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Shifting Gears: Competition Strategies of Legacy Automakers Like Volkswagen with Electric Vehicle Innovators Like Tesla for Market Dominance in the Global Electric Vehicle Sector

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Abstract

This thesis analyzes the competitive strategies utilized by traditional automakers, namely Volkswagen, and the reaction to the disruptive emergence of electric vehicle (EV) innovators such as Tesla. This is the dynamic power change in the worldwide electric vehicle market by examining critical variables, including technological advancement, regulator adaptability, consumer perception, a strategic innovation. A mixed-method approach, including semi-structured interviews, and quantitative survey research was employed to evaluate the impact of institutional characteristics, consumer expectations and R&D investments on business performance. The data indicates that Tesla's initial advantage stemmed from vertical integration, software development agility and brand positioning while traditional manufacturers also with the closing the gap substantial investments, restructuring and strategic partnerships. Nonetheless enduring organizational inertia and deficiencies in customer trust continue to impede incumbents. The report offers strategic ideas to assist both traditional and creative companies in managing the continuous shift towards sustainable mobility.

Key words: Electric Vehicles (EV), Tesla, Volkswagen, legacy automakers, innovation strategy, consumer perception, regulatory policy, battery technology, autonomous driving, market competition, sustainable mobility

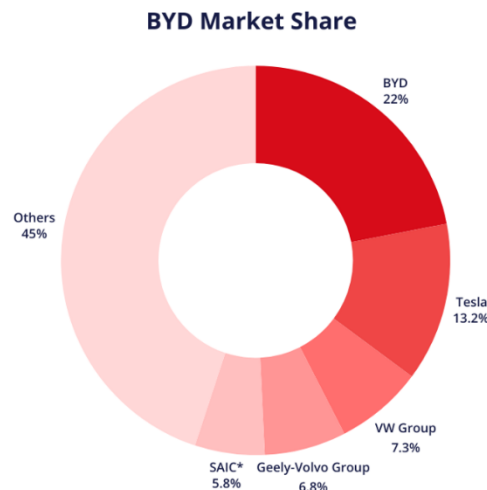
1. Chapter 1: Introduction

1.1. The Global Market for Electric Vehicles

The worldwide electric vehicle (EV) market has grown quickly over the past ten years, going from a small part of the automotive industry to a key player. In 2024, 17.3 million plug-in electric vehicles (EVs), comprising battery-electric vehicles (BEVs) and plug-in hybrids (PHEVs), were sold around the world (Autovista, 2025). This was a 26% increase from 2023. This growth shows that more people are buying electric vehicles (EVs) faster, thanks to better technology, legislation that helps, and changing consumer tastes. In 2022, electric vehicles (EVs) made roughly 14% of all legislation that helps and change consumer tastes. In 2022 electric vehicles (EVs) made up roughly 14% of all new automobile sales in the world (BloombergNEF, 2023). This number is expected to rise significantly in future years. These kinds of developments show that electrification is no longer something that automakers may choose to do; it is now the key to success in the market.

There are two main groups of big companies in the EV space: new companies that focus on EVs (like Tesla and Chinese companies like BYD) and old car makers that built their reputations on internal combustion engine (ICE) vehicles (like Volkswagen, General Motors, Toyota.). In the past few years new companies have taken a lot of market share, and their sales growth has often been faster than that of established companies. In 2023, BYD (a Chinese automaker that has since become the leader in electric vehicles) and Tesla together sold 35% of all electric cars in the world. This was more than all other major car makers outside of China (International Energy Agency, 2024). This is a huge change since 2015 when legacy automakers controlled roughly 55% of the EV industry. That share has since dropped as upstart companies have taken over.

Figure 1: *Global plug-in electric vehicle market share by manufacturer (2023). BYD and Tesla together held roughly one-third of the world EV market, highlighting the rise of new EV-focused players relative to legacy automakers.*



Source: Lesjak, Ž. (2025). BYD Sales

by Model and Country Statistics (Feb 2025). Tridens.

Tesla has been a leader in the electric vehicle (EV) sector for a long time, and it has sold more BEVs than any other company. But the competition has gotten tougher. BYD, which makes both BEV and PHEVs, sold more EVs than Tesla in 2022. By the end of 2023 it even sold more BEVs than Tesla, thanks to huge crowds in its home market of China. BYD sold 3.84 million plug-in cars in 2024, giving it a 22% share of the worldwide market. Tesla sold 1.78 million, or about 10%, down from 13% in 2023 (IEA, 2024). SAIC-GM-Wuling is another important player. They did well with cheap mini-EVs in China. Rivian and Lucid are new Western startups, but their sales are still much lower. Volkswagen Group and other legacy giants are increasing their production of electric vehicles, but they are still behind the leaders (Autovista, 2025). Volkswagen Group (which includes Audi, Porsche, and other brands) sold roughly 745,000 BEVs around the world in 2024. That's more than a million feet than either BYD or Tesla sold (Bekker, 2025). The Volkswagen brand itself saw EV sales drop 5.8% in 2024 to about 454,000 units, which is only 2.6% of the global EV market. These numbers

show how hard it is for older car companies to keep up with the EV race. Even though they have the money and the experience, many of them are still behind (Autovista, 2025).

The EV market's center of gravity has moved toward China and Europe, but North America is also developing. China is now by far the biggest market for electric vehicles. In 2023, EVs made-up around 30% of all new automobiles sold in China thanks to strong support from the government and domestic manufacturers. The share of EVs in Europe has also grown significantly. For example, Norway had over 80% EV sales in 2022, and the European Union as a whole had about 13% EV sales in 2022 (Mckinsey, 2025). Thus, this was helped by climate legislation and incentives. The United States is behind with roughly 5.8% BEV share in 2022, nevertheless this number is likely to rise as new models and subsidies such as the 2022 federal tax credits, come out. Because of these regional chains legacy automakers have to compete on a worldwide scale. This frequently means dealing with Tesla's strong presence in North America and Europe and the rise of Chinese EV companies in Asia and beyond (Mckinsey, 2025).

In short, the worldwide EV market is growing quickly and is quite competitive. Innovators focused on electric vehicles have taken over the market early pushing traditional automakers to "shift gears" swiftly. The next parts look at how older car companies like Volkswagen are trying to compete with newer companies like Tesla in important areas including technology legislation, consumer perception and innovation strategy.

1.2. Legacy Automakers' Adaptation Strategies

Legacy automakers have started using a variety of measures to stay competitive because they see the EV transition as an existential threat. Volkswagen, in the example, has big ambitions for itself, like

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becoming world's top EV maker by the end of this decade and has put a lot of money into electrification. After the 2015 “Dieselgate” pollution crisis, Volkswagen made a strategic about face “with the enthusiasm of a religious convert,” aggressively adopting the battery-electric mobility to fix its image and satisfy strict emissions goals. (Kell,2022). Volkswagen said in 2019 that it would spend €35 billion on e-mobility by 2025 and make over 70 new electric which goes by 2030. This was under CEO Herbert Diess. Other old auto companies, including General Motors and Ford in the United States and BMW and Mercedes-Benz in your Europe, have also released their own plans for electric vehicles and are getting ready for an electric future. In the next section, we'll look at how traditional car companies are changing in four important areas and how these changes relate to those made by electric vehicles pioneers like Tesla (Amelang, 2021).

Battery technology: batteries are what make electric vehicles work and how much they cost. Legacy manufacturers have spent a lot of money trying to catch up with the battery technology that Tesla and other companies have come up with. In the 2010s, Tesla had a cost and range edge since it's worked with Panasonic early own and made its own high density battery cells, like the new 4680 cell format. In response incumbents have put a lot of money into research and development production and supply chains for batteries. For example, Volkswagen built a separate battery company called Volkswagen PowerCo and it's building several gigafactories in your app to make cells on a large scale (Alvarez, 2021).

Software and connectivity: Tesla’s focus on software in its cars has been one of its most significant advantages. Tesla made their cars “computers on wheels” so that they could get over-the-air (OTA) upgrades, have advanced infotainment, and have strong clinical telemetry from the start. Tesla was ahead of the game when it came to user experience and future updates, because of the Silicon Valley culture of quickly changing software. On the other hand, traditional car companies have historically outsourced a lot of their software and for more slower to add new firmware. Volkswagens early efforts

in the EV market showed this disparity. VW ID.3, its first high-volume EV that came out in 2020, had a lot of software difficulties at launch (Amelang, 2021).

Self-driving cars: different ideas have come up in the battle to make cars drive themselves. Tesla has taken a vision-based approach with its Autopilot/FSD (Full Self-Driving) System by putting millions of cars on the road with cameras and neural networks software. This has turned its customer fleet into AI training data generators. Tesla's Level 2+ driver assistance features, like auto steering and traffic aware cruise control, are very popular, nevertheless the company has been criticized for safety and the fact that true "full self-driving" you still hard to find (Club, 2022). Legacy automakers took a different approach at first, often putting money into separate projects or partnerships for autonomous technology. For instance, Volkswagen and Ford put money into Argo AI, a firm that wanted to make Level 4 robotaxis, but the project was shut down in 2022 because it was too expensive and took too long to make progress (Bekker, 2025).

1.3. Regulations and Policy: Steering the Transition

Government rules and policies all around the world have played a big role in the move to electric vehicles. In consequence older car companies have had to change their plans to follow new standards, take advantage of incentives and sometimes even negotiate for better terms. In a lot of cases regulator pressure has been the stick that goes along with the market's chart of customer demand.

One big change in policy is that the government has set dates for when gasoline and diesel cars will no longer be sold. The European Union has passed a law that will stop the sale of new fossil-fuel cars by 2035. This means that all cars will have to switch to zero-emission vehicles (European Commission, 2021). Countries and even cities have set goals as well. For example,

Norway will stop selling new ICE cars in 2025 which is the earliest date for a major market. Britain will stop selling new petrol and diesel cars in 2030. There is no stated here for a national banning China, but the government's climate strategy says that “new energy vehicles” should make up the majority of sales by 2035 with interim goals of 20% by 2025. The federal government in the United States has adopted a different approach (SZIRNIKS, 2023). Instead of making it a law, President Biden set a goal for 50% of new cars to be electric by 2030, with incentives. But important states like California and New York have said they will stop selling new gasoline cars by 2035, which is the same time frame as Europe. These regulatory deadlines come very clear message to carmakers: to keep selling in these countries after those states, they need to have most of the electric cars. For older car companies like Volkswagen these posted chains were hard to follow at first, but they have subsequently become core parts of their business strategies (SZIRNIKS, 2023). Manufacturers must follow strict emission rules and fleet average CO₂ targets. For instance, the European Union has been slowly lowering CO₂ grams/km restrictions, which means that automakers must sell a certain percentage of electric vehicles. In fact, Tesla made a lot of money in the past few years by selling emissions credits to corporations like Fiat Chrysler. Thus, this showed how far behind certain companies were in following their rules. To avoid big fines traditional OEMs have used things like big end of year discounts on electric vehicles in Europe to get more people to buy them. This happened in Germany in late 2024. Volkswagen sales of BEVs in Europe went up near the end of the year, because of these kinds of techniques. This shows that regulatory pressure is directly affecting business decisions (SZIRNIKS, 2023).

On the other hand, government incentives and subsidies help people buy electric vehicles by lowering the cost of buying them and paying for the infrastructure needed to support them. In the 2010s, Chinese federal and municipal subsidies made it easier for businesses like BYD and SAIC so a lot of electric vehicles. In the same way many European governments gave electric vehicles customers tax benefits

or rebates. (Bekker, 2025) Norway for example put high taxes on ICE vehicles but not all electric vehicles which quickly changed the market. The Inflation Reduction Act (IRA) of 2022 brought back a 7500 dollars capital tax creditor for electric vehicles in the United States, but only if they are made and sourced locally. Because of this domestic and international legacy manufacturers have moved electric vehicles production to North America to meet the requirements. For example, Volkswagen is developing new electric vehicle assembly lines in the United States to take use of these credits and not be at a disadvantage compared to Tesla, which already makes a lot of its cars in California and Texas (Helveston et al., 2023)

1.4. Consumer Perception and Market Dynamics

The fight for electric vehicle dominance is not only happening in engineering departments and legislative halls; it is also happening in the minds of customers. Brand trust design attractiveness and how well the product fits with environmental principles are all important factors in how well it will do in the market. Legacy automakers and electric vehicle startups frequently have different brand images, and these images might help or hurt their efforts to produce electric vehicles.

Brands trust and reputation: most traditional car companies have decades of brand equity based on things like safety, reliability and quality. Many people who are new to electric vehicles say they feel more comfortable buying from a well-known brand than from a new one. Over a sort of people who answered their recent survey stated they would rather buy an electric vehicle from legacy carmaker which means that incumbents still have a chance to win over buyers who are on the fence provided they offer compelling electric vehicles (Green Car Reports, 2023). Some old brands like Audi and Porsche have successfully brought their reputation for luxury to the electric vehicle market with the e-tron and Taycan models, respectively. They have also gotten good evaluations for how well they are built. However, people have also questioned heritage businesses' commitment to electric mobility.

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Only crisis like Dieselgate undermined people's trust in Volkswagen's commitment to the environment, what the firm has attempted to improve its reputation as a "climate leader" in electric vehicle era (Kell,2022).

Design and product appeal: the competition is also affected by what consumers won't in terms of design and features. Tesla's sleek, futuristic exteriors and simple interiors (with the central touch screen interface) established standards for the industry. Lots of tech savvy consumers sold this was new and interesting, but other conventional shoppers missed the familiar tactile controls and different looks of established companies at first. Legacy car companies have taken advantage of this by making a wide range of electric vehicle cars, from retro inspired designs like the electric mini or Volkswagen's planned ID. Buzz microbus, which looks like the old VW van, to EV versions of popular models like Ford Mustang Mach-E SUV, which uses the Mustang moniker. Volkswagen's ID series in Europe uses a design language that is unusual but not too out there, in order to appeal to a wider range of purchasers. Also, luxury brands have focused on better materials and craftsmanship in the electric vehicles. For example, the Mercedes EQS has a smooth ride and a luxurious interior to attract high end buyers who would think a Tesla is too plain.

Environmental image and values: people that buy electric vehicles are often concerned about the environment and want to lower their carbon footprint. Tesla's mission-image as a driver of sustainable transportation gives it an edge here, especially among early adopters. People who own Teslas often say that the companies' ambition for sustainable energy is one of the things they like about the brand. Legacy car companies have had to work hard to change their brands from gas-guzzlers to ecofriendly ones. Lots of companies have started sub-brands marketing campaigns that focus on being environmentally friendly. For example, Audi has a "e-tron" badge for all its electric vehicles, while General Motors has a "Everybody In" campaign for electric vehicles. Some companies like BMW with its early "i" series (BMW i3, i8), aims to create a sub brand that was both ecofriendly and

futuristic (BloombergNEF, 2023). The problem for incumbents is getting over people's doubts. People who know how much these corporations make from SUVs and all trucks might not believe them. Volvo is a good example because it has promised to have a 100% electric lineup by 2030 and has a very ecologically friendly image (thanks to its safety and Scandinavian heritage branding) (BloombergNEF, 2023).

1.5. Innovation, R&D Investment, and Strategic Partnerships

Legacy manufacturers have realized that they need to be more innovative and change their strategy in order to compete with agile EV pioneers. This has led to huge investments in research and development, new alliances, and even changes to the way businesses work and the ethos of the workplace.

Research and development and capital expenditures: I guess the automakers are putting a huge amount of money into electrification. Volkswagen set aside €89 billion, or nearly 56% of its five-year investment budget until 2026, for “future oriented” technology, including electric vehicles battery development and digitization. By 2027 Volkswagen intended to spend \$193 billion on electric vehicles and software around the world (Fortune,2023). This shows that the business wants to outspend and outengineer its competitors. Other corporations are doing the same thing. For example General Motors set aside \$35 billion to outengineer its competitors. Ford set aside more than \$50 billion for electric vehicle development through 2026 including its new Model e-subsidary. When it comes to R&D spending, legacy automakers are still ahead. For example Volkswagen Group has had one of the highest research and development budgets in the car industry with approximately \$21 billion set aside for research and development in 2024 (Statista,2024). But many are questioning how will that money was spent and how focused it was. Thus, research and development spending per vehicle sold is a

relevant measure. Tesla spends roughly \$2984 per car on research and development, which is a lot more than Ford and General Motors. (Dhaliwal,2022). This means that Tesla focuses its efforts on a smaller range of products and technology, which may lead to more innovation per dollar spent. Legacy companies have had to divide their research and development money between electric vehicle and ICE programs, which means that there is a competition for funding within the company. Many companies have now made it clear that most of their research and development would go into electric vehicles. For example, Mercedes-Benz said that by 2025, 80% of its research and development would go toward electric vehicles and software (Mckinsey, 2025). This is in line with the company's intention to only offer electric vehicles by 2030 the market conditions are right. Volkswagen's CEO Thomas Schafer Set in 2023 dash 4 the airport for electric vehicles to work, they could have to close down plants and models that aren't selling well. He said, "the roof is on fire", meaning that Volkswagen's competitive position. This kind of honest shows that companies are rarely in a race for survival and they remain away to stay relevant is to spend heavily in new ideas.

In short legacy car companies like Volkswagen are using a lot of money and strategic resources to come up with new ideas that will help them become the most important players in the electric vehicle market. The competition with Tesla and other early electric vehicle companies has led to a rebirth in the industry approaches innovation. There is now more collaboration, faster development cycles and greater openness to try new things then there used to be. We don't know yet if these initiatives will help any legacy firm "unseat" Tesla as the leader in electric vehicle technology, but there are some good signals. For example, a lot of new electric vehicle models from established companies are getting great reviews and, in some markets, or segments, they are even selling better than Tesla. In Europe in 2023, for example, Volkswagen Group's combined electric vehicle sales were higher than Tesla's, and Ford's F-150 Lightning Initially sold better than Tesla's Cybertruck in the new pickup segment, because Tesla's production was delayed. The real test of success will be where the legacy automakers

can turn their investments and fresh ideas into long-term market domination around the world or whether they will always be followers in a market shaped by newcomers.

1.6. Conclusion and Outlook

The electric vehicle industry around the world is at a very important time. So far, the twenty 20s have shown that being bold pays off when things go wrong. Companies like Tesla (and more recently BYD) have moved rapidly to define the electric vehicle market and have earned the reward of being the first to do so. Legacy car companies like Volkswagen, which has made a big shift to electric vehicles have proved that they are neither lazy or unable to evolve. They are using all of their strengths-money, manufacturing knowledge, brands history, and global distribution-to compete for electric vehicle market share. This introduction has given an overview of the competitive landscape and the main areas of competition: developing new technologies, adopting policies, changing car consumers sees things and coming up with new ideas. Legacy automakers need to get past their own inertia and the weight of their existing assets while also keeping up with the speed and vision of electric vehicle focused competitors. The challenge for electric vehicle inventors like Tesla is to stay ahead of the competition in terms of technology and grow their businesses quickly and effectively as more corporations learn about and invest in electric vehicles.

The worldwide electric vehicle market is about to have a high stakes competition for the top spot. The result will have a big effect on not just the firms concerned, but also on the fight against climate change around the world and on customers everywhere. We'll be companies like Volkswagen be able to “shift gears” quickly enough to lead the way into the electric future? Or will companies like Tesla keep changing whatever vehicle companies can be? The next chapters of this thesis will go into more detail about these concerns by looking at case studies of certain automakers, how electric vehicle

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technologies have changed over time, how the market is adopting them, and the ongoing strategic moves in this fast-changing business. By looking at these several aspects we hope to provide light on how the competitive balance is changing and what will decide who leads the global electric vehicle revolution.

2. Chapter 2: Literature Review

The worldwide automobile industry is going through a big change from internal combustion ingenious to electric cars. This change has changed the way companies compete, putting new electric vehicle makers like Tesla against old automakers like Volkswagen in the quest for market supremacy. Tesla's quick rise as an electric vehicle innovator put pressure on established companies that were slow to adopt the technology but are now spending a lot of money to catch up (Whitfield & Wuttke, 2024). At stake is not only market dominance but also technological leadership regulatory compliance consumer trust and long-term corporate viability in an electric future. This literature review critically synthesizes peer reviewed research on how legacy automakers are competing with innovators like Tesla across four key thematic areas: Technology Development, Regulation and Policy, Consumer Perception, and Innovation and Strategy. In each section the results of Tesla's methods are compared to those of established original equipment manufacturers. This shows where there is agreement where there are differences in how the research was done and what is yet unknown (Jeff Yanssens, 2021). The focus is on the whole world because this competition happens all over the world, from North America and Europe to China and beyond, and quickly changing electric vehicle market.

2.1. Making new technology

Technology is a key area of conflict between new electric vehicle companies and old automakers. Battery technologies, vehicle software systems and self-driving capabilities are some of the most important areas. Tesla's strategy has been to aggressively in a way it and integrate in-house in these areas, while traditional manufacturers have depended on established suppliers and small improvements over time. This part looks at how their technologies have changed over time and how academic evaluations of each approach have changed as well.

2.1.1. Technology for batteries

battery innovation is important for both the performance and affordability of electric vehicles. Tesla was the first company to sell large-format lithium-ion battery packs in a highway capable electric vehicle in 2008. This made Tesla the first company to make contemporary electric vehicle battery packs (Jeff Yanssens, 2021). Tesla was one of the first companies to use thousands of laptops style cylindrical cells in its Roadster and Model S packs. They did this to make high-energy batteries safe and manageable in cars. Perkins and Murman (2018) say that Tesla's founders “hired experts to solve the battery problem” and we were able to make a strong pack while many other companies sold the technology wasn't ready yet. Tesla had a multiyear advantage in battery range and energy density since it started selling them so early. It also showed how Tesla works in a very integrated way: it makes its own battery management systems, works statically with Panasonic to get cells, and even built its own gigafactory to make cells at a lower cost.

Legacy car companies on the other hand were reluctant to put money on batteries and often hired other companies to build them. Else of companies made compliance electric vehicles with short range in the 2010s. This was because they were cautious and relied on suppliers like LG Chem, Samsung SDI, or Panasonic (for example, Nissan with NEC and GM with LG for the Chevy Bolt). Bergek et al. (2013) call this a “creative accumulation” strategy. This means that companies tend to slowly absorb new technology while making the most of what they already have instead of completely changing their core business. Incumbents have a strong engineering basis and a lot of experience in production which are good things. Nevertheless, their loyalty to all technologies can also slow down radical innovation. For example, Volkswagen was hesitant about pure electric vehicles at 1st and instead spent a lot of money on diesel and later hybrids. After the Dieselgate crisis in 2015 (which we will talk about later), Volkswagen change direction with their “MEB” EV

platform and big battery buying arrangements. Volkswagen has said it will build “gigafactories” in Europe and work with battery companies like QuantumScape to make solid-state batteries. This shows that the company is trying to catch up with battery technology. According to academic studies, these kinds of demand-pull policies and crises pushed certain incumbents to ultimately put a lot of money into better research and development. Luetkehaus’s (2025) recent Research Policy study, on the other hand shows that companies who have been using ICE technology for a long time are less likely to adapt to even stronger vehicle policies. This creates a “double trap” where the companies that need to modify their technology the most are the slowest to do so. This is in line with past research that showed that some incumbents’ organizational inertia made it hard for battery innovation to happen on time, which needed either outside pressure or new leadership to fix.

Everyone agrees that lowering the cost of batteries and increasing their energy density are important for the adoption of electric vehicles. Thus, Tesla had a competitive edge because it was the first to do this. This was partially because the company was vertically integrated and learned by doing it at a large scale (Jeff Yanssens, 2021). Tesla’s “Battery Day” in 2020 it said that new 4680 sales and production improvements will cut the cost of packs by 56%. People are arguing over whether Tesla can stay ahead as the technology gets better. Some analysts say that incumbents can quickly catch up or even get ahead by using their research and development power and relationships (Jeff Yanssens, 2021). For example, a panel of electric vehicle experts highlighted that Volkswagen’s ID.3 achieved very high battery and there's a density and efficiency on par with Tesla’s models, demonstrating legacy engineering know-how is closing the gap (Jeff Yanssens, 2021). On the other hand, the same experts agree that Tesla is still ahead of the rest of the pack when it comes to the speed of development (Jeff Yanssens, 2021). Tesla is able to change the designs of its batteries and powertrains faster than other companies can with their regular product cycles. Peer reviewed studies of patterns back up this image of Tesla as an early leader: Liu et al. (2021) discovered that since

2008, Tesla has filed more patents for battery systems than several older automakers showing that young companies are taking the lead in innovation. But legacy companies like Toyota and General Motors have a lot of patience in other battery chemistries such solid-state and nickel rich cathodes. This shows that there is still rivalry in labs, even if it's not yet in commercial models. Toyotas strategy is very different from others. They focused on hybrid batteries and fuel cells for a long time instead of BEV batteries, which is why they were late to the market with pure electric vehicles. Scholars often use Toyota as an example of how a company's success with a previous innovation (hybrid technology) can make it less urgent to pursue the next one (full BEVs). This is similar to the incumbent's dilemma in innovation management. For example, Toyota is now rushing to develop competitive long range BEVs, which shows this tension (Murmann, 2018).

In short tesla's early bet on lithium-ion batteries and vertical battery integration gave it a competitive edge in range and cost for several years. At first traditional automakers fell behind because they were limited by old assets and were careful with their investments. However, by the middle of the 20 twenties they had greatly increased their expenditure on better research and development and partnerships. There is a growing agreement in literature that incumbents can catch up in better technology but only if they make a big commitment to do so and usually with a few years' delay behind innovators. There is still a discussion about whether late commerce will completely close the gap or stay one innovation cycle behind forever. A steady gap here is where the battery cost leadership will endure over time. Will big OEMs be able to catch up in terms of cost through scale and learning, or does Tesla's head start and culture of risk-taking give them permanent advantages? To address this question, we need to look at how battery performance and cost change over time in Tesla models compared to other models over the next 10 years.

2.1.2. Electronics and software for vehicles

Tesla has also changed the way people sync up old software defined vehicles which is another important area. Tesla treated its cars more like consumer electronics by building a centralized software architecture that could be updated over the air from the start. According to research from both academia and industry, one of Tesla's biggest advantages is its ability to integrate software. Unlike other companies that have historically outsourced a lot of their software and used dozens of separate electronic control units, Tesla created a single operating system that allows features to be added or updated long after the car is sold. The test level was able to make change to the range user interface and even semi-autonomous features through OTA updates because of this flexibility in software development. This helped the company build a tech-oriented brand image. According to Bucur (in GLG, 2021), Tesla “revolutionized” EV electronics by treating a car “almost like a smartphone on wheels” and constantly improving both the hardware and software. The mirroring hypothesis in organizational theory says that the structure of a product tends to mirror the structure of an organization. This is a useful way to look at things: Tesla’s tightly integrated vertical and cross functional teams created an integrated vehicle architecture, while the most siloed, Modular structure of incumbents led to fragmented electronic systems. Nie et al. (2018) Did a case study that showed that Tesla did actually try to make its product architecture as integrated as possible by vertically integrated important parts like the battery control software and infotainment. This supports the mirroring hypothesis in this scenario.

Legacy OEMs have realized that their software is lacking and are making big changes. Volkswagen formed the Cariad software division, Daimler made MB. OS, and GM higher stick workers in Silicon Valley. All of these are ways to bring software knowledge in-house. However the early results have been varied. Volkswagen's first ID-series electric vehicles had problems with their

software and updates that took too long to come out. This shows that it is hard for the corporation to become a software company. Research based on real life is beginning to show these problems in organizations. Achillas et al. (2024) the case study of Mercedes-Benz and looked at cross functional teams during the company's switch to electric vehicles. They discovered that working on both traditional engineering projects and new software and electronics projects at the same time caused problems with scheduling communication and role clarity. People who were interviewed said that there was reluctance to change within the company and that it was hard to get software skills for a company that had always been focused on mechanical engineering. These results show that legacy companies have structural problems that make it hard for them to quickly improve their software skills even when they put money into it. Tesla on the other hand designed its organization around software centric agility from the start which helped it sidestep many of these old coordination problems.

But there are clear benefits. By the mid-2020s, certain incumbent models can receive OTA upgrades, while firms like BMW and Hyundai have established unique operating systems for their electric vehicles. The difference in software UX (user experience) between Tesla and other companies has gotten a little smaller. Lamm (2021) reported that Volkswagen's latest electric vehicles "fully compete with Tesla's technology" in many aspects, however Tesla still had an edge in development phase and software feature deployment. One big difference is that incumbents have to connect their software to old dealer networks and a wide range of model portfolios. This can hold down the rollout of updates compared to tesla's direct vertically integrated solution. Lu et al. (2022) and all the studies say that additional research has to be done on how established car companies may make their product development cycles more flexible, and software driven. They believed that some of Tesla's Silicon Valley methods could be used in this way.

2.1.3. Autonomous Driving Systems

All the traditional car companies have taken very diverse approaches to autonomous driving, which is a very well-known technology. Tesla's plan has been to slowly improve advanced driver assistance systems (ADAS), which are known as Autopilot and Full Self-Driving (FSD) Beta. These systems use mostly camera and radar sensors and are installed on consumer vehicles at SAE Level 2 (hands-on supervision required). They get better through software updates. Mega Soto makers on the other hand were more careful at 1st and frequently only used advanced ADAS in geofenced or driver monitored systems. Many of the big players also put money into or worked with dedicated autonomous driving startups. Many of the big players also put money into our work with dedicated autonomous driving startups. For example, General Motors bought Cruise Automation, while Ford and Volkswagen walls put money into Argo AI. They all wanted to make Level 4 robotaxis along with their consumer ADAS products (Chengyi Lin, 2025).

Research in academics and safety shows that Tesla's quick, over-the-air deployment technique has both pros and cons. Tesla has gathered billions of miles of real-world driving data from autopilot use, which some people say gives it an edge in terms of data. Studies on the other hand suggest that Tesla's method of using customers as quasi beta testers is dangerous. Nordhoff et al.(2023) talks to 103 Tesla drivers who used Autopilot/FSD Beta in depth. They found that many of them became lazy and misused the system. For example, some drivers used tricks like putting weights on the steering wheel to force hands free driving or even napping even though the car required the driver to pay attention. Over time, drivers tended to put too much faith in this system, which led to "safety-critical behaviors" and less attention to the road. The unfinished FSD Beta was supposed to be better at driving in cities, but it instead made drivers more stressed and busier because it was prone to blunders and they had to keep an eye on it for possible failures. These results are in line with the

safety concerns that regulators have been raising: the United States National Highway Traffic Safety Administration (NHTSA) Has looked at a lot of crashes that involved Tesla's Autopilot. The insurance institute for Hwy. safety recently gave Tesla's system and other automakers' level 2 systems a "poor" rating for keeping drivers' attention. IIHS did not find any clear proof that Autopilot, or similar systems actually lowered the number of crashes, which goes against what Tesla says about safety. This shows that partial automation can make alert if there are not enough safety measures in place. This is a point made in the literature on human factors.

Like assault and make yourself generally being more cautious adding strong driver monitoring and only allowing hands free operation in certain situations. Some systems have greater safety ratings because of this. For example, Consumer Reports (2022) said that General Motors's Super cruise we're safer and more consistent than Tesla's FSD. Some companies that are already in business like Mercedes-Benz have even gotten permission from regulators to use a Level 3 autonomous mode, which Tesla has not yet done. These disparities show how responsible different their ideologies are: Tesla's quick, iterative, take 3 even approach versus the incumbents' adherence to the established automotive safety culture and rules.

This is a disagreement among researchers over which technique will win out. Optimists say that Tesla's edge in machine learning data and its constant cycle of invention could lead to a better self-driving system in the long term (Zoe Long, 2019). Skeptics say that established OEMs and companies (like Waymo) that use additional sensors and safety backups may be able to offer safe or complete self-driving in the end. Some researchers say that incumbents' leave knowledge in safety validation and regulatory navigation is an undervalued asset that could help them catch up once the technology is more established. The literature has also talked about how ambiguous the rules are: there is still no clear legal framework for higher level autonomy, and this changes how both new entrants and incumbents use technology. Tesla's fast rollout has drawn the attention of regulators

whereas established companies normally wait for defined guidelines before activating new autonomous capabilities (Zoe Long, 2019).

In short Tesla's head start in consumer-facing ADAS has made it look like a leader in car autonomy, but real-world investigations have shown that this image is not true because of misuse and underserved safety issues. Like us all to make us, Ford and General Motors are quickly making their ADAS systems better and are working with other companies to develop full self-driving technology in tandem. The academic consensus is still forming it acknowledges Tesla's in the weight of approach but also recognizes that the ultimate winners in autonomous driving could be those who best integrate safety public trust and technical performance-a race in which both Tesla and legacy firms are still contending. There are not enough studies comparing the safety records of autonomous systems over a lengthy period of time or looking into how much trust consumers have in different companies' systems. This is related to the following theme, what's this consumer perception.

2.2. Rules and policies

government rules and policies about the environment have been very important in shaping the electric vehicle market. This part looks at how worldwide emission standards incentives for electric vehicles and compliance tactics affect the cost of Tesla and older car companies. It also looks at how Tesla has a new electric vehicle only company, and established automakers, as diversified companies, deal with and affect regulatory settings. They look at this just demonstrates that we asked Tesla benefits early on from supportive policies and regulatory incentives legacy OEMs first fought many electric vehicle mandates and later modified ways to comply as post pressure intensified.

2.2.1.Emission mandates and Standards

Regulation on emissions, especially CO₂ norms and zero-emission vehicle mandates, have been a mixed bag for companies that are already in business. On the one hand, severe rules made established car companies invest in electric vehicle technology to avoid fines (Gokmen, 2024). On the other hand, same rules made it possible for new companies like Tesla, which only made zero emission from the start to enter the market. Fleet CO₂ targets in the European Union have gotten stricter over the years and more stricter goals after that. If established car companies didn't build enough low-emission cars, they may have been fined hundreds of millions of euros. According to a study by Mock & Yang (2019), this European Union criteria were a big reason why established companies started making electric vehicles which force technological development. Many legacy OEMs pooled compliance in the European Union -in notable case: Fiat-Chrysler (FCA) pooled with Tesla in 2019-2020 paying Tesla for credits to avoid fines. Reports say that even Volkswagen's joint venture in China bought credit scores about \$390 million from Tesla in 2021 to meet Chinese requirements.

This shows how Tesla's emphasis on one product turned rules into money. Whitfield and Wutke (2024) say that Tesla and BYD made more than \$1 billion a year by selling extra credits to automakers who did not meet the standards. This was like an indirect subsidy that helped Tesla's finances during its growth years. This shows how incumbents were behind in electric vehicle sales at first compared to mandates and had to rely on regulatory flexibility or pay fines.

On the other hand, Tesla's strategy fit these rules perfectly, which helped the company a lot. Tillemann (2015) tells the story of how Tesla made money in its early years by selling ZEV credits to automakers that didn't have any EVs. These kinds of regulations along with a United States Department of energy funding enabled Tesla to survive and flourish when its vehicles sales alone

were not yet viable. A lot of people called the California ZEV mandate a “technology-forcing” policy. It was first passed in the 1990s and then made stronger. Wesseling, Farla, and Hekkert (2015) did thorough assessment of how car companies reacted to the California ZEV rule from 1990 to 2013. At first established automakers fought back hard by filing lawsuits lobbying and making only a few “compliance EVs”. But as the mandate went on and Tesla showed that there was a market for electric vehicles these companies changed their approach to be more aggressive. By the early 2010s, some of the companies that were already in the market for electric vehicles stepped up their research and development and joined together to assist in creating zero-emission vehicle rules instead of just fighting them. Policy studies often look at how people go from being against something to being normal with it to supporting it in some way. It shows the idea of pulse driven innovation: outside pressure made enterprises that didn't want to innovate at first to do so.

China’s stance has also had a big impact. China set up dual credit system and gave it out a lot of money in subsidies which quickly increased the manufacturing and sales of electric vehicles in 2010s. The Chinese government made an extraordinary regulatory exception to let Tesla open a factory in Shanghai in 2019 without the customer requirement for a joint venture. This showed how important tesla's technology and brand are to China’s electric vehicle aspirations. However, there were conditions: Tesla had to get its batteries from China which would help local better makers like CATL and makes China’s supply chain more efficient. This policy quid pro quo shows how governments might use access to markets to encourage the transfer of technology and build up local capability. Because of this Tesla’s cars built in China employs Chinese LFP battery cells and Tesla has helped China's electric vehicle ecosystem expand. Meanwhile China's old car companies have had to fulfill rigorous NEV credit limitations. This has LED them to create electric vehicle models that are only available in China through their joint ventures. Recent figures showed that Chinese electric vehicle manufacturers like BYD and SAIC now sell more electric vehicles in China than any

other country. Tesla is still doing well but western companies have lost ground in the world's largest electric vehicle market. By the middle of the 2020s, the European Union's climate goals, The United States' ZEV programs and China's industrial strategy had all come together to make it so that legacy automakers had to become electric. Geels et al. (2020) call this a "tipping point" in the sociotechnical transition. The combination of regulatory pressure technological progress and the success of new entrants LED incumbents to go through a period of major transformation.

2.2.2.EV Incentives and Subsidies

Parks credits rebates and grants for consumers who buy electric vehicles have been a big part of the market's growth. What the effects on Tesla and older OEMs are not the same. In the United States the federal electric vehicle tax credit used to apply to the first 200,000 vehicles made by each manufacturer. Tesla and General Motors reached its limit early therefore they lost their eligibility and may have been at a disadvantage compared to competitors who were still qualified in 2020-2021. One study from a might even found that there was no significant difference in how responsive Tesla buyers were to incentives compared to other electric vehicle buyers (Bentley Clinton, 2019). This suggests that even a high-end brand like Tesla benefited from subsidies not just lower end models. Many European countries offer purchase incentives or VAT exemptions that help all car manufacturers. Tesla's high prices meant that certain of its models were too expensive to qualify for certain incentives whereas older companies could price mid-range electric vehicles to qualify. Slowik and Lutsey (2019) says that matching incentives with a wider range of models helped European incumbents gain market share in the electric vehicle industry by the end of twenty 2020s. This was because they introduced models in popular categories.

In 2022, The United States passed the Inflation Reduction Act (IRA), which changed the electric vehicle incentives to favor North American production and supply networks. This created a new

problem: Tesla got incentives back for its United States facilities and vehicles like the Model Y, but so did Ford, General Motors, and others for their electric vehicles built in the United States.

Emphasis on local content would be disadvantaged some multinational automakers unless they localize production (Maximilian Lechner, 2024). This change in policy is new and research is just starting to look at how it will affect things. Early economic studies say that the IRA might greatly help United States-made electric vehicles across the board which would reward companies that quickly create local electric vehicle supply chains. Tesla is in good position because it's built the gigafactory in Nevada and assembles cars in California and Texas. Some older OEMs are speeding up their plans to build battery operations in the United States, frequently through joint ventures like GM-LG Ultium Cells.

Another type of incentive has been the government's investment in infrastructure, such as charging networks, which is often driven by legislation. Tesla's private supercharge network was the first to go ahead here and the company spent a lot of money to ease its customers' range of worries. In contrast, all their car companies relied on charging stations run by other companies or the government. But certain programs like Volkswagen's court-ordered Electrify America program, made existing companies put money directly into infrastructure. Cano et al. (2021) says that this not only helped fill in the gaps in charge but also helped Volkswagen make up for its mistakes and improve its reputation. In Europe, groups of car companies like Ionity, have put money on rapid charging together. These strategic answers show how false and legal forces can force incumbents into positions that Tesla chooses to take on to make its products more appealing.

2.2.3.Strategies for compliance and lobbying

and also frightening looks at how people who are already in poverty deal with environmental rules in a smart way such as by following their rules making technical remedies and using their political power. As mentioned, incumbents often choose the easiest way to comply in the beginning: making just enough electric vehicles or buying credits to meet their rules. Dyerson and Pilkington (2005) wrote about this in the case of California's 1990s ZEV program, where General Motors built the EV1 in small numbers mainly to satisfy regulators. Wesseling's (2016) dissertation and accompanying works provides a detailed overview of how incumbent carmakers coupled innovation and political advocacy during the life of the ZEV requirement. At first, firms like General Motors Ford and Toyota resisted the mandate by going to court and paying for research that questioned the viability of electric vehicles. As the rules got stricter and electric vehicle technology got better, these companies started to comply with their rules, but they still lobbied for them to be less strict. They did this by putting more money into electric vehicle research and development and creating compliance models. Wesseling et al. (2015) observed that by the 2010s, incumbents were using more proactive measures. Some even supported extending incentives or infrastructure spending now that they had electric vehicles in the works. This shows a shift in the equation from blocking to guiding policy. But they typically did these while letting trade associations or coalitions do the "dirty work" of opposing strict laws. Studies on sustainability transitions have found that these two-pronged approach-acting cooperative in public while lobbying covertly through industry groups-is a prevalent political strategy. Tesla has had a very different view on regulation. Tesla is a pure electric vehicle component that typically supports tighter emissions limits. It has offered to disclose some of its passions and charging networks to encourage more people to buy electric vehicles. Tesla is hardly apolitical either. It has pushed against United States dealership franchise restrictions that would let it sell directly and worked to get electric vehicle incentive improvements passed. Even still, Tesla'

incentives are in line with aggressive pro-electric vehicle policy even though incumbents have a complicated push-pull situation. Literature occasionally presents Tesla as a policy disruptor: why is establishing a lucrative business model under severe emission constraints, each undercut incumbents' arguments that such laws were impracticable.

The repercussions from Dieselgate are an important regulator concern. The Volkswagen emissions crisis in 2015 when Volkswagen lied about diesel emissions tests marked a turning point. It's crosswalks waging more than \$26 billion in penalties and settlements, and it also destroyed trust in the environmental claims of current leaders and pushed politicians to make sure that rules were followed more strictly. After Dieselgate people lost faith in German car companies. An Edelman Trust Barometer study found that trust in the German auto sector decreased from 61% before the scandal to 35% after. Scholars say that this reputational disaster indirectly helped new electric vehicle companies: consumers and regulators were more open to companies like Tesla that were not involved in the debacle. In response Volkswagen and others put even more money into electric vehicles to improve their image. Some studies including Wicken et al. (2019), says that Dieselgate sped up the changes in Volkswagen's structure, giving "change agents" who support electrification more power. Basically, a failure to follow the rules in one area necessitated a shift in strategy towards following the rules for electric vehicles and taking the lead. This shows how scandals and policy enforcement can change the conduct of people who are already in the office.

In short Tesla used pulses support to do well, riding the wave of pro-electric vehicle policies. On the other hand, incumbents first saw policy as a limit to be managed or avoided but when electric vehicle mandates started to rise they had no choice but to invest in innovation. Today all the traditional manufacturers have openly promised to switch to electric vehicles. This is mostly because of government forces and Tesla's success in the market. There is a lot of agreement in the research that robust and long-lasting regulations have been necessary to get over the "incumbency inertia" in

this area. There are still arguments over the best combination of policies such as how to balance incentives and punishments and how well policies can get incumbents to not just to follow the rules but also come up with new ideas. One gift that has been found is that incumbents are not all the same. Luetkehaus (2025) says that companies with trades responded better to electric vehicle legislation. More research examining how different regulatory systems affected companies could help explain why some older car companies transitioned faster than others even though they were all under the same outside pressures.

2.3. Consumer Perception

tesla's branding and history are very different from those of older car companies when it comes to how people see and accept electric vehicles. This is very important for the success of industry. This part talks about how brand image trust in the company design preferences and attitudes toward the environment affect the competition. Peer-reviewed research shows that Tesla's rise as an innovative or electric vehicle brand changed how people think about electric cars. On the other hand, established brands have to deal with the fact that they have to reinvent themselves for the electric vehicle area. We also look at how trust issues and other things that consumers care about affected Tesla versus legacy relationship.

2.3.1.Brand Image and Innovation Perception

Tesla has done an amazing job of building a brand image of being cutting edge, high performance, and eco-friendly. Long et al. (2019) did a big poll of more than 2100 new car buyers in Canada to find out how Tesla affected how people thought about electric vehicles. They found that Tesla was the brand most closely linked to electric cars. 27% of those who answered said Tesla, which is the same number as Toyota and more than any other heritage brand. It's important to note that 40% of all respondents said that Tesla represented "the future of EVs". They thought that Tesla's cars were

more inventive, stylish, and good for the environment than other electric vehicles. People who were interested in buying an electric vehicle were more likely to have these traits: being innovative, stylish and environmentally friendly. In other words, Tesla helped change the way people think about electric vehicles by becoming the first to make them look good and work well. This helped break the stigma of electric vehicles as slow and attractive “golf carts” from past decades. A number of studies, such as Hartig et al. (2020), back this up by saying that Tesla’s high-performance models notably the Model S’s acceleration transformed what people expected from electric vehicles. This shows that electric vehicles can be more than just eco-friendly automobiles; they can also be luxury or sports cars.

On the other hand, legacy car companies had to deal with their own branding problems in the electric vehicle industry. At first a lot of them produced electric vehicles on their sub brands or names that were not very well known. This sometimes-confused customers or made them unaware that certain brands sold electric vehicles. Zoe Long’s research showed that when people were asked which brand they would rather buy an electric vehicle from a lot of them choose the brand currently owned. This means that established companies can use loyalty to their advantage if they can convince their current customers that their electric vehicles live up to the brand's conventional ideals. Bauer et al.’s (2021) research shows that brands trust and familiarity are still important factors in whether or not people buy an electric vehicle. Some people indicate that they would rather wait for their favorite brand to make an electric vehicle than move to a new one. This devotion is something that incumbents strive to leverage to their advantage. However, incumbents also have problems with how people see them. For example, earlier qualitative studies (Hackbarth & Mitra, 2017) showed that some customers don't believe that legacy automakers are committed to electric vehicles and think they still love gasoline. This doubt can make Tesla seem like a more real option for those who care about the environment or are good with technology.

Legacy Automakers vs Electric Vehicle Innovators

Several sources talk about how Dieselgate changed how people saw the brand. The Volkswagen controversy made people less trust Volkswagen and other major automakers when it comes to being honest about emissions and sustainability. Tesla didn't do anything wrong, but it did benefit in terms of reputation because it was easier to see the company as the “honest alternative” focused on green technologies. On the other hand, Tesla has had its own challenges with its reputation. Issues with build quality safety concerns with Autopilot, and Elon Musk’s very public behavior have all hurt the company's image in recent years. For example, Consumer Reports said in 2021 and 2022 That Tesla cars were not reliable and lowered their ratings for some models. Some polls show that United States consumers were less likely to enjoy Tesla’s brand by 2023. This may have been because of Musk’s contentious comments and more competition. These developments illustrate that brand perception is dynamic. At first Tesla had a lot of fans and admirers like a tech business. People generally thought that incumbents were behind. Now that legacy firms are making well reviewed electric vehicles like the Porche Taycan and Ford F-150 Lightning, Tesla is getting Criticism for its customer service and quality the gap in image may be closing.

Academic research shows that design and performance also affect how people see product. Tesla’s simple high-tech interior set it apart from older automobiles and attracted a younger tech savvy in audience. Klöckner et al. (2020) discovered that a lot of people who wanted to buy an electric vehicle said that Tesla’s design and cutting-edge image were reasons why they wanted to buy one, even if they didn't end up buying one. Legacy automakers are responding by stressing modern design in their electric vehicle lines. Tesla is still a leader in design and the fact that many new electric vehicles have tablet-style infotainment screens is probably because of Tesla’s lead.

2.3.2.Consumer Trust and Quality Perception

Trust is very important especially when it comes to new technology like electric vehicles and self-driving features. To get people to trust Tesla, the business had to show them that a new company could make reliable cars and that new features like autopilot were safe. Tesla had very happy customers in its early years and many of them became fans. Consumer Reports said in 2017 that Tesla had the highest customer satisfaction of any automotive brand. This shows that those who bought want trust and were loyal to the brand. Tesla's FedEx sales and service model was part of its brand promise, which was to make things easy for customers. However, as the company grew, it had trouble keeping up with demand for service. When it comes to academic research on consumer trust in electric vehicles, battery life and perceived reliability are commonly mentioned as issues for first time customers. Tesla fixed some of these problems via over the air updates and by doing well on independent tests. As mentioned there have been problems like when Tesla's quality control problems during the Model 3 "production hell" got a lot of attention. Elon Musk himself said that they were quality issues from 2018 to 2020. These problems may have hurt Tesla's reputation as a faultless company, but its early adopter fans were somewhat forgiving. On the other hand, older car companies are known for having good quality control. When those car companies sell electric vehicles a lot of people want them to be at a particular level of refined. Some early electric vehicle models from established companies encountered problems which show that established companies are also learning about culture challenges that are special to electric vehicles.

Another aspect is trust in self-driving features. Many drivers are skeptical of self-driving technology according to surveys. People have praised Tesla for being innovative and criticized the company for making users test pilots by using semi-autonomous technology. The Nordhoff et al. (2023) interview study found that even some Tesla owners who are usually tech savvy were stressed and on edge

while using FSD beta. This shows that they didn't complete the trust of the system's capacities.

Incumbents could use these to their advantage while emphasizing their safety-first cautious approach. In fact, businesses like Volvo use trust and safety in their marketing of electric vehicles, which could attract purchasers who don't want to take risks.

Consumer perception also includes how credible a company's environmental claims are. Tesla's brand is closely linked to clean energy which appeals to people who care about the environment. On the other hand, incumbents have to deal with the baggage of the past. Some studies on how people buy things show that they are wary of "green washing". Korschun et al. (2016) discovered that people are less likely to believe in environmental statements from companies that have done things that contradict their claims in the past. So, when General Motors says it wants a "all-EV future" or Volkswagen changed its name to "sustainable" with lime-green logos, some customers might not believe them at first. This might make brands that are green, like Tesla or new ones like Rivian, more appealing to those shoppers. However legacy manufacturers can regain trust if they show that they really care. Some European brands like BMW have talked about how their electric vehicle supply chains are environmentally friendly to set themselves apart from Tesla when it comes to ethical sourcing and labor policies.

Academics agree that how much people like electric vehicles depends on a mix of practical criteria and perceptual factors. Tesla made electric vehicles more appealing which helped to break down perceptual barriers. At the same time Tesla took steps to address practical problems such as range anxiety by developing the Supercharger network and installing long range batteries in every model. At first legacy car companies supplied a lot of electric vehicles with less range and no dedicated charging networks. This may have made people think their electric vehicles were worse or less convenient than Tesla's. That difference is getting smaller now. Many vintage electric vehicles from 2013 to 2025 ranged competitively and the charging infrastructure is getting better. For instance, the

IEA (2024) worldwide EV Outlook says that as of 2023 large incumbents make up roughly 55% of worldwide electric vehicle sales. This shows that more and more people are buying electric vehicles from well-known legacy brands. This shows that the marketing is growing up. Early adopters went to Tesla, but most people will buy from a range of manufacturers if the goods satisfy their needs.

2.3.3. Contrasting Consumer Segment Dynamics

It's vital to know that the electric vehicle market is splitting up. Tesla has been the leader in the high end and luxury electric vehicle market and has built a loyal community. Legacy car companies are going to markets that Tesla is not, like Nissan and Renault, which did well in Europe with cheaper electric vehicles like Leaf and Zoe. Tesla is only entering these markets with the Model 3/Y, which are still expensive. Hardman et al. (2021) found that early electric vehicle buyers were mostly Tesla customers who were high-income and tech savvy. However, as the market grows A wider range of consumers including middle income buyers who are more price conscious are entering. These buyers may prefer older brands that are known for their value for servicing customers in their area. For some people practical concerns may be more important than brand name. A regular person would prefer a cheap electric hatchback from Volkswagen over a more expensive Tesla, especially in Europe where Volkswagen has a lot of devoted customers. As one expert panelist said, "the competition in the electric vehicle mass market will increase... leading to lower market shares for Tesla especially in Europe". This projection coincides with the recent sales data: Tesla's share of electric vehicle sales in Europe has plummeted as Volkswagen Group, Stellantis, and others debuted Several new models; in the United States, Tesla's proportion of new electric vehicle sales dipped below 50% by 2023 as Ford General Motors and others gained ground.

Social identity and status are another aspect. In many places driving a Tesla became a marker of pink environmental concern tech savvy and successful. Barth et al. (2018) talk about how Tesla found a “green luxury” market, where owning a Tesla gives you social status. Legacy car companies are striving to make their electric vehicles just as desirable. For example, Mercedes and BMW have all released high-end electric vehicles to compete in the luxury market. These cars focus on how they combine electric performance with traditional luxury craftsmanship. It is still unclear how people feel about these products compared to Tesla. All revaluations say that some of these vehicles have better interiors or ride comfort than Tesla, but Tesla still has the edge in software and driving range.

The cool factor is another design preference that is hard to put into words. Tesla’s simple design and Elon Musk’s own brand gave it a tech-cool vibe. Some ancient companies have lately broken out of their conservative mold. For example, the Ford Mustang used the moniker of a muscle car for an electric vehicle crossover which was a bold move that mostly worked to get people talking. There is not a lot of academic research on how consumers choose electric vehicle designs but it's clear that designs that are new to them can be both at risk and a selling point. Tesla’s lack of typical grille and their futuristic look of the inside were new at first, but they are now becoming common in the minds of consumers in part because of Tesla’s influence. Schuitema et al. (2020) and other studies imply that transitional consumers may enjoy electric vehicles that look like regular cars. This could be good for manufacturers who make electric vehicle versions of well-known models. But if electric vehicles become more popular bolder looks could draw in people who want the newest thing. Tesla started out strong and often makes small changes, maybe to keep its premium look.

Finally, there are still issues in the literature about how the rise of electric vehicles will affect brand loyalty in the long run. Will Tesla owners stay loyal like luxury German vehicle buyers do or will a lot of them switch to other brands when they offer equivalent electric vehicles? Early evidence

suggests that people who buy Tesla cars again and again but as more goods come out Tesla won't be able to meet everyone's needs. Real legacy companies be able to attract new client groups with electric vehicles that they couldn't with ICE? For example, younger tech fans who only sold Tesla before? Researchers are starting to investigate these issues through long-term surveys. So far everyone agrees that Tesla built a strong brand lead in the electric vehicle era. However legacy automakers are using their large customer base and enhancing their reputations to launch a serious fight.

2.4. Innovation and Strategy

The move to electric cars has been both new and old car companies reassess how they innovate and how they run their businesses. This part looks at how tesla's approach as a new electric car company is different from the strategies of older car companies like Volkswagen and General Motors and others. Investments in research and development collaborations and acquisitions and changes to the way the organization works to encourage innovation are all important parts. We carefully look at studies of various tactics pointing out where experts agree on the best ways to do things and where there is still disagreement about how well certain approaches will work in the long run.

People often say that Tesla's success is due to its strong concentration on electric vehicle related research and development and its willingness to spend a lot of money on development compared to its size. For instance, in 2020 Tesla spent more than 5% of its revenue on research and development, which is similar to what several bigger car companies do but all of that money went towards electric vehicle innovation. Perkins and Murmann (2018) notable said that it was easier to get into the auto industry during the electric vehicle era, saying that "a well-funded company could develop a new electric vehicle from scratch in about 5 years". They based this on Tesla's growth, from its founding

in 2003 to the production of the roadster in 2008 and the Model S in 2012. They pointed out that electric vehicle development uses technologies that are already widely available like batteries and electric motors, so it does not need decades of mechanical engineering knowledge that ICE vehicles did. If this is accurate it means that the huge research and development departments of incumbents were not as large of an advantage as many thought. Newcomers could catch up by employing skilled workers and putting money into their businesses. These controversial tests caused a lot of talk. MacDuffie (2018) commented in *Management and Organization Review*, cautioning that Tesla's success, while real, did not mean auto industry and three obstacles removed-he stressed what is distinctive versus not unique about Tesla. MacDuffie said that incumbents still have advantages in large-scale manufacturing, integrating supply chains and knowing the rules which all need a lot of research and development and learning. He said that Tesla's dedicated research and development might make competitive electric critical parts scaling it up to millions of units profitability is a different problem.

Studies that look at real world patient data and research and development spending provide us a more complete picture. Wells and Nieuwenhuis (2016) found that incumbents at first put money into little improvements the existing technologies instead of big changes to electric vehicles. They only did this when outside demands grew. In the late 2010s, when Tesla's market value shot up many older companies changed their research and development budgets in a big way. For example Volkswagen said in 2021 that it will spend €73 billion over 5 years on electrification and digital technology. This shows that the company is fully committed. Some companies like General Motors were quick to announce plans for all electric features and increase their research and development spending. Others like Toyota were slower to do so since they were doing well with hybrids which were an older technology. The concept of "incentive and opportunity" to innovate encapsulates this: organizations having less to lose from the old tech and some electric vehicle capabilities were more

active innovators. Indeed Wesseling et al. Observed that incumbents with weaker positions in ICE markets, but early EV expertise moved into EVs sooner, whereas extremely dominating ICE firms hesitated (Jardin, 2025).

People are starting to agree that it is not just how much money is spent on research and development but also where and how it is spent. Tesla's research and development has been very focused on fixing major problems with electric vehicles, including battery costs software and self-driving algorithms. For many years, incumbents had to split their research and development among several power trains, which made it harder to focus. Now that some companies have promised to stop developing ICE by the middle of the twenty 20s, their research and development focus is getting narrower, which could make them more effective. Bohnsack et al. (2020) is that if established companies commit to a technological path, their deep engineering experience can lead to speedy bursts of innovation. For instance, Volkswagen's MEB platform was made quickly and works with numerous models. However, some caution that bureaucracy and innovation inertia can impair incumbents' research and development efficiency. According to research by Karu et al. (2022) on research and development culture legacy companies frequently have hierarchical decision making that slows down radical innovation. On the other hand, Tesla's startup culture allows for faster iteration and risk taking.

2.4.1.Partnerships, acquisitions and strategy for ecosystems

Both Tesla and older car companies work with a larger group of suppliers, partners and new technology. Still their methods are different. Tesla has always tried to vertically integrate its business by making batteries with Panasonic building its own sales and service network and even making its own seeds and other parts to make sure they are of high quality. As literature says, this method calls back to Fordism in the early 1900s, but it is not common nowadays when most OEMs depend on

large networks of suppliers (Chengyi Lin, 2025). The mirroring hypothesis case study on Tesla indicated that vertical integration was a choice made on purpose to make sure that all of Tesla's important electric vehicle parts met the company's high-performance standards. Elon Musk is well known for saying that Tesla's competitive edge comes from its ability to make things and control its supply chain not only its product design. There were good and bad things about this. On the other hand, it lets Tesla move quickly and makes chains without waiting for suppliers. On the other hand, Tesla had to learn how to do things from scratch in many areas which caused growing pains. For example, Elon Musk said in 2018 that "excessive automation was a mistake" because it caused long delays when Tesla decided to design an automated manufacturing line (Murmman, 2018).

On the other side older car companies have used partnerships and alliances to speed up their electric vehicle and high-tech capabilities to share electric vehicle platforms and autonomous tech-a strategic collaboration to share research and development burdens. Guillec and Williams (2019) says that these kinds of partnerships are a method of established for companies to work together to fight off new competitors. General Motors also bought the startup Cruise to get its self-driving car initiative off the ground. Since then Honda and other companies have invested more money increase creating a mini ecosystem. These actions show that the people who are already in the business know that they sometimes don't have the software or electric vehicle talent they need, so they acquire it or collaborate with someone who does. Sierzychula (2018) said that the car industry is going through a change and that firms are working together more than ever since they are unsure about new technologies like battery advances and AI for driving and want to protect their investments. But not all collaborations work out. For example, the Ford-VW/Argo AI cooperation ended in 2022 when Argo couldn't provide a working product quickly enough. This shows how risky and expensive partnerships can be.

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Tesla has been more careful about who they work with. Interestingly Tesla did work with established companies at first. Around 2010 it gave battery modules to Daimler for a Smart EV and Toyota for an electric RAV4. Tesla made a lot of money and got a lot of credibility from those relationships. But as Tesla got bigger it changed its strategy to be more independent. For example, instead of relying on huge tech partners it started its own machine learning “Dojo” supercomputer project for autonomous training. Tesla’s institutes to open innovation is also different. For example, in 2014 it made its patents available to the public to help the electric vehicle industry expand. This is something that most traditional OEMs would never do. Some experts think that Tesla is using its first mover advantage to define industrial norms and win over customers by disclosing patents it already knows how to use. This way Tesla can stay ahead by always coming up with new ideas.

Legacy car companies also buy up firms that are part of the electric vehicle supply chain. For example, General Motors bought the intellectual property of battery manufacturer Sakti3, while Bosch has bought up charging software startups. These purchases are meant to quickly introduce new skills into the company. The literature on incumbent innovation typically says that when faced with disruptive innovations, incumbents could choose to acquire to catch up instead of just developing new products internally. We can see this in how old businesses have bought up companies that make electric vehicles and put money into mining or battery materials. Tesla conversely tries to develop technology internally or with close partners rarely making significant purchases.

How corporations deal with the charging infrastructure and energy environment is another important strategic factor. Tesla’s choice to establish the supercharger network offered each strategic advantage and some may say a moat. Tesla owners could go great distances without any problems which other people couldn't do. At first legacy automakers led the third parties to handle charging but as more people bought electric vehicles, they worked together to build networks like Ionity in Europe which

is owned by BMW Daimler Ford and Volkswagen. In 2023 something unexpected happened: numerous big companies (Ford General Motors Mercedes, etc.) Saturday would use Tesla's charging plug standards (NACS) and let their customers use Tesla's Supercharger network (L., 2025). This might be regarded as proof of Tesla's early approach, but it could also be seen as a kind of strategic truce: everyone knew that making charging easier for consumers would help all electric vehicle companies. Opening its network brings in more money for Tesla and could become the norm in North America. This example shows that strategy in the electric vehicle era is not just about the cars themselves; it is also aware of the platform or ecosystem that surrounds them like charging software services and energy storage. A 2022 article in a SAGE magazine said that "electric vehicles are a platform business." To be successful companies must not only come up with new products but also coordinate their networks.

2.4.2. Organizational transformation and culture

Changing the way essentially old company works is perhaps the hardest thing for legacy automakers to do. They need to change their culture from one that focuses on mechanical engineering and slow product cycles to one that is agile and software savvy and willing to break its own triumphs. Multiple case studies and reviews address this. Hanelt et al. (2021) right in a review of digital transformation in the automotive industry that established companies often create "EV divisions" or cross functional task teams to push for change, but they can run into problems with internal resistance or become isolated. The Mercedes-Benz case study (Achillas et al., 2024) that we talked about before showed that when EV initiatives were started they were problems within the company such as disagreements between departments and teams that were too busy. This shows that businesses need to change how they handle projects. Many have switched to more flexible workflows for electric vehicle development following the example of tech companies. For example,

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Volkswagen changed the way its research and development worked to make it more flat and give software teams more ability to make decisions. However, the results have been mixed thus far because of the software delays.

Changing the workforce and the skills of the people who worked there is another part. Incumbents are teaching contractors on how to work with high voltage systems battery chemistry and coding again. They are also bringing in fresh people from outside the auto industry. The Mercedes instance talked about a two-part plan: bringing in fresh electric vehicle talent and training current employees. He et al. (2020) observed that organizations that successfully navigated prior technological chains generally did so by integrating fresh expert recruits with deep institutional expertise-it balanced incumbents are seeking now. Tesla hired a lot of people from outside the company, like people from Silicon Valley and they either space industry, and created a culture of quick problem solving. Sometimes this went against the way things were done in the car industry. As Tesla grew it had to put in place more processes and quality control which meant institutionalizing without compromising the spirit of invention. Researchers like Vieder & Glücker (2022) say that the best method is midway between Tesla's anarchy and the rigidity of established companies. This means creating an organization that can use its current skills effectively while also being open to new technology.

It's an awful talk about vision and leadership as well. Elon Musk's aggressive leadership at Tesla is different from the community-based leadership of many large companies. Elon Musk's presence pushed Tesla's aggressive initiatives and kept investors on a wild ride, which allowed the company to get money for new ideas that older companies with more conservative shareholders might not be able to get. Not many current CEOs try to seem like visionaries. For example, General Motors's Mary Barra said, "GM will sell zero-emission vehicles only by 2035," which basically rebranded General Motors as a tech business of the future. There is a lot of disagreement about how real and

useful these leadership statements are. Some analysts say that there is some doubt within these companies. It is one thing for senior executive to establish electric vehicle targets but it is another for middle management and regional heads to completely support them. The idea of “creative adaptation” was first put up by Berggren et al. (2015). It says that incumbents selectively adopt radical innovations into their existing structure. The hard part is making sure the change isn't too slow or halfhearted to compete.

One subject that many are talking about is if old car companies can get around the “Innovator’s Dilemma”. A lot of people said that this was why incumbents held off on electric vehicles at first. However, government rules and Tesla’s success put pressure on the situation to fix itself-investing in electric vehicles became less hazardous. People are now asking in the literature whether incumbents will be able to make this change or whether newcomers like Tesla and potential new Chinese electric vehicle makers will take over permanently. Whitfield and Wuttke (2024) say that the car industry has seen “creative accumulation” in the past. This means that the same big companies stay in business even when technology changes by gaining new skills instead of going out of business. They remind out that American and European corporations largely retain supremacy even when technologies evolved in the past. In this scenario firms like Volkswagen General Motors and Toyota may still be in charge by the end of 2020 even after going through the transition to electric vehicles. They may use their huge resources to eventually beat Tesla, which is now just one of many competitors. On the other hand, some people think this change could be more disruptive, for example in 2021 Tesla’s market capitalization was higher than that of the next several automakers combined giving it access to cheap capital to grow. Also Chinese electric vehicle startups and tech companies like BYD, NIO, and Xpeng are now growing and could take a big share especially in emerging markets. It is wonderful to look at the whole world established firms that are successful in their waste phase not only Tesla but also fresh competition from China’s ambitious EV sector. This

industry has generated components like BYD, which beat Volkswagen in sales in China in 2022.

Tesla has a lot of competition in China, where BYD is now ahead in NEV sales. So legacy western automakers are stuck between Tesla in the high-end market and fast-moving Chinese OEMs in the low-end market, which is a strategic pincer maneuver.

Some of the gaps in the strategic literature are the long-term profitability of electric vehicle manufacturing for incumbents. Will legacy manufacturers' electric vehicle operations eventually be as profitable as their internal combustion engine division were? Tesla was able to make money consistently by keeping costs down and selling things at high prices. Can established companies do the same with the bigger product lines and dealer networks? Also, how will legacy dealers adjust to selling and maintaining electric vehicles? Some strategic management experts say that the incumbents need to change their business models. For example, some are trying direct or no haggle pricing for electric vehicles to better compete with Tesla's sales experience.

There is also a gap in figuring out how well different organizational structures work for innovation. For example, Ford split its business into "Model e" for electric vehicles and "Blue" for ICE, while Volkswagen mostly integrates electric vehicle development within its core brands. If independent units are more flexible, they might come up with new ideas faster, but they also run the danger of competing with each other and duplicating work. If they are combined there is a chance that the new projects will be stifled by old methods. In a few years when the results are obvious comparative case studies will help us understand more.

In the end, the literature shows that Tesla was a catalyst and an example that made the car industry change the way it invents. Legacy car-companies are doing a lot of things to stay competitive. They are investing in research and development teaming up and buying companies to fill skill gaps and reorganizing their businesses to be faster and more focused on software. There is a lot of agreement

that incumbents that can successfully combine their previous assets will continue to be strong. The discussions are about whether incumbents can really make the cultural transformation and speed that are needed or if companies like Tesla will always be able to come up with new ideas faster. Early indicators are mixed. Some heritage companies like Volkswagen and Hyundai have quickly churned out competitive electric vehicles while others like Toyota and Stellantis, we're slower and it may have trouble gaining market share. Tesla keeps coming up with new ideas to stay ahead like making cheaper models and entering new areas like trucks with the Semi and Cybertruck. As the electric vehicle industry becomes more widespread tactics will probably start to seem more alike in certain ways. For example, by 2020-2030, all the big competitors will have significant battery operations and strong software teams which was not the case 10 years ago. But the victors will be those who can execute and adapt which are skills that academic studies will be very interested in looking at in the years to come.

2.5. Theoretical Framework

Freeman (1984) proposed stakeholder theory, which states that enterprises must weigh the interests of all people that can affect or are affected by their goals. Freeman's concept expanded corporate responsibility to include a "wide range of individuals and groups" beyond owners, unlike the shareholder-centric vision. Typically, stakeholders are "individuals and groups who can affect, or are affected by, the achievement of an organization's objectives" (Coker, 2025). This includes shareholders, employees, customers, suppliers, governments, local communities, and others.

Later stakeholder theory emphasizes that firms have ethical and strategic responsibility to multiple populations. Freeman, Wicks, and Parmar (2004) believe that corporate accountability should include all stakeholders, not just shareholders. The notion states that corporations operate most

effectively and responsibly when they proactively satisfy stakeholders' requirements and recognize their two-way relationship with the environment. Thus, stakeholders affect business behaviors; however, can influence them through purchasing, political. Regulatory pressure or investment choices. Stakeholder theory relies on mutual influence (Solomon, 2010). Classic agency theory focuses on shareholder interests, whereas stakeholder theory says managers must balance numerous constituents' expectations for long-term success and legitimacy (Donaldson & Preston, 1995). It has underpinned company ethics and strategy, emphasizing corporate social responsibility and sustainability as stakeholder accountability (Ali Shariff Kabara, 2019).

2.5.1. Tesla, Volkswagen, and EV Industry Relevance

As traditional manufacturers and new entrants negotiate complicated constraints in the Electric Vehicle (EV) business, stakeholder theory can aid. Diverse stakeholder expectations drive the socio-economic and technological transition to EVs. Major stakeholders in this industry are (Jess, 2024):

- *EV buyers* prioritize reliability, performance, and environmental values. Automakers must address consumer demand for green technologies and cutting-edge features to improve sustainability and innovation perceptions.
- *Regulators and governments* influence automakers' electrification strategies by enforcing pollution requirements, fuel economy laws, and EV subsidies. Tightening CO2 restrictions in the EU and other countries have pushed corporations to speed EV development
- *Investors and shareholders* focus on financial returns and may also consider ESG factors. They pressure companies to adopt sustainable practices and gain EV market share. Tesla's 2010s market valuation rose due to investor confidence in its mission and stakeholder appeal, which prompted legacy corporations to consider EVs more seriously.

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- *Partners* in the automotive value chain, including as battery and charging infrastructure providers, are essential for EV production innovation and scale. A company's ability to supply new technology and reach production targets depends on its stakeholder management.
- *Employees and unions* are concerned about job security and reskilling as the industry transitions from combustion engines to electric drivetrains. They expect companies to manage the transition to retain jobs and offer new chances. Volkswagen's supervisory board comprises labor and government representatives, demonstrating a stakeholder system where employee concerns are important (Schwartz, 2021).
- *Environmental and community activists* promoting pollution reduction and climate action. This organization expects automakers to reduce environmental impact, make zero-emission cars, and disclose sustainability. Environmental groups and communities protested Volkswagen's 2015 "Dieselgate" emissions scandal, showing how failing these stakeholders may undermine a company's brand and social license to operate (Schwartz, 2021).

According to stakeholder theory, Tesla and Volkswagen must consider these diverse expectations while developing EV plans. A stakeholder-oriented research reveals that both firms are electrifying to meet social and regulatory expectations for sustainable mobility as well as market or technology-driven choices. Automakers have strong incentives to advance electric projects as public and community stakeholders see EVs as a solution to climate change and urban air quality. Regulators worldwide have set strong emissions and EV adoption goals, rewarding EV leadership with credits, subsidies, or market access and punishing laggards with fines and limitations (Jess, 2024). Capital markets have benefited EV entrepreneurs, placing pressure on older manufacturers to catch up. Stakeholder theory shows that innovative and incumbent automakers are entrenched in a network of social, political, and economic stakeholders whose interests define EV market dominance.

2.5.2.Engagement and Communication

Stakeholder theory also illuminates how legacy automakers and EV innovators interact with stakeholders. Traditional automakers like Volkswagen have defined stakeholder management systems and a comprehensive governance framework that enables some stakeholders to stakeholder management systems and a comprehensive governance framework that enables some stakeholder groups direct influence over corporate decisions (Schwartz, 2021). Volkswagen has a “complex stakeholder structure” with strong labor representation and government ownership. Lower Saxony and labor unions control VW’s supervisory board. This structure requires VW executives to interact and communicate with employee representatives and political stakeholders when developing strategy. Volkswagen management constantly communicates with its people through works councils and coordinates public policy with governments and industry associations (Schwartz, 2021). The company recognizes that it operates in a highly regulated environment and believes it must actively engage stakeholders to create its business structure. VW aligns its company with social expectations through its extensive sustainability reports, stakeholder meetings, and lobbying initiatives, such as advocating for EV charging infrastructure with honesty and transparency.

Tesla has taken a unique stakeholder engagement approach. Tesla, a disruptive entrepreneur with centralized leadership, has avoided corporate communications and intermediary stakeholder channels. Tesla CEO Elon Musk is known for personally connecting with customers and investors via social media. The first major carmaker to eliminate its public relations department, Tesla relies on Musk’s Twitter (X) and other direct updates to spread news (Greenspan, 2024). This was “yet another unconventional” action compared to peers who spend millions on advertising and public relations. Tesla has avoided sponsored advertising and franchised dealerships to promote its brand and vehicles. Musk’s social media is its key promotion channel, where online communities swiftly

echo new features and technologies. Tesla prioritizes tech-savvy consumers and eager investors over intermediary stakeholders like dealership networks and the conventional press. Tesla's honest, mission-driven image is enhanced by a dedicated customer base and organic media buzz via shareholder word of mouth and Musk's charisma. The downside is that Tesla's stakeholder management can appear less structured in areas where legacy firms are more traditional, such as its handling of employee stakeholders (due to its resistance to labor unionization) and its sometimes reactive relations with regulators. Legacy automakers and EV innovators have different stakeholder communication messaging and branding strategies (Greenspan, 2024). Established companies like Volkswagen balance technological innovation and performance to excite customers and investors, emissions targets and compliance to satisfy regulatory and environmental groups, and job creation or retraining programs to reassure employees and communities. Volkswagen increased stakeholder outreach and rebranding after Dieselgate to rebuild trust. The "Together – Strategy 2025" program sought to restore public trust and refocus the firm on sustainable mobility. This strategy was driven by shareholder indignation over emissions trickery, legal requirements for cleaner automobiles, and the need to catch up with emerging competitors like Tesla that were winning consumers over with EV technology. Volkswagen showed stakeholders, from governments to eco-conscious customers, that it was dedicated to leading the industry's transition to electric vehicles and addressing its environmental negligence by making sustainability its new strategy. VW and other legacy corporations now promote their electric cars and climate aims, join charging infrastructure coalitions and disclose carbon reduction and ethical practices. These activities demonstrate to stakeholders (internal and external) that the organization is embracing sustainability and innovation. Tesla, meanwhile, appeals to environmentally conscious stakeholders and forward-thinking consumers with its audacious aim (famously, "to accelerate the world's transition to sustainable energy") (Greenspan, 2024). Tesla engages stakeholders via its mission-driven brand and charismatic CEO

rather than traditional adversiting. Tesla regularly emphasizes long-term societal benefit with growth in its investor communications, reinforcing the perception that its goals align with stakeholder values like lowering global carbon emissions. Tesla's simple marketing and social media buzz reflect authenticity and digital prowess that many consumers related to, in contrast to legacy automakers' more formal corporate communications. Volkswagen's structured stakeholder involvement and Tesla's informal, direct contact show how each firm's history and stakeholder structure affect its stakeholder support strategy.

2.5.3.Impacts on EV strategy, Branding, and Market Positioning

Stakeholder theory explains Tesla and Volkswagen's EV strategy and branding decisions. Each firm's EV strategy balances (or prioritizes) stakeholder expectations and interests:

- Tesla's strategy and positioning: Tesla's success as an EV leader resonates with its stakeholders, including early adopters seeking innovative technology and sustainable solutions, and investors seeking growth. According to stakeholder theory, Tesla's massive battery investments, Tesla's massive battery investments, Supercharger network expansion, and bold product initiatives (from high-performance electric sedans to autonomous driving software) are responses to stakeholder expectations for continuous innovation and environmental impact. Tesla has increased brand equity and loyalty by addressing environmental and consumer stakeholders' concerns with zero-emissions goods and premium, high-tech user experiences. Tesla's goods are seen as an alternative to gasoline automobiles' environmental effect and the company's CSR initiatives are integrated into its business strategy (Greenspan, 2024). This strategy helps stakeholders and strengthens Tesla's business and brand image, providing it an edge over traditional automakers. Tesla has used

stakeholder goodwill and tech-sector enthusiasm to promote itself as a beacon of innovation and environmental stewardship. After achieving stakeholder expectations, this reputation has led to robust demand and higher market prices. The stakeholder theory perspective shows that Tesla's EV market domination is tied to how it aligns its goals with customers, climate-conscious groups, and forward thinking investors

- Volkswagen strategy and positioning: legacy automakers consider the shift to EVs as a response to stakeholder pressure. Volkswagen invested tens of billions of euros in electric vehicle programs (e.g. the ID series of EVs and battery production partnerships) to satisfy regulators (compliance with government mandates and emissions targets), meet consumer demand for affordable EVs with longer range, and respond to societal calls for corporate responsibility after Dieselgate. Volkswagen's EV marketing campaigns portraying the company as a champion of sustainable mobility and its public pledge to become carbon-neutral aim to restore its credibility with customers, regulators, and environmentalists. Volkswagen is reaffirming its commitment to "sustainable mobility" and sustainability in its vision to show stakeholders that it has acknowledged their concerns and is changing its identity (Greenspan, 2024). Volkswagen Group's Together 2025 strategy aims to become a world leading provider of sustainable transport, recognizing that consumer preferences and regulatory requirements are now crucial to competitiveness. VW's involvement in charging infrastructure joint ventures (to allivate customer range anxiety and support government infrastructure goals) and transparency and compliance are all explained by this stakeholder-driven repositioning. Volkswagen now sees itself as a fast-follower turned aspiring EV leader due to investor expectations that it innovate and atone for previous mistakes. VW's EV strategy and branding really satisfy the stakeholders it neglected in its past efforts, proving stakeholder theory).

2.6. Conclusion

In conclusion, Tesla and other electric vehicle innovators are competing with legacy manufacturers in a wide range of areas including technology post navigation, customer appeal and strategic flexibility. This literature study has put together results from 4 main areas of research:

Technology development: Tesla's early lead in battery, software, and electric vehicle specific engineering forced other companies to speed up their own attempts to come up with new ideas. Tesla introduced new standards (such long-range batteries and over the air software upgrades), but older OEMs are catching up by using their size and making huge investments in research and development, even if they are late. Most people agree that incumbents can catch up with technology but in the early days of electric vehicles they were follows. There is still a lot of debate about whether Tesla's integrative approach will provide it with a long-term advantage or whether the small advances and partnerships of its competitors will level the playing field.

Regulation and policy: government rules and rewards have been very important in getting people to buy electric vehicles. Tesla skillful with leveraged legislation like ZEV crazies and subsidies into strategic benefits and sources of income, well established companies first followed or only partially followed these rules. As the regulations become stricter in the European Union, United States, and China, legacy automakers went from campaigning against electric vehicle mandates to making their business plans fit with an electric future. Research shows that companies that were most willing to accept policy induced change (for example, those with significant electric vehicle "incentive and opportunity") were the most successful among incumbents while others fell behind. One important thing to remember is that strong policy frameworks made it harder for incumbents to move about which forced them to come up with new ideas that might not have happened as quickly otherwise.

But the way that different countries' policies affect how firms prioritize electric vehicles is still changing.

How people see it: Tesla did something quite unusual by changing the story of electric cars from being environmentally friendly vehicles to being highly sought-after high-tech products. It fueled a strong brand linked to innovation performance and sustainability. This is not only of Tesla but it also made people think more highly of electric vehicles in general. They can sell for makers to enjoy strong brand loyalty and bigger product range, but they have had to confront lingering uncertainty about their commitment to electric vehicles and overcome any tarnish from incidents like Dieselgate. Studies show that more and more people think older electric vehicles are a good option, especially as more models become available and issues like range and charging are fixed. However, there are still different points of view. Some research shows that Tesla's committed "brand believers" are a long-term benefit, while other research suggests that mainstream consumers could eventually return to trusted established brands once they provide similar electric products. Some unanswered concerns are how long Tesla's brand supremacy will last as the market becomes more diverse and how incumbents can adapt their brand values (such quality and safety) into the electric vehicle industry to gain consumer trust.

Innovation and strategy: the shoes to electric vehicles have put the capabilities of existing companies to adapt to new situations-was organizational and strategically-to the test. At the same time, it has given emerging companies the chance to set the agenda. Tesla's startup mentality and bold, vertically integrated strategy are different from the more methodical and collaborative ways that older companies do business. Everyone agrees that incumbents need to make big changes to their skills culture and business models in order to compete with nimble electric vehicle focused companies. Research shows both the good and bad sides of these changes. For example, it might be hard to deal with people who don't want to change and to get software teams to work with hardware

focused companies. Strategic disputes are about whether to break out electric vehicle activities to how to handle alliances and how to stay profitable during the change. One evident trend is that all of the big car firms, both new and old, are trying to become more tech driven. This makes it harder to tell the difference between car companies and tech companies. A big agreement is that innovation in the electric vehicle era goes beyond the car itself to include ecosystems like charging infrastructure and energy storage. This means that a larger strategic strategy is needed. One thing that has not been studied enough is what will happen to companies that use current methods in the long term. Which companies will become leaders in the post-ICE rolled and why? Researchers will be watching these “experiments” in real time.

This review looked at how studies used different methods to measure trends and correlations such as quantitative analysis (surveys patent counts financial data) and qualitative research (case studies, interviews) to learn about how things work inside and how people think about them. This combination of methodologies makes the overall findings stronger but still also shows some of their limits. For example, perception studies based on surveys may only be welled in certain areas and not be able to be applied to all areas. Case studies of only one company like Mercedes or Tesla may not show what is really going on in the sector but may hint to important issues. When different types of evidence point to the same conclusion (for example, both sales data and consumer surveys showing that Tesla has an impact on electric vehicle adoption) we can be surer of that conclusion. On the other hand, when different types of evidence point to different conclusions (for example, how much of an edge Tesla still has in technology), we know that more research is needed.

In the end the global electric vehicle competition is still in its early stages. Legacy car companies like electrification and are spending tens of billions to compete. Tesla is no longer a new company; it is instead a trendsetter that faces new competitors. There is a dynamic interplay in the literature: Tesla’s success has pushed incumbents to innovate quicker, and incumbents’ efforts have pushed

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Tesla to do things like lower prices or come up with new ideas faster. There is a general agreement that the switch to electric vehicles is unavoidable and probably permanent. The question is who will be in charge of this new era. Will it be the old companies that are now new, the new companies that are now old, an order combination of both? Current data implies a plural conclusion-incumbents are not static and many are swiftly learning to compete, while Tesla and other innovators continue to push frontiers. As the transition happens more research especially across the company, and longitudinal studies will be needed to understand these high stakes competition that is changing an industry and has big effect on how we use energy and fight climate change around the world

3. Chapter 3: Methodology

This study research design combining quantitative and qualitative data collection strategies to explore stakeholder perceptions, trust dynamics, and institutional influences on the electric vehicle market. The primary focus is to examine how Tesla, as a disruptive electric vehicle innovator, that compares to legacy automakers like Volkswagen in the minds of consumer and professionals, particularly in the context of an emerging market such as Azerbaijan. This approach is grounded in the pragmatic research paradigm which promotes methodological flexibility and integration of both positivist and interpretivist elements to generate a fuller understanding of complex social phenomena.

3.1.1. Research design and rationale

On strategy attempted for this research is explanatory sequential mixed methods, wherein the study begins with a broad quantitative phase (survey) followed by in qualitative phase (semi-structured interviews). The rationale for this design lies in its capacity to combine the breadth of numeric trends with the depths of individual perspectives. Quantitative data provides general patterns of attitudes and preferences toward Tesla and legacy brands, while qualitative interviews explored the underlying rationales, contextual factors, and the emotional responses that shape those patterns.

This study also follows A comparative case logic, well the by Tesla serves as a model of a technology first digitally native automaker, and Volkswagen represents a traditional manufacturing incumbent undergoing technological transformation. These two focus facilitates structured comparison across stakeholder dimensions such as brand trust, innovation perception, product expectations, and institutional adaptation.

3.1.2.Quantitative Phase: Structured Online Survey

Survey instrument development

the quantitative instrument was developed based on constructs from stakeholder theory, consumer trust frameworks, and innovation adaptation models. The final survey contains 22 structured items, which included a mix of demographic questions (age, gender, education, income), EV ownership and driving experience, familiarity with brands, perceived trust in Tesla versus legacy automakers, evaluation of EV features (battery range, autonomous driving, service availability), and intention to purchase an EV in the near future. Key items were formatted as 5-point Likert scales, multiple-choice questions, and rank-ordering prompts to enable robust statistical analysis. For example, respondents were asked to rank the importance of different factors (such as price, brand, and innovation) in their EV purchase decisions, and to rate statements like “Tesla’s Autopilot system is safe to use” on a scale from 1 (strongly disagree) to 5 (strongly agree).

Sampling and Data Collection

The survey was disseminated via online channels including LinkedIn, WhatsApp, and e-mail over a five-week period in April-May 2025. A non-probability purposive sampling method was employed to ensure the inclusion of participants familiar with the automotive market and digital technologies. The target population included professionals, university students, and middle-to-upper income residents of urban centers such as Baku, where awareness of EVs is higher.

A total of 325 valid responses were collected. This sample size is considered sufficiently large for descriptive statistical analysis and offers significant insights into the consumer and stakeholder perceptions in a developing market context. The sample was diverse in terms of age (ranging from

18 to 60), gender, income, and educational background, allowing for segmentation analysis and the examination of sub-group differences.

4. Chapter 4: Results and Discussion

4.1. Qualitative Phase: Semi-structured Interviews

4.1.1. Participant Selection and Sampling

Following the quantitative analysis, a purposive sampling strategy was employed to select six professional interviewees across different fields relevant to the electric vehicle ecosystem. These individuals included experts in asset management, strategy, legal compliance, procurement, and accounting. Selection criteria focused on individuals likely to hold informed views on electric vehicle technology, brand positioning, and market development, either as analysts, consumers, or policy observers. Participants were approached personally and via professional networks, and all agreed to participate voluntarily. The final set of interviews reflected the diverse range of perspectives in terms of both professional background and degree of experience with electric vehicles.

4.1.2. Interview Protocol

A semi-structured interview format was adopted to allow for consistency across interviews while retaining the flexibility to explore emergent topics. The interview guide contained eight core questions derived from the survey results and literature, covering themes such as:

Perceived differences between Tesla and legacy brands

Trust in Tesla's technology and corporate behaviour

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Role of software and autonomous features in EV preferences

Views on EV infrastructure in Azerbaijan

Institutional and regulatory considerations

Expectations for the future of electric mobility

Interviews were conducted in person or via Zoom, depending on participant preference, and lasted between 20 and 35 minutes. All interviews were recorded with informed consent and transcript for subsequent analysis.

4.1.3. Qualitative analysis

To complement the quantitative findings and provide depth to stakeholder perceptions, a series of semi-structured interviews were conducted with six professionals from diverse sectors, including procurement finance law and strategic consultancy. The aim was to assess perceptions of innovation trust and market strategy concerning Tesla and Volkswagen as competing actors in the global electric vehicle sector. Thematic analysis was employed to code the transcripts and identify recurring patterns. Four key themes emerged: Perceived Innovation Leadership, Trust and Market Readiness, Infrastructure and Software Ecosystem, and Brand Positioning and Strategic Direction.

The dominant perception across interviews was that Tesla continues to lead the electric vehicle industry in innovation. Respondents highlighted Tesla's technological advancements in battery range, autonomous driving, software updates, and vertically integrated manufacturing. For instance, one respondent describes Tesla as a "trendsetter" (Interviewee: B.H), if the sizing its first-mover advantage and ability to dictate the pace of innovation in the electric vehicle sector. Another participant (S.H), drawing on professional experience in procurement strategy, praised Tesla's capacity to deliver an advanced product ecosystem, its focus on software and AI based systems as a

fundamental differentiator: “Tesla creates an integrated technological experience that is not yet fully replicated by legacy automakers.” Nevertheless, some skepticism was expressed regarding tesla's regional applicability. Specifically, participants based in or familiar with emerging markets (e.g., Azerbaijan) note that tesla's product advantages were often limited what contextual factors such as software restrictions regulatory incompatibility or lack of regional infrastructure (Interviewee: M.A.). In contrast Volkswagen was recognized as a late adapter in the electric vehicle domain. However, several interviewees acknowledged the brand's increasing commitment to electrification, particularly through the ID.series and significant investments in better production and vehicle platforms. One less the consensus remained that Volkswagen is catching up rather than leading, was it simulation and foreseen as a reactive to Tesla’s advancements. Just emerged as a bifurcated construct. Initiated slowing his technological leadership he had expressed reservations regarding its after-sales services regional presence and long-term reliability. For example, one respondent (M.A.) remarked “Tesla is not the best option for me to trust... we have no service points, no spare parts every user base here.”. This view reflects concerns about operational infrastructure and proactive support risk in emerging error underdeveloped markets. In contrast Volkswagen and other legacy brands were consistently perceived as more transformative primarily due to their longstanding presence in global markets robust dealership and service networks and brand familiarity. One interviewee (N.A.) articulated this sentiment by stating: “volkswagen's reliability superior because Tesla has not yet passed the market test in the same way.”

Interestingly several interviewees noted that while Tesla enjoys A visionary image and symbol of capital among early adopters this has yet to translate into widespread trust among conventional users and less mature electric vehicle markets. A recurring theme across all interviews was the critical role of infrastructure and software integration in shaping stakeholder evaluations. Respondents emphasized that charging infrastructure availability software limitations and lack of regional

Technical Support are significant barriers to electric vehicle adoption regardless of brand.

Participants acknowledged Tesla's advantage in software innovation and autonomous driving capabilities but also criticized the limited operability such features outside core markets like the US and Western Europe. For example, S.H. emphasized that the "brain" of the vehicle-i.e., this software and AI layer-will become increasingly central to brand value, stating: "the ability to build and maintain a high-quality vehicle operating system will define the brand's long term success."

However, legacy automakers including Volkswagen were often viewed as lagging behind in creating seamless digital ecosystems. Several respondents identified instability or underdevelopment in user interfaces and connected systems in non-Tesla electric vehicles as a concern. At the same time respondents acknowledged Volkswagen's recent efforts to enhance software reliability so partnerships and internal restructuring. Interviews provide a diverse perspective on strategic direction and long-term market positioning. Some respondents expressed clear loyalty to legacy brands due to cultural familiarity, institutional trust, and service reliability (Interviewees: M.A., N.A.). Others favored Tesla for its ambitious vision product and perceived technological superiority (Interviewees: B.H., S.H.).

One respondent (B.H.) stated: "I would believe in Tesla. I would buy Tesla," reinforcing the idea that Tesla's aspirational identity continues to resonate with forward-looking stakeholders. However, this enthusiasm was tempered by concerns about localization: "Tesla's reputation is not the same everywhere. Their approach may not work in regions where legacy automakers are deeply embedded, not another participant (V.A.). Several participants highlighted the rise of Asian electric vehicle brands particularly BYD and NIO, suggesting that the competitive landscape is broader than Tesla versus Volkswagen comparison. These companies were recognized for delivering competitive pricing and user centered software particularly in domestic markets. Finally strategic observations suggested that Volkswagen's transformation is viewed as credible but delayed. Many participants

noted that external pressures-regulatory environmental and reputational-were key in catalyzing volkswagen's electric vehicle transition especially post-Dieselpgate. In contrast tesla's strategic direction is seen as self-defined and mission-driven, the company's founding vision to accelerate the global shift to sustainable energy.

4.2. Quantitative Phase

4.2.1.Quantitative analysis

The quantitative component of this study aims to examine stakeholder perceptions brand preferences and behavioral intentions toward electric vehicles, with a specific emphasis on the comparative positioning of Tesla and legacy automakers, particularly Volkswagen. Data was obtained from 325 respondents via structured questionnaire. The results offered him prequel insights into the psychological demographic and market related factors shaping electric vehicle interests and brand dynamics in an emerging market context.

Figure 2 : Gender Ratio

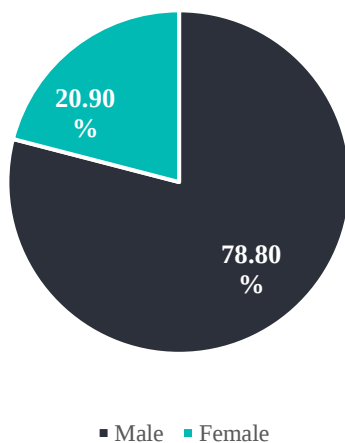


Figure 3 : Awareness of EV Brands (# of respondents)

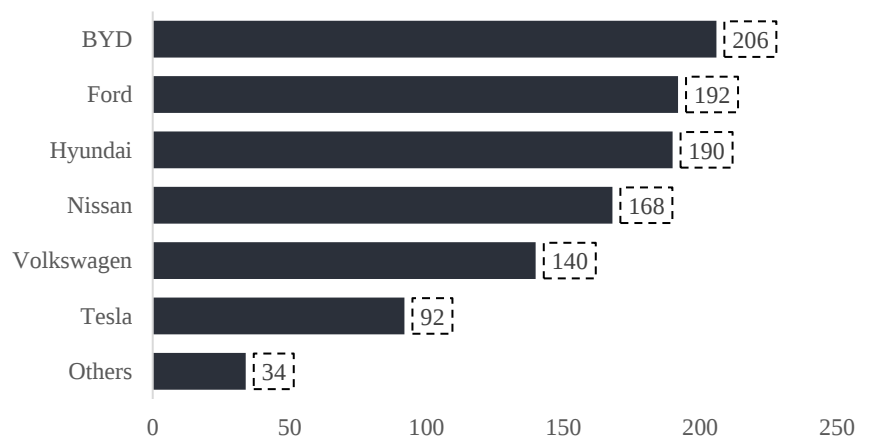


Figure 4 : Innovation in Tesla / Volkswagen (likert-scale)

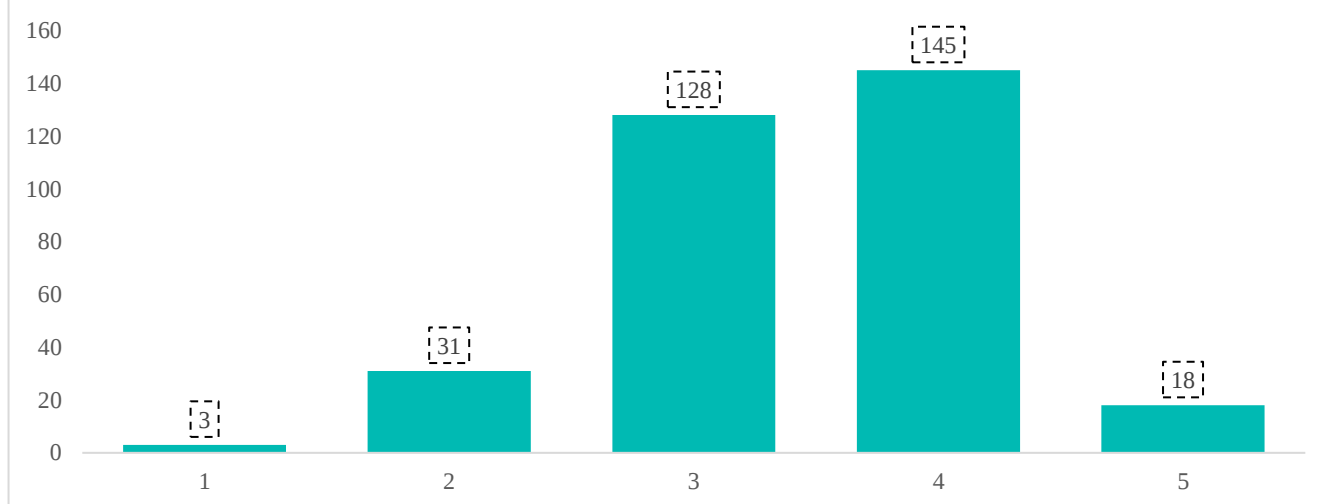


Figure 5: Vision of Tesla / Volkswagen (likert-scale)

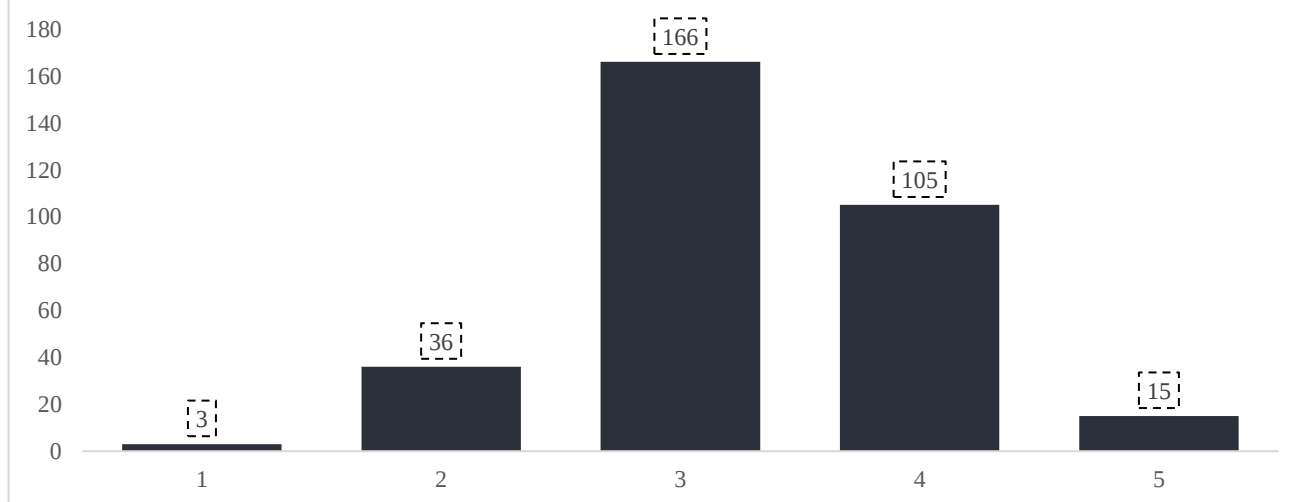
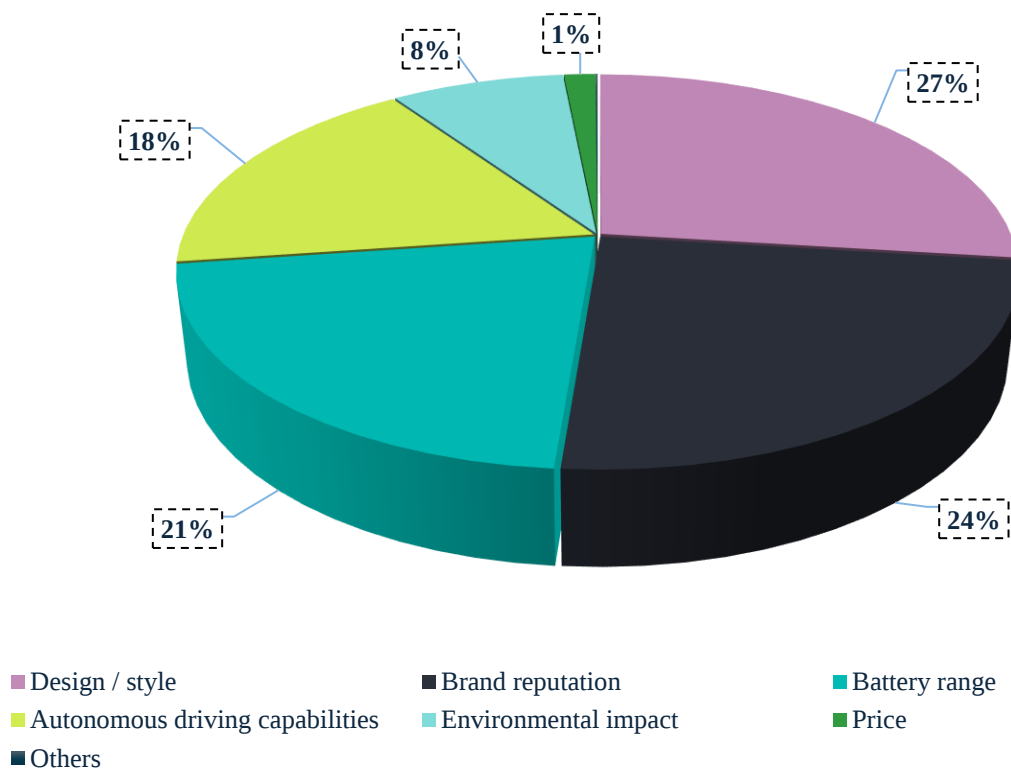


Figure 6 : Important Factors Affecting Purchase of EV



The age profile of respondents skews heavily toward younger cohorts, with the modal age group falling between 25 and 35 years. This age group is internationally recognized there's more innovation tolerant and environmentally aware, aligning with Rogers' (2003) diffusion model, which positions them as “early adopters” of technological products like electric vehicles. This finding is of strategic significance suggesting that Azerbaijan’s potential electric vehicle consumer base is concentrated within a generational group that sustainability technology and brand novelty. Gender distribution was relatively balanced was male respondents slightly outnumbering females. This gender balance provides a solid basis for analyzing generalized preferences without excessive demographic bias.

Importantly substantial share of respondents holds a university degree or higher education qualification. Given the established correlation between education level and openness to technological innovation this further reinforces the potential receptiveness of Azerbaijani market to new mobility solutions-provided infrastructural and institutional constraints are addressed.

When asked about the likelihood of purchasing an electric vehicle within the next five years, the majority of participants selected responses of four or five on a 5-point Likert scale indicating Kai behavioral intention. This outcome reflects strong latent demand for electric vehicles in Azerbaijan's or runs market despite limited current penetration. The result supports the assertion that the electric vehicle market is not constrained by consumer skepticism but rather by external market readiness variables namely price accessibility charging infrastructure and service support. This demand intention gap alliance with literature on "institutional voids" in emerging markets (Khanna & Palepu, 2010), where consumer intention precedes infrastructural capability. It implies that both Tesla and legacy firms like Volkswagen stand to benefit from strategic interventions that reduce practical adoption barriers-such as offering financial incentives ensuring after sales service availability and participating in public private charging infrastructure projects.

Respondents were asked which brand they would prefer if they were to purchase an electric vehicle tomorrow. The results show a pronounced preference for Tesla, significantly outperforming all other brands, including traditional giants like Volkswagen BMW and Hyundai. This finding confirms tesla's strong brand salience and its effective positioning as a leader in electric vehicle innovation, even in market where its physical presence is limited. Tesla's symbolic capital-rooted in technology sustainability and aspirational branding-appears to transcend logistical limitations such as the absence of local dealerships or service centers. Volkswagen appeared among the top three selected brands signaling moderate success in transferring its legacy trusts into the electric vehicle space. However, it lags behind Tesla and Hyundai, suggesting that brand transformation efforts remain

incomplete in the eyes of consumers. Volkswagen has invested heavily in electrification including the rollout of its ID series major research and development commitments these efforts have not yet translated into brand parity with Tesla in consumer perception-underscoring the “perception gap” that off on the last legacy firms’ recovery in markets dominated by disruptors.

The perceived safety and reliability of Tesla's autopilot system was evaluated using a Likert scale question. The responses show a right skewed distribution with a clear majority of respondents selecting 4 or 5, indicating a high level of confidence in Tesla's autonomous capabilities. This is a particularly significant finding given the global controversy and regulatory scrutiny surrounding Tesla's autopilot. In this regional context, however, such skepticism appears minimal, possibly due to the limited exposure to negative press or the relatively theoretical nature of autonomous driving in a country with few Tesla units on the road. This perception of technological superiority provides Tesla with a durable competitive advantage. As stakeholders increasingly factor in digital features, over the air updates, and the AI driven safety functions into their purchasing decisions, Tesla's branding as a software first automaker reinforces its legitimacy in the eyes of potential buyers. However, this also imposes a reputational responsibility: failure to localize or ensure feature compatibility in markets like Azerbaijan could create these elements between perceived and actual performance.

Respondents were also asked whether they believe Volkswagen is catching up to Tesla and electric vehicle innovation. The distribution of responses approximates a normal curve centered around the neutral midpoints suggesting a polarized or ambivalent view among consumers. While some respondents agreed that Volkswagen is closing the innovation gap others remained skeptical or undecided. This indecision reflects the dual identity challenge faced by legacy automakers: while their engineering credibility and skill are well established there's shifts toward software integration digital platforms and electric vehicle specific designs are still in transition. It also indicates that

Volkswagen's transformation strategy may not yet be effectively communicated to or recognized by the target market. Bridging these perceptual gaps will require not only product performance but also aggressive marketing transparent sustainability commitments and visible leadership in electric vehicle infrastructure deployment. Did show significant segmentation potential across the Azerbaijani market. While Tesla dominates preference among tech savvy younger respondents, legacy brands like Hyundai, Volkswagen, and BMW retain more price sensitive or service-oriented segments. This bifurcation is critical: it implies that the electric vehicle market is not monolithic and that firms must adapt differentiated market and three strategies based on segment values. For Tesla the strategy should emphasize maintaining its technology halo while mitigating infrastructure gaps via strategic partnerships mobile service fleets or collaborative charging networks. For Volkswagen and peers, the opportunity lies in leveraging existing dealers and maintenance infrastructure and positioning their electric vehicles as a trustworthy, accessible alternatives with proven reliability.

5. Chapter 5: Strategic Recommendations

5.1. Strategic recommendations for Tesla

Drawing on our findings we proposed several strategic recommendations for Tesla to strengthen its market position and address challenges identified through stakeholder and institutional analysis.

First Tesla should reinforce stakeholder trust through greater transparency and engagement. While admired for innovation Tesla has faced criticism over product issues and communication gaps.

Publishing regular updates on safety improvements vehicle quality and responses to consumer concerns can enhance its reputation. Candidly acknowledging limitations-such as in autopilot or manufacturing defects-and outlining corrective measures would demonstrate responsibility. Tesla could also benefit from stakeholder advisory panels enabling diverse feedback beyond its core fan base and signaling broader stakeholder inclusion. According to stakeholder theory ethical engagement enhances reputation and resilience which Tesla must cultivate as scrutiny increases.

Second, improving customer service and support infrastructure is vital. While Tesla leads in innovation its after sales support has lagged legacy automakers. Complaints about repair delays and limited-service accessories undermining brand loyalty. Tesla should expand service centers to train more technicians and potentially partners with certified third-party repair shops. Strengthening the ownership experience would help Tesla match the reliability consumers expect from established brands. Superior post-sales support not only boosts trust but also distinguished Tesla in an increasingly competitive electric vehicle market. Third, Tesla must continue leading innovation while ensuring quality consistency. Its technological edge, particularly in battery software and autonomous driving is widely recognized. Yet stakeholders expect innovation without compromising reliability. Perceptions of premature feature rollouts suggest the need for more robust quality assurance. Tesla should enhance manufacturing quality control and story feature releases until they

meet high safety and reliability standards. Balancing rapid development with excellence will protect tesla's reputation and justify its premium market position. Fourth, the Tesla should navigate the institutional landscape more proactively. As the company matures it must engage constructively with regulators and policymakers. Collaboration on issues like electric vehicle infrastructure charging access and autonomous driving standards can secure Tesla's influence and avoid regulatory clashes. Opening its supercharge network to other brands exemplifies how Tesla can use public pools or while expanding its reach. As Tesla expands globally particularly in Europe and the US regulatory compliance and cooperative relationships will become central to sustaining its institutional legitimacy. Lastly Tesla should broaden its market appeal without diluting its brand. Educational outreach such as demystifying electric vehicle ownership can address hesitations and expand Tesla's base. However, such efforts must remain consistent with tesla's identity of cutting-edge innovation and environmental commitment. Carefully extending its narrative to reach late adopters can help Tesla maintain growth in a maturing electric vehicle market.

In some Tesla must evolve from a disruptive innovator to a trusted stakeholder conscious leader. By improving transparency service quality institutional engagement and outreach Tesla can sustain its competitive advantage and navigate an increasingly complex market environment. Balancing innovation with responsibility will ensure it remains A defining force in the global transition to electric mobility.

5.2. Strategic Recommendations for Volkswagen

Legacy car companies who want to compete with Tesla and other electric vehicle pioneers need to use their strengths and change to satisfy the needs of new stakeholders and institutions. We have some strategic suggestions for companies like Volkswagen based on what we found.

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First, it's important to reestablish trust by putting the needs of all stakeholders first. Legacy companies put openness honesty and accountability to the public at the top of their lists. To stay away from Dieselgate scandal, Volkswagen needs solid compliance processes and clear sustainability reporting. Giving them regular information on pollution improvements battery sourcing and how well their vehicles work in the real world can help rebuild their trust. Building loyalty will also happen if you talk to customer communities directly and listen to what they have to say. According to stakeholders here reorganizations that pay attention to the requirements of all their stakeholders will rebuild their reputations and do better over time. Showing that you care about climate goals can draw in buyers who care about the environment and might otherwise pick pure electric vehicle manufacturers. Second old car companies should use their brand history to help them adjust to the electric vehicle industry. Decades of experience in manufacturing, a strong supply chain, and a global reach can help make a lot of electric vehicles at cheaper costs, going after price sensitive markets that Tesla doesn't service well. People frequently think of dealer and service networks as liabilities but they may become assets if they are taught to support electric vehicles by teaching customers doing maintenance and updating software. For example BMW changed their message to fit the electric vehicles era. This smart mix can help old companies keep their good name while also appealing to customers who are more interested in the future. Third, creating a culture that is flexible and open to new ideas is important for getting beyond internal stagnation. Many old car companies have trouble changing because of cultural resistance especially from structures that have been around since the creation of combustion engines. Creating independent electric vehicle divisions or flexible startup teams can help drive internal and speed up the process, just like Tesla does. These teams should be able to make their own decisions have a tax saving for force and be OK with making mistakes that are smart. Promoting electric vehicle champions within the company and encouraging people from different departments to work together can help change the way people

think about speed and experimentation. Aligning performance incentives with electric vehicle milestones instead of legacy sales would help this transformation happen and encourage ongoing innovation in mobility services batteries and software. Fourth, like us automakers need to proactively work with institutional forces. Instead of fighting against rules companies like Volkswagen may acquire respect by helping to build policy frameworks pushing for incentives for electric vehicles and working to set safe to our emission standards. Working with government on infrastructure or retraining workers can help with regulations and build trust in society. Working together across the industry on battery recycling or charging networks is another way to help establish ecosystems in the long term. The lessons from Dieselgate show how bad it is for your reputation to be out of sync. Setting internal goals that go above and above what the law requires and being open about them can help heritage companies stand out as ethical corporate citizens. These lowers regulatory risks and boost legitimacy.

Finally writing an engaging story about electric vehicle era is important for getting both internal and external stakeholders to act. Tesla's success comes not only from its products but also from the stories it tells about its mission. Legacy companies need to come up with their own stories that connect their histories to sustainability and stress how they help make electric vehicles more popular. The “Way to Zero” program from Volkswagen is a start in this direction. Legacy brands can build trust and show that they are not just following the crowd but are actually leading the way in the transition to electric vehicles by talking about their past successes and future pledges such investing in charging infrastructure making batteries in the United States and treating workers fairly. Good storytelling will get employees dealers consumers and partners to support a common vision of innovation and responsibility.

These changes will cost a lot of money and chains within the company but they are required for long term competitiveness. Stakeholders expectations and institutional forces are both changing the

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electric vehicle environment. Legacy car companies that earn the trust of their stakeholders and stay ahead of legislative chains will be in the best position not to just catch up to innovators like Tesla, but also lead the next chapter of the industry by combining their extensive knowledge with a new sense of purpose and legitimacy.

6. Chapter 6: Stakeholder Theory Implementation

Stakeholder theory states that organizations must provide value for all stakeholders to succeed not just shareholders. Stakeholder outcomes in the electric vehicle marketing consumer trust and brand preference. Legacy manufacturers and electric vehicle focused entrants are trusted differently by customers according to our survey. Many respondents felt more confident in non-automobile brands when buying an electric vehicle. According to a 2022 Escalent survey, 35% of electric vehicle customers preferred established automakers over upstart electric vehicle startups like Tesla or Rivian. The remaining respondents were unsure demonstrating that while the brands are trusted by many consumers A sizable segment is still susceptible to persuasion. Many of our interviewees trusted legacy automakers due to their long track record, extensive service networks and familiar reliability, while Tesla was admired for its innovation but questioned for its quality and service support.

These trust dynamics tend to influence worldwide electric vehicle brand selection. Survey respondents who trusted an automaker preferred its electric vehicle products. Despite tesla's technology leadership some consumers still favor heritage brands like Volkswagen for their safety build quality and post purchase assistance which establish confidence. According to stakeholder theory, a firm's reputation and trustworthiness drives stakeholder trust. Legislature makers have decades of brand building and customer service infrastructure which gives consumers trust. Smoking ranked higher than Tesla in 2023 Axios Harris Poll on corporate reputation, with tesla's scoring only “fair” on trust and ethics. Our qualitative data explains this contrast: While appealing to early adopters and the tech aficionados, tesla's maverick brand image might be risky, interviewees said. Tesla owners are dedicated to its daring vision and objective. According to stakeholders’ theory company purpose should match stakeholder values and several interviewees said that Tesla

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customers feel like stakeholders in a wider cause rather than just buyers. Um tesla's impressive customer loyalty metrics-99% of Model 3 owner stated that they would recommend the car-show how a clear objective and good product experience can produce loyal customers.

Tesla owners and other interviews worried about tesla's recent business practices and public scandals which could damage consumer trust. Consumers are wary about aggressive timelines, autopilot safety concerns, and CEO Elon Musk's divisive personality. Outpatient statistics showed Tesla's decrease in ethics and citizenship. Such findings reinforce stakeholder theory that trust, and brand equity are fragile assets that depend on a company's ethics and transparency with stakeholders. Tesla might lose stakeholder trust if it prioritizes rapid innovation or the CEO's vision over stakeholder participation. Tesla's revolutionary direct to consumer sales and service approach left some respondents apprehensive about long term support, void conventional dealers normally fill. These quotes have been sites showed that tesla's brand strengths are technological leadership and a purpose driven story but stakeholder expectations for reliability communication and ethics may need to be addressed to preserve consumer trust.

Data implies a different dilemma for traditional automakers like Volkswagen. Volkswagen's history of engineering reliability and mass market accessibility usually builds consumer trust and loyalty. Our findings revealed that business behavior can substantially change stakeholder views. Dieselgate, Volkswagen's 2015 emissions cheating scandal, still affects customer opinions. Dieselgate-every year respondents in our study had considerably less trust in Volkswagen's claims and business ethics notwithstanding its alternative expertise. Dieselgate was often mentioned unprompted as an example of a legacy corporation abusing shareholder confidence for profit. Dieselgate shows what happens when a company prioritizes shareholders or competitive demands over consumer regulators and public interests. Volkswagens dishonesty breached regulatory laws and customers' ethical expectations of cleaner vehicles. After the scandal one interviewee said they saw Volkswagen "like

any other company that could lie,” indicating a loss of Volkswagen’s moral high ground. The research shows that diesel gate damaged Volkswagen’s brand integrity, making customers stopped corporate environmental pledges.

Results support this: interviewees said Volkswagen’s electric vehicle commitments and apologies/compensation attempts to slowly rebuild faith in its honesty and innovation. Ethical behavior transparency and keeping promises may restore stakeholder trust. Volkswagen publicly switched to clean technology to show customers regulators and the public that it is addressing the past wrongs and prioritizing stakeholder interests over short term gains. According to stakeholder theory legacy automakers can reveal brand loyalty and even attract new customers by realigning business strategies with stakeholder values like clean transportation and honest communication.

In conclusion stakeholder feedback on our findings showed that business behavior and values strongly influence electric vehicle consumer trust and brand preferences. Tesla's rise shows how a company that prioritizes stakeholder values can inspire loyalty and change market expectations. However, it illustrates that this regarding stakeholder issues can quickly damage trust. Like us automakers have goodwill due to their quality and reliability, but they must maintain ethical conduct and adapt to new stakeholder demands like environmental responsibility to keep that confidence. Other integrated quantitative and qualitative data support the idea that stakeholder-oriented organizations that prioritize openness ethics and engagement have higher consumer trust and brand loyalty. Those who fail risk losing ground to competitors in the eyes of increasingly conscientious consumers.

Limitations

Even while this research gives a whole picture, it has certain limitations. First of all, even if Tesla and Volkswagen are the main examples, the results might not apply to all legacy automakers or all regional markets because of differences in strategy, consumer demographics, and the rules that govern them. Also, the EV industry is changing quickly. New government rules, technological breakthroughs, or big recalls might swiftly change the way companies compete, making certain findings only useful for a short time. Next, while interviews help us comprehend the background better, the small number of participants and the possible subjectivity of their answers may not adequately show the strategy range of all the automakers involved.

Thesis Conclusion

The thesis asserts that the worldwide electric vehicle sector is experiencing A transformative revolution propelled by environmental regulations technology innovations and evolving customer perspectives. Tesla has positioned itself as the by making investments in battery technology, software defined vehicles, and direct-to-consumer business strategies. Established automakers such as have undertaken substantial strategic transformations, encompassing multi-billion-dollar research and development investments, breakthroughs in platforms like the MEB, and efforts to realign corporate culture with sustainable objectives. Although established companies benefit from scale, brand reputation, and worldwide presence, they have to contend with internal obstacles such as bureaucratic lethargy and consumer mistrust regarding their electric vehicle commitments. The future of competition will hinge on the efficiency with which corporations reconcile technology innovation, regulatory wall adherence, and consumer focused strategy. The route to market

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supremacy in electric vehicle sector could be determined by adaptation, ecosystem cultivation, capacity to receive value propositions in a carbon-aware environment.

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