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Electric vehicle manufacturer BYD expansion into Europe - a case study

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Master in Management

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Department of Marketing, Strategy and Operations

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Resumo

Este trabalho explora a expansão internacional da BYD, um dos principais fabricantes chineses de veículos elétricos, para o mercado automóvel europeu. Com a mobilidade elétrica a ganhar força globalmente, o continente Europeu representa uma oportunidade significativa, mas também um desafio para novos participantes como a BYD. Esta tese investiga o estado atual da indústria automóvel europeia, caracterizada por elevadas barreiras à entrada e pela dominância de marcas estabelecidas, ao mesmo tempo que enfatiza o papel crucial dos veículos elétricos na criação de um novo panorama competitivo.

A estratégia de crescimento da BYD, assente no uso de um processo de manufatura intensivo em mão-de-obra, baterias com tecnologia de ponta e preços competitivos, é analisada em detalhe. Além disso, um inquérito ao consumidor fornece insights sobre as perceções do consumidor europeu em relação às marcas chinesas e veículos elétricos, destacando fatores-chave como o cumprimento de normas de segurança, o reconhecimento da marca e os desafios de ultrapassar preconceitos culturais.

As conclusões contribuem para uma compreensão mais ampla das forças que impulsionam as mudanças na indústria automóvel global, com implicações tanto para os players estabelecidos como para os emergentes. Em última análise, este trabalho serve como um valioso estudo de caso sobre a estratégia empresarial internacional no setor dos carros elétricos, que está a evoluir rapidamente.

Palavras-chave:

Expansão Internacional; Mercado Automóvel Europeu; Estratégia Automóvel; Estratégia de Entrada no Mercado

JEL Classification System:

M16: International Business Administration

L62: Automobiles; Other Transportation Equipment

Abstract

This paper explores the international expansion of BYD, a leading Chinese electric vehicle (EV) manufacturer, into the European automotive market. As electric mobility gains momentum globally, Europe represents a significant opportunity and challenge for new entrants like BYD. The thesis investigates the current state of the European automotive industry, characterized by high barriers to entry and dominance by established brands, while emphasising the pivotal role of electric vehicles in shaping a new competitive landscape.

BYD's growth strategy, rooted in its use of labour-intensive manufacturing, cutting-edge battery technology, and competitive pricing, is examined in detail. Additionally, a consumer survey provides insights into European consumer perceptions of Chinese brands and electric vehicles, highlighting key factors such as safety standards, brand recognition, and the challenges of overcoming cultural biases.

The findings contribute to a broader understanding of the forces driving change in the global automotive industry, with implications for both established and emerging players. Ultimately, this work serves as a valuable case study on international business strategy within the rapidly evolving EV sector.

Keywords:

International Expansion; European Automotive Market; Automotive Strategy; Market Entry Strategy.

JEL Classification System:

M16: International Business Administration

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1. The Case Study

1.1. Introduction

Since their emergence, vehicles have rapidly become one of the preferred means of transport and are now vital in society for their convenience, cost, and necessity of use. Due to the sheer size of its dispersal, the automotive sector has a great impact on the development and economies of various countries, as it is projected that revenue from passenger cars alone will reach €1,818 bn in 2024 (Statista, 2023). Being a necessity to modern society and so influential in the world's economy, the private car is here to stay. However, it faces a big challenge - carbon emissions. In 2020, 3 billion tons of CO₂ were released into the atmosphere by passenger cars alone (Statista, 2021), and therefore the transition away from traditional combustion engines is of top priority for car manufacturers and countries.

In Europe, despite other emerging alternatives like biodiesel and hydrogen, the preferred medium-term solution to undertake this challenge is the electric vehicle (EV) due to the current and expected advances in the technology. When it comes to EVs, China is the world leader in production, accounting for 51% of worldwide production. With the right strategy and support from the government, Chinese companies have managed to enter forcefully into the electric automotive industry and accumulate advanced technological capabilities in several technological fields (Altenburg et al., 2022).

The chosen approach to perform this study is a pedagogical case study, due to the relevant case of BYD, a market leader in his own country, China and that is currently expanding internationally, namely to the world's 3rd biggest car market - Europe. With an history of making use of qualified engineers and the large inexpensive Chinese labour to turn a conventionally capital-intensive business model into a labour intensive one, thus making it cost effective, BYD has managed to grow exponentially since its foundation in 1995 and turn into one of China's biggest companies.

Although BYD is a large group present in a wide variety of industries, the vast majority of them are somehow connected by technology, semiconductors, and batteries. The subjects approached in this case focus on their passenger electric vehicle (EV) business, and if they have what is needed to succeed in the European market.

Europe's car industry is well settled with given proof and home to some of the worlds most renowned automakers, that cover almost the entirety of brands a European customer could think of when asked, or most importantly, when buying a new car. This creates a sector that is hard for new players to break in, with large barriers to entry. However, we've seen that electric

vehicles are shaping a new era in the automotive industry and already permitted the emergence of new players in Europe in the EV space – namely Tesla, which has done it very successfully in a short period of time. This creates a breakthrough precedent that other brands can capitalize on as consumers might look for real alternative products in the EV sector, instead of the traditional European offering.

As such, this project is divided into four main parts: the first part, where the case study context provides an analysis on current state of the European automotive industry from a manufacturer and consumer perspective and how economic, societal, and political factors influence the choices made by each of the parts. The second, consists of an extensive overview of BYD as a company, their products and what might separate them from their competitors. Thirdly, the presentation of a survey and its findings, performed for the enrichment of this research. Lastly, various approaches are delineated for applying the attained knowledge, accompanied by their optimal resolution which are supported by the literature review, where the main research findings are consolidated to fit the goal of the pedagogical case study.

1.1.1. Motivation

As an avid enthusiast of automobiles, cars have always held a special place in my heart. I consider myself what is called a “car guy”, being a major hobby of mine and to which I’ve dedicated countless hours. For that reason, I decided to merge this passion with my academic work and as a management student, I took an interest in understanding and analysing the complex process of internationalisation of an automotive maker, and all areas that it encompasses.

Besides this, investigating and trying to reach a conclusion towards their success in this new market is rather important as BYD is one the first Chinese brands that we see making a big move under its own name into Europe. The analysis of this expansion so early on its roots, I consider it of great relevance and contribution as it provides holistic view which EV manufacturers can resort for business decision-making and European car dealers to know about customer buying behaviour and preferences regarding this particular brand, but also Chinese EV’s in general.

1.1.2. The problem

The European automotive industry has a long history, dating back to the late 19th century. It has since evolved into one of the largest and most influential industries in the world. The region has been a hub for innovation, with several iconic brands originating from here, and in addition to traditional automakers, the European automotive market also consists of suppliers, dealerships, and other stakeholders. These entities contribute to the overall growth and development of the industry through time with a robust ecosystem that remains vibrant and competitive.

Driven by a variety of factors including customer preferences, market trends and underlying macroeconomic factors, by 2024, a revenue of €402.8bn (Passenger Cars - Europe | Statista Market Forecast, n.d.) is expected on this sector alone. The truth is that in Europe, more people own a car now than ever before, and this growth has been accompanied by shifting customer preferences towards more environmentally friendly and fuel-efficient vehicles.

The multibillion industry is a fierce and highly competitive as Europe is one of the continents that has an outstanding offer in terms of passenger vehicles. Take Germany, home of BMW, Mercedes, Volkswagen, and Opel; France, with Peugeot, Renault, and Citroën; and Italy, homeland of the exotic car brands Ferrari and Lamborghini with Fiat and Alfa Romeo as well. The mentioned are manufacturers with a long history and proven track record of developing cars to the highest standards of technology, safety, and performance. What this means is that for decades, the industry has been established and but also stagnant in terms of new players.

This was until, most recently, with Tesla, that went from an almost bankrupt company to the first big pusher of EV's worldwide. But Tesla is not alone, and on the horizon of Europe's car landscape, multiple new offerings that represent innovative competition are arising. Namely, Google, currently working on the Waymo, a fully autonomous vehicle but that will use, at least as of now, already introduced production models from Jaguar; SAIC, a Chinese car brand but that is coming to Europe under the brand MG; and Geely, which merged in 2021 with Volvo and will reach the European customers as well.

Against this background, it seems relevant to take a look at the magnitude of factors that affect the success of these manufacturers that are establishing their way into the market and, the particularity of BYD, which is more controversial since “(...) no Chinese company has yet manage to sell large numbers of cars in Europe under its own brand name” (Clausen & Olteanu, 2021, p. 6). Expanding under its own name is a bold strategy that even the previously mentioned

SAIC and Geely brands are not currently attempting. As such, it becomes relevant to study what it could mean to BYD and to the industry as a whole.

1.2. Market Analysis

1.2.1. Overview of the European automotive market, including conventional and electric vehicles

The first European car brands emerged in the late 19th and early 20th centuries, coinciding with the beginnings of the automotive industry. Pioneering companies such as Benz & Cie, founded by Karl Benz in Germany in 1883, and Peugeot, established by Armand Peugeot in France in 1889, stand out as the first car manufacturers in Europe. These companies were followed by other emblematic brands, such as Renault, Fiat and Opel, which quickly gained prominence on the European automotive scene.

From these humble beginnings, the old continent has emerged as one of the main centres of the automotive industry, massively contributing to the development and innovation of the sector over the years. Currently, the EU auto industry's is a crucial part of EU's economy representing 7% of the EU's total GDP ('Facts about the Automobile Industry', 2023) exporting more than what it imports with a trade surplus of €102 billion, employing almost 13 million and having raised significant revenues to governments in 2022 from vehicle sales and ownership ('The Automobile Industry Pocket Guide 2023/2024', 2023).

Following the 2008 financial crisis years, both the production and registration of vehicles were steadily growing, indicating a healthy path to the further expansion of the sector as a whole. This was until the COVID-19 crisis, which had a massive impact in the world's economy, which the automotive industry was not exempt and is still recovering since 2022, the turnaround year that turned back the trajectory into an ascending one.

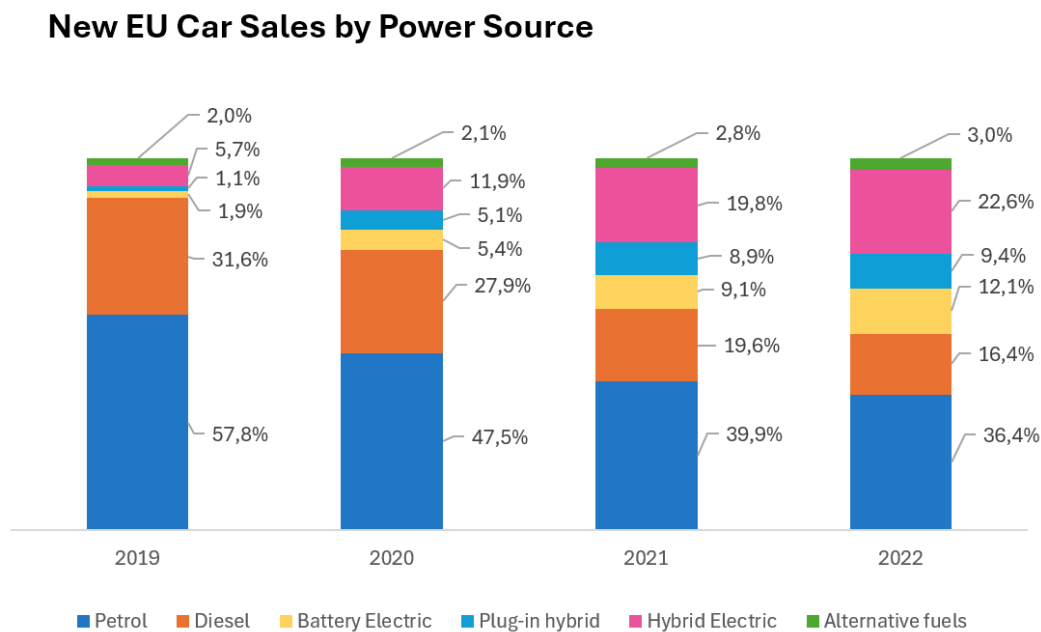
1.2.2. Electric vehicle growth in Europe

Europe's automotive industry is experiencing a significant transition towards sustainability, marked by a widespread embracing of electric vehicles as the preferred solution. This is driven by a multitude of factors, including environmental concerns, consumer demand, and government initiatives to accelerate the transition.

According to the European Automobile Manufacturers' Association (2023), currently only 1.5% of all cars on EU roads are currently electrically chargeable, which is a very small

percentage as of current time. However, when looking at new car sales by their power source throughout the last years, it's clear that the landscape is changing. Reducing is the share of petrol and diesel vehicles which dominated for the last decades in Europe and in its place, the growth of vehicles powered by batteries. In 2019, petrol and diesel vehicles sales combined accounted for 89.4% and every year after that the share has been decreasing until the 52.8% registered in 2022. Meanwhile, in the space of four years, fully electric vehicles sales have increased sixfold.

Figure 1: “New EU Car Sales by Power Source”



Source: ‘The Automobile Industry Pocket Guide 2023/2024’, 2023

1.2.3. Factors pushing this growth

Legislation and governments

Transport is currently responsible for one quarter of all greenhouse gas emissions in the EU, and road transport alone represents 70% of that amount. Hence, behind this accelerated change in the automotive industry is EU's long-term strategy to make Europe climate-neutral by 2050, known as the ‘European Green Deal’. To accomplish this, Executive Vice-President of the European Commission stated: “the direction of travel is clear: in 2035, new cars and vans must have zero emissions. The new rules on CO2-emissions from cars and vans are a key part of the European Green Deal and will be a big contribution to our target of being climate neutral by 2050” (Timmermans, 2023).

Beyond this overarching directive, a multitude of legislative instruments are at play, each contributing to the growth of the electric vehicle market in Europe. One such instrument is the vehicle emission standards set by the EU, known as the Euro standards. These standards impose increasingly strict limits on pollutant emissions from vehicles, compelling automakers to invest in electric and hybrid technologies to be able to comply with regulations. The Euro 7, planned to be put into action in July 2025, imposes strict limits regarding emissions for internal combustion vehicles and introduces limits on non-exhaust particulate emissions, particularly from tyres and brakes as well as new lifecycle requirements for EV's, setting mandatory limits on battery degradation for both electric and hybrid vehicles.

Furthermore, Europe has in place two main carbon pricing mechanisms: the EU Emissions Trading System (ETS), in which companies have allowances for the maximum amount of emissions they can emit, with that number being reduced over the years; and carbon taxes, which directly attach a cost to emissions released. Although both are still far from optimized and still struggle to address issues like carbon leakage (Barnes, 2021), as these systems continue to be developed and improved, their impact will increase and put increasing pressure in the overall industry that can either internalize the environmental costs of pollution or change into emissions-free alternatives.

Tax incentives, rebates, exemptions from road taxes and congestion charges as well as the increasing establishment of zero-emission zones and low-emission zones in cities to restrict access to combustion engine vehicles are all measures that are being implemented across the member states.

As described, legislation carries a big responsibility in this transformation, but it must also support it. To keep up with the EV surge, "EU's infrastructure framework needs to prioritise electric charging and be in line with the increasing demand for public and private charge points" (Mathieu, 2020). According to EY's report (Simpson et al., 2023) on the scaling of public EV charging stations, governments are one of the most important actors in the EV ecosystem and should be a key partner in the infrastructure growth through access to major financial support mechanisms and to enabling faster infrastructure development, e.g., quicker planning for grid connections.

As a response, AFIR - Europe's public charging infrastructure law was put in place and set to be fully enforceable across all EU member states starting from April 2024 with two main objectives: first, to install at least one fast-charging station every 60 km's both directions in

Europe's core network of highways and significant national roads by 2030; second, the introduction of the mandatory 'fleet-based' targets, in which each EU member state is required to expand its national public charging infrastructure in proportion to the number of electric vehicles (EVs) registered within its jurisdiction (*European Green Deal: Ambitious New Law Agreed to Deploy Sufficient Alternative Fuels Infrastructure*, 2023). According to European Federation for Transport and Environment (2024), "the overall conclusion is that while the EU is moving in the right direction regarding public charging infrastructure, capacity needs to quadruple in the next six years" and that governments should prioritise public funding towards the establishment of a minimum basic network coverage for charging infrastructure, primarily addressing market failures, namely areas where charging infrastructure is lacking, to ensure a seamless network.

Customer pressure and preference change

It becomes relevant to comprehend what motivates customers when it comes to buying EV's, as without public acceptance and adoption, the transition would be nearly impossible. That said, the major influencing factors for consumers are:

- 1) Ownership and operation costs of EV's compared to traditional ICE's: with the overall conclusion that, while the high initial cost of EVs is commonly cited as a barrier to adoption, the perceived lower operational costs serve as an incentive for EV adoption (Rezvani et al., 2015).

The first barrier, as previously mentioned, can be partially alleviated by policy makers utilizing different financial incentives and demonstrated to have a positive influence on the intention to adopt electric vehicles (Brückmann & Bernauer, 2020). Regarding running costs, the high fuel prices practiced in Europe (when compared to USA, for example, which are significantly cheaper) boost EV's popularity as well as the lower maintenance when compared to ICE's.

Nevertheless, despite the previous, EV's are still regarded as a pricier choice than an equivalent ICE in Europe. With price being one of the main predictors on EV purchase (Degirmenci & Breitner, 2017), Cecere et al. (2018) shows that price reduction is the most important trigger for the adoption of electric vehicles, exerting a greater influence than other factors in transitioning consumers from non-intention to intention to purchase an electric vehicle.

- 2) Confidence in battery range and recharging infrastructure: as significant indicators influencing electric vehicle (EV) adoption (Tiwari et al., 2020). In Featherman et al.,

(2021, p.13) consumers “expressed strong anticipated frustration (psychological risk) related to the prospect of wasting time looking for, traveling to, and using public charging stations”.

- 3) The symbolic choice: as cars not only fulfil transportation needs but also serve as symbols for constructing and expressing identity, the choice of an EV can reflect an individual's convictions. The pro-environmental behaviour has been identified as a motivator for the adoption of electric vehicles (EVs), driven by consumers' attitudes, values, and beliefs (Nayum & Thøgersen, 2022). As EVs are usually perceived as the most eco-friendly form of road transport, they can influence potential buyers to acquire them as a representation of the beliefs and ideas they defend (Degirmenci & Breitner, 2017).

The dispute for the EV market

The last quarter of 2023 was a turning point in the automotive industry, it was the first time that one company was able to sell more EV's than Tesla, the number one manufacturer until then. That company was no less than BYD.

This gives two important takeaways: the first is the actual confirmation that the expansion of BYD is to be taken seriously if it is surpassing Tesla's numbers; the second is that European manufacturers, that once dominated the automotive market, are not the ones at the front of this battle and are trying to catch up with it instead.

It is concerning that European brands are being overtaken by two companies that didn't exist two decades ago. Luca de Meo, Renault's CEO, starts his open letter to Europe with the following: “a pillar of the European economy, the automotive industry is facing an onslaught of electric vehicles from China” and there is an imbalance in international competition which is defined by “industry incentives in the US, strategic planning in China, and new regulations in Europe” (de Meo, 2024). According to him, a typical C-segment car produced in China has a 25% cost advantage compared to an equivalent European model. This is corroborated by Carlos Tavares, CEO of the Stellantis group (which includes 14 brands, such as Peugeot, Citroën, Fiat, Opel, Jeep, and Alfa Romeo, among others), that claims the cost advantage to be around 30%.

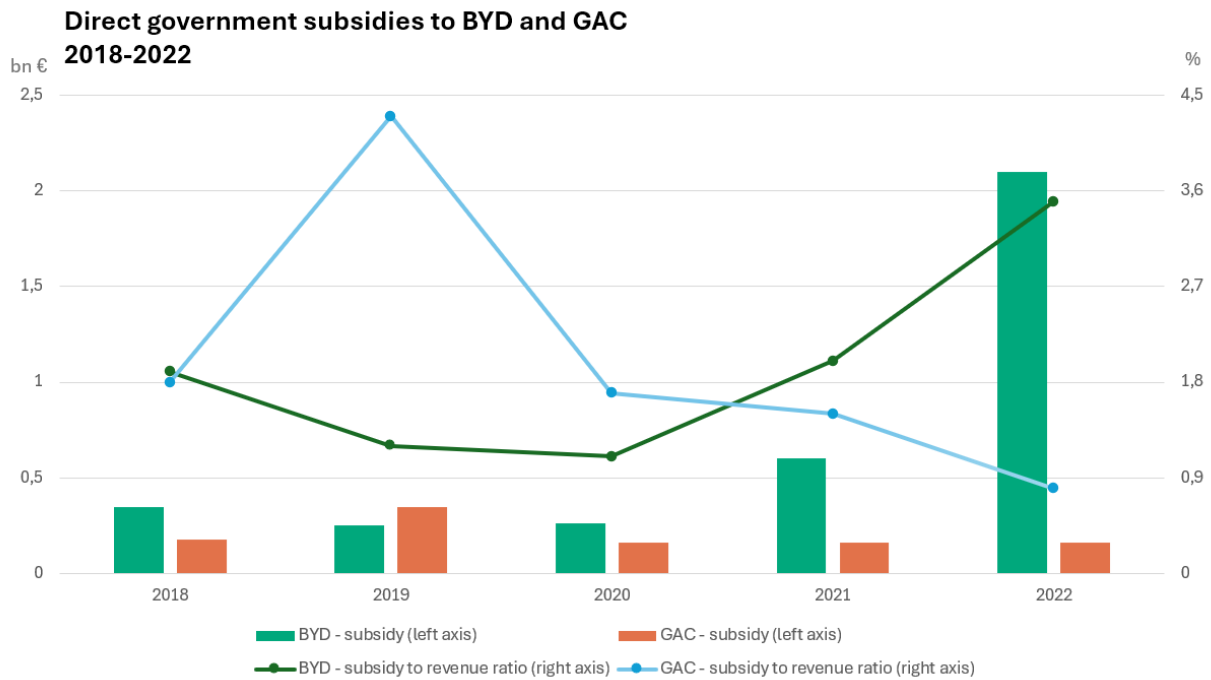
Europe's heavy regulations and the tight standards it aims to reach, like the 2035 zero CO2 emissions, are a complicated equation. In one hand, they try to achieve their goal of making Europe the leader in environmental protection, to make an impact on a global level while

influencing others to follow. On the other hand, that comes at a cost as the regulations and objectives are constricting the industry forcing it to have to meet the increasingly strict criteria. To be able to do so, European manufacturers are expensing huge costs which ultimately are passed to their vehicle's prices, further making them less cost competitive than the Chinese counterparts. As an example, Oliver Blume, CEO of the VW Group, has been forced to ask EU regulators to revise emissions targets that are set to kick in from 2025 which stipulate a fine of 95 euros for each vehicle registered in the European Union if the overall brand fails to meet the its established CO2 targets (Raymunt, 2024), as these terms are not realistically achievable in relation to the current scenario for the European automakers.

In short, Europe regulates, and manufacturers have to obey to it. In China and the US, the story is different, the auto industry is less regulated and also more subsidized. The European Commission is aware of this and is currently investigating the subsidisation of EV's being imported from China. While the investigation is still ongoing, the "available evidence at this stage tends to show that the exports of the product concerned are benefiting from countervailable subsidies" (Commission Implementing Regulation (EU) 2024/785 of 5 March 2024 Making Imports of New Battery Electric Vehicles Designed for the Transport of Persons Originating in the People's Republic of China Subject to Registration, 2024) and each of these vehicles might be charged with retroactive import tariffs at the end of the investigation due to unfair competition.

This is in line with Kiel Institute's study (Bickenbach et al., 2024), that estimate direct incentives BYD received from the Chinese government amounted to at least €3.4 billion, having raised from around €220 million in 2020 to €2.1 billion in 2022.

Figure 2: Graph “Direct government subsidies to BYD and GAC



Source: Bickenbach et al., 2024

To protect themselves from these potential entry barriers in the future, BYD is already set to build a factory in Hungary (BYD, 2023), planned to be fully operational in 2027.

To conclude, the balance between the environmental goals of Europe and the health of its automotive industry is difficult to achieve and one that might put Europe in a very risky position. According to the European Court of Auditors (2024), emission targets are not being reached, batteries produced in Europe continue to cost much more than predicted and there is an over reliance on external raw material imports from third countries, lacking appropriate trade agreements, issue that is aggravated when considering the social and environmental conditions under which those raw materials are mined. These are all factors that could jeopardize Europe’s leadership. “The risk is that the “e-car revolution” in Europe will rely on imports and ultimately be detrimental to the European car industry and its more than 3 million manufacturing jobs” (Zeroing in on Zero Emissions – A Sharp Bend Ahead, 2024), underscoring the pressing need for regulators to address these issues proactively.

1.3. Company Overview

1.3.1. Business background & Overview

Founded in 1995, BYD (Build Your Dreams) Company Limited is a fast-growing automotive company, focused on the electric vehicle market. Headquartered in Shenzhen, China, the company has 30 industrial parks across the continents, namely in China, the United States, Canada, Japan, Brazil, Hungary, and India.

The company didn't start as an EV manufacturer. In fact, in 1995, BYD started out by producing rechargeable nickel-cadmium batteries (Kasperk et al., 2011) and in 1997, started producing lithium-ion batteries quickly becoming the main supplier of Motorola in 2000 and Nokia in 2002 (Clausen & Olteanu, 2021). Seeing potential in the automotive industry, the company bought Tsinchuan Automobile Company Limited, a move aimed at securing a license for automotive production, which resulted in the founding of BYD Auto in 2003 (About BYD-BYD, n.d.). Despite being newcomers to the automotive sector, BYD demonstrated remarkable adaptability and rapid learning capabilities. Only two years later, by 2005, the company commenced production of the 'BYD F3', a luxury sedan. Notably, in 2006, BYD achieved a very important milestone with the successful production of a prototype for the 'F3e', featuring a cutting-edge lithium iron phosphate (LFP) battery. The car never made it into production, however, it set the beginning root of BYD's use of the LFP architecture, that the company still uses to this day. Subsequently, BYD swiftly expanded its global footprint, establishing factories and branches in various countries along the years.

The root years of BYD coincide with the China's 8th and 9th Five-Year Plan, in which the Chinese government started promoting research and development for important electric car technologies (Tyfield et al., 2015). Clausen and Olteanu (2021) citing Sun (2012) state "the Chinese government had recognised that the Chinese automotive industry could not keep up with the competition from abroad, which was focused on combustion technology. By changing to electric propulsion, the government saw a chance to reduce this gap in know-how and, if possible, even to turn it into a lead by leapfrogging". The long term-policy to push towards electrification of vehicles in China was done through a series of purchase incentives, significant investments in the charging infrastructures and in some Chinese cities, conceding electric cars special advantages as being exempt from automotive registration restrictions, which are a major issue in the country (Müller & Müller, 2018). These factors combined uplifted the Chinese EV

market through which BYD benefited and was able to quickly grow into one of the biggest electric cars manufacturers in the world.

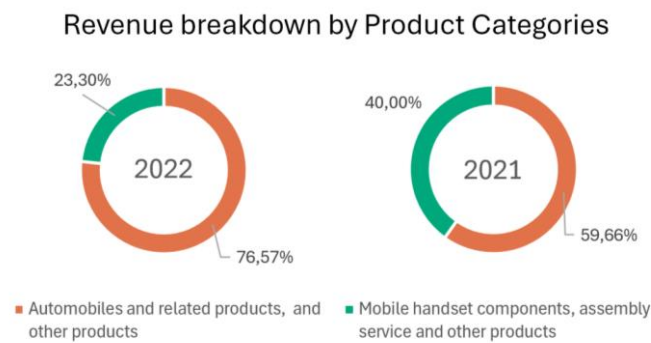
The group, besides passenger vehicles, also has multiple other subsidiaries that offer an extensive lineup of commercial electric vehicles, including city buses, coaches, taxis, sanitation vehicles, and specialized vehicles for construction purposes. This encompasses a variety of applications such as electric forklifts for warehousing, as well as electric vehicles tailored for port, airport, and mining operations. Besides its automotive offer, the group is also a player in: rail transit market; production of consumer electronics, such as mobile phones, tablets, and other electronic devices and the development and manufacturing of rechargeable batteries, energy storage systems, and solar products.

It's important to mention the group's product portfolio as it reflects its commitment to providing solutions across different sectors and the accumulated knowledge that it has gained over the years in pretty much anything that is battery powered related. As a result, BYD is greatly benefited as all the know-how greatly impacts the company as it gives it an important advantage in the EV consumer market.

BYD's business model is an atypical one in the car industry, both the very pronounced vertical integration and the way their production is organized. Instead of a highly robotized assembly line, that represents a very high cost for companies, "the founder of BYD, Mr. Wang Chuanfu, reinvented the manufacturing process by replacing machinery with manpower wherever feasible to obtain lower costs" (Kasperk et al., 2011, p. 10) and "broke every job down into basic tasks and applied strict testing protocols" (Aldeguer, 2010, p. 9). This leads to a very high rate of employment. To put it into perspective, BYD has a turnover of 59.67 billion dollars with 570,000 employees (BYD, 2023) while Tesla has a turnover of 81.46 billion dollars with only 127,855 employees (Tesla, 2023). It is arguable that this approach only works in countries with cheap labour, like China, but in the era of globalization, has been a great advantage that BYD successfully implemented.

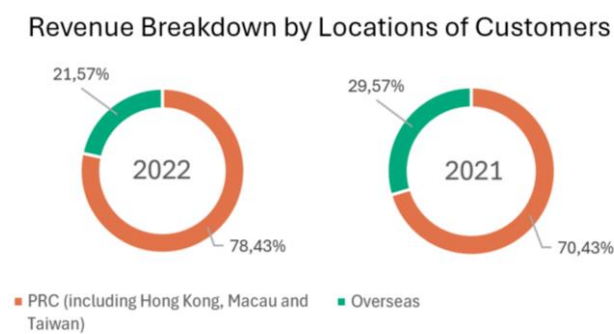
In FY2022, automobile revenue accounted for 76.57% of the company's revenue-reporting 58 billion \$ (BYD, 2023, p. 360). In the prior FY, it accounted for only 59.66%, which shows a fast-paced growth of this segment. As for the geographical distribution of revenues, BYD is still very reliant on the Chinese internal market, accounting for 78.43% of FY2022 revenues, with the remaining 21.57% revenue located overseas.

Figure 3: “Revenue breakdown by Product Categories” chart



Source: BYD, 2023, p. 30

Figure 4: “Revenue breakdown by Location of Customers” chart



Source: BYD, 2023, p. 30

Unlike many other car brands, BYD is known for having the expertise in developing and manufacturing its own lithium-ion batteries for its electric vehicles. BYD vehicles typically use lithium iron phosphate (LiFePO₄) batteries, a type of lithium-ion battery chemistry known for its safety, long cycle life, and thermal stability. In addition, the company's focus on vertical integration allows it to control the entire process of battery development and production, from the raw materials to a finished battery pack.

1.3.2. BYD's Product Range

Blade Battery

In the fast-changing environment of electric vehicles (EVs), BYD's Blade Battery introduced an alternative method for energy storage.

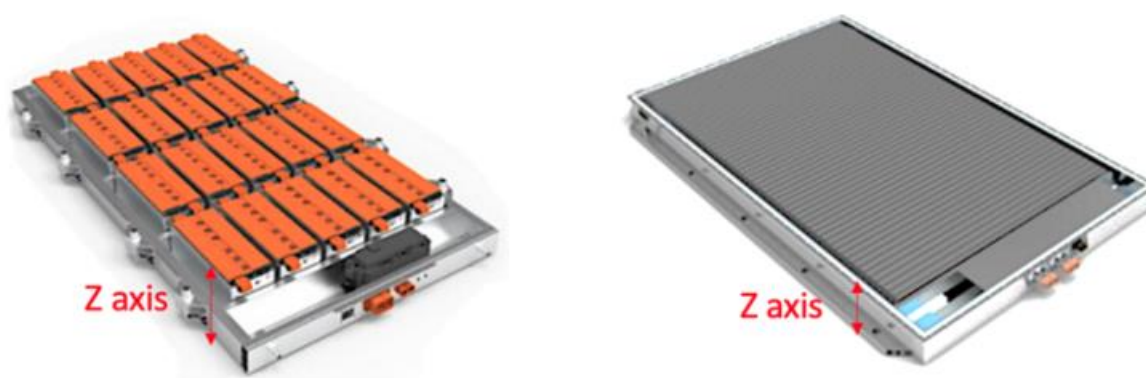
The Blade Battery uses a lithium iron phosphate (LFP) construction, which is renowned for having a lesser environmental impact than the typical nickel-cobalt-manganese (NMC) or

nickel-cobalt-aluminum (NCA) formulations used by the majority of EV manufacturers. This is because iron and phosphate, the key components of LFP batteries, are more abundant and widely available compared to the cobalt and nickel used in NMC or NMA batteries. Cobalt, in particular, has faced scrutiny due to concerns about human rights abuses in its mining and refining processes, and it is relatively scarce compared to iron and phosphate. Recycling LFP batteries is easier at the end of their life cycle as well, making them more eco-friendly, and lowering production costs.

Nonetheless, LFP batteries carry one major drawback, which is being far less energy dense than regular NMC or NCA batteries. In practical terms, this means that the same size LFP battery holds less energy than an NMC/ NCA battery of the same dimensions. However, this is where Blade's Battery innovative design tackles this constraint, since unlike traditional EV batteries, which use a prismatic or pouch cell arrangement, the Blade Battery has a unique design approach to the prismatic cell construction merging each individual cell into a gigantic blade and packing them as a rack, making it a very space-efficient way to design a battery.

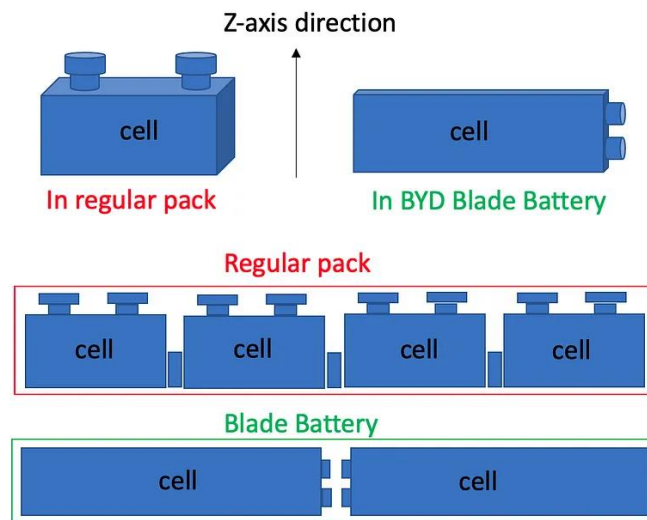
Below can be seen the typical battery pack composed by various individual modules that contain the battery cells inside them versus Blade Battery's cell-to-pack technology, in which the battery packs are assembled directly from the cells without the need of module.

Figure 5: Comparison of the overall construction between conventional battery pack and BYD Blade Battery pack



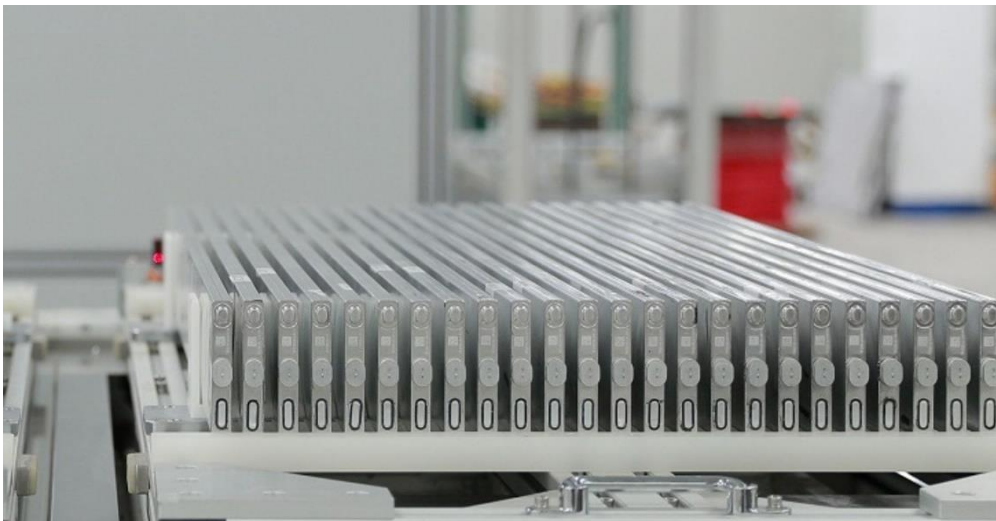
Source: Meng & Zheng, 2020

Figure 6: Comparison of the design in Z-axis between conventional battery pack and BYD Blade Battery pack



Source: Meng & Zheng, 2020

Figure 7: BYD Blade Battery pack



Source: Sanchez, 2023

By doing this, BYD has been able to significantly increase the energy density of their entire battery pack, which has a 50% higher energy density than an identical cylindrical LFP pack and thus offsetting the problem of energy density.

Battery safety has been a priority in the development of electric cars, and BYD has managed this with sophisticated safety measures in the Blade Battery's construction. The Blade Battery reduces the possibility of thermal runaway, which is a major worry with lithium-ion batteries,

by making use of the prismatic cell structure. Furthermore, temperature management features and BYD's patented Battery Management System (BMS) maintain ideal working conditions, boosting the Blade Battery's safety profile. This ultimately results in a battery pack that can be punctured and does not catch on fire or surpasses temperatures of 60° celsius (*BYD's revolutionary Blade Battery*, 2023).

The strength of the blade-like cell arrangement reduces the chance of internal short circuits, lowering the risk of early battery failure. As a result, the Blade Battery has a longer operating life, in an effort to address a known barrier to broad adoption of electric vehicles: the lifespan and durability of the energy storage system.

BYD Atto 3

The Atto 3 is one of the most important models BYD offers as it competes in the C-SUV segment, a highly sought after and increasingly growing segment in Europe. Boosting 204 HP/150 kW that makes it go from 0 to 100 km/h in 7.3s and a limited top speed of 160 km/h. Perhaps more important than its performance numbers, are its efficiency specs: The Atto 3 has a WLTP Combined Cycle range of 420 km (*BYD ATTO 3*, n.d.). The maximum DC charging speed achievable at a high-speed public charging point is only 88 kW, which is not the fastest when compared to competitors.

Based on the e-Platform 3.0, conceived exclusively for fully electric vehicles, the Atto 3 scored a full five-star rating on EURO NCAP (European New Car Assessment Programme) crash test, with a 91 percent adult protection score, which is at the top end for its class (Euro NCAP, 2022). Other safety systems include Blind Spot Detection, Intelligent Cruise Control with Lane Keep Assist and Rear Cross-Traffic Alert and Braking System.

Figure 8: $\frac{3}{4}$ front exterior view of BYD Atto 3



Source: BYD, n.d.

Figure 9: Atto 3 front cockpit



Source: Dias, 2023

BYD Dolphin

The Dolphin model is a small family car and comes in as the entry-level offering from BYD. The model has 4 variants:

- Active: is the most basic version, has a 44,09 kWh battery boosting 95 HP/ 70 kW with a limited top speed of 150 km/h and a WLTP Combined Cycle range of 340 km.
- Boost: features the same 44,09 kWh battery, offering however 176 HP/ 130 kW and a 10 km/h increase of top speed to 160 km/h. The “Boost” introduces a multi-link rear suspension, which is superior to the torsion beam system found in the “Active” trim. Besides, every other standard equipment is the same as the latter.
- Comfort: offers a bigger 60,40 kWh battery, with 204 HP/ 150 kW which contributes to a better range of 427 km (WLTP Combined Cycle).
- Design: the top-spec variant, has the same performance fundamentals as the “Confort”, with some extra equipment.

BYD offers all the safety systems on all model variants and the Dolphin also got a full five-star rating on EURO NCAP (European New Car Assessment Programme) crash test due to the e-Platform 3.0.

Figure 10: $\frac{3}{4}$ front exterior view of BYD Dolphin



Source: BYD, n.d.

Figure 11: Dolphin front cockpit



Source: Dias, 2023

BYD Tang

BYD's 7 seater SUV is named the Tang and wants to compete with models like Tesla Model X. This 4 wheel-drive, dual motor SUV, has 517 HP/ 380 kW and a combined range of 400 km. Its design language differs from the rest of BYD's and is instead based on the 'Dragon Face', which can be seen in its more imposing front end design.

Figure 12: $\frac{3}{4}$ front exterior view of BYD Tang



Source: BYD, n.d.

Figure 13: BYD Tang interior



Source: 'BYD TANG | Caetano Tec', n.d.

BYD Han

The Han, a statement vehicle. Luxury is the word when it comes to the end goal of this car, which inserts itself into a particularly difficult market to break-in, the large executive saloon for the E segment. The car was fully developed into providing the occupants with the most comfortable and luxurious experience it can in the segment. Interior confort, a tuned intelligent

road-reading suspension system, choice of materials, high-tech, and large rear seats are what is expected of this model and it delivers.

The model is still based on the e-platform 2.0., since it was available in either a plug-in hybrid version or a fully electric one, when it was released in 2020 in its BYD's home market - China. However, for Europe, solely the full electric version is available in all-wheel-drive configuration, which provides 515 HP/ 380 kW and offers a combined range of 521 km. This choice is in line with the brand positioning BYD's pretends to have in Europe.

Figure 14: $\frac{3}{4}$ front exterior view of BYD Han



Source: BYD, n.d.

BYD Seal

BYD Seal is the company's response to the demand for automobiles with sleek design and a combination of sportiness and luxury - the mid-size executive saloon segment. Built on design language "Ocean Aesthetics" as BYD named it, it presents smooth fluid lines with an athletic style. The design is also functional as it results in a very low coefficient of air resistance, 0.219 Cd. As previously mentioned, this model also packs the Blade Battery, however this is the first model in which BYD uses the battery as part of the structure of the car, which due to its high-strength aluminium honeycomb construction, increases the car's safety and is more efficient in terms of space. A 82 kWh battery is used in both model versions:

- Design: single rear motor version with 313 HP/ 230 kW, which makes it go from 0 to 100 km/h in 5,9 seconds and a WLTP Combined Cycle range of 570 km.
- Excellence: adds an electric motor on the front axle, increasing the combined power to 530 HP/ 390 kW. This results in 3,8s in 0-100 km/h acceleration and a combined range of 520 km.

The model has a limited top speed of 180 km/h and can charge at a 150kW charge rate, which is one criteria where it stands out compared to the other models of the brand. It passes with distinction on safety testing as well (Euro NCAP, 2023). The Seal has been awarded Car of the Year of 2024, the oldest and most prestigious trophy in the automotive industry in Portugal (Santos et al., 2024).

Figure 15: $\frac{3}{4}$ front exterior view of BYD Seal



Source: BYD, n.d.

1.3.3. BYD Product comparison with competitors

When analyzing a new player in the market, it's crucial to compare its products with those of established competitors. The automotive industry is known for its fierce competition, where achieving the right balance between value offered and pricing is crucial for success.

Pricing plays a significant role in attracting customers and driving sales. Below, it is presented a comparison of BYD models with some of their closest rivals in the European market. The vehicles selected for this comparison are based on their segment and performance characteristics. The prices listed are German market prices (July 2024), as Germany is a key automotive market and provides a representative benchmark for pricing across Europe.

Figure 16: BYD product comparison

				
BYD ATTO 3	Kia Niro EV	Volvo EX40 Single Motor	Volkswagen ID.4 Pure	
Price	€37,990	€45,690	€49,990	€40,335
Battery Capacity	62.0 kWh	68.0 kWh	70.0 kWh	55.0 kWh
Range (WLTP)	420 km	463 km	479 km	364 km

				
BYD DOLPHIN 60.4 kWh	Volkswagen ID.3 Pro	Hyundai IONIQ 5 Standard Range 2WD	Citroen e-C4	
Price	€32,990	€39,995	€43,900	€36,040
Battery Capacity	62.0 kWh	62.0 kWh	58.0 kWh	50.0 kWh
Range (WLTP)	427 km	429 km	400 km	357 km

				
BYD TANG*	Audi Q8 e-tron 50 quattro	BMW iX xDrive40	Mercedes-Benz EQE SUV 350+	
Price	€71,400	€74,400	€77,300	€86,811
Battery Capacity	88.0 kWh	95.0 kWh	76.6 kWh	105.0 kWh
Range (WLTP)	400 km	491 km	425 km	628 km

*BYD Tang is the only 7-seater model as the remaining are 5-seater configuration only.



BYD HAN



BMW i5
eDrive40 Sedan



Tesla Model S
Dual Motor



Mercedes-Benz EQE
350 4MATIC

Price	€69,020	€70,200	€93,970	€74,149
Battery Capacity	88.0 kWh	84.4 kWh	100.0 kWh*	100.0 kWh
Range (WLTP)	521 km	582 km	649 km	627 km



BYD SEAL
82.5 kWh RWD
Design



Tesla Model 3
Long Range Dual
Motor



BMW i4
eDrive40



Polestar 2
Long Range Single
Motor

Price	€44,990	€50,970	€60,000	€49,975
Battery Capacity	84.0 kWh	78.1 kWh	84.0 kWh	82.0 kWh
Range (WLTP)	570 km	678 km	600 km	654 km

Source: Electric Vehicle Database, 2024

1.3.4. SWOT Analysis

BYD has captured significant market share in its home country and is increasingly making strides in international markets. However, amidst its remarkable growth, it faces a complex landscape of both opportunities and challenges. This analysis delves into the internal strengths and weaknesses of BYD, along with the external opportunities and threats it navigates as it continues to shape its future in mobility and sustainable energy.

Strengths

BYD has a competitive advantage due to its advanced knowledge of battery technology, developed through its experience in other industries such as consumer electronics and energy. This expertise gives BYD the ability to design and manufacture high-quality, high-performance batteries for its electric vehicles, guaranteeing energy efficiency, longevity and safety. In addition, BYD uses the lithium iron phosphate (LFP) architecture, which offer several advantages, including greater safety, longer life and lower cost compared to other lithium-ion

battery technologies. This architectural choice allows BYD to offer electric vehicles with more affordable prices (Gao, 2021), without compromising on performance or reliability.

BYD adopts a vertical integration approach, which means that the company controls much of its supply chain, from the R&D and manufacture of the batteries to the final assembly of vehicles. Over 70% of value creation occurs internally within the company, which is highly uncommon in an industry where usually over two-thirds of value creation stems from external suppliers (Clausen & Olteanu, 2021). This integration allows BYD to optimise operational efficiency and reduce production costs. The fact that the company operates in countries with relatively low labor costs, helps to reduce production costs, thus maintaining a competitive advantage.

Due to these factors, BYD can offer electric vehicles at more affordable prices compared to other cars in the same class. This price advantage makes BYD's products attractive to a wider segment of consumers.

Weaknesses

BYD faces challenges due to a lack of brand recognition in international markets, where consumers might be more familiar with traditional car manufacturers or already more established electric vehicle brands. This could make it difficult to get access to global markets (namely Europe) and requires significant investment in marketing and brand awareness to increase public interest and acceptance of BYD's products. In some markets, there might still be a stigma associated with Chinese products in terms of quality, reliability, and safety.

In some cases, BYD has faced quality issues (Cheng et al., 2024), which can affect its reputation and consumer confidence. Issues such as battery failures, safety problems or manufacturing defects can result in additional warranty costs, lost sales and damage to the brand's image. Ensuring consistent quality standards is essential to mitigating these risks and maintaining customer confidence.

Opportunities

Due to increased environmental awareness and stricter regulations on carbon emissions, the electric vehicle market is growing, offering significant opportunities for BYD (Aldeguer, 2010).

BYD can explore opportunities for collaboration through joint ventures and strategic partnerships with other automotive companies, battery manufacturers, technology companies

and even local governments. These partnerships can facilitate access to new markets, complementary technologies, additional resources and expanded distribution channels. In addition, joint ventures can help share development costs, mitigate risks and accelerate innovation, allowing BYD to position itself more competitively in the global electric vehicle market.

Threats

BYD's Chinese origin may expose the company to unfavorable legislation and regulations in some of Europe's international markets. In certain cases, laws and taxes may be put in place to protect the interests of European or other regional car manufacturers by creating additional obstacles for BYD vehicles. These measures may include higher import taxes, licensing restrictions or preferential subsidies for vehicles from local brands, which could have a negative impact on BYD's competitiveness in said markets. Also, changes in policies related to carbon emissions, energy efficiency and battery recycling can increase compliance costs and require additional investments in research and development to meet the new standards.

Growing competition in the electric vehicle market represents a significant threat to BYD. As more traditional automotive manufacturers and technology start-ups invest in electric vehicles, they may catch up in terms of technology, quality and product offering, posing a direct threat to BYD's position in the market (Gao, 2021).

Figure 17: SWOT Analysis – BYD

SWOT ANALYSIS - BYD	
Strengths	Weaknesses
2. Advanced battery technology expertise 3. Use of cost-effective LFP battery architecture 4. Vertical integration optimizing efficiency 5. Competitive pricing due to lower production costs	6. Low brand recognition in international markets 7. Stigma around Chinese product quality 8. High marketing and brand-building costs
Opportunities	Threats
9. Growing EV market driven by environmental awareness 10. Potential for strategic partnerships and joint ventures 11. Access to new markets and technologies	12. Protectionist measures favouring local brands 13. Changes in emissions and recycling policies 14. Increasing competition from established brands

Source: Author, 2024

2. Methodology

The methodology is qualitative and will take the form of an online survey, through the development of a set of previously defined questions. The motivation is due to one of the intrinsic objectives of this thesis, which is to understand the level of acceptance of the European customer in relation to Chinese electric cars, particularly the BYD brand. In doing so, it is sought to understand which factors the brand should prioritise to be successful in conquering this market, and thus define its strategy.

The survey was distributed via social networks using the Qualtrics platform and was answered by 134 respondents. The questionnaire was divided into three parts: the first, requires answering to questions that merely identify the respondent - age, gender, annual income and country of residence as these characteristics allow the results to be analysed in a more concrete and rigorous manner; the second part includes questions regarding customer opinion, openness and breakdown of potential factors that might influence the adoption of electric vehicles overall; the third part presents questions that address the previously assessed themes but in relation to Chinese vehicles and to BYD itself. The answers will be treated and analysed to formulate relevant conclusions and the correlation between the different variables as a method to explain customers' preferences.

2.1. Results from the survey

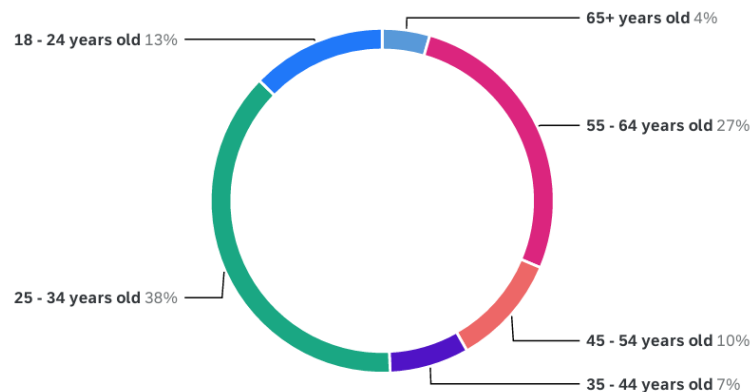
2.1.1. Consumer profile

From the 134 respondents, 91% reside in Portugal, while the remaining 9% reside in countries like the Netherlands, Spain, Poland, Switzerland and Germany. In the sample, 65% considered their annual income as 'Medium', 25% as 'Low' and the remaining 10% as 'High'.

The sample is practically split in half between male and female and the age distribution of respondents is as follows:

Figure 18: Results from the question: “What is your age?”

Age ⓘ



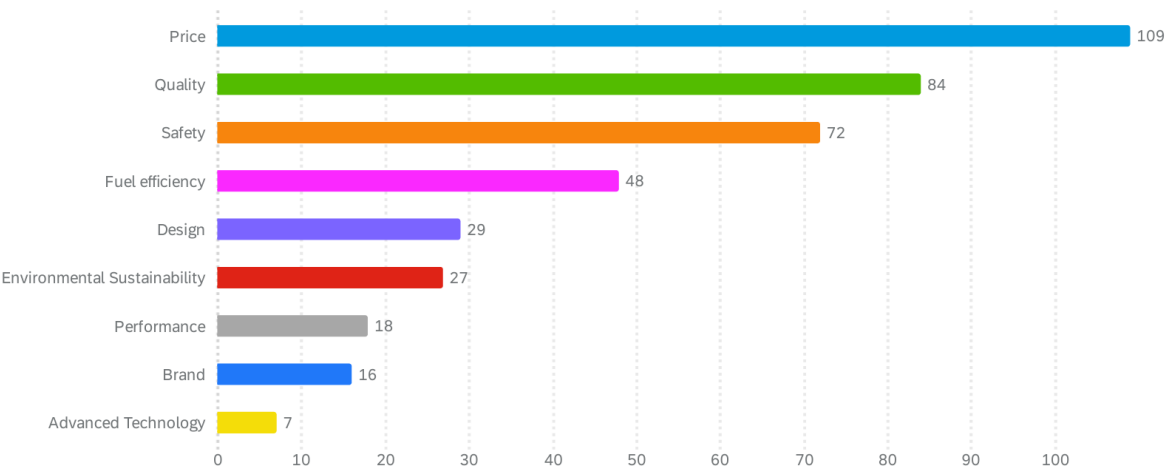
Source: Author, 2024

2.2.2. Consumer preferences and electric car adoption

The first question of the customer preferences section starts by asking what are the factors most valued by consumers when buying a car. Respondents could choose up to three options:

Figure 19: Results from the question: “What are the most important factors when choosing a car? (choose up to three options)”

What are the most important factors when choosing a car? (choose up to three options) ⓘ

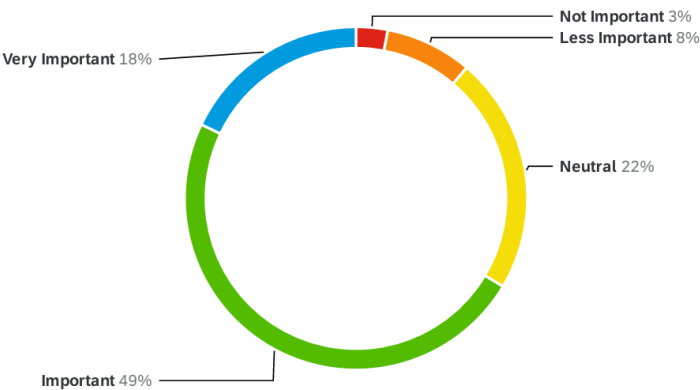


Source: Author, 2024

The second question is regarding the importance of environmental sustainability to consumers when buying a new car, since it is inherently associated with electric vehicles.

Figure 20: Results from the question: “Is environmental sustainability an important factor when buying a new car?”

Is environmental sustainability an important factor when you buy a new car? ⓘ



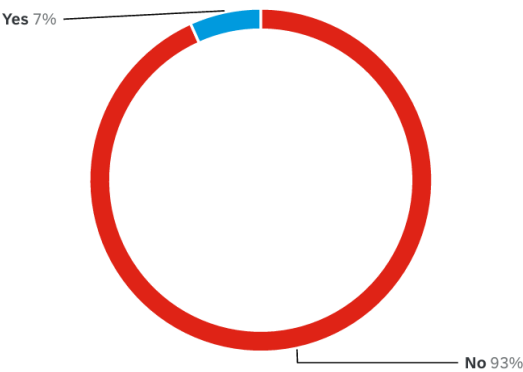
Source: Author, 2024

After, the sample was questioned which car brands which electric car brands they find most attractive and why. BMW, Audi and Tesla were the preferred ones, and the highest-ranking factors behind the choices were the reputation associated with the brand, its quality and design.

Following this, we can see below that the majority has never owned an electric car. However, the 7% who have owned one reported a high level of satisfaction, as they expressed strong interest in purchasing another electric vehicle as their next car.

Figure 21: Results from the question: “Have you bought an electric car?”

Have you bought an electric car? ⓘ

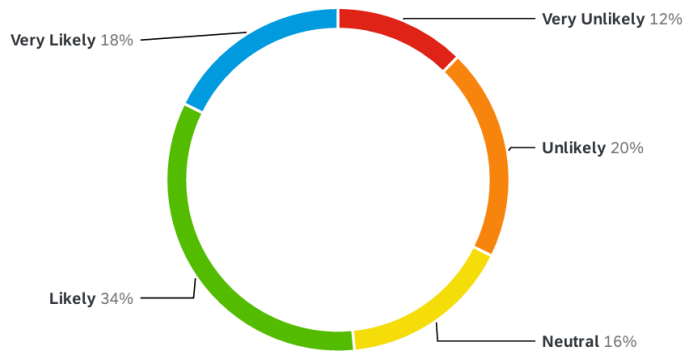


Source: Author, 2024

The whole sample was asked on the likelihood to choose an electric car when purchasing their next vehicle as well as their main concerns in doing it.

Figure 22: Results from the question: “How likely are you to buy an electric car when deciding to purchase your next car?”

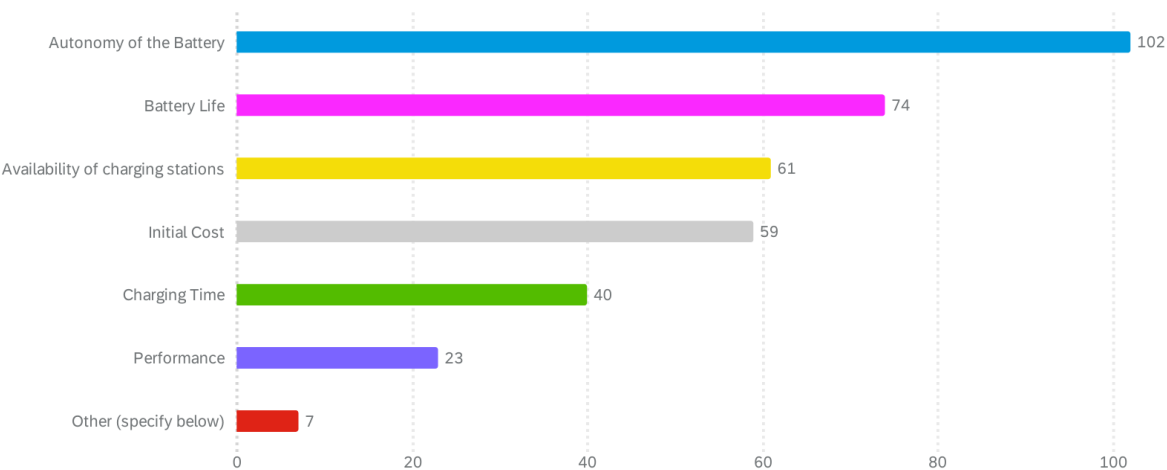
How likely are you to buy an electric car when deciding to purchase your next car? ⓘ



Source: Author, 2024

Figure 23: Results from the question: “What would be your main concerns when buying an electric car? (select up to three options)”

What would be your main concerns when buying an electric car? (select up to three options) ⓘ



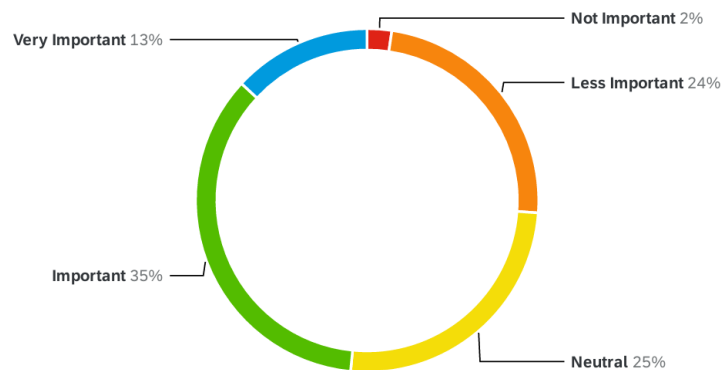
Source: Author, 2024

When it comes to test driving vehicles before purchasing them, respondents overall acknowledge the vast importance that it has and how much it influences their decision on the vehicle that they end up buying. 30% considered it ‘Very Important’ and 52% ‘Important’.

Following this, it was asked the importance of a car's origin in their purchasing decision, e.g. how much the country of manufacture is valued. The answers can be seen below:

Figure 24: Results from the question: “How important is the origin of a car in your purchasing decision?”

How important is the origin of a car in your purchasing decision? ⓘ

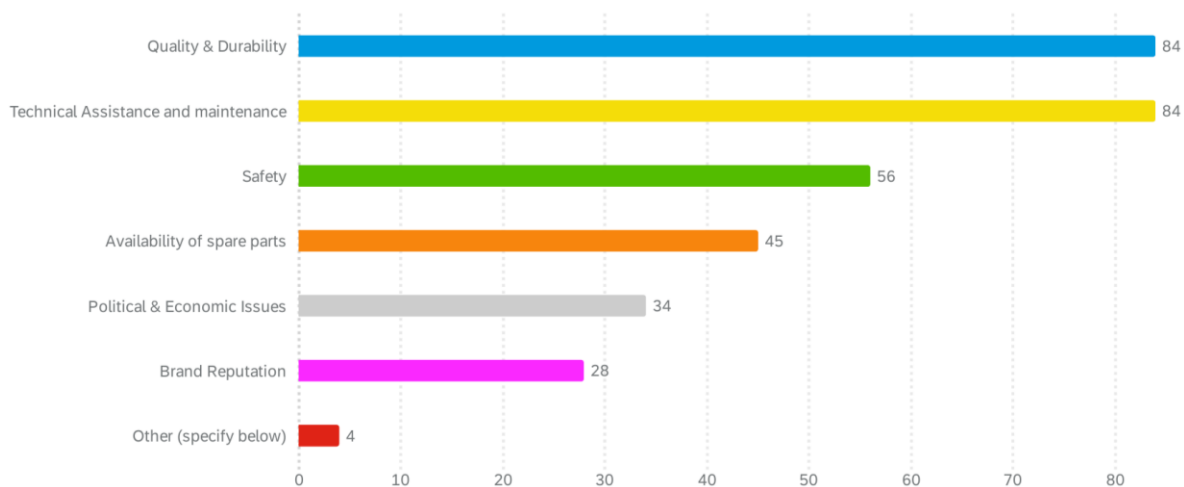


Source: Author, 2024

Then, it was sought to understand the sample willingness to buy a car that has a “Made in China” stamp on it. 57% of the sample responded ‘Yes’ and the remaining 43% would not buy a car by the fact that is Chinese. The primary reasons for hesitance in buying a Chinese car are:

Figure 25: Results from the question: “Which of these could be/ are limiting factors in buying a car from a Chinese brand? (select up to three options)”

Which of these could be/ are limiting factors in buying a car from a Chinese brand? (select up to three options) ⓘ



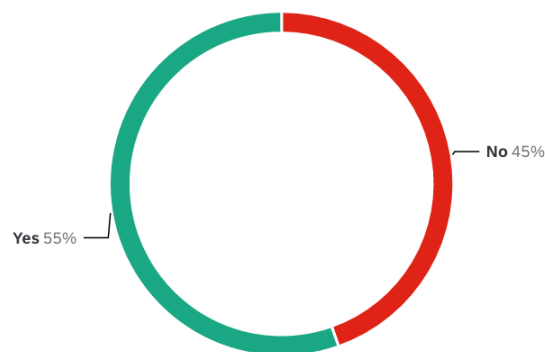
Source: Author, 2024

2.2.3. BYD recognition and perception

This group of questions is meant to understand if respondents know BYD and if so, what is their perception and expectations of the brand. The first and second questions meant to measure how many already heard of the brand and how did they first have contact with it.

Figure 26: Results from the question: “Have you ever heard of BYD brand?”

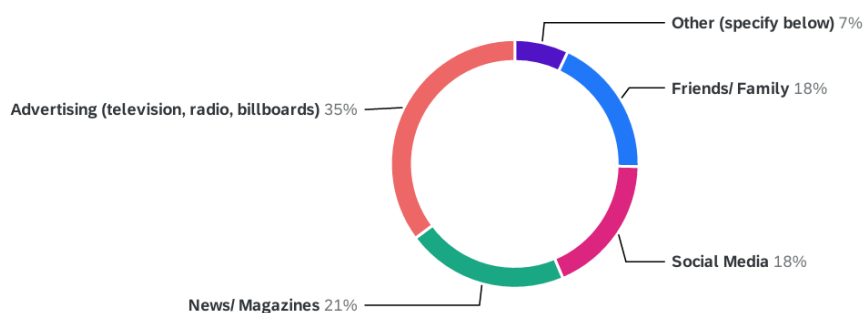
Have you ever heard of BYD car brand? ⓘ



Source: Author, 2024

Figure 27: Results from the question: “How did you first hear about BYD?”

How did you first hear about BYD? ⓘ

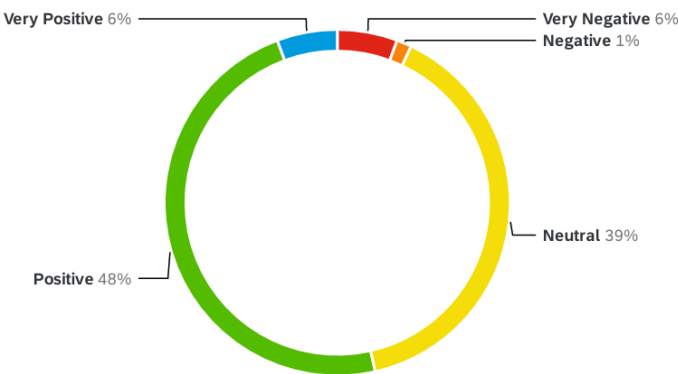


Source: Author, 2024

Furthermore, these same respondents (that knew BYD) were asked about their initial impression of the brand, from ‘Very negative’ to ‘Very Positive’. As seen below, there is already a good brand perception between the sample, but 39% still responded as Neutral.

Figure 28: Results from the question: “What is your initial impression of the BYD brand?”

What is your initial impression of the BYD brand? ⓘ

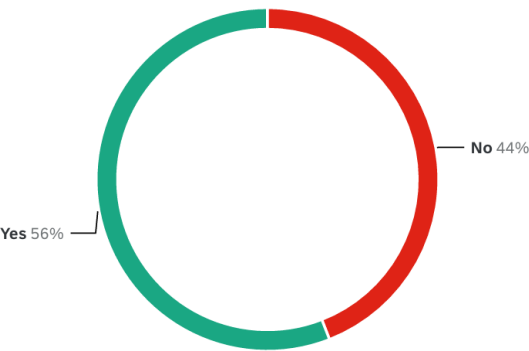


Source: Author, 2024

Afterwards, all respondents were asked if they would consider a BYD when buying an electric car. This question was made to judge if consumers are open to the brand and the question was made available to all respondents, even the ones who don’t know BYD, to assess if there is the willingness to buy a car from a manufacturer they don’t know or if that is an eliminatory factor.

Figure 29: Results from the question: “If you were considering buying an electric car, would you consider buying a BYD model?”

If you were considering buying an electric car, would you consider buying a BYD model? ⓘ



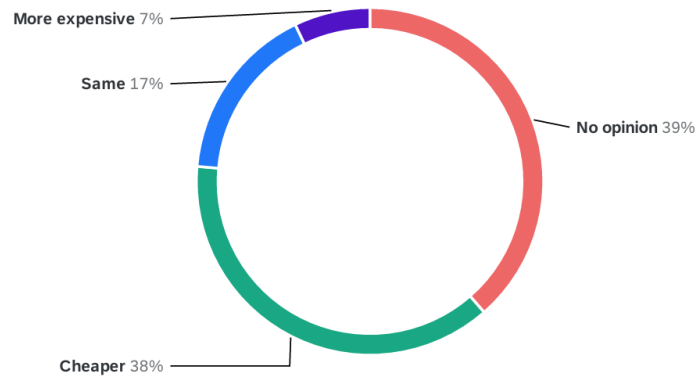
Source: Author, 2024

The influence of the 'Chinese' label is evident here: among the respondents which answered being open to buying a Chinese car, 77% would consider buying a BYD. In contrast, 71% of the respondents unwilling to purchase a Chinese car wouldn’t also buy a BYD.

Follow this, price expectations regarding the brand were questioned.

Figure 30: Results from the question: “What are your expectations for the price of BYD’s electric cars compared to other brands?”

What are your expectations for the prices of BYD's electric cars compared to other brands? ⓘ

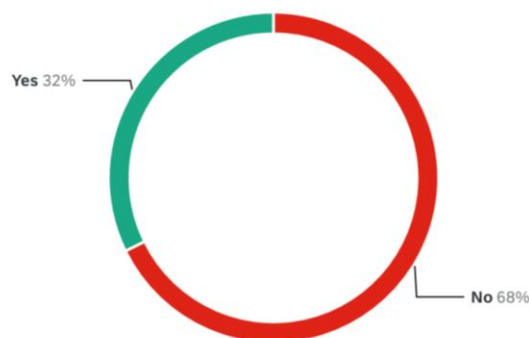


Source: Author, 2024

The last question aimed to comprehend if BYD having all European emission certifications and safety standards demanded by the EU have an impact on the consumer’s likelihood to steer away from the brand due to its Chinese roots. The results are shown in the chart below.

Figure 31: Results from the question: “Knowing that BYD car models meet all the safety and emissions requirements demanded by the European Union, would you be afraid to buy a car from a Chinese brand like BYD?”

Knowing that BYD car models meet all the safety and emissions requirements demanded by the European Union, would you be afraid to buy a car from a Chinese brand like BYD? ⓘ



Source: Author, 2024

3. Case Study Questions

To evaluate the strategic understanding and theoretical knowledge accumulated thus far, this chapter introduces a series of pertinent questions related to the core objectives of this project. These questions delve into the strategic aspects of BYD's expansion into the European market, examining the company's sales models, product diversification strategies, and the macroeconomic factors that may influence its business decisions.

Through these inquiries, the chapter aims to enrich the academic discourse surrounding international business strategy, market entry models, product innovation, and the impact of macroeconomic trends on corporate expansion.

Questions:

1. What kind of strategy is BYD following in its expansion into the European market?
2. From the sales models presented and the information given, which model is used by BYD? Do you agree that this is the best sales model for the brand? Justify.
3. Imagine that BYD aims to develop a strategy to reduce dependency on their current product lineup. Based on this goal, suggest a specific approach to achieve this objective by introducing new products that appeal to a broader audience.
4. “Meanwhile, in the space of four years, fully electric vehicles sales have increased sixfold.” Based on that information, try to explain how some macroeconomic indicators, automotive market trends, and other relevant data may have influenced BYD's decision to expand to the European market.

4. Teaching Notes

4.1. Case Study Target

This case study is aimed at undergraduate and master's students in the fields of Management, Strategy, and Business Administration, who wish to develop or deepen their knowledge in the area of international business expansion, by offering a in-depth understanding of the expanding EV industry and economy and identifying the key forces that are shaping its current trajectory and determining its future direction.

Additionally, it caters to professionals seeking insights into this field serving as a resource for their business decision-making processes, being better able to understand consumer preferences.

4.2. Pedagogical Objectives

The main objective of this study is to explore and enhance understanding of BYD's expansion into the European market. This thesis examines various aspects of BYD's entry strategy, including the methodologies employed, product selection, marketing campaigns, and pricing strategies. By analysing these factors, the study aims to offer a comprehensive overview of BYD's market offering and provide readers with a foundation of knowledge to draw their own conclusions.

In addition to focusing on BYD's expansion, this thesis also delves into the broader context of the car industry, offering insights into its past, present, and future. It examines the evolution of the European automotive market and the macroeconomic forces driving the significant transformations within the industry.

This being said, the pedagogical case study was developed with the following objectives:

1. To analyse if BYD can disrupt the market share of other car manufacturers in Europe.
2. To perform an overview on the current state of European car market and understand the transition of the industry, namely the trends, legislation and customer demand behind it.
3. Revise Chinese laws and government incentives towards the development of the EV industry in China to understand if it provided BYD a valuable advantage.
4. Collect information as to whether European clients are receptive to Chinese vehicles and for what reasons (e.g., price, quality, brand name).

4.3. Literature Review

4.3.1. What is Strategy?

"Strategy is the great work of the organisation. In situations of life or death, it is the Tao of survival or extinction. Its study cannot be neglected" (Sun Tzu, 2010). Thus, it is pivotal in any business and therefore widely discussed in the academic environment.

There are numerous definitions of this critical term for organisational success. However, the definitions do converge in that strategy defines the future of firms as well as on the definition and operationalisation of long-term objectives through the set of actions and resources needed to achieve them (Learned et al., 1965; Katz, 1970; Hofer & Schendel, 1978). It is then important to be clear that strategy is not the company's mission and vision, but rather the way in which both will be achieved. For this to happen, the relationship between the company (internal environment) and its environment (external environment) is inseparable and presents both threats and opportunities that must be taken advantage of.

Grant (2019) suggests that consistency between the two is only achieved through strategic fit, as a common source of corporate failure is a strategy that is not consistent with one of the environments. The author further argues that the concept extends to an internal harmonisation between different elements of corporate strategy. This means that "an effective strategy is one in which all the decisions and actions (...) are aligned with one another to create a consistent strategic direction" (Grant, 2019, p. 19).

4.3.1.1. Generic Strategies

Guiding a company's strategic decisions is a meticulous evaluation of future sector profitability and the criteria for selecting a suitable industry. Porter's influential framework, the Generic Strategies model, introduced in 1980, plays a pivotal role in assisting companies in making strategic choices to enhance their competitive positioning within an industry.

Participation in a lucrative sector alone is insufficient for sustained success. Therefore, companies must strategically position themselves to gain a competitive advantage. Porter's generic strategies, emphasise the importance of making clear and specific choices to avoid "stuck in the middle" scenarios where a company fails to excel at either cost leadership or differentiation, leading to a competitive disadvantage. Encompassing differentiation or cost leadership, provides a solid foundation for companies aiming not only to navigate industry landscapes but also to establish a resilient and distinct position within their chosen sector.

Cost leadership

Its main characteristic is "to achieve overall cost leadership in an industry through a set of functional policies aimed at this basic objective" (Porter, 1998, p. 60). This requires development of efficient-scale facilities; an active sought after of cost reductions techniques from experience; cost and overhead must be tightly controlled, and costs must be minimised in areas like R&D, service, sales force and advertising. This does not mean that quality, service, and other areas are ignored, but rather highly cost controlled.

A successful cost leadership strategy will be accomplished when companies find a way of sustainably cutting costs below those of other competitors in order to put pressure on those less efficient competitors. This frequently necessitates a large relative market share or preferential access to raw materials, materials, and facilities.

Differentiation

Consisting of enterprises offering products or services that are different and more attractive than those of their competitors, "creating something that is perceived industry wide as being unique" (Porter, 1998, p. 66). This means that the company emphasises superior quality and the associated reputation (Varadarajan, 1999). This can be achieved through: development and innovation; having the ability to deliver high-quality products or services and effective sales and marketing, so that the market understands the benefits of the differentiated offering. If this strategy is successfully implemented, it is a "viable strategy for earning above-average returns in an industry" (Porter, 1998, p. 66).

Focus

In this strategy, "the focuser selects a segment or group of segments in the industry and tailors its strategy to serving them to the exclusion of others" (Porter, 1998, p. 15). By doing this, it seeks to gain a competitive advantage in a specific segment although it does not possess a competitive advantage overall.

The focus strategy has two variants: (1) Cost focus, in which a company seeks to achieve a cost advantage in target segment, by exploiting differences in cost behaviours in selected segments; (2) Differentiation focus, in which special needs of buyers in specific segments are exploited by providing a more dedicated offer that is tailored to a more specific client.

The strategy takes advantage of the suboptimization in either direction of their broadly targeted competitors, i.e. competitors that are underperforming in meeting the needs of a

particular segment or on the other hand, overperforming in meeting those needs, which in turn carries higher than necessary costs and thus prices practiced (Porter, 1998).

4.3.1.2. Growth Strategies

The Ansoff Matrix is a strategic planning tool that was first developed in 1957 and gives firms a structured approach to assess and create growth strategies. The tool also aids stakeholders in understanding the degree of risk inherent to the various strategies. By using the matrix, businesses can more precisely evaluate and rank their possibilities for possible growth into four different quadrants: market penetration, market development, product development and diversification (Ansoff, 1957).

Each of the above strategies describes a distinct path which a business can take towards growing itself. But in fact, a company that is forward-thinking and well-managed tends to concentrate on market penetration, market development, and product development at the same time as part of its overall product strategy and question itself if this strategy should be broadened to include diversification (Ansoff, 1957).

Market Penetration

Market penetration involves “increasing volume of sales to its present customers or finding new customers, without departing from an original product-market strategy” (Ansoff, 1957, p. 114). This means selling more of the same product to the same market. To achieve this, strategic moves such as aggressive marketing campaigns, loyalty programs or enhancing customer experience can be adopted or, otherwise the company will have to operate cost-cutting measures (Loredana, 2016). In fact, the strategy requires a deep understanding of customer behaviour and competition dynamics to identify areas where the company can further penetrate the market.

Market Development

Market development strategy involves expanding into new markets or new market segments with existing products or services, generally with some modification in the product characteristics, to absorb the current offer of competitors and gain market share. To operate this, a comprehensive understanding of the new market's dynamics, customer segments, and regulatory environments is essential. Companies need to conduct thorough market research and tailor their marketing and distribution strategies to suit unique characteristics of said new market.

Product Development

Product development, on the other hand, “retains the present mission and develops products that have new and different characteristics such as will improve the performance of the mission” (Ansoff, 1957, p. 114). This can mean completely new products for a company or for example, just a change in product size or packaging that now makes it appealing to a new audience.

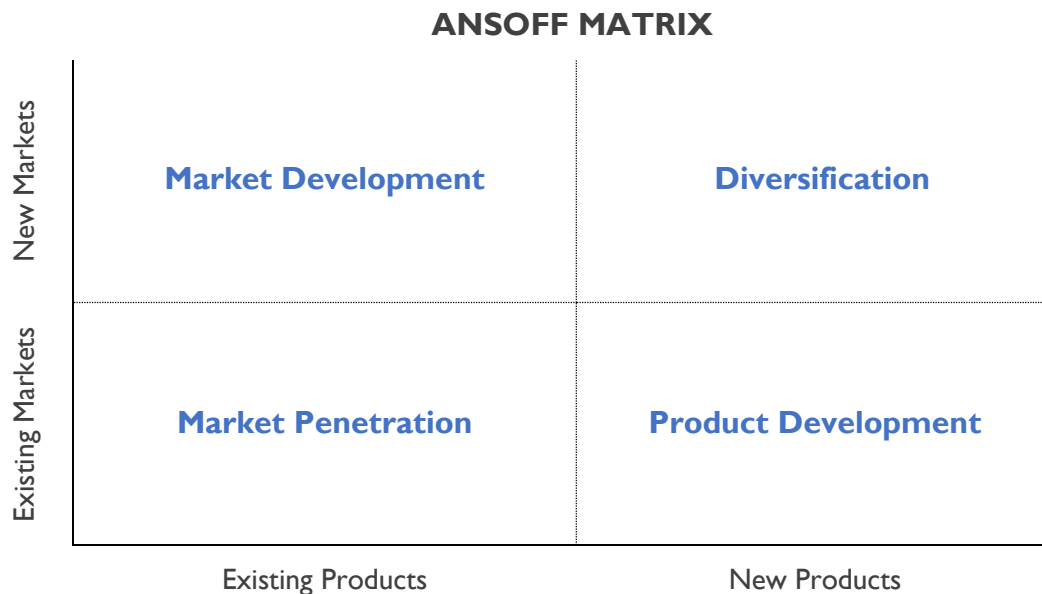
It emphasises innovation and tailoring offerings to meet the current customer base's needs, allowing companies to capitalise on existing brand loyalty and customer relationships. One key advantage of product development resides in the potential of leveraging established brand loyalty and customer product development. However, effective implementation requires high research and development efforts in which companies must assess market demand, track technological advancements, and monitor consumer trends to create innovative offerings within existing markets.

Diversification

Diversification is the final alternative - “It calls for a simultaneous departure from the present product line and the present market structure” (Ansoff, 1957, p. 114) by entering in new markets and entering with new products or services. With it comes the highest risk out of the other strategies, especially if it is not based on the core competencies of the company, as the latter are usually pursued with already in place skills and technical resources.

Diversification generally involves venturing into totally unfamiliar territories which requires “new skills, new techniques, and new facilities. As a result, it almost invariably leads to physical and organisational changes in the structure of the business which represent a distinct break with past business experience” (Ansoff, 1957, p. 114). The strategy is most often achieved through partnerships or acquisitions in order to mitigate the risks (Loredana, 2016).

Figure 32: Ansoff Matrix



Source: Ansoff, 1957

Internationalisation

The internationalisation component is strongly linked with strategy (Melin, 1992), in which according to Johanson & Vahlne (1977), firms normally go through several stages during their existence - starting with exporting and progressing thereafter to foreign investment by acquisition or joint venture. There are two models that are commonly mentioned in the literature:

The "product life cycle" model (Vernon, 1966), in which internationalisation occurs as a sequential process in the product life cycle, having different implications for the internationalisation of the company and its product: first (introduction), a certain company innovates in a certain product based on opportunities that it detects in the domestic market. Second, in the growth phase, as demand for the product in other markets begins to rise, the business decides to pursue internationalisation to bring its products to these demanding markets through exports while also investing in manufacturing plants in these countries. At maturity, when these major markets become saturated and products become standardised, production is reallocated to countries with low manufacturing costs. In the last stage (decline), manufacturing and, in some cases, demand leave the country where the invention originated. Melin (1992) claims the model's main contribution is the developmental view on relocation of production

activities. Furthermore, it concludes that as the product's maturity evolves, there is a decreasing need for a short distance between the production site, the decision-making and R&D centres.

On the other hand, this is not the most appropriate model for products with a short life cycle (McKiernan, 1992). As such, this model links innovation and R&D playing an important role on a firm's decision to engage in exportation to leverage its new offering in new markets (Cassiman & Golovko, 2011). Recent studies have found this direct link (Basile, 2001; Bernard & Jensen, 2004; Cassiman et al., 2010; Becker & Egger, 2013).

The "internationalisation process model", in which each company goes through a set of rational steps in internationalisation, relying on "gradual acquisition, integration, and use of knowledge about foreign markets and operations, and on its successively increasing commitment to foreign markets" (Johanson & Vahlne, 1977, p. 1). This theory focuses on market knowledge and market commitment to overcome the distance to these international markets in terms of "language, culture, education level, business practice, and legislation" (Melin, 1992, p. 103).

4.3.2. Sales Models in the Automotive Industry

New market players have exploited the introduction of new technologies to introduce innovative sales methods, which has put pressure on established OEMs (original equipment manufacturers) to re-evaluate their conventional sales model, i.e., the dealership model (Andreas et al., 2021). Given this context, the future of automotive retail has understandably become a top agenda item in many boardrooms (Dau et al., 2022), especially in the ones producing new energy vehicles (NEVs).

Dealership model

The dealership model is the typical experience that consumers go through when buying a vehicle. In this model, OEMs and dealers are independent entities, in which OEMs allocate and sell cars to the dealers, who then directly sell to the final consumer at an independently set price taking into account the manufacturer's suggested retail price (MRSP) (Andreas et al., 2021).

The dealership model is advantageous to OEMs because it allows them to collect money even before the vehicles are sold and distribute them efficiently across the dealer network. However, having an intermediary increases transactional costs and presents the risk of OEMs losing control of retail prices (Tschödrich et al., 2020). Another aspect to consider is that, within this model, brands rarely interact with the end customer, ending up having diminished influence and control over the user experience.

Direct Sales model

In practice, "OEMs sell directly to their customers through online platforms and their own offline experience stores, without the assistance of dealers" (Andreas et al., 2021, p. 4). By vertically integrating sales in the distribution channels, which must be operated or at least controlled by the brand manufacturer, or by having a direct relationship with the customer by using salespeople or online stores (Dornberger, 2021), the Direct Sales or Direct to Consumer (DTC) model can resolve the previously mentioned challenges.

When discussing DTC, online direct sales channels become increasingly relevant, as "no other intermediaries, neither electronic marketplaces nor other brokers or resellers, are involved in the transaction process" (Dornberger, 2021, p. 240). Li et al. (2011) further argue that the platform used must allow for a complete transaction process, including agreement and ordering of the goods.

Concluding, a broader or narrower approach to the concept can be applied when defining what counts as an DTC model or not. Either brands have to operate all parts of the distribution channels in a direct manner in relation to the final customer (narrower approach) or the simple control over these channels, which can be outsourced for example, is enough to be classified as direct sales since brand manufacturers can still determine the content and prices offered (Dornberger, 2021).

Agency model

The agency model puts OEMs in direct contact with customers and takes full control over the sales transaction end-to-end, transforming the dealer into an "agent" for the sales process, which can be done by manufacturers entrusting either local agents or online platforms to sell on their behalf. This means that "the dealer remains the face to the customer but is no longer the contractual partner and acts as an agent" (Andreas et al., 2021, p. 5).

Dau et al., (2022) classes the model as the "dealer as execution agent" approach, in which these only fulfil transactional directions set by the manufacturer and thus receive a fixed handling fee instead of a revenue commission. Gissler and Hoffmann (2022) refer to the model as "Agency Distribution Model" and state the benefits for both parties rely on revenue as brands can manage discounts to the end customer themselves, achieving pricing consistency across various dealers of the same brand, and ultimately avoiding price competition between these.

4.3.2. Regulatory Environment

Labour standards

There is nearly universal consensus in the international community that individuals have the right to work under specific labour laws concerning their humanity. As a result, the majority of nations recognise that our society needs fair labour standards. This topic gathered momentum as international trade expanded, since developed countries worried that countries with lower labour standards would gain an unfair advantage in global trade when compared to countries that promote higher standards (Verma & Elman, 2008). Doumbia-Henry and Gravel (2006) argued that allowing this acts as "social dumping", cheapening labour and violating fundamental rights at work to obtain an advantage. However, defining "labour standards" is complex. The literature discusses that if a labour standard is a minimum working condition that everyone in a certain jurisdiction must practise, then many established European agreements between institutions to establish standards that apply only to the firms or sectors covered by those agreements might not be classified as a labour standard (Block, 2007).

For this reason, the Block–Roberts method defends that in order to be considered a standard is must be "(1) governmentally created and enforced; (2) designed to affect or regulate workplace transactions for all or almost all employees in the political jurisdictions studied, with any exclusions legislative; (3) generally comparable in purpose and administration across jurisdictions studied such that a fair comparison can be made; and, (4) have been adopted or could reasonably be adopted in all the of the jurisdictions analysed" (Block, 2007, p. 2). This method has the advantage of not relying on universal benchmarks such as International Labour Organization conventions. Nonetheless, the importance of the ILO cannot be overlooked as a foundation for progress and pressure to achieve higher levels of working conditions (Servais, 2004; Verma & Elman, 2008).

Environmental policy

The improvement of environmental outcomes is the main objective of environmental policies, which are motivated by the pursuit of goals for broader well-being and ensuring sustainable growth. Environmental policies seek to accomplish their objectives by raising the opportunity costs of pollution and environmental damage, punishing polluting behaviour, encouraging investment in less ecologically damaging technology, and other measures (Kozluk & Zipperer, 2015).

In the EU, environmental policies are extensive and include legislation and strategic plans to meet various environmental goals. To name a few, there are: reducing greenhouse gases;

combating deforestation; clean energy; renewable energy; cleaner transport, which includes transport targets in road, air, rail and maritime transport; among others (EU Lex, n.d.).

When it comes to the road transport sector, the EU has set a number of directives and objectives to be met in the short, medium, and long run. This is done to ensure that the sector's largest challenge - becoming more sustainable - is accomplishable (European Commission, 2020). This will be done through the "Sustainable and Smart Mobility Strategy", introduced in December 2020, together with an action plan.

4.3.3. Quality Management

How quality should be managed in an organisation has been the subject of a lot of research. The quality literature is filled with descriptions of quality theories, case studies of successful businesses, and quality-improvement measures. Therefore, a definition of quality management (QM) can be the management area that focuses on the governance and continuous improvement of all organisational functions with the objective of reaching or exceeding customer demands and expectations (Flynn et al. 1994; Kaynak 2003). According to Molina-Azorín et al. (2009), in their review of the empirical studies on the topic, they argue that quality management theory has developed from three sources:

1. Contributions from quality researchers, namely Deming (1982) with the Total Management Quality (TQM) approach and the 14 points for effectively managing quality in companies, that had massive impacts on how to achieve continuous improvement in business. Juran (1988) extensively discussed the three stages of QM: quality planning, quality improvement, and quality control.
2. Formal assessment processes, like the European Quality Award and the Deming Prize;
3. Measurement studies, which identified several dimensions that constitute and measure quality management levels, which according to Saraph et al. (1989, p. 818) are: "Role of divisional top management and quality policy; role of the quality department; training; product/service design; supplier quality management; process management; quality data and reporting; employee relationships".

Associating QM with performance, the literature implies that as the decision makers of an organisation focus on better management of such critical factors, improvements will occur in quality performance and ultimately result in improved financial performance for the organisation (Saraph et al., 1989; Deming, 1982).

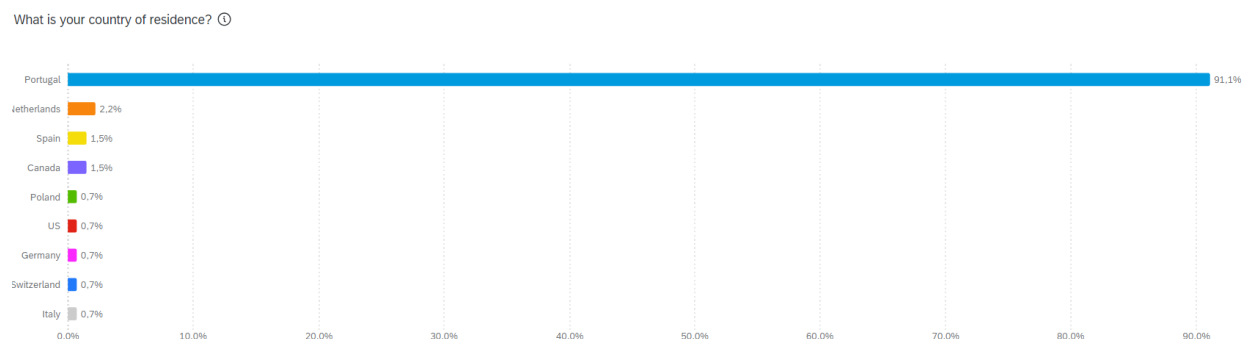
4.4. Critical analysis of the survey results

This chapter is dedicated to the critical analysis and deductions derived from the data collected from the survey. From this data, we can draw first-hand conclusions that either support or challenge the theories and findings discussed earlier in the study. This pedagogical survey was conducted with the intention of providing a primary research source for this thesis, thereby enhancing its richness and accuracy.

4.4.1 Consumer profile

As mentioned, this section is meant to draw a demographic division of the respondents. With a high Portuguese focus (91%), the 134 respondents were practically split between male and female. Although a big portion (38%) of the sample were between 25-34 years old, the remaining 62% are nicely represented between each of the age groups which are all represented with a relevant share in this study. One relevant statistical fact is that two thirds classified their income as ‘medium’, 25% as ‘low’ and only 10% as ‘high’, which is very much in line with the Portuguese economic scenario of the low, medium and high classes (Mendes, 2024).

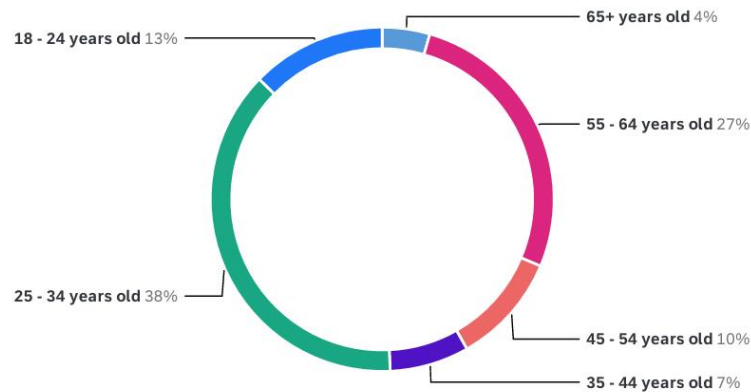
Figure 33: Results from the question: “What is your country of residence?”



Source: Author, 2024

Figure 34: Results from the question: “What is your age?”

Age ⓘ



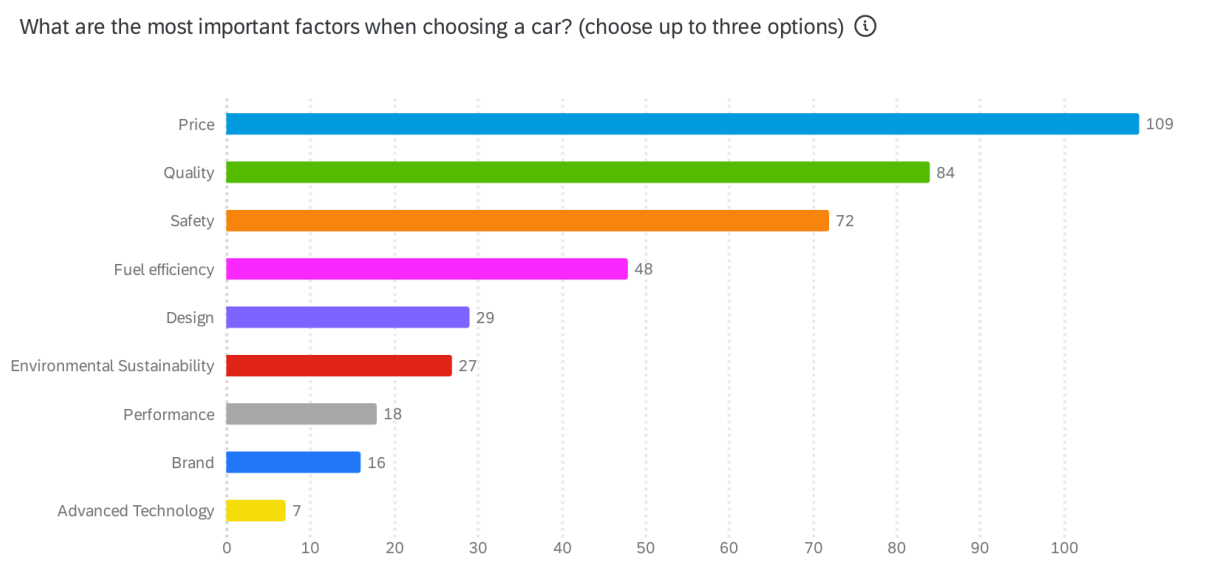
Source: Author, 2024

4.4.2. Consumer preferences and electric car adoption

The sample, in the first question of this section, praised car price as the most important factor when choosing a car, followed by its quality and safety. Then, on the second question, when asked specifically about the importance of a car’s environmental sustainability, two thirds gave relevance to it and the other third was neutral or gave no importance at all.

As said, this query was made specifically in question number 2 and the importance ranked overall high, however, in question number 1, in which respondents were asked about the most important factors when buying a car, ‘environmental sustainability’ only ranked in 6th place out of the 9 options given. From this can be concluded that although sustainability is an important topic to consumers, what they pay and directly get in return (quality, safety, fuel efficiency, design, etc) is more important than to be sustainable.

Figure 35: Results from the question: “What are the most important factors when choosing a car? (choose up to three options)”



Source: Author, 2024

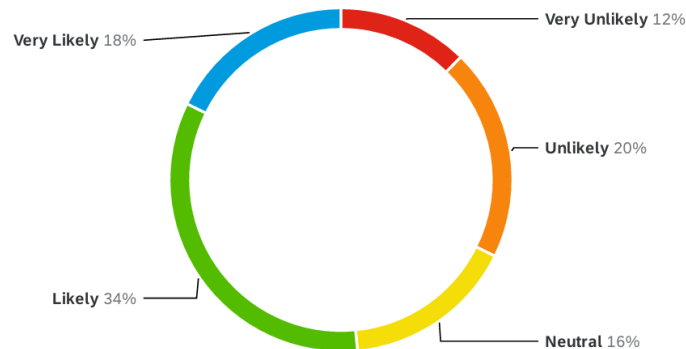
When it comes to cars brands, and which are attractive in their EV’ offering, BMW and Tesla were the most chosen ones 70 and 72 times selected, respectively. It is worth mentioning that BYD, despite its recent establishment in Europe, was selected 19 times. When asked about the reasons for selecting certain brands, the sample clearly prioritizes three factors: brand reputation, the associated quality and design.

Contrary to the European scenario, in which only 1.5% of all cars on are electrically chargeable, in our sample, 7% of respondents own or have owned an electric vehicle. These respondents are satisfied with their electric car experiences since they responded very positively when asked how likely they are to buy another EV as their next car.

This contrasts with the overall sample that is split between choosing an EV when purchasing their next car, since 52% responded combined as ‘very likely’ or ‘likely’, 16% as ‘neutral’ and 32% combined as ‘unlikely’ or ‘very unlikely’. This reveals that there is openness and interest from customers to buy EV’s, which plays in BYD’s favour as well as the considerable percentage that responded as ‘neutral’ could be an opportunity for the brand, as these could be more easily converted into actual clients if BYD targets them correctly, e.g. promoting (and having) what customers value more as strong points in BYD vehicles.

Figure 36: Results from the question: “How likely are you to buy an electric car when deciding to purchase your next car?”

How likely are you to buy an electric car when deciding to purchase your next car? ①

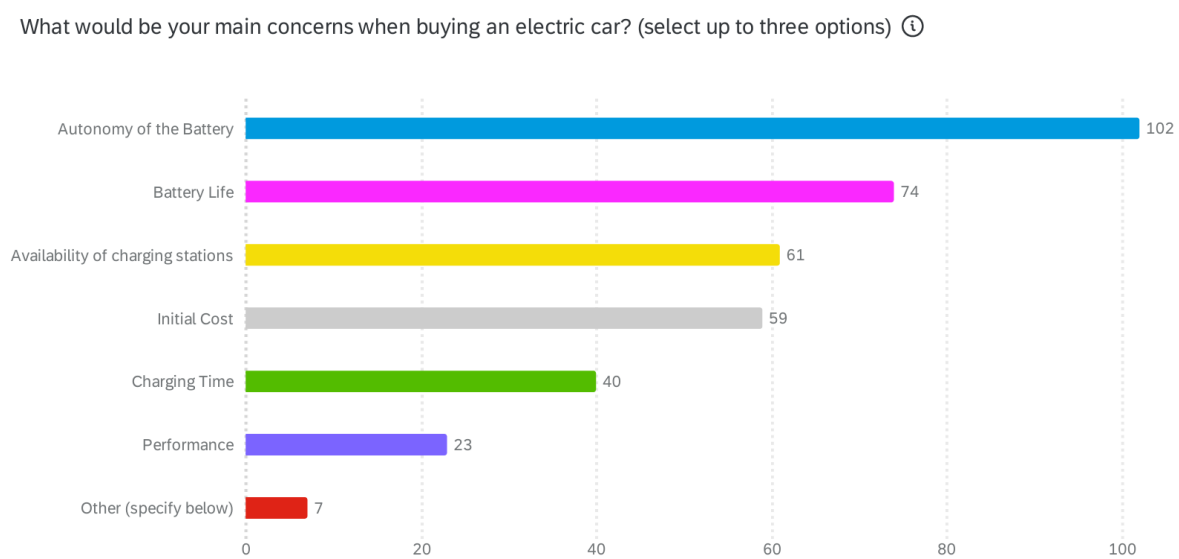


Source: Author, 2024

Brands must understand and address consumers' primary concerns when it comes to EV's and respond effectively to these to reduce any constraints and therefore attract more customers. This being said, it is clear that the main concern is still the autonomy of the battery, a topic very often discussed when it comes to electric vehicles. Although this is not easily changeable and is highly dependent on the overall development of the battery industry and technology, its findings and the cost to mass-produce them at a profitable rate.

Car manufacturers and BYD specifically, should still prioritise their efforts on mitigating this issue, specially BYD with its highly vertical supply chain which includes R&D, could gain a competitive advantage as it is not as restricted as many of its competitors which outsource the batteries and therefore are more limited. Besides this, the durability of the battery along the years, the availability of the charging stations and EV's initial cost are the main secondary concerns.

Figure 37: Results from the question: “What would be your main concerns when buying an electric car? (select up to three options)”



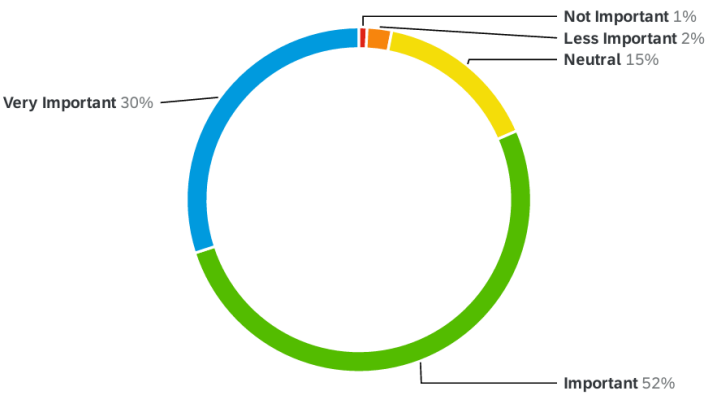
Other (specify below)
Response
“Pollution at source and early destruction”
“It's the future with the interests unfortunately installed in the economic elites that will force the purchase”
“The car's usual purpose (short-distance use, long journeys, city driving, etc.)”
“Lack of garage”
“Lack of manual transmission”
“Don’t like it”
“Don’t like it”

Source: Author, 2024

Test drives are important to the sample and the conclusions taken from them have a high influence as respondents acknowledge the vast importance that it has on the decision of the vehicle that they end up buying. This piece of data becomes relevant as BYD can invest in organizing various test-drive days and events that promote first hand contact with their cars, as a way to break into the market and raise brand awareness, by giving customers a feel of their products which in many cases could dispel stigmas that people have from the brand.

Figure 38: Results from the question: “To what extent the conclusions taken from a test-drive influence your purchasing decision?”

To what extent the conclusions taken from a test-drive influence your purchasing decision? ⓘ

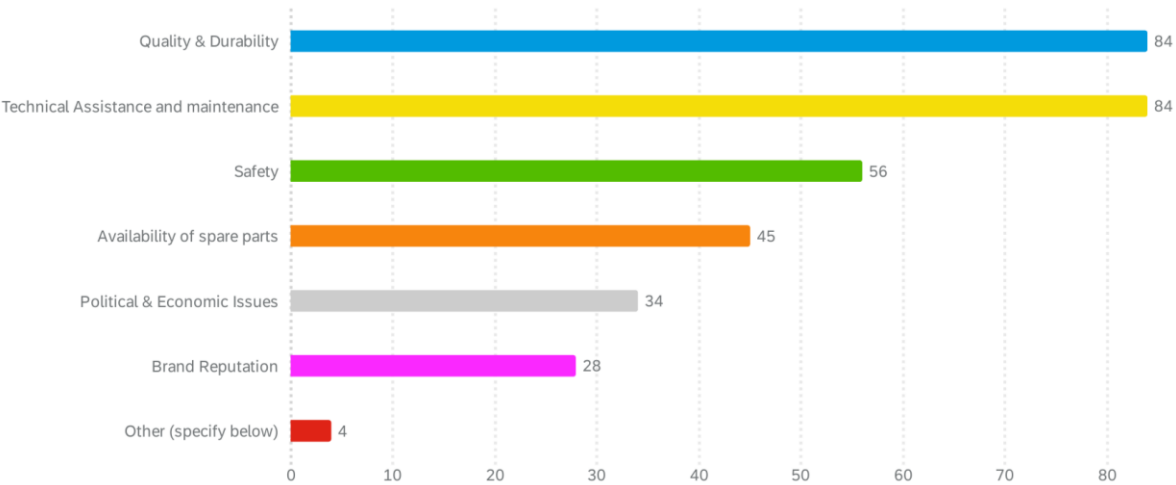


Source: Author, 2024

A great example of that stigma is the country of origin of the car, which is valued by 48% of the sample. When said car has a “Made in China” stamp on it, 43% of respondents stated they would not buy a car for that reason alone. This is something that BYD must work on if it wants to prevail in the European market in the long-term and a way to do it is showing the value and quality offered its products, namely via test-drives, by meeting all European safety tests and keep a reliability/ serviceability record across the years to start building its brand reputation.

Figure 39: Results from the question: “Which of these could be/ are limiting factors in buying a car from a Chinese brand? (select up to three options)”

Which of these could be/ are limiting factors in buying a car from a Chinese brand? (select up to three options) ⓘ



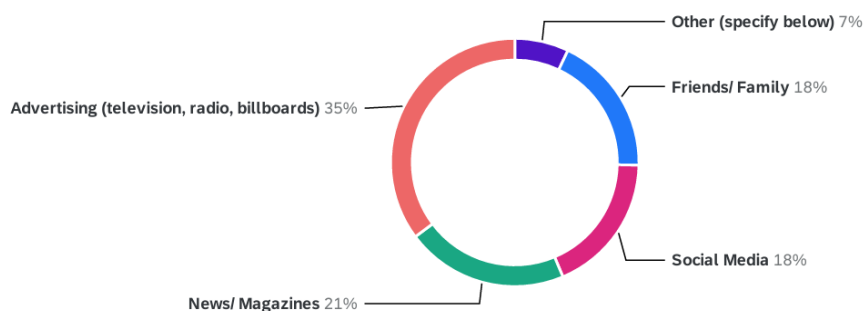
Source: Author, 2024

4.4.3. BYD recognition and perception

When analysing BYD's recognition, more than half of the sample (55%) already knew the brand, which is remarkable when considering their short time in Europe. For the respondents that knew the brand, the most effective channel was through advertising in television, radio or billboards. A big part of it possibly due to BYD's presence in the FIFA Euro 2024, which in itself has a massive audience. News, magazines and social media have also proven to be methods with a comprehensive reach to new audiences.

Figure 40: Results from the question: "How did you first hear about BYD?"

How did you first hear about BYD? ⓘ

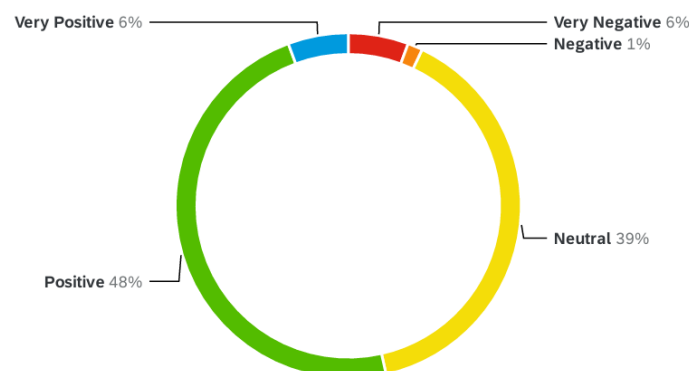


Source: Author, 2024

Furthermore, those respondents (who know BYD) were asked about their initial impression of the brand. As seen below, there is already a good perception between the sample, but 39% still responded as Neutral, which is an important data point for BYD to capitalize on.

Figure 41: Results from the question: "What is your initial impression of the BYD brand?"

What is your initial impression of the BYD brand? ⓘ



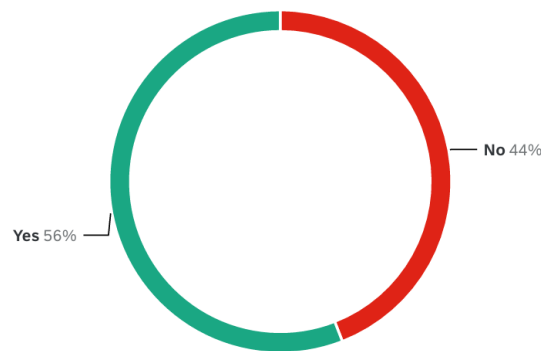
Source: Author, 2024

Then, the whole sample when asked if they would consider a BYD when buying an electric car, only 56% responded as ‘Yes’ and the remaining 44% answered ‘No’. This is a concerning number which is however explained by one main factor: BYD being Chinese.

Here we can see the impact of the Chinese label, since of the 74 respondents that would buy a Chinese car, 77% would buy a BYD as well and out of the 56 respondents that wouldn’t buy a Chinese car, 71% of them wouldn’t buy a BYD.

Figure 42: Results from the question: “If you were considering buying an electric car, would you consider buying a BYD model?”

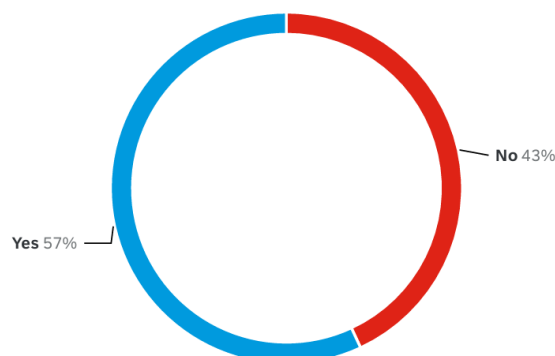
If you were considering buying an electric car, would you consider buying a BYD model? ⓘ



Source: Author, 2024

Figure 43: Results from the question: “Would you buy a car from a Chinese brand?”

Would you buy a car from a Chinese brand? ⓘ

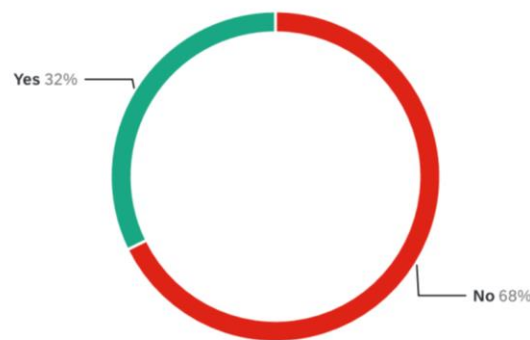


Source: Author, 2024

There is, however, a positive indicator: when consumers are made aware that BYD meets all the safety and emissions requirements demanded by the European Union, then the sample decision to consider buying a BYD increases from 56% to 68%. This in accordance with what was shown previously since safety is much valued. Also seen before, is that BYD cars exceed on the Euro NCAP safety ratings and therefore, BYD increasing the visibility of this to consumers is worth doing.

Figure 44: Results from the question: “Knowing that BYD car models meet all the safety and emissions requirements demanded by the European Union, would you be afraid to buy a car from a Chinese brand like BYD?”

Knowing that BYD car models meet all the safety and emissions requirements demanded by the European Union, would you be afraid to buy a car from a Chinese brand like BYD? ⓘ



Source: Author, 2024

4.4. Animation Plan

Lecture	Objectives	Action Plan	Time
1 st lecture	To foster interest of the class	Case study distribution to students	75 min
		Subject summary and presentation of the case study	
		Introduction of BYD and their business	
		Introduction and contextualization of the overall European automotive market and electric vehicle growth	
		Highlight the relevance of the case in current context of the automotive sector transformation	
		Group work's creation (4/5 elements)	
Out of the lecture	Learning consolidation and case resolution	Individual studying of the case, analysing and identifying the research findings	60 min
		Group brainstorming, resulting from the individual analysis	
2 nd lecture	Practical questions presentation regarding BYD and survey results	Presentation of BYD: company, background, product range and comparison with competitors	90 min
		Presentation of case study's survey objectives, questions and results	
		Presentation of the first two case questions to the class and brief discussion of each one	
Out of the lecture	Resolution of the first two questions	In-depth case study analysis	120 min
		Group discussion and further independent research of the company (annual reports, articles, relevant news)	
		Collective resolution of the delivered case study questions	
3 rd lecture	Work presentation and continuation of the case presentation (remaining two questions)	Group presentation of the first two case study questions resolution	90 min
		Comparison between the groups' answers and discussion with the class	
		Presentation of the last two case question to class and brief discussion of each one	
Out of the lecture	Resolution of the last two questions	Individual consolidation of the topics analysed thus far	120 min
		Additional research of relevant topics to enrich the answers to the case study questions	
		Collective resolution of the delivered case study questions	
4 th lecture	Group work presentation of the last two questions	Student presentation of last two question resolution	120 min
		Student recommendations for the future of BYD in Europe	
		Student critical analysis of the findings and limitations of the research regarding the success of BYD's expansion into Europe	
	Assessment	Case resolution (50%) + presentation (20%) + critical analysis/ given recommendations quality (30%)	
Final lecture	Learning consolidation and case resolution	Presentation of the best resolution for each of the questions	45 min
		Final recommendations and limitations of each group work	
		Questions and general feedback	

4.5. Case Study Question Resolution Proposition

4.5.1. Question 1

What kind of strategy is BYD following in its expansion into the European market?

In navigating its expansion into the European market, BYD has strategically positioned itself by capitalising on the region's stringent environmental standards and the growing demand for sustainable technology. This approach not only aims to comply with European standards but also seeks to distinguish BYD from its competitors through a commitment to technological innovation and sustainability, pivotal in today's automotive sector.

BYD did not follow the leading international energy vehicle companies. Instead, it independently developed lithium iron phosphate batteries and is “the only company that masters the technology for large-scale production of lithium iron phosphate batteries for vehicles and has established its leadership position in the new energy industry” (HAO, 2021). The cutting-edge technology demonstrates BYD’s differentiation, that along with a strong commitment to research and development, not only began to create batteries but also engines, control systems, and semiconductor chips that are all fitted to its vehicles. This aligns with European priorities that emphasize durability, safety, and environmental sustainability, allowing BYD to differentiate itself by value creation through innovation.

To strengthen its market presence and ensure adherence to local standards, BYD has established manufacturing capabilities within Europe with its bus factory in Hungary and upcoming passenger car factory in Hungary as well. This includes setting up assembly operations that allow BYD to streamline logistics and reduce costs, making its vehicles more competitive in the European market.

Marketing and consumer engagement are also central to BYD’s strategy. The company actively participates in European automotive shows and technology expos, vital platforms for showcasing its advanced EV technologies. These events offer BYD the opportunity to directly engage with potential customers and industry stakeholders, highlighting the unique benefits of its electric cars. One major marketing partnership that BYD made was with UEFA, being an official sponsor of the EURO 2024, BYD had its brand advertised to an “expected cumulative live audience of around five billion, a level of global appeal that few occasions can match” (UEFA, 2024).

This level of engagement and brand awareness is significant, especially for a growing company fighting for brand recognition. According to the company, aligned with UEFA's goal of organising the most sustainable European Championship ever, "BYD's expectation is to create a closer connection to the needs and desires of its customers and fans, providing a premium and memorable experience" (BYD, n.d.). This aims at the end goal of creating brand awareness and the first steps into brand loyalty, by offering unique products that satisfy consumer needs and preferences.

Moreover, BYD is committed to expanding its service networks across Europe. Establishing a comprehensive after-sales service infrastructure ensures that BYD car owners receive timely and effective support, enhancing customer satisfaction and trust in the BYD brand. To do this, the Asian brand has been making agreements for distribution and maintenance with largest distribution chains in European countries, for example, with Salvador Caetano in Portugal (BYD, 2023), ASTARA, Caetano Retail, and Quadis in Spain (BYD, 2023), and Sternauto in Eastern Germany (Waldersee et al., 2024). This aspect of BYD's strategy is an important one, since partnering with industry-known dealerships can assure a good customer experience from the beginning, thus creating a good reputation for customers across the vehicle's lifecycle.

In conclusion, BYD's entry strategy into the European market is a well-orchestrated blend of differentiation through technological innovation, coupled with strategic localization of production and services. This approach not only helps BYD meet the stringent regulatory and consumer demands in Europe but also well positions the brand in the transition towards sustainable mobility. Although BYD currently offers cars in the same segment as European manufacturers but at lower prices, and that this is a powerful facilitator for customers to first enter into this brand, this advantage might not be sustainable in the long-term as we've seen with the possible import tariffs from Europe or as other automakers start to shorten this cost gap and therefore price gap, making this strategy ineffective on the long term.

As such, BYD is not trying to be the Dacia of EV's, trying to undercut every other manufacturer and sell its products only based on their competitive pricing. Instead, by focusing on advanced technology, safety and quality that match premium automaker standards, BYD aims to carve out a significant dent in the competitive European automotive industry, with a differentiated product that appeals to consumers looking for reliable and innovative electric vehicles.

4.5.2. Question 2

From the sales models presented and the information given, which model is used by BYD?

Do you agree that this is the best sales model for the brand? Justify.

BYD is utilising a network of long-known dealership groups to sell its vehicles. The company has been closing numerous partnerships with these groups across Europe as their preferred method of distribution.

By doing so, the brand capitalises on dealerships to reach a broader audience without the need to invest heavily in their own retail infrastructure, allowing a better market penetration and the ability to tap into local markets more effectively. Furthermore, by leveraging independently owned dealerships, it can reduce the financial burden and risks associated with owning and operating retail outlets. This includes savings on real estate, staffing, and operational costs.

BYD is currently in the beginning of its expansion process which in many cases can include hurdles such as lack of appropriate customer service and experience, qualified personnel, weak support on vehicles and limited availability of replacement parts due to the lack of an established infrastructure. Instead of managing all these aspects on top of an accelerated expansion, which could lead to poor customer service and satisfaction, crucial on this stage of the company's lifecycle in Europe, BYD chose to leverage the national dealerships networks expertise and experience to ensure proper customer service, support, and experience.

This model has its drawbacks namely the increased costs of having a “middleman” and the distance between BYD and the actual customer makes the company have a diminished influence and control over the user experience, thus being more dependent on the dealership's interaction with customers, which ultimately also represent BYD as a brand. This limited oversight on dealers can lead to varying levels of service quality and inconsistent brand representation and poor experiences at dealerships can harm the brand's reputation.

Despite this, this model can be better suited to BYD than the direct sales model, made popular by Tesla, as “most OEMs have little hands-on experience in interacting with the end-customer. Therefore, to succeed, they must take the time to understand the complexities of their dealers' sales operations” (Heuser et al., 2023). This would require a higher investment both in capital and time, which could unnecessarily delay BYD's expansion efforts. When referring to

an online direct sales model, BYD's Managing Director of BYD Europe, Michael Shu, states the following: "we do not think that car sales work if you are only digital. You need the awareness in the market and on the street, seeing cars in physical dealerships." And he adds, "(...) we love our dealer partners. When it comes to size, our network still has a long way to go to properly cover our expansion plans for Europe. Depending on the market, we operate either with a national sale company that interfaces directly with individual dealers or with a national sales company that interfaces with a large distributor that then interfaces with individual dealers. Thus, we are very flexible, but we will not have direct sales anywhere" (Ciferri, 2024).

4.5.3. Question 3

Imagine that BYD aims to develop a strategy to reduce dependency on their current product lineup. Based on this goal, suggest a specific approach to achieve this objective by introducing new products that appeal to a broader audience.

Currently, BYD's expansion is built on a 100% electric offering for their vehicles. As we know, this is highly encouraged by the path the auto industry is taking in Europe, driven by its desire to change personal transportation to an eco-friendlier approach and the push and support of governments to accomplish this.

However, by only having EV products, BYD is only reaching a portion of all car customers in Europe, missing an important portion of consumers which still are not ready to switch to full EV's. As appraised in McKinsey's Mobility Consumer Pulse Survey (2024), only 16% of the total respondents stated their next vehicle would be an EV, which is in line with the survey done for this thesis, in which 18% classed as 'very likely' to buy an EV for their next car. As we can see, future EV customers only account near a fifth of the overall market, at least for now, as this number has been rapidly growing along the years.

This being said, BYD expanding their product lineup would give them access to a new important section of the market. Looking at BYD's offering in its home country, the brand does not currently have any ICE's, but it does however have hybrid vehicles in their fleet. Hybrids bring together the advantages of ICE's and EV's with lesser downsides that both platforms have when isolated. For example, hybrid vehicles can serve as an intermediate step for consumers who are not yet ready to fully embrace electric vehicles, and this can help ease the transition for customers who are accustomed to traditional ICE vehicles but are interested in moving towards more sustainable options. In addition, hybrids allow consumers to experience the

benefits of electric driving, such as quiet operation and instant torque, without the concerns of limited charging infrastructure or range anxiety.

From a financial perspective, this project would not have a substantial up-front development cost, since BYD already produces these hybrids vehicles and would only need to start selling them in the Old Continent as well, without going through the massive financial effort of developing a whole new hybrid platform outside of its expertise, which are EV's. Entering the hybrid market would allow BYD to enter into an untapped consumer segment for the brand. According to McKinsey's 2024 Mobility Consumer Pulse Survey, 22% of respondents indicated that their next car purchase would be a hybrid, representing a significant growth opportunity for BYD.

With a successful accomplishment of this, BYD would reduce their dependency on EV's and as a result reach new customers with new products, potentially increasing its revenue and brand presence in Europe.

4.5.4. Question 4

“Meanwhile, in the space of four years, fully electric vehicles sales have increased sixfold.” Based on that information, try to explain how some macroeconomic indicators, automotive market trends, and other relevant data may have influenced BYD's decision to expand to the European market.

In recent years, the global automotive industry has witnessed a considerable shift towards electric cars (EVs), driven by a variety of macroeconomic indicators. Between 2020 and 2024, sales of fully electric cars increased sixfold, signalling a fundamental shift in consumer preference and market dynamics. This background of significant growth in EV sales created a compelling opportunity for BYD's decision to enter the European market. Numerous factors, including macroeconomic indicators, automotive market trends, and stringent environmental regulations, are likely to have influenced BYD's move.

Macroeconomic Indicators:

According to the International Energy Agency (IEA, 2024), Europe accounted for over 25 percent of global electric car sales in 2023, outpacing all other areas in terms of electric vehicle registrations, except China. This trend is exacerbated by European consumers' higher spending power compared to other regions. Data from the World Bank indicates that the average GDP per capita in Europe is significantly higher than in many other parts of the world, enabling

consumers to expense the costs associated with electric vehicles (World Bank, 2024). Additionally, the rising prices of fossil fuels in Europe have catalysed a shift towards more sustainable and cost-effective modes of transportation. The economic burden of fuel costs has prompted consumers to seek alternatives, positioning EVs as a viable and attractive option.

Automotive Market Trends:

The automotive market in Europe has been characterised by a growing adoption of electric vehicles, driven by a combination of incentives, regulations, and infrastructural developments, such as the European Green Deal. European governments have implemented a range of policies to encourage the transition to electric mobility, including financial incentives such as tax credits, subsidies, and grants. These measures reduce the overall cost of ownership for EVs, making them more accessible to a broader segment of the population. Furthermore, non-financial incentives, such as access to low-emission zones and exemptions from congestion charges, provide additional motivation for consumers to switch to electric vehicles. The ongoing development of an extensive and reliable network of charging stations across Europe should also play a crucial role in facilitating the adoption of EVs.

Environmental Regulations:

The European Union (EU) has established some of the most stringent emission standards and carbon reduction targets in the world, namely the Euro 7 and the Emissions Trading System. These regulations mandate significant reductions in greenhouse gas emissions from the automotive sector, compelling manufacturers to innovate and offer cleaner alternatives. The EU's rigorous emission norms have created an encouraging environment for electric vehicles, which produce zero tailpipe emissions and thus align with the bloc's environmental objectives. For BYD, a company with a strong portfolio of electric vehicles, these regulatory pressures present an opportunity to position itself as a key player in the European market. By providing solutions that help consumers and fleet operators meet these stringent regulations, BYD can capitalise on the growing demand for low-emission vehicles.

Challenges and Opportunities:

While the European market presents numerous opportunities, it also poses certain challenges, namely BYD's current relationship with European regulators due to the amount of financial support they receive from the Chinese government, creating a bigger disadvantage on European automakers, which are affected by this unmatched competition. The European Union

(EU) is often referred to as one of the most open economies in the world, characterised by its commitment to free trade and investment. However, even open economies like the EU can adjust their level of openness based on economic needs and strategic considerations and if, one of their most important industries is being defied by what is considered unfair competition, they are forced to intervene and the result of that is the ongoing investigation on this topic, from which might result in retroactive import taxes for BYD vehicles.

From this, it is safe to assume that BYD doesn't currently have the best relationship with Europe's regulators and if it wants to succeed in the long term, it is important to do so, by becoming an important part of its economy being a significant contributor to it. Establishing production plants and, utilising and developing new supply chains in Europe can be viable options to achieve this.

Additionally, one of the primary challenges is the need for an extensive and efficient charging infrastructure. To address this, BYD can collaborate with governments and energy companies to expand the charging network, thereby facilitating the adoption of its electric vehicles. Such partnerships can help overcome infrastructural barriers and ensure that consumers have reliable access to charging facilities.

In conclusion, BYD's decision to expand into the European market is influenced by a combination of macroeconomic indicators, automotive market trends, and environmental regulations. Europe's leadership in electric vehicle adoption, superior purchasing power, and rising fossil fuel prices create a favourable market environment. Supportive government incentives and stringent emission standards further enhance the attractiveness of the European market. Despite the challenges, the opportunities for collaboration and technological innovation present a promising pathway for BYD to establish a strong foothold in Europe and contribute to the ongoing transition towards sustainable transportation.

4.6. Case Study Question Resolution Slides

Electric vehicle manufacturer BYD expansion into Europe - *a case study*

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European automotive market

Europe is currently one of the **main centres of the automotive industry**, massively **contributing to the development and innovation of the worldwide sector** over the years.

€402.8 bn
expected
revenue in
2024

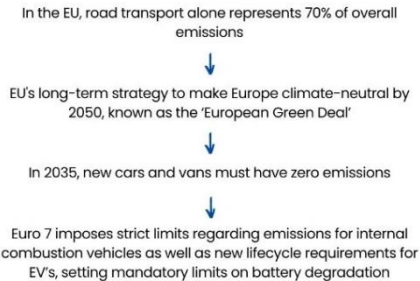
Employs 13
million

7% of EU's
total GDP

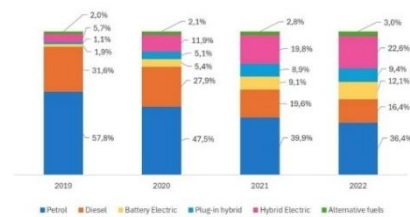


Electric vehicle growth in Europe

Europe's automotive industry is experiencing a significant **transition towards sustainability**, marked by a widespread embracing of **electric vehicles as the preferred solution**.



New EU Car Sales by Power Source



2

The dispute for the EV market

Last quarter of 2023 was a turning point in the automotive industry, it was the **first time that one company was able to sell more EV's worldwide than Tesla. That company was no less than BYD.**

Key takeaways:

- Expansion of BYD is to be taken seriously if it is already surpassing Tesla's numbers
- European manufacturers, that once dominated the automotive market, are not the ones in front and are instead trying to catch up
- Europe's heavy regulations are constricting its own industry

Chinese VS European Manufacturers

C-segment car has a 25% - 30% cost advantage equivalent European model

Chinese EV's are heavily subsidized by the Chinese government - BYD is the most benefited manufacturer

"A pillar of the European economy, the automotive industry is facing an onslaught of electric vehicles from China" and there is an imbalance in international competition which is defined by "industry incentives in the US, strategic planning in China, and new regulations in Europe"

Lucas de Meo - Renault's CEO

3

BYD - Build Your Dreams



At a glance:

- Founded in 2003 as a subsidiary of BYD Company Limited
- A leading global electric vehicle (EV) manufacturer

Market Presence:

- Operating in over 50 countries
- Largest EV manufacturer by volume in 2023

Core Values:

- Innovation
- Sustainability
- Quality

Mission: Change the world by creating a complete, clean-energy ecosystem that reduces the world's reliance on fossil fuel



4

BYD – EV Portfolio

BYD is expanding into Europe with a diverse electric vehicle lineup, offering an **extensive range of vehicles that cater a vast market audience**, from compact urban cars to luxury sedans and SUVs.



Blade Battery:

- **Safety:** Proven to withstand extreme conditions (e.g., puncture, fire), reducing the risk of fires.
- **Efficiency:** Improved energy density, offering more range and longer lifespan.
- **Environmental impact:** Uses more sustainable materials compared to traditional lithium-ion batteries.

E-Platform 3.0:

- **Scalability:** Flexible architecture supporting various vehicle types, from compact cars to SUVs.
- **Advanced tech:** Integrated heat pump system, increasing energy efficiency in cold climates.
- **Autonomous driving:** Prepared for Level 3 autonomous driving features, with further enhancements in the pipeline.

5

BYD – Analysis

BYD's advanced battery technology expertise and cost advantages drive its global EV expansion, but low international brand recognition and increasing competition require strategic focus.

Strengths	Weaknesses
• Advanced battery technology expertise • Use of cost-effective LFP battery architecture • Vertical integration optimizing efficiency • Competitive pricing due to lower production costs	• Low brand recognition in international markets • Stigma around Chinese product quality • High marketing and brand-building costs
Opportunities	Threats
• Growing EV market driven by environmental awareness • Potential for strategic partnerships and joint ventures • Access to new markets and technologies	• Protectionist measures favouring local brands • Changes in emissions and recycling policies • Increasing competition from established brands

6

Case study Question 1

What kind of strategy is BYD following in its expansion into the European market?

Leveraging environmental standards:

BYD capitalizes on Europe's stringent environmental regulations and growing demand for sustainable technology to position itself as a leader in the EV market

Investing in marketing:

BYD is investing heavily in marketing to make sure it raises its brand visibility, e.g. BYD participates in European automotive shows and technology expos, or the UEFA's EURO 2024 sponsorship

Distribution agreements:

Partnerships with distribution chains across Europe to ensure robust customer service and maintenance support

Innovation:

Focus on in-house developed lithium iron phosphate batteries and in advanced technology engines, control systems, and semiconductors, all fitted in their cars

Local manufacturing & assembly plants:

Establishing production facilities in Hungary for buses and passenger cars to streamline logistics, reduce costs, and comply with local standards

Differentiation through technological innovation, coupled with strategic localization of production and services

7

Case study Question 2

From the sales models presented and the information given, which model is used by BYD?
Do you agree that this is the best sales model for the brand? Justify.

Dealership model

This model is more practical for BYD's rapid expansion, as direct sales would require substantial investment and time, potentially delaying growth. BYD's flexibility and reliance on trusted dealers offer a balanced approach to scaling in Europe.

Disadvantages:

Middleman costs:

Adds expenses due to dealer margins, potentially diminishing profit margins and making pricing less competitive.

Limited control:

Reduced influence over customer experience, risking inconsistent service quality and brand representation.

Advantages:

Market penetration:

Reaches a broader audience by tapping into established dealership networks

Cost effective:

Reduces the financial burden of investing in BYD-owned retail outlets, saving on real estate, staff training, and operational costs.

Local expertise:

Ensures better customer service and support by utilising dealers' experience in local markets.

8

Case study Question 3

Imagine that BYD aims to develop a strategy to reduce dependency on their current product lineup. Based on this goal, suggest a specific approach to achieve this objective by introducing new products that appeal to a broader audience.

Current focus on EVs:

- While BYD's all-electric lineup aligns with industry trends, it limits the brand's reach to a smaller portion of the market.
- BYD is missing out on consumers who are not yet ready to switch to fully EVs.



Proposed strategy:

- BYD should introduce hybrid vehicles in Europe, leveraging their existing technology to break into a larger market segment.
- This approach offers a smoother transition for consumers of traditional ICE vehicles to more sustainable options.
- Addresses concerns like range anxiety and charging infrastructure.



Financial advantage:

- Expanding into hybrids would involve minimal upfront costs, as BYD already produces these models in other markets.
- By entering the hybrid market, BYD could significantly broaden its customer base and reduce its dependency on EVs alone.
- Ultimately boosting revenue and market share in Europe.

9

Case study Question 4

"Meanwhile, in the space of four years, fully electric vehicles sales have increased sixfold."

Based on that information, try to explain how some macroeconomic indicators, automotive market trends, and other relevant data may have influenced BYD's decision to expand to the European market.



Macroeconomic indicators:

- Europe accounts for 25% of global EV sales
- High GDP per capita and rising fuel prices drive EV demand



Automotive market trends:

- Government incentives make EVs more accessible
- Expanding charging infrastructure supports adoption



Environmental regulations:

- Strict EU emissions standards create demand for low-emission vehicles
- BYD's EV portfolio aligns with regulatory goals

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5. Main Conclusions

The expansion of BYD into the European market marks a pivotal moment not only for the company but also what it represents for the broader EV industry. Through a detailed examination of BYD's strategy, this thesis has illustrated both the complexities and challenges of entering a mature and competitive market like Europe. The company's approach, which leverages its expertise in battery technology and vertical integration, has the potential to disrupt the established automotive landscape, but success is far from guaranteed.

BYD's entry into Europe coincides with a period of significant transformation in the automotive industry. The European Union's ambitious environmental targets, particularly those set out in the European Green Deal, create a favourable environment for EV adoption. The legislation surrounding emissions, coupled with the phasing out of internal combustion engines, positions EV manufacturers like BYD to capitalise on the growing demand for cleaner vehicles. Additionally, the shift in consumer preferences towards sustainable and eco-friendly transportation further enhances the market potential.

However, this opportunity comes with substantial challenges. The stringent regulations in Europe mean that BYD must continuously innovate to meet evolving standards. This includes ensuring that its vehicles not only comply with current regulations but also anticipate future ones, such as the upcoming Euro 7 emissions standards and the requirements for battery life and recyclability. BYD's decision to establish a factory in Hungary by 2027 is a strategic move that could mitigate potential trade barriers and provide a more localized supply chain, allowing the company to better respond to regulatory changes and consumer demands.

Despite BYD's technological competence, one of the most significant challenges highlighted in this thesis is the issue of brand perception. The survey conducted as part of this research reveals a notable hesitation among European consumers to embrace Chinese brands, particularly in the automotive sector. Concerns about quality, reliability, and safety persist, even though BYD's vehicles have performed well in safety tests such as the Euro NCAP. This indicates that overcoming these perceptions will require more than just competitive pricing and high-quality products; it will necessitate a concerted effort in brand building and consumer education.

BYD's marketing strategy must focus on demonstrating the tangible benefits of its vehicles, such as their advanced battery technology, safety features, and cost-effectiveness. Test drives, which were identified as a crucial factor in influencing purchasing decisions, should be a

cornerstone of BYD's promotional activities. Additionally, the company must work to dispel the stigma associated with Chinese-made products by highlighting its global presence, partnerships with reputable firms, and adherence to European standards.

The European EV market is not just a growth opportunity, it is also a highly competitive arena. Established players like Tesla, Volkswagen, and BMW, along with many other emerging competitors, are all vying for dominance. BYD's ability to disrupt the market share of these will depend on its capacity to differentiate itself through innovation and value.

The company's focus on vertical integration gives it a unique advantage in controlling costs and ensuring the quality of critical components, such as the batteries. This not only allows BYD to offer competitive pricing but also positions it to respond more nimbly to supply chain disruptions - a significant advantage in a post-pandemic world where supply chain resilience has become a key concern. However, BYD must also ensure that its vehicles meet the specific needs and preferences of European consumers. This includes addressing concerns about vehicle range, charging infrastructure, and total cost of ownership.

Beyond BYD's specific strategies, this thesis has also explored the broader macroeconomic forces shaping the European automotive industry. The transition to EVs is not just a technological shift but also a profound economic one, with implications for employment, trade, and industrial policy. The European automotive sector, long dominated by established brands, is facing unprecedented disruption from both new entrants like BYD and shifting regulatory landscapes.

BYD's expansion into Europe is a small-scale indicator of the larger forces at play in the global automotive industry. The company's ability to navigate these dynamics, balancing innovation with compliance, and global ambitions with local sensitivities will be a critical determinant of its success. Moreover, BYD's experience in Europe could provide valuable lessons for other Chinese companies looking to expand internationally, particularly in sectors where brand perception and regulatory compliance are key.

BYD's expansion into Europe represents a bold and strategic move that reflects both the opportunities and challenges of the modern automotive industry. The company's success will depend on its ability to leverage its technological strengths, navigate complex regulatory environments, and build a strong brand in the face of consumer scepticism. As the electric vehicle market continues to evolve, BYD's journey in Europe will be a critical case study in international business strategy, offering valuable lessons for companies worldwide. This thesis

provides a foundation for understanding these dynamics, and it is hoped that future research will continue to build on these findings, contributing to the ongoing dialogue about the future of the global automotive industry.

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7. Annexes

Annex A – Pedagogical survey questions

1. What is your country of residence?

2. What is your age?

- ☐ 18-24 years old
 - ☐ 25-34 years old
 - ☐ 35-44 years old
 - ☐ 45-54 years old
 - ☐ 55-64 years old
 - ☐ 65 years or older
-

3. What is your gender?

- ☐ Female
 - ☐ Male
-

4. How do you describe your annual income?

- ☐ Low
 - ☐ Medium
 - ☐ High
-

5. What are the most important factors when choosing a car? (Select up to 3 options)

- ☐ Price
 - ☐ Quality
 - ☐ Fuel efficiency
 - ☐ Advanced technologies
 - ☐ Safety
 - ☐ Design
 - ☐ Brand
 - ☐ Environmental sustainability
-

6. Is environmental sustainability an important factor when you buy a new car?

- ☐ Very important
 - ☐ Important
 - ☐ Neutral
 - ☐ Less important
 - ☐ Not important
-

7. Which electric car brands do you find most attractive?

- ☐ Tesla
- ☐ Nissan

- ☐ BMW
 - ☐ Audi
 - ☐ Renault
 - ☐ BYD
 - ☐ Other (specify below)
-

8. Justify your previous answer

- ☐ Design
 - ☐ Quality
 - ☐ Technology
 - ☐ Brand reputation
 - ☐ Performance
 - ☐ Price
 - ☐ Range/Charging network
 - ☐ Other (specify below)
-

9. Have you bought an electric car?

- ☐ Yes
 - ☐ No
-

10. Which brand was it?

- ☐ Tesla
 - ☐ BYD
 - ☐ Nissan
 - ☐ BMW
 - ☐ Audi
 - ☐ Renault
 - ☐ Other (specify below)
-

11. How likely are you to buy an electric car when deciding to purchase your next car?

- ☐ Very likely
 - ☐ Probable
 - ☐ Moderate
 - ☐ Unlikely
 - ☐ Very unlikely
-

12. What are your main concerns when buying an electric car? (Select up to 3 options)

- ☐ Autonomy of the battery
- ☐ Availability of charging stations
- ☐ Initial cost
- ☐ Battery life
- ☐ Performance
- ☐ Charging time
- ☐ Other (specify below)

13. Do you think it's important to take a test drive before buying a car?

- ☐ Very important
 - ☐ Important
 - ☐ Moderate
 - ☐ Less important
 - ☐ Not important
-

14. To what extent the conclusions taken from a test-drive influence your purchasing decision?

- ☐ Very Important
 - ☐ Important
 - ☐ Moderate
 - ☐ Less important
 - ☐ Not important
-

15. How important is the origin of a car in your purchasing decision?

- ☐ Very important
 - ☐ Important
 - ☐ Moderate
 - ☐ Less important
 - ☐ Not important
-

16. Would you buy a car from a Chinese brand?

- ☐ Yes
 - ☐ No
-

17. Which of these could be/are limiting factors in buying a car from a Chinese brand?
(Select up to 3 options)

- ☐ Quality & durability
 - ☐ Safety
 - ☐ Brand reputation
 - ☐ Technical assistance and maintenance
 - ☐ Availability of spare parts
 - ☐ Political & economic Issues
 - ☐ Other (specify below)
-

18. Have you ever heard of BYD car brand?

- ☐ Yes
 - ☐ No
-

19. How did you first hear about BYD?

- ☐ Advertising (television, radio, billboards)
- ☐ Social media

- Friends/ family
 - News/ magazines
 - Other (specify below)
-

20. What is your initial impression of the BYD brand?

- Very positive
 - Positive
 - Moderate
 - Negative
 - Very negative
-

21. If you were considering buying an electric car, would you consider buying a BYD model?

- Yes
 - No
-

22. What are your expectations for the prices of BYD's electric cars compared to other brands?

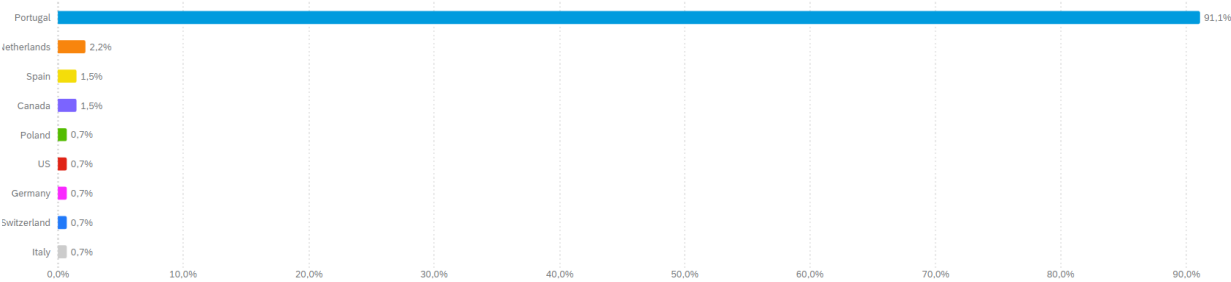
- More expensive
 - Same
 - Cheaper
 - No opinion
-

23. Knowing that BYD car models meet all the safety and emissions requirements demanded by the European Union, would you be afraid to buy a car from a Chinese brand like BYD?

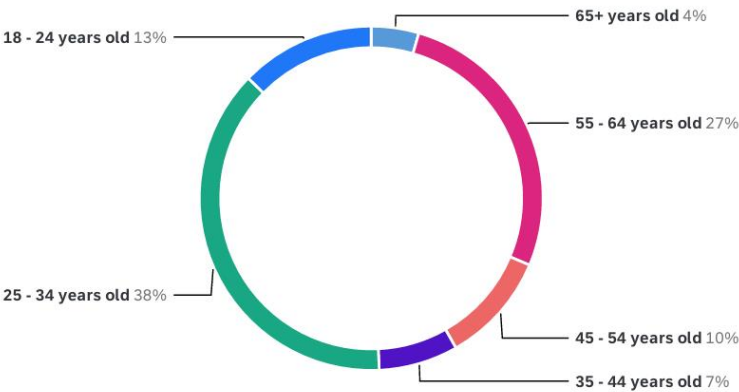
- Yes
 - No
-

Annex B – Results from survey

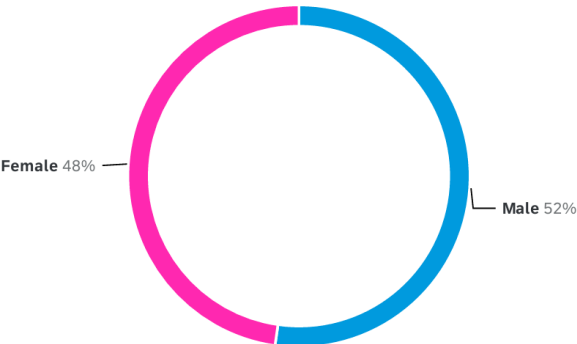
What is your country of residence? ⓘ



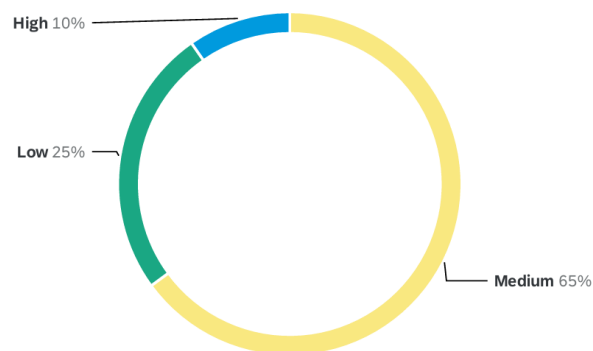
Age ⓘ



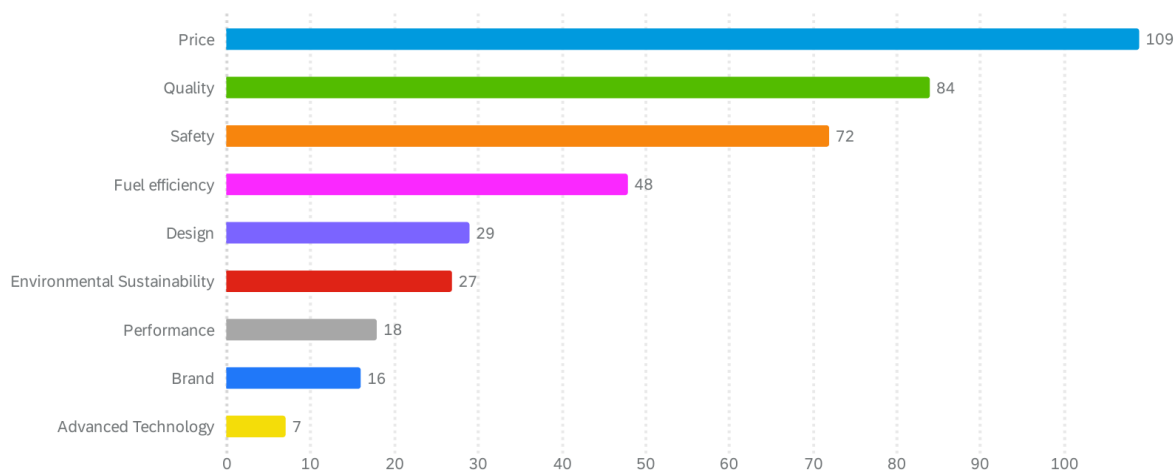
Gender ⓘ



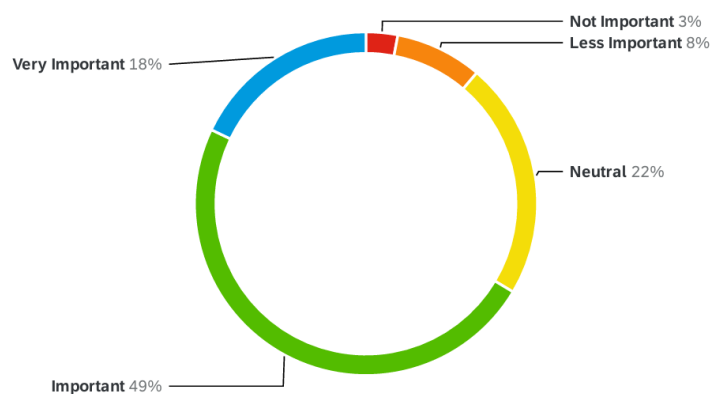
How do you describe your annual income? ⓘ



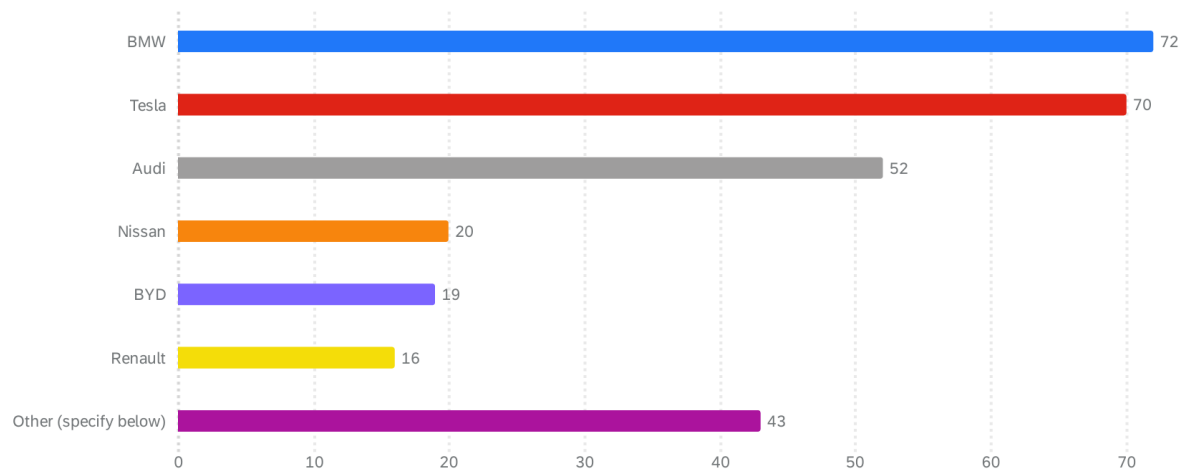
What are the most important factors when choosing a car? (choose up to three options) ⓘ



Is environmental sustainability an important factor when you buy a new car? ⓘ



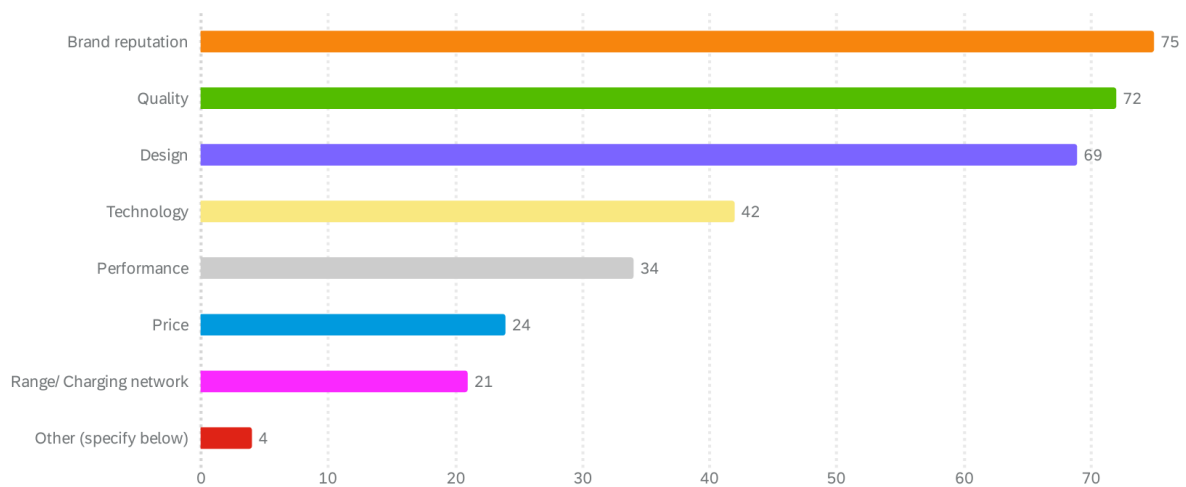
Which electric car brands do you find most attractive? (select up tp three choices) ⓘ



Other (specify below)

Response	Count
Mercedes-Benz	10
Toyota	7
Polestar	4
Volkswagen	3
Volvo	3
Hyundai	2
Kia	2
Opel	2
Peugeot	2
Mini	2
Cupra	1
Honda	1
Porsche	1
MG	1
Ford	1
None	1
I haven't researched	1

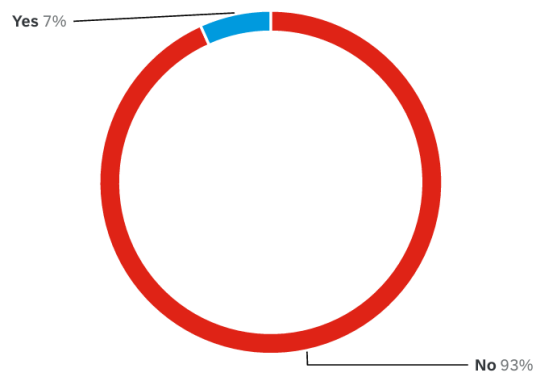
What factors influenced your previous answer? (choose up to three options) ⓘ



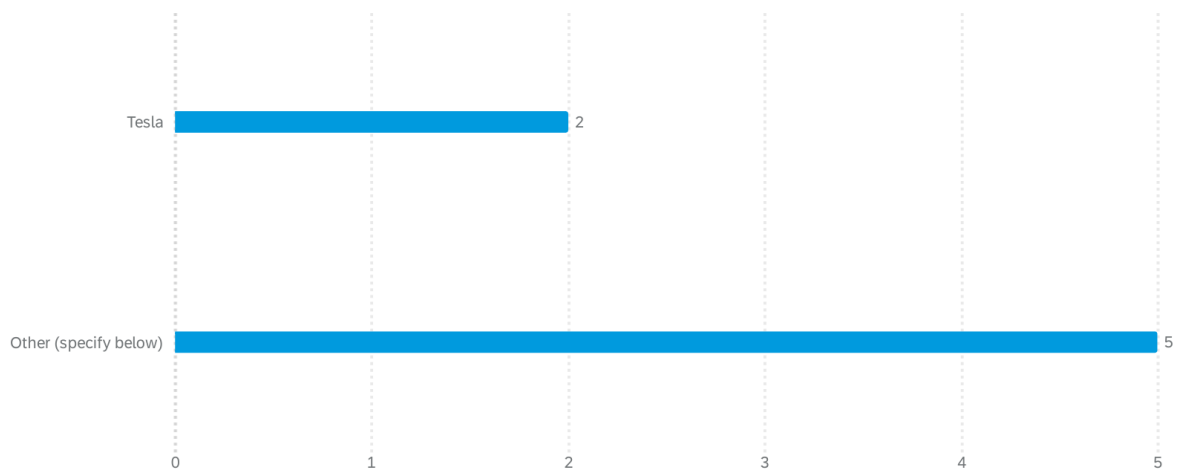
Other (specify below)

Response	Count
Safety	1
Reliability	1
None	1

Have you bought an electric car? ⓘ



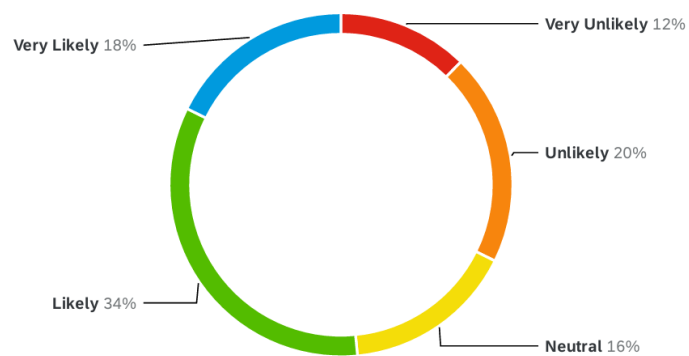
Which brand was it? 7 ⓘ



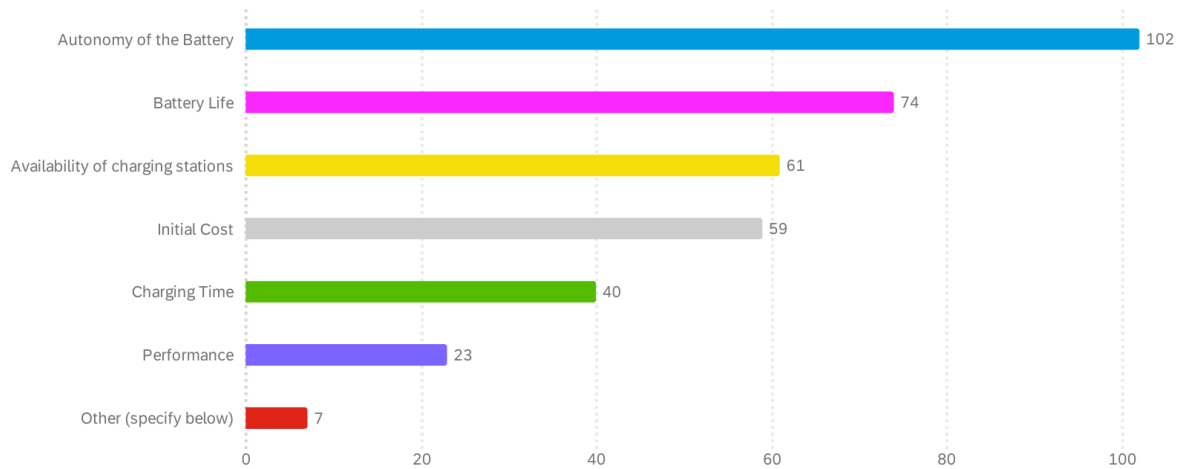
Other (specify below)

Response	Count
Mercedes-Benz	2
Opel	2
Mini	1

How likely are you to buy an electric car when deciding to purchase your next car? ⓘ



What would be your main concerns when buying an electric car? (select up to three options) ⓘ



Other (specify below)

Response

“Pollution at source and early destruction”

“It's the future with the interests unfortunately installed in the economic elites that will force the purchase”

“The car's usual purpose (short-distance use, long journeys, city driving, etc.)”

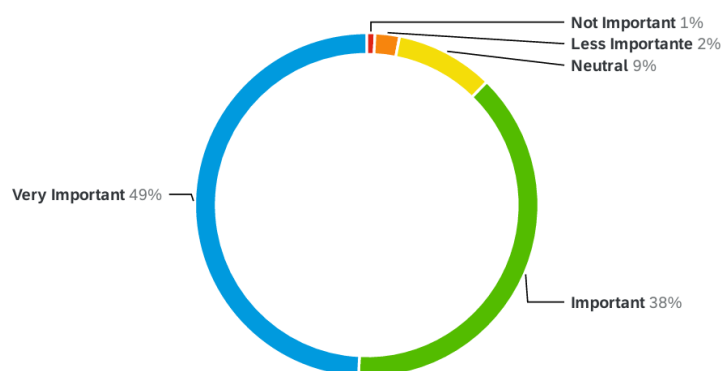
“Lack of garage”

“Lack of manual transmission”

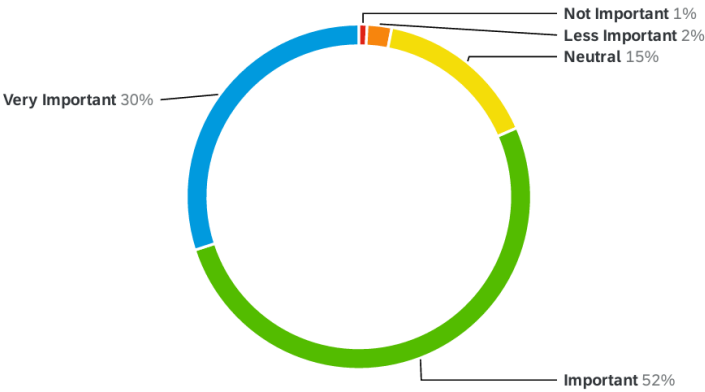
“Don't like it”

“Don't like it”

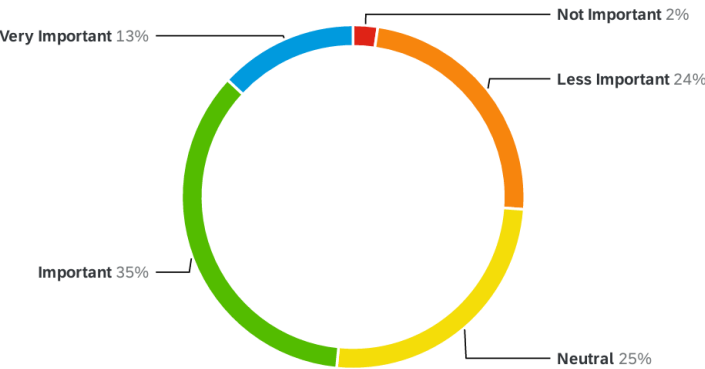
How important is it to take a test drive before buying a car? ⓘ



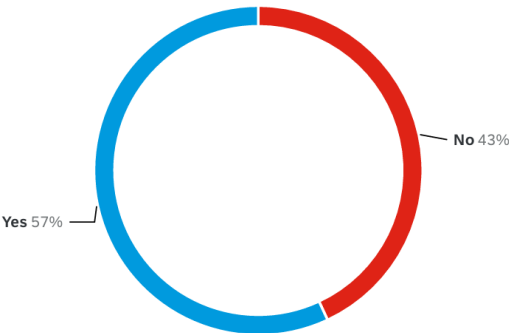
To what extent the conclusions taken from a test-drive influence your purchasing decision? ⓘ



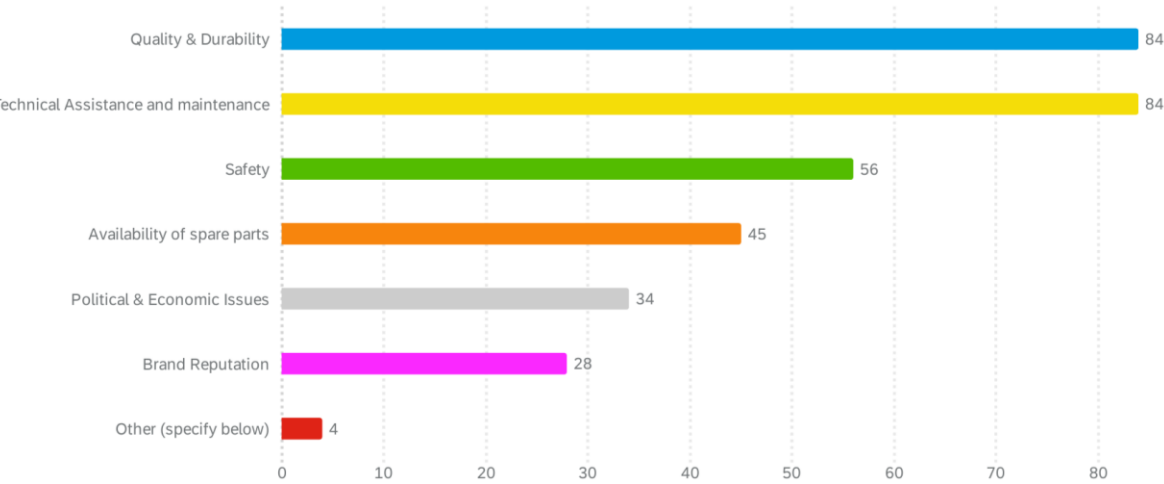
How important is the origin of a car in your purchasing decision? ⓘ



Would you buy a car from a Chinese brand? ⓘ



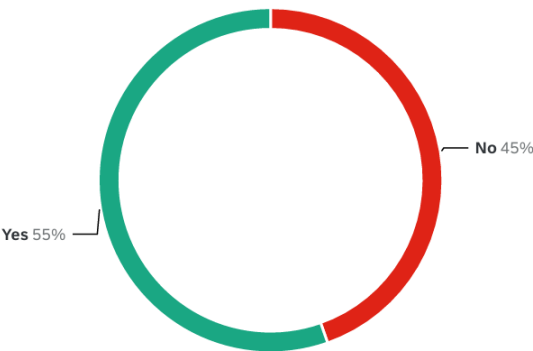
Which of these could be/ are limiting factors in buying a car from a Chinese brand? (select up to three options) ⓘ



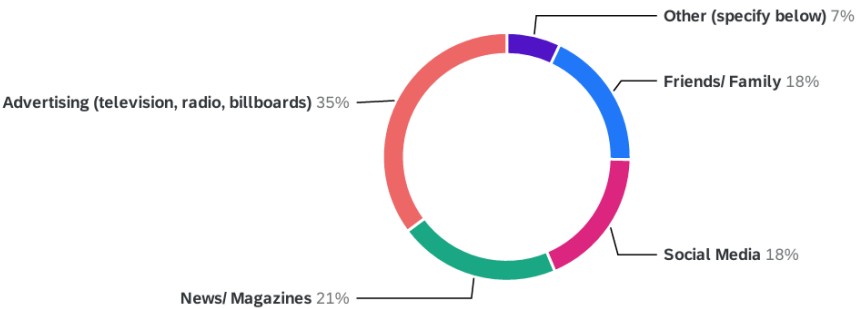
Other (specify below)

Response
“Espionage”
“Privacy”
“Retroactive import taxes”
“Insurance”

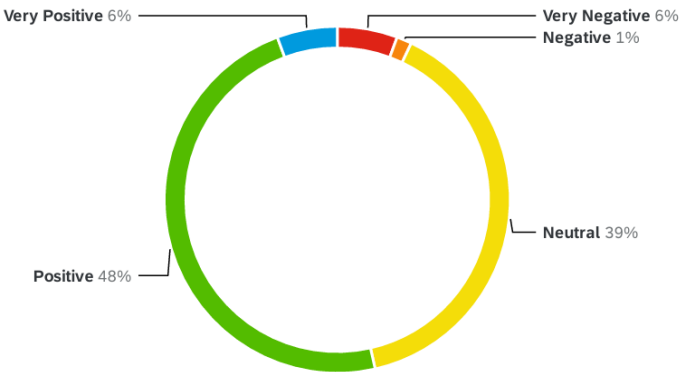
Have you ever heard of BYD car brand? ⓘ



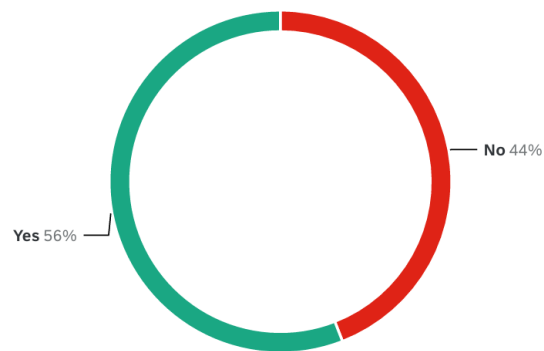
How did you first hear about BYD? ⓘ



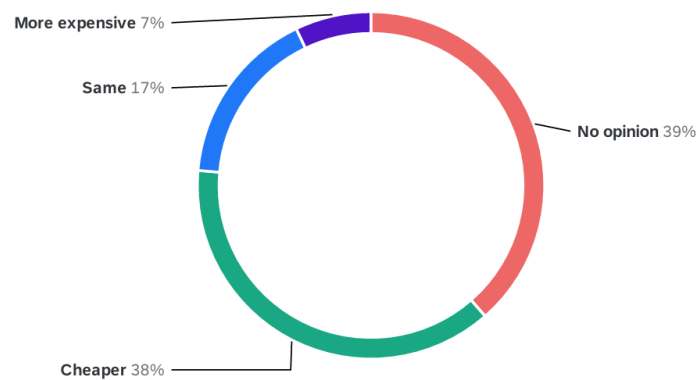
What is your initial impression of the BYD brand? ⓘ



If you were considering buying an electric car, would you consider buying a BYD model? ⓘ



What are your expectations for the prices of BYD's electric cars compared to other brands? ⓘ



Knowing that BYD car models meet all the safety and emissions requirements demanded by the European Union, would you be afraid to buy a car from a Chinese brand like BYD? ⓘ

