-scale producers must first change their production processes, as they are one of the biggest negative impacts on the environment. If these producers focus on using their resources and energy more efficiently while reducing pollution and waste in their production processes as much as possible, the foundation for a greener economy will be in place. Consumers then have a wider choice and can consciously purchase the more sustainable offerings, making their own contribution to a greener or more environmentally friendly economy (Halton, 2019).

Customers are certainly asking for such green alternatives in all market segments, and it is time for manufacturers to respond by offering them. The green economy has evolved from a niche market to one that now accounts for about 6% of the global capitalization of publicly traded companies (Clark & Cooke, 2016).

One of the most affected markets is the automotive industry. The industry responded with a range of eco-friendly cars, but the most environmentally friendly option is definitely the electric car, i.e., the all-electric vehicle. These cars run solely on electricity and are powered by rechargeable batteries, reducing harmful air pollution compared to traditional gasoline cars. In addition, unlike gasoline, the energy used to run such a car is renewable, further reducing greenhouse gas emissions.

In this way, the driver of such a car can get a better sense of his or her environmental footprint. The more companies make such cars and the more people buy and drive them, the better society as a whole will treat nature. This in turn also has many health benefits for people as pollutants are reduced (Ergon Energy, 2020).

The concept of the green economy is a trend that should be followed closely as the changes are becoming more noticeable every day. Tesla has managed to adapt to these changes with its products more quickly and efficiently than any of its competitors.

III. THE MAIN CHARACTERISTICS OF TESLA COMPANY

Tesla is one of the most influential automotive companies that has changed the industry and its course forever. It is important to look at its characteristics, taking into account the environment and circumstances that prevailed during its development.

A. History and Overview of Tesla Company

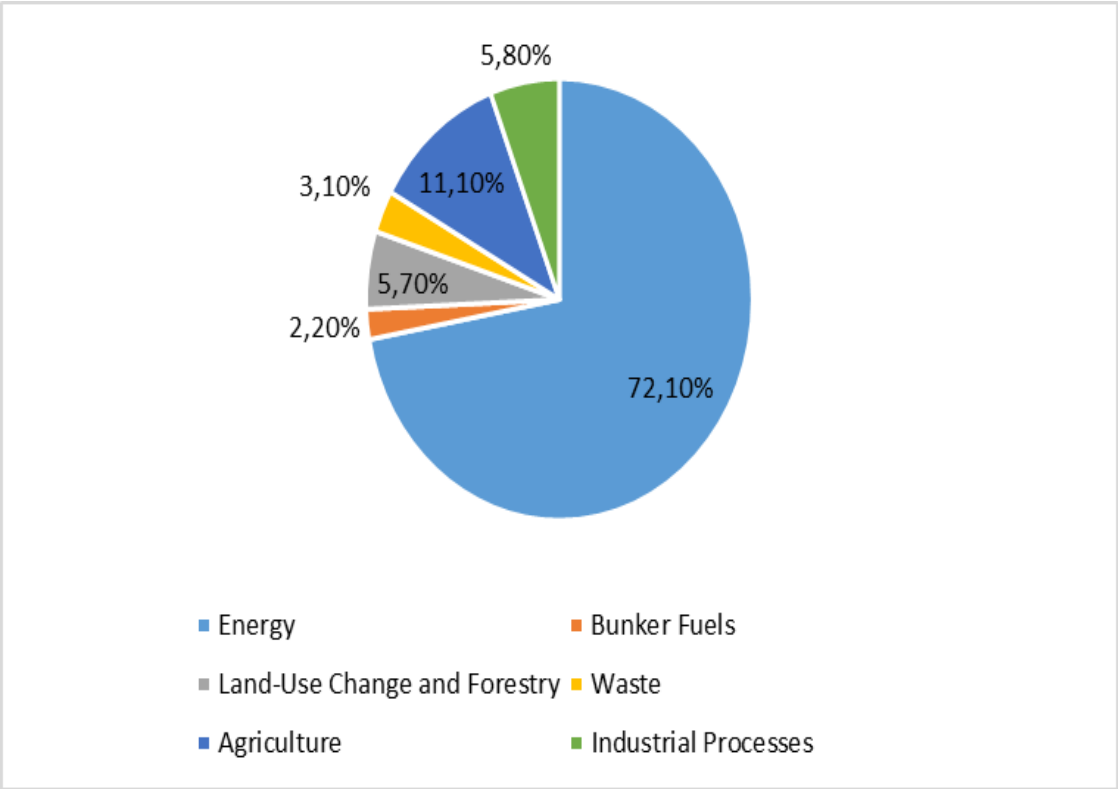
The concept of electric vehicles was introduced as early as the 20th century, but until the 21st century none of these cars could replace conventional gasoline cars. That changed when Tesla, Inc. entered the market and turned the vision of many into a feasible reality. The company was founded in 2003 with the goal of bringing electric cars to everyday life. In this way, the company brought the entire automotive industry to focus on sustainable energy sources. It's important to consider that electric cars were far behind gasoline cars in terms of quality at the time, but Tesla decided to change that. Not only would their cars be the best electric vehicles on the market, but they would also be better, faster, and more fun to drive than any conventional gasoline cars (Matulka, 2014).

However, Tesla is not only an automotive company, but also an energy innovation company. Tesla's cars are powered by batteries that are powered by the sun. Solar power generates clean electricity by converting sunlight into electricity without releasing harmful pollutants. It's exactly this kind of energy, sourced from SolarCity, that powers Tesla's cars. Together, these two companies form the world's only integrated sustainable energy company, giving them a competitive advantage that none of the other players in this industry have. From energy generation to storage to transportation, Tesla is in control of everything and is not dependent on outside suppliers (Schreiber & Gregersen, 2019).

SolarCity has revolutionized the energy industry by providing solar energy to homeowners, businesses, schools, nonprofits, and government entities at a much lower cost than using fossil fuels. The company gives its customers control over their energy costs while using an energy source that is completely renewable and environmentally friendly. This is especially important

considering how damaging the energy industry is: more than 70% of global greenhouse gas emissions come from energy-related sources such as electricity generation, heating, and transportation, as shown in the following graph (Tesla and SolarCity, 2016).

Graph 1. Greenhouse gas emissions by sector



Source: World Resources Institute, 2017

To create a fully sustainable energy ecosystem, Tesla produces a unique set of energy solutions in SolarCity, including Powerwall, Powerpack and Solar Roof.

The Solar Roof is a solar panel system that integrates solar cells and modules into the roof structure, rather than simply placing the panels on the roof. This system captures the sunlight that hits the roof and converts it into electricity. This electricity is then converted into renewable energy to power the home. When the solar panels produce too much energy, that energy can be stored in the Powerwall rechargeable home battery or Powerpack (Lambert, 2020). The Powerwall is a rechargeable lithium-ion battery designed to store solar energy at a residential level for load shifting, backup power, and self-consumption. It is mounted on an exterior wall and integrated with the local power grid to harness excess power and allow customers to draw energy from their own reserves. There are two types of Powerwalls: the Powerwall home battery and the so-called Powerpacks for businesses. Powerpacks are large powerwalls intended for industrial use due to their high capacity. The Powerwall and Powerpack are a game changer in the renewable energy industry, making on-site energy production and use much more flexible and convenient (Tesla, 2020).

Tesla launched its first car, the all-electric Roadster, in 2008. It reached 394 km on a single charge; a new world record for an electric vehicle. Further testing showed that its performance was comparable to many gasoline-powered sports cars: the Roadster could accelerate from zero to 96 km/h in less than 4 seconds and reach a top speed of 200 km/h. The vehicle can be charged from a standard electrical outlet, as its electric motor is powered by lithium-ion cell batteries located at the front of the vehicle. With a price tag of $109,000, the Roadster was a luxury item that the general population could not afford, but it was a start in the right direction

Production of the Roadster ceased in 2012 so Tesla could focus on its new Model S sedan. It was highly praised by the public for both its performance and design, becoming the best car in its class in every category. It was launched with three different battery options that give it a range of 379 or 483 km on one charge. The most powerful battery allows acceleration from zero to 96 km per hour in 4 seconds and a top speed of 209 km per hour. The batteries are located under the floor, which creates additional storage space in the front of the vehicle and improves handling due to the low center of gravity. It has completely changed the world's idea of an electric car that combines safety, performance and efficiency.

That same year, Tesla began building Superchargers in the United States and Europe where Tesla owners could quickly charge their car batteries for free. These were later called Tesla Stations and could completely replace the Model S battery pack.

In 2015, Tesla launched the Model X, a crossover vehicle with sporty and practical features. It has a maximum battery range of 475 km and can accommodate up to seven people. This year, Tesla also entered the solar energy products. The Powerwall and Powerpack batteries for storing electricity from solar energy were introduced. With the acquisition of SolarCity in 2016, Tesla was officially no longer a pure car company, as evidenced by its name change to Tesla, Inc.

Under pressure to bring a cheaper car to market, production of the Model 3 began in 2017. It is a four-door sedan with a range of 354 km and a price tag of $35,000. The most important feature of this car is its safety, as it combines aluminium and steel in all areas. In a roof crush test, the Model 3 proved it could withstand four times its own mass, even with an all-glass roof. Shortly after, Tesla launched the safest and most comfortable truck in the world, the Tesla Semi.

Tesla has begun production of the Model Y in 2020, a compact SUV that fills the gap between the Model 3 and the Model X. It seats up to seven people and offers plenty of space, but also appeals to those looking for more affordable options. The SUV segment is not heavily populated with electric vehicles, so Tesla has restored its position as a pioneer in another automotive category.

Tesla has also decided to enter the pickup truck segment with its Cybertruck, which was unveiled in late 2019. Because of its unique angular design with a body made of stainless steel and bulletproof glass, it is likely to be much more popular in the United States than in other countries around the world. It can be sold in three different versions, with one, two or three engines.

Tesla has proven to be a pioneer in the automotive industry by reinventing the electric vehicle and completely changing its perception by the public. Its cars combine futuristic and elegant design with advanced technologies to provide its customers with the best performing car on the market (Tillman, 2020). At the same time, Tesla is also environmentally friendly, leading the entire industry to a greener future. The company's impact on the industry has shifted the entire market in a different, a greener direction.

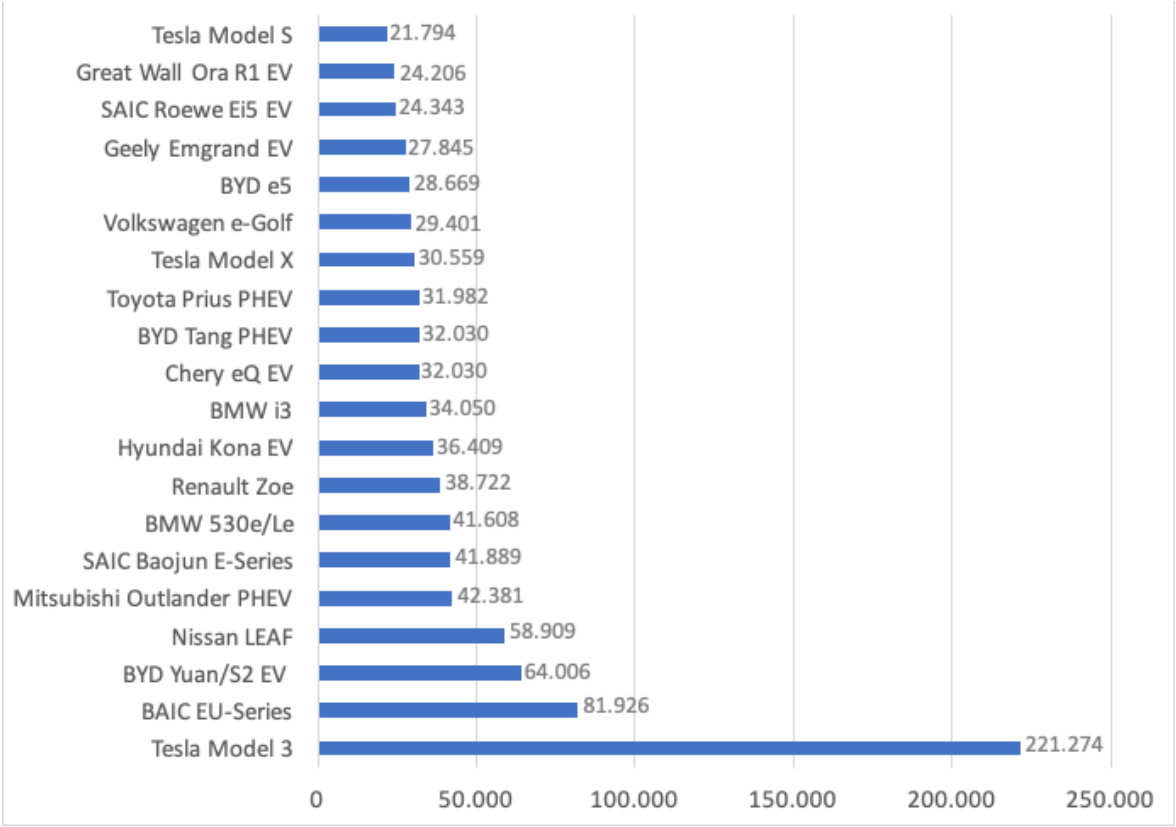
B. The Influence of Tesla Company on the Market

Tesla was the first car company to have a forward-looking vision, so its entry into the market had a major impact on the entire automotive industry. Tesla had an ambitious vision for the future that combined renewable energy, a greener economy, and lower global CO2 emissions with high-performance and safe cars. The company began producing sustainable electric vehicles and showed the world that it was not only possible to keep up with the competition, but to surpass it. Although it is a relatively young company, its clear mission has allowed it to capture its own share of the market. Tesla is not only a car manufacturer, but also a company that wants to improve people's everyday lives with its innovative products. It has recognised that the world needs greener vehicles and has conveyed the urgency of such a product to its customers. People are finally being offered an option that is good for both the planet and the consumer, and the response has been great.

The introduction of Tesla's products, such as large battery-powered electric vehicles and solar roofs combined with powerwalls, has transformed both the automotive industry and the energy utility market. Now that people have a green option when it comes to driving solar-powered cars and using solar power at home, they are evaluating all other segments of their energy use much more critically than before (Smith, 2019).

After Tesla launched its first electric vehicle in 2008, the company achieved great success. The incredibly positive public reaction encouraged many other major automotive producers to accelerate the introduction of their own electric cars. The first to hit the market were the Chevy Volt and the Nissan LEAF in late 2010. The Chevy Volt was the first commercially available plug-in hybrid car that has a gasoline engine that supplements the electric drive when the battery is depleted. This allows customers to drive electrically most of the time and extend the vehicle's range with gasoline. The Nissan LEAF, on the other hand, is a pure electric vehicle powered by an electric motor. In the years that followed, other automotive producers entered the market and launched their own electric vehicles. The trend had begun, and it was only a matter of time and how quickly other market players would respond, but it was clear that the automotive industry had begun to move toward electric vehicles (Matousek, 2018).

Graph 2. Leading electric vehicles worldwide (January-October 2019)



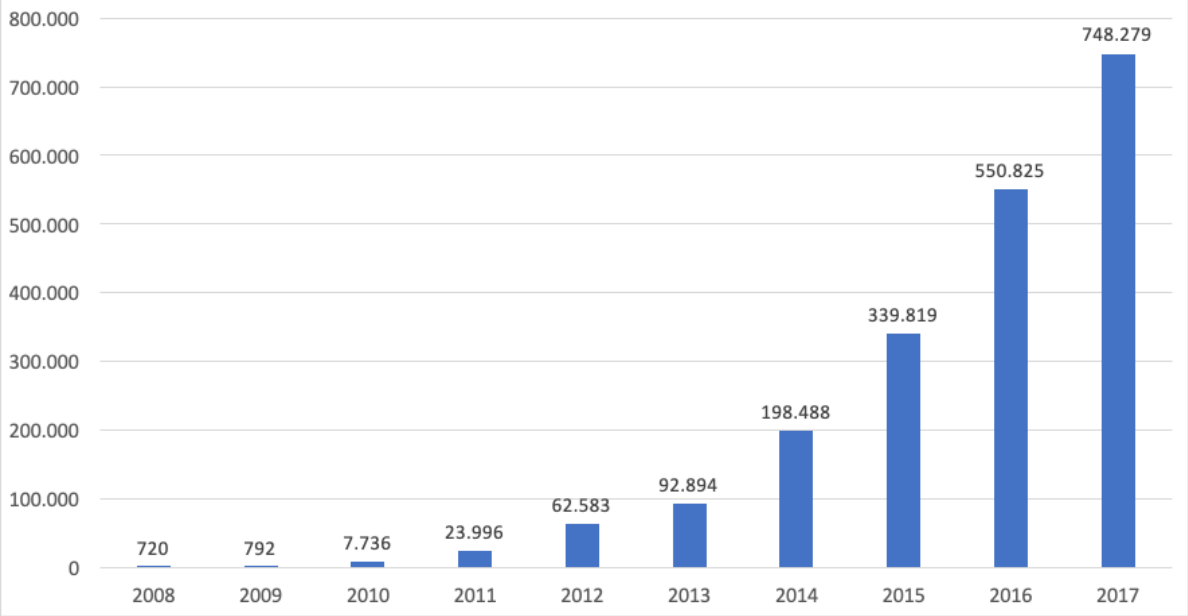
Source: CleanTechnica, Shahan, 2019

The graph shows how the market formerly dominated by Tesla is being supplemented by many other automotive producers. There are currently more than 40 different electric car models available for purchase on the global market, and the number continues to grow every year. According to JP Morgan, by 2025 most electric and hybrid electric vehicles will account for an estimated 30% of all cars sold worldwide. By comparison, electric vehicles accounted for 1% of global car sales in 2016. This incredible increase in electric vehicle sales, which has seen an annual growth rate of 32% in the U.S. alone, will be accompanied by many more models coming to market and further improvements to cars and their technology (Kaneva, 2018).

Electric cars are growing in popularity year after year, enjoying positive feedback from consumers and excellent reviews from industry publications. Demand is increasing while the cost of manufacturing and purchasing such cars is decreasing. In addition, these cars offer greater cost savings, as evidenced by a study conducted by the University of Michigan's Transportation Research Institute. The study concluded that electric vehicles cost less than half as much to operate as gas-powered vehicles. The average cost of driving an electric vehicle in the United States is $485 per year, while the average for a gasoline-powered vehicle is $1,117. The exact figure depends on the gas and electric rates where the driver lives, the type of car they drive, etc. Nevertheless, it is undeniable that buying an electric vehicle is a better and more profitable investment than buying a traditional gasoline vehicle (Energy Sage, 2020).

Hand in hand with the increasing popularity and number of electric vehicles on the road is the number of charging stations along those roads. To support this increase, the motor vehicle infrastructure will need to change dramatically. While electric cars can be charged at home, this method still does not provide fast charging. This makes the availability of charging stations at multiple locations, especially along popular commuter routes, all the more important. SolarCity offered solar-powered charging stations for homes and businesses back in 2011, promising lower costs than buying from the grid. These chargers are compatible with all electric vehicles on the market. SolarCity was one of the first to respond, but not the only one. The market has responded accordingly and has grown rapidly, as shown in the following graph (Wagner, 2018).

Graph 3. Number of electric vehicle charging stations worldwide



Source: Statista, Wagner, 2018

In 2019, the market for electric vehicle charging stations was estimated at $5,909.4 million. It is estimated to grow at a compound annual growth rate of 36.1% from 2020 to 2016. The reason for this incredible growth is a combination of many factors: people have started to care more about the environment, and governments are now offering more and more subsidies to support such businesses. Fuel costs are rising, while the cost of electric vehicles continues to fall. There are plans to install such charging stations in many places, from parking lots of various companies to the garages of customers themselves. (Kaneva, 2018).

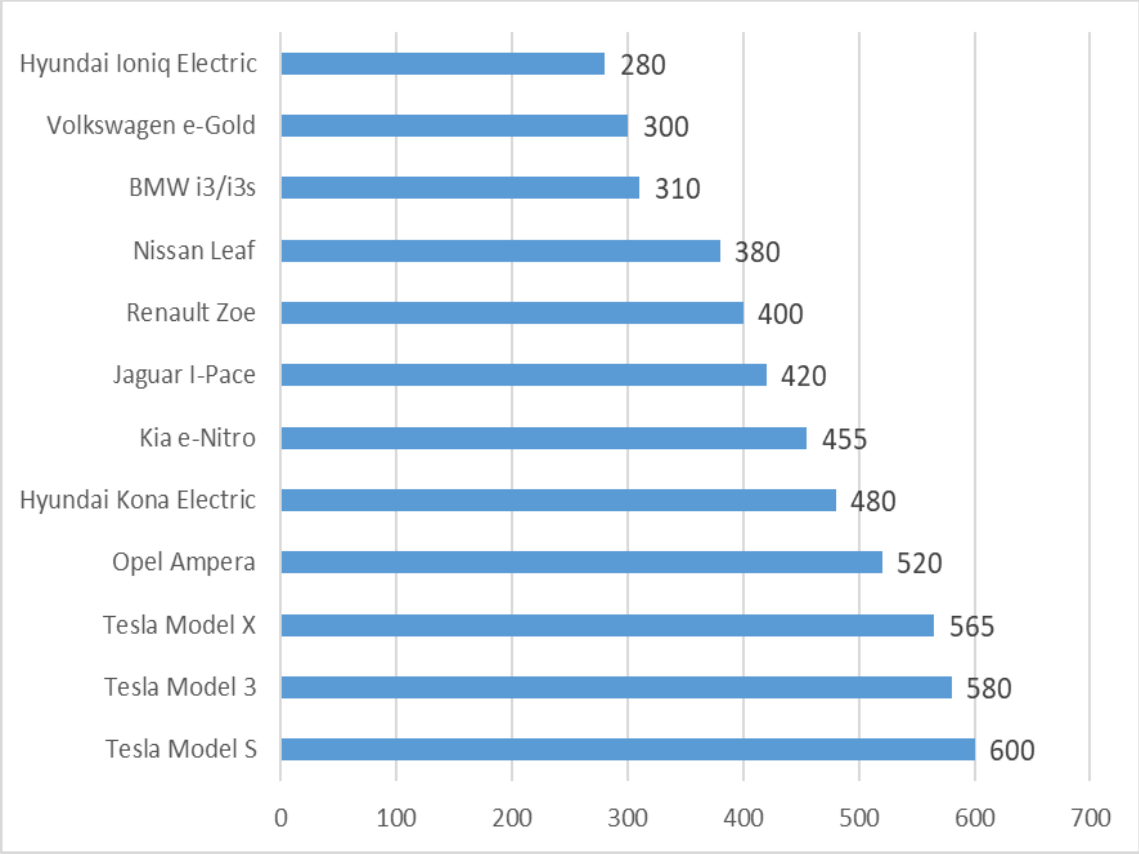
Tesla is very quickly turning its vision into action, capitalising on its strengths and market opportunities while trying to overcome any difficulties it encounters.

C. SWOT Analysis of Tesla Company

In order to present in more detail, the position of the company in the market, the following part of this thesis deals with the internal and external strategic analysis of the company. The strengths are characteristics of the company that give it advantages over others, while the weaknesses are characteristics that put the company at a disadvantage compared to others. These refer to the internal environment, while opportunities and threats generally focus on the external environment. Opportunities can be defined as elements of the environment that the company could use to its advantage, while threats are those elements of the environment that are likely to cause difficulties for the company. This simple but useful analysis creates a visual overview of Tesla and its business environment.

In terms of the company's strengths, Tesla has the advantage of being a pioneer in the production of alternative fuel vehicles, as it was the first company to produce an all-electric sports car. Before Tesla, electric vehicles seemed to be a compromise, as their performance was far behind that of gasoline-powered cars. That has changed completely, as product quality has been the company's focus from the beginning. This commitment is reflected in the fact that the company has increased its investment in research and development every year. Tesla has the highest level of innovation in the automotive world. The company also has more control than any of its competitors over the production processes and quality of not only its products, but also the products of its suppliers, because it is vertically integrated with SolarCity. This integration gives the company additional flexibility and room for innovation. The company's research has also focused on increasing safety, which has paid off as Tesla's vehicles are considered the safest cars in the world. This is evidenced by the U.S. government's New Car Assessment Program, in whose tests the Model S, Model X and Model 3 achieved the lowest overall probability of injury of any vehicle ever tested. Tesla's performance is exceptional on all levels, making the company a powerful symbol of innovation and "the car of the future" that easily attracts and retains new customers. The innovative nature of the company gives it a high profile in the electric car industry and makes it the sole number one. Tesla has left all other brands behind in the race for the best electric cars. In terms of range, Tesla's cars cover the greatest distances; its three different models occupy the top three spots (Business Strategy Hub, 2020).

Graph 4. Electric cars ranked by range (in kilometers) after one battery charge



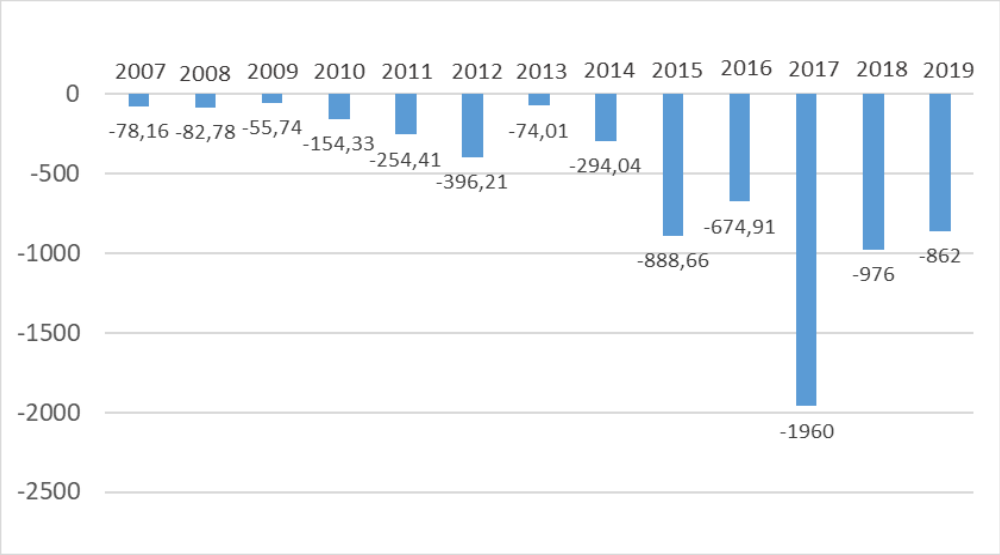
Source: Statista, Armstrong, 2019

When Tesla launched, it could be said that the company was operating in a niche segment that has since grown and expanded to include the entire automotive industry, giving the company a near monopoly in the electric vehicle market. This has resulted in higher growth rates compared to competitors that have been in the automotive industry for a long time. Tesla's vision of a better future for the planet and people is expressed and visible in its products, making the company the world's leading manufacturer and seller of electric cars (Pratap, 2019).

Tesla's weaknesses are due to their high standard of innovation, which usually leads to major mechanical complications and production risks. Numerous delays in launching new vehicles or other products have damaged its public image and made customers impatient. Delays due to experimentation and complicated production processes have left the company unable to meet demand. Tesla's supply is still unable to meet the ever-increasing demand in the market. This has a negative impact on the company's pioneering position, as it is unable to produce large volumes for any of its models, thus hindering its market expansion. One of the reasons Tesla is facing so many difficulties in terms of production volume and resource management could be the fact that the company produces cars in only one plant, which is located in Fremont, California. The plants in Reno, Nevada, and Buffalo, New York, produce only solar panels and battery packs (Dalvagas, 2016).

In addition, high operating costs have prevented the company from generating high profits that it could invest in additional production equipment to meet market demand. The company cannot run its business smoothly because it does not have longstanding financial resources like many of its competitors (General Motors, Ford, etc.). Poor liquidity is the primary cause of many of Tesla's problems, and all revenue generated is reinvested in research and development. The strong and growing revenues are negated by the high costs, which leaves the company to yet make a profit (Chandrasekaran, 2020).

Graph 5. Annual net income of Tesla (in USD million)



Source: NASDAQ: TSLA, 2020

The high production costs are reflected in the high input prices, which make the company's cars quite expensive compared to other car brands. These exceptionally high prices prevent the company from growing its customer base and market share faster than its competitors. Tesla cars are simply too expensive for most users, leaving the company with only a small target customer segment. Had the company been able to reduce prices slightly while maintaining its quality and premium image, its growth would have been much faster.

Tesla's products are undeniably important for the environment because of their sustainability aspect, but they are still very futuristic. Most customers cannot decide whether to invest in them because of the high price. If only Tesla had used a different marketing strategy, its cars might be more present on the roads today. If more people knew the importance of driving an electric car and its benefits, more people would probably buy one (Kissinger, 2018).

The biggest opportunity for Tesla is the growth of sustainability trends as more people become aware of their importance to consumers and the planet. The demand for sustainable products such as electric cars is steadily increasing and will most likely continue to grow in the coming years. Since Tesla is the pioneer in electric vehicles, consumers are automatically led to this company when looking for a sustainable and high-quality brand. Tesla needs to use this to its advantage by expanding its range of electric cars to appeal to a wider audience. The research that the company invests so much in encompasses the entire production process and how it can be improved so that Tesla can offer its cars at lower prices while still maintaining high quality. An example of this is the launched Model 3, a cheaper version of the Model S. The only difference is that the cheaper Model 3 has a lower range, power and features, hence the lower price. Like all Tesla vehicles, this car has amazing performance, but it is now accessible to a wider audience, which will increase the number of Tesla vehicles on the road.

Tesla has numerous opportunities to grow as a company because it is very innovative and future-oriented nature. As mentioned earlier, Tesla invests three times as much in research and development as its competitors, which gives the company the upper hand. One of the company's latest projects is the Robotaxi. There are still some regulatory challenges to overcome before the project can become a reality. Robotaxis are a fleet of autonomous Teslas without drivers, i.e., driverless cabs that would have a similar business model to Uber or AirBnB. However, since it is difficult to have fully driverless cars for many reasons, ridesharing services can be introduced in other formats, including semi-autonomous vehicles. The technology is already in place, but regulatory approval is still pending. Perhaps Tesla can adapt the business model to better fit current market conditions and regulations to speed time to market. Aside from the Robotaxi project, it's important to keep in mind how large the market for autonomous driving is. It is a huge opportunity, valued at around $2 trillion in the stock markets today, and one in which Tesla is currently leading the way due to its extensive research (Hyatt, 2020).

Another big opportunity for Tesla is to expand into foreign markets, since the company has generated most of its revenue in only one country. With a 2020 revenue value of $10,898 million, the United States is the most important market for the company. In second place is the Netherlands with $1,117 million and in third place is Germany with $323 million. These numbers show how Tesla is focusing on the U.S. market and neglecting most parts of the world and the including markets. However, Tesla was self-aware of this neglect, so the company built a Gigafactory in Shanghai in 2019 and immediately began producing and selling vehicles. In March 2020, Tesla sold a total of 10,160 cars in China, which is its highest monthly result ever in the world's

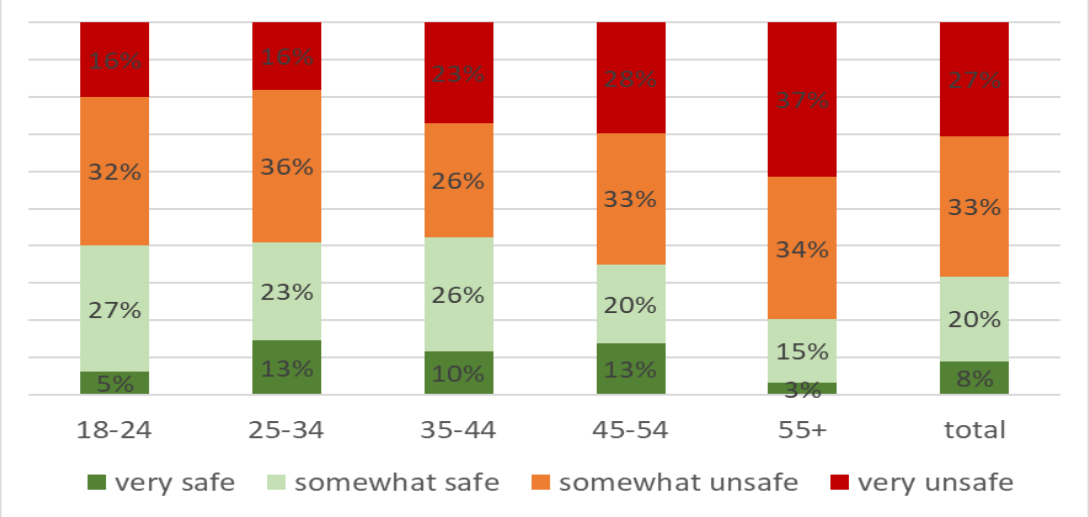
largest new car market. These sales account for about 30% of China's electric vehicle market. Considering Tesla sold only 2,620 cars in January and 3,900 in February, this rapid increase in sales represents remarkably fast progress for Tesla. Such a sharp increase is also expected in other global markets that Tesla has yet to enter, as the company's successful positioning as the automaker of the future has gained it popularity worldwide. The demand for Tesla cars is global, and it is up to the company itself to respond with the appropriate supply (Edelstein, 2020).

Tesla should also reduce its dependence on suppliers, if possible. One such case is Panasonic, which makes battery cells that keep Tesla's electric vehicles running. The company is currently working to bring the manufacturing of the batteries it needs in-house. The battery cells and battery pack are the main cost component of an electric car. By producing them in-house, Tesla could cut costs significantly and offer cheaper, yet powerful electric cars. It has happened before that Tesla's production and sales have been limited due to a shortage of supplied batteries. Making those batteries itself would also fit with the overall effort to integrate Tesla as vertically as possible, so that the company designs, manufactures and sells everything itself. In this way, Tesla would have maximum control over its processes and final products (Kolodny, 2019).

Threats are what create risk and prevent the organisation from taking full advantage of all the benefits that come from its existing strengths. One of the biggest challenges Tesla faces today is extensive and aggressive competition in both the alternative fuel vehicle and self-driving technology markets. Competitors have chosen to also invest in research and development in the segments in which Tesla operates, and they also use extensive marketing. Car brands such as BMW, Mercedes, Audi and Lexus are entering the luxury electric vehicle segment, while Toyota, Ford, Volvo and General Motors are preparing for fierce competition in the economy segment. Tesla's sales have accelerated in recent years compared to the years when it first entered the market, but the company should not underestimate its competitors. To maintain and expand its market share, Tesla needs to focus more on marketing and expanding its supercharger network to gain ground faster (Randall, Halford & Sam, 2019).

Many brands have launched or plan to launch their own self-driving technology, but they do so at a much lower price point than Tesla. This could pose a massive threat, as Tesla has always benefited from its unique value for innovative cars, which are quite expensive and prohibitively expensive for many. However, the self-driving car market is still very much an unknown; although many say that this will be the future of the automotive industry, there are still very few regulations that would make this dream a reality. Regulatory complexity adds to the uncertainty about the future of self-driving vehicles. Tesla's sales of self-driving cars depend heavily on such regulations and consumer opinion. Surveys show that most people are still reluctant to embrace autonomous cars, as the graph below illustrates.

Graph 6. Proportion of U.S. adults who would feel safe as pedestrians in a city with self-driving cars



Source: Statista, Richter, 2019

Due to the high complexity of production and engineering for innovative vehicles, Tesla's products have shown significant defects in many cases. The defective products often have weaknesses in design, manufacturing, and other areas, which could permanently damage the company's image. Tesla's reliability score in consumer reports has dropped recently as complaints pile up. Most of the Model 3 vehicles Tesla has sold since 2017 have had numerous defects, ranging from chipped paint to misaligned panels to mechanical problems. Battery failures have also been a problem with Tesla sedans and SUVs after some vehicles spontaneously burst into flames due to battery malfunctions. These developments are causing safety concerns and

frustration among customers and the manufacturer itself, while for critics they became a point of fixation. Tesla must ensure that these malfunctions do not cause permanent damage to the company's image, as its vehicles are praised for their high quality and performance. In addition, the company must take care to maintain its sustainable side and communicate this to consumers, as the company's public image and optimism play an important role in the company's existence. Due to the uncertain production conditions, many customers feel insecure about Tesla's future, which has further slowed down business development and expansion (Alba, 2019).

Overall, Tesla has certainly set the tone for the future of the automotive industry, as evidenced by the rapid response of other market participants to Tesla's innovations.

IV. COMPETITION AND BUSINESS BEHAVIOR

Tesla was the first to enter the all-electric vehicle market, but not the last. Today, many car manufacturers have also started producing electric cars and have captured a part of the market. Traditional automakers are constantly expanding their lineup of gasoline-electric hybrids and all-electric cars. Nevertheless, models such as the Chevy Volt and the Nissan Leaf do not pose a threat to Tesla, as they operate in a different market segment. Recently, however, renowned car brands have entered the electric vehicle segment in which Tesla operates, such as BMW, Porsche, Ford, Mercedes-Benz, Volvo, Jaguar & Land Rover, Audi, and many others.

The Tesla Model 3 continued to dominate the luxury electric vehicle market in 2019, outpacing sales of all other electric vehicles. In second place was the Tesla Model S with 157,000 vehicles sold, nearly half of Model 3 sales.

However, this could soon change as more and more competitors enter the race. Porsche, a German car manufacturer, known for its high-quality sports cars, recently launched its first electric car: the Porsche Taycan. The Taycan offers high performance combined with impeccable design. It is the first electric vehicle with a two-speed transmission and an 800-volt electrical system that provides higher speeds. Three models are available on the market: the Taycan 4S, which takes the prize for the longest range, the Taycan Turbo and the Taycan Turbo S (DeBord, 2019).

The BMW i3 is the most popular electric vehicle of all BMW models, which may be due to its compact size, which fits perfectly into a busy urban lifestyle. The BMW i8 Roadster is a modern classic with its sporty design. With a charging time of just three hours, this hybrid is aimed at consumers who want to live more sustainably without sacrificing luxury. For longer journeys, it is possible to switch between the electric motor and the combustion engine. The BMW i4 and BMW iX3 also fit perfectly into the existing range. The BMW i4 is an all-electric Gran Coupé aimed at the same market segment as Tesla and is already being referred to as the "German Tesla" among vehicle experts.

Audi has also released its own all-electric SUV, the Audi e-tron. With its five seats, a large boot of 605 litres and quattro all-wheel drive, it is a perfect family car. It conveys safety and innovation, as it is the first car to have side cameras instead of mirrors. The car has a range of 400 km and a simple, straightforward driving system. The top speed is 200 km per hour, as a higher speed would reduce the range, but this is not a problem given the target group (Darling, 2020).

Jaguar has also decided to enter the new electric vehicle market with its all-electric SUV, which is considered the first credible competitor to Tesla. The I-Pace is designed to impress customers in terms of both luxury and technology. It offers a range of 407 km with a quick charge time of just 45 minutes to go from zero to 80% battery capacity. In addition, it is one of the fastest SUVs on the market. The vehicle's interior design includes a front widescreen interactive display, a unique floating center console, and premium materials that create a welcoming and comfortable space (BBC Top Gear, 2020).

Aston Martin has also entered the electric vehicle market with its Rapide E model. It is the company's first all-electric vehicle and promises to be the first of many more electric Aston Martins. Only a few hundred examples have been produced and sold to first see what buyers want from an electric vehicle before more are produced. Using quantitative data, the company hopes to produce the best electric vehicle on the market in the future (Patrascu, 2019).

These are just a few of the car producers that have joined Tesla in the electric vehicle market, with many more brands and models to come. Although Tesla still has the upper hand in this market segment, the company must continue to improve in order not to lose this advantage.

V. CONCLUSIONS

Tesla has led the U.S. luxury car market, tripled its sales in Europe, and positioned itself as one of the best-selling vehicles in numerous countries - all in a market that has been very difficult to penetrate in just a few years.

Tesla continues to be probably the most specific automotive company on the market, and its customers are the most loyal in the automotive market. This is because Tesla isn't just a car manufacturer, but a technology company that's leading the world into the future. Their vehicles have so many extras and benefits, especially in regards to their autopilot, which will most likely

take over the technology of the upcoming Robotaxis. Driving has never been safer, both for the people in the car and for nature. Gas stations will soon be a thing of the past, as electric cars can travel 600 km on a single charge, but the range will certainly continue to increase. The vision of the car of the future makes it impossible for Tesla drivers to switch to another brand.

Only now have some analysts begun to understand Tesla's long-term direction. Increasing efficiencies in both production processes and finished vehicle performance are proof that the heavy investment is paying off. Tesla's goal is to change the world, and this is clearly evident in its results. It is not a traditional company, but a company that entered the market like a meteorite and changed it forever. Before Tesla, there were only gasoline cars. After Tesla, the entire market has shifted to electric cars (Dans, 2019).

Perhaps the company does not want to be the best car company, but to anticipate the future and help the world reach it as easily and quickly as possible. It can be said that the company has not yet completed what it has started, but its confident start has convinced the world that it will complete what it has started and do much more.

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