

GREEN MARKETING STRATEGY AND CONSUMER BEHAVIOUR FOR
ELECTRIC VEHICLES IN DEVELOPING COUNTRIES

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**GREEN MARKETING STRATEGY AND CONSUMER BEHAVIOUR FOR
ELECTRIC VEHICLES IN DEVELOPING COUNTRIES**

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ABSTRACT

The global trend toward sustainability and decreasing carbon emissions promoted electric vehicles (EVs) one of the most noteworthy innovations in the transportation sector. While countries desire to satisfy the enterprising purposes specified by international climate agreements, such as the Paris Agreement, EVs appeared vital in handling the environmental effects of internal combustion engine (ICE) cars. EVs deliver a realistic resolution to the growing climate change problems, diminishing gas emissions and improving energy efficiency, presenting a more sustainable alternative to fossil-fuel-powered cars. Their increasing dominance in consumer markets emphasises their essential function in the global shift toward zero-emission transportation. This dissertation examines the challenges EVs encounter in the Turkish automobile market. It investigates whether green marketing strategies effectively adopt EVs in Türkiye. This study will utilise the Most Similar System Design (MSSD) technique to make a comparative case study among two developing countries, Türkiye and Portugal. As a result of a comparative case study, the research aims to reveal both countries' electric vehicle marketing strategies by understating their different strategies leading to other electric vehicle sales numbers and understanding whether green marketing strategies are effective in developing countries. Furthermore, this dissertation gives importance to understanding and revealing the Turkish market as a developing country where price sensitivity, infrastructure limitations, and consumer scepticism give extraordinary barriers by comparing with other remarkable European markets and elite interviews with predominant actors of the automobile sector in Türkiye. It paves the way for making comparative study in depth.

Keywords: Electric Vehicles; Marketing; Green Marketing; Türkiye; Portugal

ÖZ

Sürdürülebilirliğe ve karbon emisyonlarını azaltmaya yönelik küresel eğilim, ulaşım sektöründeki en dikkat çekici yeniliklerden biri olan elektrikli araçları (EV'ler) teşvik etti. Ülkeler, Paris Anlaşması gibi uluslararası iklim anlaşmaları tarafından belirtilen girişimci amaçları yerine getirmek isterken, EV'ler içten yanmalı motorlu (ICE) araçların çevresel etkilerini ele almada hayati önem taşıyordu. EV'ler, artan iklim değişikliği sorunlarına gerçekçi bir çözüm sunuyor, gaz emisyonlarını azaltıyor ve enerji verimliliğini artırıyor ve fosil yakıtla çalışan araçlara daha sürdürülebilir bir alternatif sunuyor. Tüketici pazarlarındaki artan hakimiyetleri, sıfır emisyonlu ulaşımın doğru küresel değişimdeki temel işlevlerini vurguluyor. Bu tez, EV'lerin Türk otomobil pazarında karşılaştığı zorlukları inceliyor. Yeşil pazarlama stratejilerinin Türkiye'de EV'leri etkili bir şekilde benimseyip benimsemediğini araştırıyor. Bu çalışma, iki gelişmekte olan ülke olan Türkiye ve Portekiz arasında karşılaştırmalı bir vaka çalışması yapmak için En Benzer Sistem Tasarımı (MSSD) tekniğini kullanacaktır. Karşılaştırmalı bir vaka çalışması sonucunda, araştırma, diğer elektrikli araç satış rakamlarına yol açan farklı stratejilerini anlayarak ve yeşil pazarlama stratejilerinin gelişmekte olan ülkelerde etkili olup olmadığını anlayarak her iki ülkenin elektrikli araç pazarlama stratejilerini ortaya çıkarmayı amaçlamaktadır. Ayrıca, bu tez, fiyat duyarlılığının, altyapı kısıtlamalarının ve tüketici şüpheciliğinin olağanüstü engeller oluşturduğu gelişmekte olan bir ülke olarak Türkiye pazarını, diğer dikkat çekici Avrupa pazarlarıyla ve Türkiye'deki otomobil sektörünün baskın aktörleriyle yapılan seçkin röportajlarla karşılaştırarak anlamaya ve ortaya koymaya önem vermektedir. Derinlemesine karşılaştırmalı çalışma yapmanın yolunu açmaktadır.

Anahtar Kelimeler: Elektrikli Araç; Pazarlama; Yeşil Pazarlama; Türkiye; Portekiz

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LIST OF ABBREVIATIONS

EVs:	Electric Vehicles
ICE:	Internal Combustion Engine
GHG:	Greenhouse Gas
HOV:	High-Occupancy Vehicle
IEA:	International Energy Agency
MSSD:	Most Similar System Design
OECD:	Organisation for Economic Co-operation and Development
TEHAD:	Electric and Hybrid Vehicles Association
WVS:	World Value Survey

INTRODUCTION

EVs are major to the transportation sector's decarbonisation, accounting for almost one of four global carbon dioxide emissions. According to the International Energy Agency (IEA), the transportation sector is one of the most significant contributors to greenhouse gas emissions, making it an essential principle for countries aiming to decline their carbon dioxide impact (IEA, 2021). As traditional ICE automobiles continue to articulate notable quantities of carbon dioxide and other contaminated impurities, EVs offer a zero-emissions option, decreasing the environmental deterioration induced by roadway vehicles. Unlike traditional cars, EVs create no tailpipe emissions, greatly enhancing air quality, specifically in densely populated urban locations where traffic congestion and pollution are primary troubles. Demirtas et al. (2021) argue that “the switch to EVs can play a significant role in improving urban air quality and reducing the health burden associated with pollution.” The importance of EVs lies not only in their environmental advantages but also in their potential to cause technological innovation and convert the automotive industry.

The transport sector is the fastest-growing source of greenhouse gas (GHG) emissions, projected to contribute over 30% of total emissions in the future (UNEP, 2018). In 2019, road transport accounted for more than 70% of transport-related GHG emissions in Europe. Türkiye experienced the highest increase in carbon emissions globally from 2019 to 2021, at 7.9% (Crippa et al., 2022). In 2021, emissions from Türkiye's transport sector increased by 3% compared to the previous year, with approximately 60% of CO₂ emissions from fossil fuel vehicles in major cities like Istanbul (Ferraris et al., 2018). A 90% reduction in transport emissions by 2050 is required to achieve climate neutrality (European Commission, 2022).

Moreover, the elevation of EVs is not only pushed by environmental imperatives but also by their economic and “technological benefits. EVs present significant expense redemptions over their lifecycle due to their heightened energy efficiency and lower maintenance necessities than ICE automobiles. EVs transform approximately 60% of the

energy accumulated in their batteries into functional power, compared to only 20% in gasoline-powered cars (Chen and Zhang, 2017). This boosts efficiency and lowers operating expenditures for buyers, as electricity is commonly more affordable than petrol or diesel. Furthermore, EVs have fewer moving parts and do not demand frequent maintenance of complicated systems, such as exhaust systems, fuel injectors, and oil changes. These decreased maintenance requirements also reduce the total price of ownership, making EVs an economically feasible alternative for buyers in the long run.

Although it has the apparent benefit of EVs, their adoption is inconsistent across different regions, primarily because of the obstacles associated with price, infrastructure, and consumer behaviour. One of the main challenges is the increased upfront cost of EVs, which can be prohibitively costly, particularly in developing markets like Türkiye. The cost of EVs stays higher than that of ICE automobiles due to the increased cost of batteries, a significant element of the automobile's overall expense. While lithium-ion batteries have fallen enormously over the past decade, EVs are still considered premium objects in many markets, restricting their attraction to price-sensitive consumers. As Karahan et al. (2022) note, “in markets like Türkiye, where consumer purchasing power is lower than in many European countries, the high price of EVs remains a significant barrier to adoption.”

In addition to the cost obstacle, the availability of charging infrastructure is another vital element affecting the adoption of EVs. The amenity of charging an EV is a noteworthy trouble for consumers, especially those who live in regions with limited access to public charging stations. Range anxiety, or the suspicion that an EV will run out of battery before arriving at a charging station, is one of the most typically mentioned causes for consumer hesitancy in buying EVs. In many countries, mainly developing markets, the charging infrastructure is still in its babyhood, with most charging stations consolidated in metropolitan regions and along major highways, departing underserved rural and intercity ways. As Demirtas et al. (2021) explain, “the uneven distribution of charging infrastructure in Türkiye exacerbates range anxiety, limiting the appeal of EVs for long-distance travel.” Managing this problem requires effective investment in developing the

charging network, especially in rural and suburban areas, to allow EV owners to recharge their cars wherever they are.

To overcome these challenges, many countries have presented policies and stimuli to make EVs more accessible and attractive to customers. States worldwide have realised that the shift to EVs needs significant intervention in the form of financial motivations, regulatory help, and infrastructure growth. A lot of countries, including Norway, Germany, China, and the United States, have executed extensive incentive programs that have successfully guided the development of their EV markets. These countries provide practical case studies for comprehending how various policies and programs can be effectively utilised to encourage the adoption of EVs.

Marketing strategies are vital in facilitating the adoption of EVs in countries like Norway, Germany, China, and the United States. These marketing programs concentrated on positioning EVs as both environmentally friendly and technologically advanced, appealing to consumers' growing awareness of climate change and their passion for creative products. In Norway, for example, marketing campaigns highlighted the long-term cost savings related to EVs and the environmental advantages of decreasing emissions. The visibility of EVs in Norway's public and private transportation sectors also supported regularising EVs and facilitated more additional buyers to think about making the switch (Karahan et al., 2022).

In Germany, car manufacturers such as Volkswagen and BMW positioned their electric automobiles as high-performance vehicles with a unique driving experience compared to standard cars. Volkswagen's marketing campaign for its ID.3 model emphasises the automobile's advanced technology and long-range and quick charging abilities, demanding tech-savvy customers who value cutting-edge automotive creations (Kumar and Alok, 2020). These marketing actions positively make customer confidence in EVs, contributing to the growing demand for EVs in the German market. Marketing strategies emphasising EVs' technological advancements and environmental benefits proved critical in shaping consumer perceptions and revving their adoption.

In China, where air pollution is a noteworthy public health problem, marketing campaigns focused on the environmental benefits of EVs, encouraging them as a way for consumers

to contribute to more sterile air and a healthier urban environment. This approach is incredibly functional in cities like Beijing and Shanghai, where the visibility of electric buses and taxis helped increase public awareness about the benefits of EVs (Demirtas et al., 2021). Wang et al. (2017) used the term "new energy vehicles" (NEVs) and applied the extended theory of planned behaviour model to examine factors influencing NEV purchase intentions in China. They found that environmental concerns, financial benefits, infrastructure readiness, and policy incentives were key positive drivers. Zhuge and Shao (2019) quantified the relative importance of factors such as vehicle price, usage, social influence, environmental awareness, and purchase-related policies, identifying vehicle price and usage as the most influential. In another study, He et al. (2018) confirmed that personality traits, personal innovativeness, and environmental concern significantly impacted EV purchase intentions in China. As a result of both state incentivise and academic research, these marketing strategies, integrated with substantial state aid and investment in charging infrastructure, made China the world's largest market for EVs, with domestic manufacturers like BYD and NIO competing with international brands.

In the United States, Tesla pioneered a unique marketing strategy that played a crucial role in transforming the perception of EVs. Tesla's marketing strategy goes beyond traditional advertising, leveraging the impact of social media and its well-known charismatic CEO, Elon Musk, to induce across-the-board attention for the brand. As part of its strategy, Tesla uses direct-to-consumer sales and constructs a loyal customer base that recognises its mission of advancing sustainability and innovation. Tesla's marketing highlights the performance and premium of its vehicles, placing them not just as environmentally friendly options but as cutting-edge, high-performance machines. According to Tesla Marketing Analysis (2023), "Tesla's ability to combine sustainability with advanced technology and premium has significantly changed how consumers view EVs, transforming them from niche products into mainstream options." This approach is instrumental in enabling Tesla to become one of the most recognizable EV brands globally.

Despite the encouraging improvement in countries like Norway, Germany, China, and the United States, the transition to EVs is challenging. As mentioned, the increased

upfront cost of EVs remains a considerable obstacle for many customers, especially in developing markets. Price sensitivity, especially in countries like Türkiye, continues to be a vital topic. Türkiye presents a unique case for EV adoption due to its specific economic and market conditions. The Turkish automotive market is distinguished by high price sensitivity, where consumers are more likely to prioritize affordability over environmental benefits. This paves the way for a notable challenge for green marketing strategies, as EVs are generally more expensive than their internal explosion engine counterparts. Chen and Zhang (2017) cited that “price remains the dominant factor influencing consumer purchasing decisions in price-sensitive markets, which poses a significant challenge for the successful marketing of EVs.”

The destiny of EVs in Türkiye and other appearing markets will depend on state policies, infrastructure development, and effective marketing strategies. State support in the form of financial incentives, such as tax exemptions, subsidies, and rebates, will be essential for reducing the high upfront costs of EVs and making them more available to a broader range of consumers. As seen in countries like Norway, Germany, and China, government incentives are vital in facilitating consumers to switch from gasoline-powered vehicles to electric alternatives. Without such support, reaching overall adoption in markets like Türkiye will be challenging, where price sensitivity remains an important obstacle.

Public transportation also introduces the possibility of improving the visibility and adoption of EVs in Türkiye. Incorporating EVs into public transportation systems, such as buses and taxis, can help regularise the use of EVs and prove their reliability and efficiency. Public transportation systems can serve as a platform for enlightening the general people about EVs and allowing them to diminish the psychological obstacles related to switching from traditional vehicles to electric ones. This method was successfully executed in European cities like Oslo and Paris, where electric buses and taxis played an influential role in encouraging the use of EVs among consumers (Chen and Zhang, 2017). By introducing electric buses and taxis into Türkiye’s public transportation systems, cities like Istanbul and Ankara can set an example for personal vehicle owners, indicating that EVs are a feasible and sustainable option for everyday transportation.

This dissertation explores the role and effectiveness of **green marketing strategies** in promoting **premium EVs** in Türkiye and Portugal. Both countries share striking socio-economic and cultural similarities, yet they differ significantly in EV adoption rates. The study seeks to identify the **variables causing this disparity** and analyse whether green marketing aligns with consumer behaviour and post-materialist values. Therefore, this dissertation's main priority is to examine EVs' challenges in the Turkish market and consider whether green marketing strategies can overcome these challenges. This study's primary research question is: “What is the role and challenges of green marketing strategies in promoting premium electric vehicles in Türkiye and Portugal?”

This research question is designed to analyse the diverse economic, infrastructural, and consumer-related obstacles that hinder the adoption of EVs in Türkiye and to determine possible strategies for overcoming these obstacles.

This research indicates that Mercedes in Türkiye aim to enhance public awareness of the benefits of electric vehicles, thereby increasing consumer interest and purchase intent and how green marketing is inefficient in Türkiye. Their strategy aligns with the communication component of Marketing Communications, which emphasizes building strong awareness and understanding of a product or service among consumers. In general, it will examine how different the marketing strategies of Mercedes in Türkiye are from the examples of other European countries and which issues are given priority. In addition, green marketing strategies will be examined in the Turkish market. The difficulties and advantages discussed in the Turkish market will be detailed through elite interviews. In addition, the comparative analysis using the MSSD method in developing countries like Türkiye and Portugal will provide us with foresight about how Türkiye can reach the electric car sales figures in its equivalent countries.

The selection of Mercedes-Benz as the focal brand for this dissertation is based on its position as a globally recognized leader in the premium automotive industry and its growing focus on sustainability through the EQ electric vehicle line. Mercedes, with its combination of luxury, technological innovation, and environmental responsibility, provides a valuable case for examining how green marketing strategies are applied in the premium EV segment. Our expectation is that Mercedes' positioning as a premium brand

will offer insights into the challenges and opportunities faced in promoting electric vehicles, particularly in two distinct markets, Türkiye and Portugal.

Focusing on premium car brands like Mercedes-Benz allows this research to explore the delicate balance between luxury branding and environmental messaging. Premium brands, targeting high-income and status-oriented consumers, provide a unique perspective on how green marketing strategies resonate within this segment. It is anticipated that factors such as price sensitivity, government incentives, and infrastructure will influence the adoption of premium EVs in Türkiye and Portugal. By examining Mercedes' strategies, this study aims to highlight the variables that may explain differing adoption patterns and uncover actionable insights for the broader premium electric vehicle market.

This study is guided by a set of exploratory assumptions that reflect patterns observed in prior research and contextual knowledge of the Turkish and Portuguese markets. First, it is expected that green marketing strategies for electric vehicles (EVs) may face significant challenges in the Turkish market due to a pronounced consumer sensitivity to price, which often overrides environmental considerations in purchasing behavior. In contrast, the Portuguese context—shaped by the government's strong commitment to a zero-carbon future—appears to have cultivated broader environmental awareness and post-materialist values within society, potentially encouraging more widespread acceptance of EVs. Additionally, in Türkiye, persistent concerns surrounding the adequacy of charging infrastructure and the perceived inefficiency of EVs suggest that their initial integration may be more feasible within public transportation networks rather than among private consumers. In Portugal, however, government incentives are thought to have played a catalytic role in reshaping consumer preferences and normalizing EV adoption. Finally, the growing success of premium EV brands in Portugal may be better understood through the lens of Diffusion of Innovation Theory, which posits that technologically advanced products gain traction among early adopters—a dynamic that appears more pronounced in Portugal than in Türkiye. These assumptions serve as the conceptual framework guiding the qualitative exploration of consumer attitudes, policy impacts, and market dynamics in both national contexts.

The methodology for this dissertation embraces a qualitative research approach, combining elite interviews with key stakeholders in the EVs industry and a comparative case study analysis. Elite interviews will be conducted with automotive executives and marketing experts in Türkiye and Portugal to gather insights into the challenges and opportunities for EV adoption in Türkiye. The comparative case study will analyse EV adoption in Türkiye alongside several European countries, including Norway, Germany, and Portugal, to reveal common challenges and effective strategies. This methodological approach will provide a comprehensive understanding of the factors influencing EV adoption in Türkiye and its difference offer valuable recommendations for promoting sustainable transportation solutions.

To explore the challenges faced by green marketing strategies for electric vehicles in the Turkish market, this study adopts a qualitative research design centered on elite interviews with marketing professionals from Türkiye and Portugal. A total of eight semi-structured interviews were conducted—four in each country—with senior professionals such as marketing managers, sales executives, and communications directors from premium automotive brands. The interview data were analyzed using NVivo, a qualitative data analysis software, which facilitated systematic coding and thematic interpretation. This enabled the identification of key recurring patterns across the transcripts, structured around core themes such as price sensitivity, consumer education, environmental awareness, and government incentives.

To complement and enrich the NVivo-driven thematic analysis, the study also employed BERTopic, an advanced transformer-based topic modelling technique built on the BERT language model. This computational tool was used to detect latent topics and discourse clusters across the interview data, offering an additional layer of insight by highlighting semantic relationships that may not emerge through manual coding alone. By integrating traditional qualitative techniques with digital content analysis, this methodological approach not only enhances the analytical depth of the study but also improves its reliability through triangulation. This mixed-methods-inspired strategy provides a robust framework for understanding cross-cultural marketing dynamics and consumer behavior in developing electric vehicle markets.

This research employs a comparative case study methodology to examine the green marketing strategies for electric vehicles (EVs) in two socio-economically similar yet environmentally and institutionally distinct contexts: Türkiye and Portugal. Both countries represent developing economies within the broader European region but differ significantly in terms of consumer environmental awareness, government support mechanisms, and infrastructural readiness for EV adoption. By applying the Most Similar Systems Design (MSSD), this study isolates the cultural, policy, and behavioral factors that account for the divergence in marketing outcomes despite comparable economic constraints. Türkiye, characterized by high price sensitivity and limited EV infrastructure, offers insight into the barriers facing green marketing in emerging markets. In contrast, Portugal, with its stronger environmental policy framework and growing post-materialist values, presents a context where premium green marketing strategies have begun to resonate more effectively. This comparative approach enhances the generalizability and relevance of the findings, highlighting how localized factors shape the adoption of global sustainability narratives.

The theoretical framework of this study is built on four key theories to analyse the role of green marketing strategies in promoting premium EVs in Türkiye and Portugal. According to Green Marketing Theory (Polonsky, 1994), environmental messaging influences consumer behaviour. Our expectation is that strong environmental awareness and post-materialist values in Portugal create a supportive environment for green marketing strategies. In contrast, in Türkiye, economic concerns may overshadow environmental benefits, limiting the effectiveness of these strategies. Price Sensitivity Theory (Monroe, 1990) is particularly relevant for Türkiye. Meanwhile, in Portugal, government incentives such as subsidies and tax reductions are expected to reduce price sensitivity, making EVs more appealing to consumers. Diffusion of Innovation Theory (Rogers, 1962) explains how new technologies spread within societies. We anticipate that in Portugal, early adopters view EVs as innovative and prestigious products, supported by advanced infrastructure, which accelerates adoption. On the other hand, in Türkiye, infrastructural gaps and concerns such as range anxiety may slow down the diffusion process. Finally, Perceived Value Theory (Zeithaml, 1988) examines how consumers evaluate the benefits of EVs, such as environmental impact, long-term cost savings, and

convenience. Our expectation is that Portuguese consumers perceive greater value in EVs due to strong environmental consciousness and financial incentives, while in Türkiye, short-term economic concerns may limit the perceived benefits. Together, these theories provide a comprehensive framework for understanding the adoption gap between Türkiye and Portugal and identifying strategies to enhance the effectiveness of green marketing in both markets.

This dissertation contributes to the academic literature on green marketing, consumer behaviour, and EV adoption in several ways. First, it provides an exhaustive examination of EV adoption challenges in a developing market, contributing to the growing research on sustainable transportation in developing countries. Second, it presents a comprehensive review of how price sensitivity affects consumer behaviour in the context of EVs and underscores the significance of state incentives in encouraging adoption. Third, the dissertation provides a comparative analysis of EV adoption in Türkiye and Portugal, delivering a worthwhile understanding of the effectiveness of different policies and marketing strategies. Finally, this study provides practical suggestions for policymakers and industry leaders in Türkiye, offering a roadmap for promoting the widespread adoption of EVs in the country. Given Türkiye's unique economic and market conditions, any strategies to encourage EVs must consider the characteristic challenges that Turkish consumers face, particularly regarding price sensitivity and infrastructure limitations. By examining the barriers and opportunities in the Turkish market, this dissertation aspires to provide actionable perspicuity that can advise forthcoming policy decisions and marketing strategies. One of the most critical components of this research is understanding how Türkiye can know from the experiences of countries that have successfully advanced EVs. As a last point, the literature reviewed indicates limited findings, with a strong focus on European countries and USA- China competition, particularly China. Additionally, much of the research relies on survey data, revealing gaps in geographical scope and the need for qualitative insights that could enhance understanding consumer responses to EVs, which are still relatively innovations. Crucially, the role of EVs in contributing to the twin transition—towards both environmental sustainability and technological advancement—remains underexplored (Almansour, 2022). This research contributes to academic literature from a methodology

perspective by using the elite interview and the MSSD, namely, the comparative case study method instead of the dominant survey method.

The findings of this dissertation will provide practical insights into the challenges and opportunities related to EV adoption in Türkiye. By investigating both the economic and psychological elements that affect consumer behaviour and the role of state policies and infrastructure development, this research strives to offer practical suggestions for encouraging EVs in Türkiye. A comprehensive analysis can inform these recommendations of the experiences of other countries that have successfully implemented policies to support EV adoption, as well as insights from elite interviews with industry experts and policymakers in Türkiye and Portugal.

This dissertation examines the EV market in Türkiye, the associated challenges, and possible solutions. Following this introduction, Chapter 2 will present a comprehensive review of the existing literature on green marketing, consumer behaviour, and EV adoption, with a particular focus on the experiences of other countries. Chapter 3 will discuss the theoretical framework underpinning this study, including Green Marketing Theory, Price Sensitivity Theory, Diffusion of Innovation, and Perceived Value Theory. Chapter 4 will detail the research methodology, including the elite interviews and comparative case studies used to gather data. Chapter 5 will present the findings from these interviews and case studies, comparative analysing the challenges faced by the Turkish and Portugal EV market. Chapter 6 will discuss these findings, offering strategic and policy recommendations. Finally, Chapter 7 will conclude the study by summarizing key insights, acknowledging limitations, and suggesting areas for future research. Through this structure, the dissertation aims to offer a holistic analysis of the EV market in Türkiye and contribute to the broader academic discourse on sustainable transportation and green marketing.

LITERATURE REVIEW

The existing literature recognizes EVs as a sustainable solution to mitigate the negative environmental impacts of fossil fuel-based vehicles. However, research on this topic remains preliminary and lacks the detailed, in-depth analysis needed to fully understand why EVs are not being adopted as widely as expected, despite their financial and environmental advantages in human mobility (Almansour, 2022).

Academic analyses indicate a significant increase in publications on EVs over the past decade (Barbosa et al., 2022). China leads in EV research, followed by the United States and the United Kingdom (Ullah et al., 2023). A review of Scopus-indexed publications from the last two decades shows a rapid growth in EV studies, with considerably fewer contributions from developing economies compared to developed ones (Bhat and Verma, 2023). Analysis of three decades of Web of Science publications highlights key technical topics: Vehicle to Grid (V2G) strategies, powertrain, battery, charging technologies, and infrastructure (Pinto et al., 2022). Keyword analyses reveal a focus on energy management, storage, infrastructure, and environmental issues (Barbosa et al., 2022; Ullah et al., 2023). Additionally, mapping studies addressed topics such as control strategies and business models, offering insights to support policymakers and stakeholders in promoting EV adoption (Secinaro et al., 2020; Wahid et al., 2022; Brescia et al., 2023; Senyapar et al., 2023).

The Literature Review section will comprehensively analyse critical EV (EV) marketing themes, drawing from global and Turkish perspectives. The chapter starts with Green Marketing (2.1), examining its principles, advantages, and challenges in promoting EVs. It then analyses Consumer Behaviour (2.2), focusing on theories of price sensitivity, environmental awareness, and sustainable consumer preferences, particularly in the Turkish market. The section continues with the Marketing of EVs (2.3), offering a comparative analysis of global and European approaches, including state incentives in countries like Norway, Portugal, the USA and Germany. Pricing Strategies and Government Incentives (2.4) delves into the role of price in EV adoption and examines

how policies impact EV sales. Finally, the Marketing and Market Situation of EVs in Türkiye (2.5) analyses Türkiye's specific challenges and opportunities in the EV market, including consumer choices, infrastructure, and market trends.

2.1. Green Marketing

Green marketing has evolved into a concept of paramount importance, essential for promoting sustainability across society, the environment, and industries. By emphasizing the triple-bottom-line—social, environmental, and economic factors—the automobile industry significantly influences this movement toward sustainable development (Nair et al, 2011). Green marketing, or eco-marketing, is directed at advertising products or services based on their environmental benefits. The notion is levelled in the increasing awareness of environmental issues and consumer demand for products that minimize ecological adverse effects. According to Polonsky (1994), green marketing implicates developing and marketing products conceived to facilitate harmful environmental impacts, whether through product improvements, production processes, packaging, or advertising methods. The rise of green marketing can be traced back to growing environmental consciousness in the late 20th century, driven by societal demand and governmental regulations to mitigate environmental degradation.

Marketing plays a crucial role in the design, development, and promotion of eco-friendly products or in conducting marketing activities in an environmentally sustainable manner. Green marketing encompasses a range of practices, including product modifications, adjustments in production and distribution processes, packaging improvements, and changes to marketing communications. The key objectives of green marketing are: a) Enhancing consumer appeal for environmentally preferable products. b) Reducing environmental impact while effectively reaching target audiences. c) Meeting two goals: improving environmental quality and ensuring customer satisfaction (Nair et al, 2011).

At its core, green marketing is related to creating a value offer that highlights the environmental advantages of a product. For companies, this means designing products with a more miniature carbon footprint, utilising renewable energy, or being

biodegradable, recyclable, or constructed using sustainable techniques. On the other side of the medal, companies can tap into the growing consumer segment that prioritizes environmental consciousness when purchasing (Chen and Zhang, 2017). However, green marketing is not without its troubles. While it proposes a way for companies to distinguish themselves and react to customer demands for sustainability, the real significance of green marketing varies by region, market maturity, and consumer behaviour.

Despite the increasing popularity of green marketing, the term became increasingly nuanced due to the phenomenon comprehended as “greenwashing.” Greenwashing refers to companies exaggerating or falsely asserting the environmental benefits of their products to attract environmentally conscious consumers. This can damage trust and weaken the credibility of legitimate green marketing endeavours. As Chen and Zhang (2017) note, “the challenge for marketers lies in striking a balance between promoting the environmental benefits of their products and ensuring that these claims are substantiated and not perceived as misleading by consumers.” Thus, transparency and accountability are essential for the triumph of any green marketing strategy.

The advantages of green marketing are apparent. First, companies can attract a growing part of environmentally conscious consumers willing to pay a premium for products that align with their values. According to research by Nielsen (2015), nearly 66% of global consumers are willing to pay more for sustainable products. Second, green marketing allows companies to distinguish themselves from competitors, particularly in industries where products are often noticed as entities. By offering environmentally friendly alternatives, companies can create a unique brand identity that reverberates with consumers pursuing sustainability. Third, green marketing can encourage long-term loyalty, as consumers who buy into a company’s environmental mission are likelier to remain loyal to the brand.

However, the disadvantages of green marketing should not be overlooked. In their comprehensive study on electric vehicles, Barbarossa et al. (2015) found that environmentalism plays a significant role in adaptation. Gadenne, Sharma, Kerr, and Smith (2011) suggested there is a gap between environmental attitudes and eco-friendly behaviour. Similarly, Gyimesi and Viswanathan's (2011) research in the United States

revealed that while people are sensitive to the environmental impact of vehicle use, they lack sufficient knowledge about electric vehicles, and price remains a critical factor in their decision-making. One of the primary challenges is the higher cost of producing environmentally friendly products. Sustainable production methods, eco-friendly materials, and renewable energy sources can raise expenses, often passed on to consumers. This limits the market to higher-income individuals willing to pay a premium for green products, potentially alienating price-sensitive consumers. In addition, green marketing requires a high level of transparency and accountability. Companies must ensure that credible certifications back their claims, as failure to do so can result in accusations of greenwashing, damaging their brand reputation (Demirtas et al., 2021).

The role of green marketing in promoting EVs is particularly significant. As the automotive industry moves toward electrification to diminish carbon emissions, green marketing plays a crucial role in shaping consumer perceptions and encouraging the adoption of EVs. EVs are placed as eco-friendly options to conventional gasoline-powered cars, and green marketing highlights their environmental benefits, such as zero emissions, reduced fuel consumption, and lower long-term costs due to reduced maintenance and energy expenses. Chen and Zhang (2017) argue that “the success of EVs depends not only on technological advancements but also on how well companies can communicate their environmental benefits through effective green marketing strategies.”

The significance of green marketing also changes across different regions and countries. In markets like Germany and Scandinavia, green marketing is highly successful due to the strong environmental awareness among consumers and government support for sustainability endeavours. In contrast, for developing countries, since electric vehicles are a relatively new technology compared to internal combustion engine vehicles, and potential users tend to have concerns about technological performance, which increases their reluctance to adopt them (Isabel Neumann et al., 2018). While it is known that perceived performance issues affect user perceptions of electric vehicles, system stability remains a significant barrier to their widespread adoption (Xue et al., 2014). Providing accurate information is crucial to facilitating the transition to products like electric vehicles. Key factors influencing electric vehicle adoption include consumer awareness

of the benefits, financial incentives, infrastructure availability, and potential fuel savings (Ninh and Bentzen, 2014).

In conclusion, green marketing is essential for companies to demand environmentally conscious consumers and distinguish themselves in an increasingly competitive market. While green marketing offers several advantages, including attracting a growing segment of eco-conscious consumers and building long-term brand loyalty, it is not without its challenges. The effectiveness of green marketing differs by region, with countries like Norway and Germany seeing notable success due to high levels of environmental awareness and government support. At the same time, markets like developing countries encounter considerable troubles due to price sensitivity and limited infrastructure. For EV manufacturers, green marketing plays a vital role in shaping consumer perceptions and encouraging the adoption of eco-friendly vehicles. Nevertheless, to be successful, companies must confirm that their green marketing efforts are transparent, credible, and aligned with consumer values.

2.2. Consumer Behaviour

Consumer behaviour is critical in marketing and adopting EVs (EVs). Theories of consumer behaviour present understandings of the decision-making processes that affect whether a consumer determines to purchase an EV, how they perceive the value of sustainable transportation, and the obstacles that may prevent them from adopting such technologies. Understanding consumer behaviour is essential for crafting effective marketing strategies that align with different consumer segments' motivations, preferences, and concerns. This section will examine existing literature on consumer behaviour theories, examine essential elements such as price sensitivity, environmental awareness, and sustainable consumer behaviour, and how these factors vary across regions.

Consumer behaviour is a complex research field investigating how individuals make purchasing decisions, considering psychological, social, cultural, and economic factors. Several theoretical models are designed to illustrate consumer behaviour. One of the most

influential theories is The Theory of Planned Behaviour (TPB), which asserts that an individual's intention to commit behaviour is affected by three factors: their attitude toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991). TPB is widely used in the context of sustainable consumption and EV adoption. For example, a study by Chen and Zhang (2017) argues that perspectives toward environmental protection and perceived social support for adopting green technologies are significant predictors of EV purchase intentions. These findings indicate that marketing strategies aimed at encouraging EVs should focus not only on the functional benefits of EVs but also on shaping positive attitudes toward sustainability and leveraging social influence.

Another critical theory appropriate to comprehending consumer behaviour in the EV market is the Value-Belief-Norm (VBN) Theory, which declares that pro-environmental behaviour is caused by personal values, views regarding environmental degradation, and emotions of moral responsibility to behave in an environmentally responsible manner (Stern, 2000). VBN theory underscores the role of ecological understanding and personal norms in driving sustainable consumption choices, making it particularly relevant for understanding the adoption of EVs. Research by Demirtas et al. (2021) advocates that consumers with environmentally stable values are more likely to adopt EVs, especially when they perceive their actions as contributing to reducing carbon emissions and environmental harm. This highlights the significance of targeting environmentally premeditated consumers with green marketing campaigns emphasising EVs' ecological benefits.

In addition to these behavioural theories, the Diffusion of Innovation (DOI) Theory by Rogers (2003) argues for insights into how new technologies, such as EVs, spread through a population. According to DOI theory, consumers can be classified into different groups based on their willingness to adopt new technology: innovators, early adopters, early majority, late majority, and laggards. Early adopters and innovators tend to be more willing to experiment with new technologies, while most consumers stay until the technology has demonstrated its reliability and benefits. This model describes the slow pace of EV adoption in many regions, where consumers may be reluctant to support

moderately new and unfamiliar technology. For marketers, understanding the adoption curve is crucial for tailoring marketing strategies to different population features, encouraging early adopters while addressing the concerns of more risk-averse consumers.

Sustainable consumer behaviour refers to the actions of individuals who desire to minimize the adverse effects of their consumption on the environment. Consumers with sustainable behaviours are more likely to support environmentally friendly products like EVs that align with their values. According to a study by the Electric and Hybrid Vehicles Association (TEHAD, 2020), the growing trend toward sustainable consumption drives demand for EVs in many developed markets, where consumers increasingly prioritise products that reduce their environmental footprint.

Environmental awareness is another critical factor influencing consumer behaviour in the EV market. Consumers with a high environmental awareness are more likely to encounter pro-environmental behaviours, including purchasing EVs. Research indicates that consumers' awareness of environmental issues, such as climate change, air pollution, and the insufficiency of natural resources, can particularly affect their willingness to adopt sustainable technologies. A study by Demirtas et al. (2021) claims that customers who perceive a strong connection between their personal activities and environmental outcomes have more potential to purchase EVs, mainly when they think doing so will decrease their carbon footprint. This finding is consistent with the Value-Belief-Norm Theory, which indicates that consumers encouraged by environmental values and moral responsibility are more likely to encounter sustainable consumption behaviours.

Nevertheless, the level of environmental awareness differs significantly across regions, which can influence the effectiveness of green marketing strategies. In countries like Germany, where ecological sustainability is a profoundly embedded societal value, consumers are more likely to react positively to green marketing campaigns emphasising EVs' ecological benefits. Germany's solid environmental consciousness and government policies promoting sustainability have created a favourable market for EVs (Chen and Zhang, 2017). In contrast, green marketing strategies may be less effective in regions with lower environmental awareness, such as in some developing markets. For example, while there is growing awareness of environmental issues in Türkiye, price sensitivity often

precedes ecological considerations in purchasing decisions. This suggests that green marketing campaigns in such regions must be carefully crafted to balance environmental messaging with economic incentives that appeal to price-sensitive consumers.

On the other hand, Despite the growing trend toward sustainability in many developed markets, there are significant barriers to promoting sustainable consumer behaviour in developing countries. As previously mentioned, price sensitivity and limited government support are substantial obstacles to the adoption of EVs in countries like Türkiye. In these regions, environmentally conscious consumers may be unable or unwilling to pay the premium associated with EVs. This suggests that fostering sustainable consumer behaviour in price-sensitive markets will require a multifaceted approach that includes both economic incentives and educational campaigns aimed at increasing environmental awareness. Research by Chen and Zhang (2017) supports this view, suggesting that “in developing markets, where economic constraints often limit the ability of consumers to engage in sustainable behaviours, government subsidies and targeted educational campaigns are necessary to promote the adoption of green technologies.”

In conclusion, consumer behaviour plays a central role in shaping the adoption and marketing of EVs. Theories such as the Theory of Planned Behaviour, Value-Belief-Norm Theory, and Diffusion of Innovation provide valuable insights into consumer decisions to adopt sustainable technologies. Key factors such as price sensitivity, environmental awareness, and sustainable consumer behaviour vary significantly across regions, highlighting the need for tailored marketing strategies that account for different markets' economic and cultural realities. As a conclusion, understanding the diverse factors that influence consumer behaviour is critical for developing effective marketing strategies that promote the adoption of EVs and contribute to the transition to sustainable transportation.

2.3. Marketing of EVs

EVs are a central focus in global actions to decrease greenhouse gas emissions and combat climate change. Across Europe and North America, countries employed various

marketing strategies and government incentives to promote the adoption of EVs. Each country adapted different techniques to fit its unique markets and regulatory environments. The marketing of EVs is often closely linked with state initiatives aimed at reducing carbon emissions, promoting renewable energy, and improving public health. The alignment between marketing and policy is particularly successful in some countries, where government support allows the overwhelming of critical obstacles to EV adoption, such as high upfront costs and a lack of charging infrastructure.

Norway is often regarded as the world leader in EVs adoption, and its marketing strategies are closely tied to government incentives. Norway's approach to EVs has focused heavily on making them more financially accessible through tax exemptions and other incentives. This comprehensive set of incentives, combined with visible marketing campaigns and the expansion of charging infrastructure, has transformed Norway into a leader in EVs adoption, demonstrating that government support is crucial in making EVs a feasible option for the average consumer (Karahana et al., 2022). In 2020, EVs accounted for more than 50% of all new car sales in Norway, making it the first country in the world to achieve this milestone (Karahana et al., 2022). The Norwegian government has implemented one of the most generous incentive programs in the world, which is instrumental in making EVs more affordable for consumers. As noted by Karahana et al. (2022), the elimination of purchase taxes and VAT for EVs has significantly reduced the cost of owning an EV in Norway. Additionally, EV drivers benefit from free parking, reduced tolls, and access to bus lanes, further enhancing the appeal of EVs in the country. These government incentives are complemented by marketing campaigns that emphasize the environmental benefits of EVs, particularly their role in reducing Norway's carbon footprint. According to the European Journal of Science and Technology (2022), "Norway's success in EVs adoption can be attributed to the alignment of government policy and green marketing efforts, which have resonated with environmentally conscious consumers."

Germany, another major player in the global EVs market, has set ambitious targets for EVs adoption, aiming to have seven to ten million EVs on the road by 2030 (Chen and Zhang, 2017). Germany, as the largest automotive market in Europe, has also

implemented a range of policies to promote EVs adoption. The German government's Environmental Bonus Program offers subsidies of up to €9,000 for EVs, which has helped to stimulate demand in the market (Kumar and Alok, 2020). This financial support is crucial in making EVs more accessible to consumers, particularly in a country where automotive tradition is deeply rooted in the production and consumption of internal combustion engine (ICE) vehicles. Marketing strategies in Germany have focused on highlighting the technological innovations of EVs, positioning them as superior to traditional gasoline-powered cars in terms of performance, efficiency, and environmental impact. German automakers such as Volkswagen, BMW, and Mercedes-Benz have played a key role in these efforts, promoting their electric models as both environmentally friendly and high-performance vehicles. Volkswagen's ID series, for example, is marketed as a symbol of the future of sustainable mobility, with advertisements highlighting the vehicle's long range, fast charging capabilities, and advanced driver assistance systems (Chen and Zhang, 2017).

In addition to consumer-focused marketing, the German government has invested heavily in the development of charging infrastructure. By 2030, Germany aims to have one million public charging stations, a goal that is intended to address one of the primary concerns of potential EV buyers: range anxiety. The combination of government investment in infrastructure and innovative marketing campaigns has resulted in a significant increase in EVs sales in Germany. According to research by Demirtas et al. (2021), EVs accounted for 13% of new car sales in Germany by 2020, up from less than 1% in 2015. However, the transition to EVs in Germany is slower than in Norway, due in part to the country's deep-seated automotive culture and consumer concerns about the practicality of EV ownership for long-distance travel. By providing consumers with significant rebates for EVs purchases and committing to the installation of one million public charging stations, Germany has alleviated many of the concerns related to the cost and convenience of owning an EVs (Kumar and Alok, 2020). These policies, combined with marketing strategies that emphasize the technological advancements and performance benefits of EVs, have made EVs an attractive option for German consumers.

Portugal, while a smaller market than Norway or Germany, has also made considerable progress in promoting EVs adoption. The Portuguese government offers a subsidy of up to €3,000 for the purchase of EVs, in addition to tax exemptions and reduced registration fees (Chen and Zhang, 2017). These financial incentives are a key factor in the growth of Portugal's EV market, particularly in urban areas where air pollution is a significant issue. Marketing campaigns in Portugal have focused on positioning EVs as an environmentally responsible choice for city driving, emphasizing the benefits of zero emissions and lower operating costs compared to ICE vehicles. Additionally, Portugal has made substantial investments in charging infrastructure, with the number of public charging stations increasing from 1,000 in 2015 to over 2,500 in 2020 (Demirtas et al., 2021). This expansion of infrastructure is critical in alleviating consumer concerns about charging availability, making EVs a more attractive option for urban commuters.

The United States presents a unique case in the global EVs market, with private companies like Tesla leading the way in terms of innovation and marketing. Tesla's marketing strategy is particularly successful in positioning its EVs as premium products that offer superior performance and advanced technology. Tesla's Model S, for example, is marketed as a high-performance EVs with a range comparable to or exceeding that of gasoline-powered cars, as well as fast charging capabilities that make long-distance travel feasible (Tesla Marketing Analysis, 2023). Tesla's success has helped to mainstream EVs in the United States, particularly among higher-income consumers who are willing to pay a premium for environmentally friendly products. However, the broader adoption of EVs in the U.S. is slower compared to Europe, largely due to the country's sprawling geography and the relative lack of charging infrastructure in many regions.

Government incentives have played a crucial role in promoting EVs adoption in the United States. The federal tax credit, which provides a rebate of up to \$7,500 for EVs buyers, is a key driver of EV sales. Several states, including California, have introduced additional incentives such as rebates, access to HOV lanes, and reduced registration fees for EVs owners (Chen and Zhang, 2017). California, in particular, is a leader in the EVs market, with EVs accounting for nearly 8% of new car sales in the state by 2020 (Demirtas et al., 2021). The state has also invested heavily in expanding its charging infrastructure

and has introduced stringent emissions regulations that encourage automakers to produce more EVs. However, EVs adoption in other parts of the United States is slower, particularly in regions where government incentives are less substantial and charging infrastructure is less developed.

On the other hand, the United States lead and direct the electric car market and marketing strategies thanks to its well-known electric car specialised brand, Tesla, and its famous and popular owner Elon Musk. Tesla, an American EVs manufacturer, has played a key role in shaping the EVs market in the United States. Tesla's marketing strategy, which combines online and offline advertising, social media engagement, and direct-to-consumer sales, is highly effective in building a strong brand image and driving consumer interest in EVs (Tesla Marketing Analysis, 2023). As Kumar and Alok (2020) explain, "Tesla's success is largely due to its ability to position EVs as desirable products that combine sustainability with cutting-edge technology."

In conclusion, the marketing of EVs in Europe and the United States is shaped by a combination of government incentives, green marketing strategies, and investments in charging infrastructure. Countries like Norway, Germany, and Portugal have seen significant success in promoting EV adoption. At the same time, the United States has made progress through a combination of private-sector innovation and government support. However, challenges remain, particularly regarding reducing the cost of EVs and expanding charging infrastructure. As the global EV market continues to grow, the alignment between marketing strategies and government policies will be crucial in ensuring the widespread adoption of EVs.

2.4. Pricing Strategies and Governments' Incentives

The EVs (EV) market is highly sensitive to pricing strategies and government incentives, which play a significant role in determining consumer behaviour and sales performance. Pricing remains a critical factor because of the high upfront cost of EVs compared to traditional internal combustion engine vehicles (ICEVs), while government incentives, including tax exemptions and rebates, are essential for reducing these costs and

stimulating market growth. In this section, we will explore how pricing strategies and government incentives have shaped the marketing and adoption of EVs in various countries, with a particular focus on markets that are more vulnerable to price and the role of incentives in boosting EV sales.

EVs traditionally are more expensive than ICE vehicles, primarily due to the high cost of batteries. As the price of lithium-ion batteries decreases, EV manufacturers are employing various pricing strategies to make their vehicles more competitive. One approach is penetration pricing, where manufacturers introduce EVs at lower prices to gain market share and build a customer base. This strategy, however, often relies on government support to remain financially viable during the early stages of market entry, as EV technology requires high upfront investment in production and infrastructure (Kumar and Alok, 2020).

Learning curve pricing, as proposed by Kotler (1991), is another strategy used by manufacturers to achieve market penetration by gradually lowering prices as production scales up and costs decrease. For instance, as highlighted by the European Journal of Science and Technology (2022), economies of scale play a crucial role in reducing the production costs of EVs. By producing more units, manufacturers can reduce per-unit costs, making EVs more accessible to a broader consumer base.

A major challenge in pricing EVs lies in the fact that many consumers are price-sensitive and may prioritize immediate costs over long-term savings. As noted by Demirtas et al. (2021), price sensitivity is especially prevalent in emerging markets, where consumers often have lower disposable incomes and are more likely to choose a traditional ICE vehicle over an electric one if the upfront cost is significantly lower. In countries like Türkiye, where the average income is lower than in Western Europe or North America, consumers are highly sensitive to price differences between EVs and ICE vehicles. In such markets, pricing strategies alone may not be enough to drive adoption without the support of government incentives to reduce the financial burden on consumers.

Government incentives and tax policies are critical in reducing the overall cost of EVs and making them more attractive to consumers. These incentives come in various forms, including purchase subsidies, tax exemptions, reduced registration fees, and grants for

charging infrastructure development. The effectiveness of government incentives in increasing EV sales is well-documented, with numerous studies highlighting their importance in various markets.

As it mentioned before, Gallagher (2011) showed that the U.S. government's tax relief and exemption policies for new energy vehicles, including EVs, were instrumental in driving early adoption. The federal tax credit of up to \$7,500 for EV purchases, combined with state-level incentives, is a key driver of sales in the U.S. Furthermore, according to Kumar and Alok (2020), California has seen significant success in this regard, with EVs accounting for nearly 8% of all new car sales in 2020. This success can be attributed to a combination of state incentives, such as rebates and access to high-occupancy vehicle (HOV) lanes, as well as the federal tax credit.

In Europe, Norway stands out as the country with the most comprehensive government incentive program for EVs. EV drivers in Norway enjoy free parking, access to bus lanes, and reduced tolls, all of which contribute to the country's high EV adoption rate. As noted by Karahan et al. (2022), these incentives are critical in making EVs more affordable and desirable, leading to EVs accounting for over 50% of all new car sales in Norway by 2020. The success of Norway's government incentives demonstrates how pricing strategies, when combined with generous subsidies, can drive rapid market growth.

2.5. Marketing and Market Situation of EVs in Türkiye

The evolution of Türkiye's electric vehicle (EV) market has garnered significant attention in academic literature, focusing on market penetration, consumer behaviour, infrastructure development, and policy implications. This review synthesizes findings from various studies to comprehensively understand the current state and future prospects of EVs in Türkiye.

In Europe, most EVs are purchased by consumers in high-income countries like Norway, Germany, the UK, France, the Netherlands, and Sweden. Like many EU countries, the EV market share in Türkiye is below 1% (Ozturk, 2022). The transition from fossil fuel vehicles to EVs has also attracted research attention in Türkiye. Karamehmet and Morgul

(2018) identified factors influencing consumer intentions to use EVs, including instrumental, environmental, social-symbolic, and political-marketing factors (Ustabas, 2015). Ozturk (2022) discussed factors affecting EV consumers' purchase and behavioural intentions. Onder and Kaya (2019) found that urbanization had a more significant impact on electric car sales than education level, renewable energy production, and oil prices. Yegin and Ikram (2022) studied internal combustion vehicle users to examine behavioural factors affecting EV adoption. Pasalioglu and Cengiz (2019) found that lifestyle partially affects consumer innovativeness and unique purchase intentions. Yildirim and Ozdemir (2021) noted that a centralized regime and innovative marketing focused on EV functionality are vital for promoting domestic EVs. Finally, Karamehmet and Morgul (2018) provided insights into consumers' conceptual perceptions of EVs, suggesting promotional strategies and environmental awareness initiatives (Gunduz and Yakar, 2020).

Although the Turkish market is not comparable to those of other nations, it is currently undergoing gradual expansion. The hybrid segment is clearly a key player in the transition of the electric car market, which has shown significant growth compared to the previous year. In the Turkish automobile market, 4,312 electric and hybrid vehicles were sold in 2018, 11,237 in 2019, 17,780 in 2020, and 2,849 electric and 20,915 hybrid vehicles in 2021 (Uslu and Demiarel, 2022). The turning point for Türkiye's EV market came in 2023. By 2023, the Turkish EV market had transformed. Sales of EVs surged nine fold compared to the previous year, with approximately 48,883 EVs sold in the first ten months of 2023. This dramatic rise in sales saw EVs capturing 11.9% of the total car market in Türkiye, compared to just 1.3% in 2022. The combined sales of electric and hybrid vehicles reached 127,270 units, marking a significant shift in the market dynamics (World Bank, 2023). In addition, the first Turkish electric car brand, The Turkish Automotive Joint Venture Group (TOGG), entered the market significantly because it represented Türkiye's first major attempt to produce EVs domestically, and the government has provided substantial support for the project. According to Karahan et al. (2022), TOGG's EVs will be affordable alternatives to foreign brands, focusing on price-sensitive consumers in the Turkish market. The Turkish government has also announced

plans to offer additional incentives for TOGG vehicles, including tax exemptions and grants for charging infrastructure development.

In the first ten months of 2023, approximately 48,883 EVs were sold, compared to just 1.3% of the total car market in 2022. By October 2023, the EV market share had risen to 11.9%, and the combined sales of electric and hybrid vehicles reached 127,270 units. These figures represent a substantial shift in the Turkish automotive market, traditionally dominated by internal combustion engine (ICE) vehicles. The TOGG brand, in particular, played a critical role in this growth, with its C-segment SUV, the T10X, delivering over 9,000 units since its launch in late April 2023. The T10X is a C-segment electric SUV that competes with global models like the Tesla Model Y and the Hyundai Ioniq 5. Priced at around 1.1 million Turkish lira (approximately €36,000), the T10X is positioned as an affordable yet high-quality EV for Turkish consumers. T10X's marketing strategy focuses on its technological capabilities, including up to 314 kilometres of advanced driver assistance systems (TOGG, 2023). The Turkish market is also characterized by high brand loyalty, with many consumers favouring domestic brands like TOGG over foreign competitors. TOGG has positioned itself as a symbol of national pride and innovation, which has resonated with Turkish consumers. The brand's marketing strategy emphasizes the environmental and technological benefits of its vehicles while also highlighting the fact that they are domestically produced.

The growth of the Turkish EV market is supported by the entry of new players, including both global and domestic automakers. Tesla entered the Turkish market in 2020, introducing its Model 3, Model S, and Model X vehicles to Turkish consumers. Tesla's marketing strategy in Türkiye has focused on positioning its vehicles as high-performance, premium products with environmental benefits and advanced technology. According to the Tesla Marketing Analysis (2023), the company's ability to combine green marketing with technological innovation has resonated with Turkish consumers, particularly in the higher-income market segments.

In addition to Tesla, the Turkish Automotive Joint Venture Group (TOGG) is developing a domestically produced EV that is expected to launch in 2023. Durmuş Şenyapar (2023) conducted a bibliometric analysis of academic studies on EV consumers, underscoring

the importance of understanding consumer behaviour in developing markets like Türkiye. The study emphasized that insights into consumer purchase intentions and behaviors are crucial for both industry stakeholders and policymakers to effectively promote EV adoption. Another study highlighted the significance of consumer ethnocentrism in the adoption of domestic EVs, particularly in the context of Türkiye's national car project, TOGG. The research suggested that national pride and consumer preferences for domestic products could positively influence the market penetration of locally produced EVs. TOGG's entry into the market is significant because it represents Türkiye's first major attempt to produce EVs domestically, and the government has provided substantial support for the project. According to Karahan et al. (2022), TOGG's EVs will be affordable alternatives to foreign brands, focusing on price-sensitive consumers in the Turkish market. The Turkish government has also announced plans to offer additional incentives for TOGG vehicles, including tax exemptions and grants for charging infrastructure development.

Despite these positive developments, several challenges are still facing the Turkish EVs market. Gönül et al. (2021) provided an overview of EVs and charging infrastructure in Türkiye, emphasizing the country's efforts to integrate renewable energy sources and develop supportive energy policies. They noted that, despite global advancements, Türkiye's EV market share remained relatively low, necessitating further policy support and infrastructure development. Furthermore, Ekici et al. (2021) reviewed EV charging systems and the current status in Türkiye, discussing the evolution of charging technologies and the critical role of infrastructure in EV adoption. They highlighted the need for standardized charging systems and the expansion of charging networks to alleviate consumer concerns regarding range anxiety.

Additionally, the concept of Vehicle-to-Grid (V2G) interactions has been explored as a potential avenue for enhancing energy efficiency and grid stability in Türkiye. Studies have examined the feasibility of V2G technologies, suggesting that bidirectional energy flow could offer benefits such as load balancing and increased integration of renewable energy sources.

One of the main disadvantages of EVs in Türkiye is the lack of consumer awareness and education about the benefits of EV ownership. According to a study by Chen and Zhang (2017), many Turkish consumers are unaware of the long-term cost savings associated with EVs, particularly in lower fuel and maintenance costs. In addition, there is a perception among some consumers that EVs are less reliable than traditional gasoline-powered cars, particularly in terms of range and charging time. This perception is exacerbated by the limited availability of charging infrastructure in rural areas, which has led to concerns about the practicality of owning EVs for long-distance travel.

In terms of marketing strategies, several automakers have used green marketing to promote EVs in Türkiye, although its effectiveness is mixed. Green marketing campaigns emphasising EVs' environmental benefits have resonated with a small segment of environmentally conscious consumers, particularly in urban areas. However, as Demirtas et al. (2021) noted, the Turkish market remains highly price-oriented, and many consumers are unwilling to pay a premium for environmentally friendly products unless they offer clear financial benefits. According to Chen and Zhang (2017), environmental concerns rank lower than price, fuel efficiency, and range in vehicle purchasing decisions in Türkiye. This has led many automakers to adopt a more pragmatic marketing approach, focusing on the total cost of ownership and the long-term savings associated with EVs rather than purely on their environmental benefits. For green marketing to be more effective in Türkiye, there needs to be greater awareness and education about EVs' long-term economic and ecological benefits.

One of the key factors influencing consumer behaviour in the Turkish EV market is range anxiety. According to KPMG's 2018 Türkiye Global Automotive Research, many Turkish consumers are concerned about the limited range of EVs and the availability of charging stations, particularly in rural areas. To address these concerns, automakers have focused on promoting their vehicles' long-range capabilities and expanding the charging network. For example, Tesla has emphasized the availability of its Supercharger network, which allows for fast charging and long-distance travel, in its marketing campaigns in Türkiye (Tesla Marketing Analysis, 2023).

Köksal (2021) discussed the economics of EVs in Türkiye, emphasizing the need for public policy to support market growth. The study highlighted that, despite increasing numbers of imported EVs, discouraging tax policies and limited incentives have hindered market expansion. The author advocated for comprehensive policy frameworks to promote EV adoption and infrastructure development.

Recent analyses have indicated that Türkiye's EV sector is poised for growth, albeit at a gradual pace. Factors such as strategic location, manufacturing capabilities, and emerging market dynamics position Türkiye as a potential hub for EV production. However, the absence of robust incentives and regulatory frameworks may slow the sector's development.

Looking to the future, the Turkish EV market is expected to continue its rapid growth, with annual EV sales projected to expand by 61% per year through 2032. By then, EVs are expected to account for over 30% of total passenger car sales in the country. TOGG's production capacity is set to reach 175,000 units per year once its factory in the province of Bursa is fully operational. In addition to the SUV model, TOGG plans to introduce four other electric models by 2030, including a sedan and a C-hatchback, further bolstering the domestic EV market. Consequently, the EV market in Türkiye is at a pivotal moment, with significant growth potential driven by government incentives, the expansion of charging infrastructure, and the emergence of domestic EV brands like TOGG. However, challenges such as high price sensitivity and limited infrastructure remain.

Briefly, the academic literature underscores that Türkiye's EV market is in a nascent stage, characterized by low market penetration and limited infrastructure. Consumer behaviour studies reveal a cautious yet growing interest in EVs, influenced by factors such as national pride and environmental awareness. The expansion of charging infrastructure and supportive policy measures are identified as critical components for accelerating market growth. Strategic initiatives, including the development of domestic EVs like TOGG, reflect Türkiye's commitment to participating in the global shift towards sustainable transportation. However, the literature suggests that without comprehensive

policy support and infrastructure development, the transition to electric mobility in Türkiye may progress slowly.

2.6. Marketing and Market Situation of EVs in Portugal

Portugal has emerged as one of the most notable European countries actively fostering the growth of electric vehicle (EV) adoption. While the country's market is smaller compared to industry leaders such as Germany and Norway, strategic incentives, public investments, and sustainable urban planning have established Portugal as a rapidly growing market in the electric mobility sector (Ribau and Ferreira, 2014; Garcia and Freire, 2016).

Portugal's government policies have played a pivotal role in accelerating the adoption of EVs. Financial subsidies of up to €3,000 for EV purchases and reductions in registration fees and road taxes have directly impacted consumer behaviour, especially in urban areas where environmental pollution is a concern (Chen and Zhang, 2017). The Portuguese government's Programa de Mobilidade Elétrica has been instrumental in supporting EV adoption by subsidizing both private and commercial vehicle purchases (Frade et al., 2011).

Moreover, fiscal policies have been designed to position electric vehicles as a financially attractive alternative to internal combustion engine (ICE) vehicles. Such tax exemptions have proven particularly effective in reducing the perceived cost disadvantage associated with EVs. Portugal's incentives help bridge the gap between the price of ICE vehicles and EVs (Demirtas et al., 2021).

In addition to this, Portugal has made considerable progress in expanding its charging infrastructure, a critical factor for consumer confidence in EVs. The MOBI.E network, Portugal's national EV charging infrastructure system, has grown from 1,000 public charging stations in 2015 to over 2,500 in 2020 (Demirtas et al., 2021; Frade et al., 2011). This growth has helped alleviate range anxiety, a major barrier to EV adoption, particularly for premium vehicle owners who expect seamless mobility solutions.

Strategic placement of charging stations has been prioritized in urban centers such as Lisbon and Porto, where population density and vehicle usage patterns justify investments in infrastructure (Frade et al., 2011). Moreover, investments in fast-charging stations align with premium EV consumer expectations, where convenience and efficiency are central decision-making factors.

According to marketing approach, Premium brands such as Mercedes-Benz have actively targeted environmentally conscious, affluent consumers in Portugal. Marketing campaigns emphasize sustainability, innovation, and luxury, integrating Green Marketing Theory to position EVs as both aspirational and environmentally responsible choices. The appeal of premium EVs is further amplified by lower long-term operational costs and the country's urban policies favoring clean energy vehicles (Garcia and Freire, 2016).

Portuguese consumers exhibit post-materialist values that align with the broader European trend of prioritizing environmental concerns over purely economic considerations. These values have positively influenced the perception of premium electric vehicles, with higher-income urban consumers leading the adoption curve (Ribau and Ferreira, 2014).

Furthermore, Green marketing strategies in Portugal emphasize the environmental benefits of EVs, including zero emissions, energy efficiency, and alignment with national sustainability goals. Portuguese consumers respond positively to messaging that highlights environmental responsibility and long-term cost savings (Garcia and Freire, 2016). Public awareness campaigns in Portugal have targeted urban commuters, showcasing the benefits of EV ownership in terms of lower fuel costs and reduced maintenance expenses (Ribau and Ferreira, 2014). Initiatives such as Lisbon's Clean Air Programs further reinforce the alignment between EV adoption and improved urban air quality, addressing public health concerns.

In Portugal, green marketing plays a pivotal role in driving the adoption of electric vehicles (EVs), particularly in the premium segment, where environmental awareness and post-materialist values are dominant consumer motivators. Unlike many other markets, including Türkiye, where price sensitivity poses a significant barrier to EV adoption, Portuguese consumers prioritize sustainability, innovation, and environmental

responsibility when making purchasing decisions. This behaviour aligns with the principles of Green Marketing Theory (Polonsky, 1994), which emphasize how environmental messaging can influence consumer choices in markets where societal values favor sustainability. As Kapferer and Michaut-Denizeau (2014) explain, premium consumers often prioritize symbolic and emotional value, which in Portugal translates to contributing to environmental goals and reducing carbon emissions.

The low importance of price sensitivity in the Portuguese premium segment is further reinforced by cultural and socio-political factors. Portugal's national focus on achieving zero-carbon emissions has cultivated a strong societal alignment with sustainable development goals. Consequently, EVs are perceived not merely as vehicles but as symbols of progress, innovation, and responsible citizenship (Ribau and Ferreira, 2014). Consumers who purchase premium EVs, such as those produced by Mercedes-Benz, associate their purchase decisions with environmental stewardship, reflecting a broader trend of post-materialist values observed across Western European nations (Frade et al., 2011).

The success of green marketing in Portugal also stems from its alignment with urban policies aimed at improving air quality and reducing traffic-related emissions. In cities like Lisbon and Porto, where air pollution is a significant issue, marketing campaigns highlight the local environmental benefits of EVs, such as cleaner air and reduced noise pollution. These campaigns resonate with environmentally conscious urban populations, who are more willing to adopt premium EVs despite their higher upfront costs (Chen and Zhang, 2017). In this context, green marketing strategies effectively position EVs as not only luxury products but also as essential tools for achieving sustainable urban living. Portugal's experience demonstrates that, when aligned with societal values and supported by enabling infrastructure, green marketing can successfully drive premium EV adoption, positioning electric vehicles as aspirational, responsible, and innovative products.

Moreover, Portugal's investments in electric public transportation, including electric buses and metro systems, have contributed to greater social acceptance of EVs. These initiatives create a ripple effect, encouraging private EV ownership by enhancing societal familiarity with electric mobility solutions. The integration of electric vehicles into public

transport systems aligns with Diffusion of Innovation Theory, as public adoption serves as a catalyst for private adoption in urban markets (Ribau and Ferreira, 2014).

Despite its notable progress, the Portuguese EV market faces challenges such as grid dependency on fossil fuels and seasonal variability in renewable energy production. Garcia and Freire (2016) argue that while Portugal's energy mix includes significant renewable sources, the marginal emissions of electricity generation remain a concern, particularly during peak demand periods.

For premium brands like Mercedes-Benz, differentiating EVs from traditional ICE vehicles while maintaining brand heritage is critical. Consumer education on the environmental and economic benefits of EVs remains essential to overcome lingering doubts about battery range and infrastructure availability.

As a conclusion, Portugal's electric vehicle market offers valuable insights into the successful implementation of policies and infrastructure investments that support premium EV adoption. By leveraging green marketing strategies, financial incentives, and an expanding charging infrastructure, Portugal has positioned itself as a leader among smaller European markets. The country's focus on post-materialist values and sustainable urban planning further differentiates it from markets like Türkiye, where economic constraints limit the effectiveness of similar strategies.

This literature review highlights the unique strengths and challenges of Portugal's EV market while underscoring the importance of policies, infrastructure, and consumer education in driving premium EV adoption. Moving forward, Portugal's experience offers a roadmap for emerging markets seeking to balance sustainability goals with economic growth.

2.7. Summative Comparison: Türkiye vs. Portugal in EV Marketing

At the conclusion of this literature review, it is essential to draw together the key distinctions between Türkiye and Portugal with regard to electric vehicle (EV) adoption and the receptivity to green marketing strategies. Although these two nations share broad structural and economic similarities—as both are mid-sized, developing economies

located on the periphery of Europe—their trajectories in EV penetration and sustainable consumer engagement diverge in significant ways. These divergences are shaped by variations in infrastructure development, consumer culture, institutional policy, and market communication practices.

In the Turkish context, economic pragmatism emerges as a dominant behavioural determinant. Numerous studies highlight that price sensitivity functions as a substantial barrier to EV adoption, often outweighing environmental motivations or interest in innovation. Consumers tend to evaluate EVs primarily through a cost-benefit lens, where initial vehicle price, tax obligations, and long-term maintenance expectations dominate purchasing decisions. Additionally, infrastructure development in Türkiye remains limited, with a heavy concentration of charging stations in metropolitan areas such as Istanbul, while rural and secondary urban centres continue to suffer from inadequate accessibility. This infrastructural deficiency exacerbates range anxiety and undermines consumer trust in the viability of EV ownership.

Moreover, Turkish consumers display a notable scepticism toward green marketing messages, in part due to a history of greenwashing and inconsistent environmental policy implementation. This has cultivated a culture of mistrust toward ecological claims made by both government and corporations. While there is increasing attention on domestic innovations such as TOGG, national pride does not automatically translate into market confidence, especially in the absence of competitive pricing and globally benchmarked performance indicators.

In contrast, the Portuguese EV landscape benefits from a more cohesive and state-supported policy framework. Government subsidies—up to €3,000—alongside vehicle tax exemptions and the deployment of the national MOBI.E charging network have significantly reduced structural barriers to adoption. These interventions have not only made EVs more economically accessible but have also reinforced public trust in long-term investment in sustainable technology. Consumers in urban centres such as Lisbon and Porto display relatively high levels of environmental awareness, which aligns closely with the value propositions embedded in green marketing narratives. This resonance is

particularly pronounced among younger, post-materialist consumers who integrate ecological considerations into their lifestyle choices.

In terms of brand messaging, automotive companies operating in Portugal are more successful in positioning their EV products through aspirational, values-based campaigns. Here, green marketing strategies are not simply promotional tools but are perceived as authentic reflections of both brand identity and national policy objectives. The relative stability of Portugal's environmental policies further strengthens the legitimacy of such campaigns and reinforces consumer belief in the credibility of sustainability claims.

The synthesis of these findings underscores the rationale for the application of a Most Similar Systems Design (MSSD) in this research. While Türkiye and Portugal present similarities in structural dimensions, the notable contrasts in consumer trust, infrastructural maturity, and cultural alignment with sustainability reveal how context-specific dynamics mediate the effectiveness of green marketing. Understanding these divergences is essential for constructing a nuanced analytical framework capable of evaluating how marketing strategies succeed or fail across different sociocultural and economic settings. These comparative insights set the stage for the empirical analysis that follows in the subsequent chapters, where theoretical expectations will be tested against primary data derived from elite interviews and computational content analysis.

Table 2.1. Comparative Summary: Türkiye vs Portugal in EV Marketing

Criteria	Türkiye	Portugal
Government Incentives	Limited, TOGG-focused incentives	Structured €3,000 subsidies
Charging Infrastructure	Developing, uneven distribution	Urban-centered, well-developed
Consumer Profile	High price sensitivity	Post-materialist, eco-conscious
Green Marketing Effectiveness	Limited, price-driven market	Effective, values-aligned
Public Perception of EVs	Skepticism on range & cost	Positive, seen as innovation
Dominant Brands	TOGG & niche exports	Established premium brands

THEORETICAL APPROACH

The Theoretical Approach chapter will lay the foundation for understanding the various factors influencing the marketing and adoption of EVs, specifically focusing on four critical theories. The chapter will begin by exploring Green Marketing Theory (3.1), examining its principles and relevance in promoting environmentally friendly products like EVs. This will be followed by an analysis of the Price Sensitivity Theory (3.2), which provides insights into how consumers' responsiveness to price changes impacts the success of EV marketing, particularly in a price-sensitive market like Türkiye. Next, Diffusion of Innovation Theory (3.3) will be discussed to explain how EVs are adopted by different population segments over time, highlighting the role of innovators and early adopters. Finally, Perceived Value Theory (3.4) will be analysed to understand the factors that shape consumer perceptions of the value of EVs, including economic, social, and functional aspects. Together, these theories will provide a comprehensive framework for analysing the challenges and opportunities of premium scale EV marketing in the Türkiye and Portugal.

3.1. Green Marketing Theory

Green Marketing Theory is rooted in the idea of promoting environmentally friendly products while maintaining their appeal to consumers. It gained academic recognition during the 1980s as businesses began to address environmental concerns and align with the growing awareness of sustainability issues. The primary definition of green marketing includes producing, promoting, and developing products that have a minimal environmental impact (Peattie, 1995). One of the core academic contributions to Green Marketing Theory came from John Grant, who, in his work, established that green marketing goes beyond advertising eco-friendly products—it is about rethinking the product lifecycle, from design to disposal to reducing the environmental footprint.

The application of Green Marketing Theory in the EVs sector is especially relevant, given that EVs represent a solution to the growing environmental crisis caused by fossil fuel

consumption. In the automotive industry, companies use green marketing to promote EVs as a sustainable and ethical choice, capitalizing on consumers' increasing preference for products that align with their values regarding environmental stewardship (Grant, 2007). For instance, brands like Tesla have successfully leveraged green marketing by emphasizing the zero-emission feature of their vehicles, which directly appeals to eco-conscious consumers.

Existing literature shows that green marketing can work with government policies to enhance the appeal of sustainable products. In countries like Norway, where both environmental awareness and government incentives are high, green marketing is particularly successful in promoting EV adoption. The academic perspective on Green Marketing Theory suggests that businesses must combine environmental benefits with economic value propositions, particularly in markets where consumers are more price-conscious (Peattie, 1995). This theory has become integral in the automotive industry, where businesses promote not just the product but also their brands' environmental and social responsibility aspects.

3.2. Price Sensitivity Theory

Price Sensitivity Theory examines how price changes affect consumer purchasing behaviour. The theory is foundational in marketing and economics, and it posits that different consumers exhibit varying degrees of sensitivity to price changes, influencing their likelihood to purchase certain products. Eliashberg and Rao (1986) provided early models for understanding how price elasticity impacts consumer choices across different markets. The theory has gained significant attention in academic literature, particularly in the context of high-cost, innovative products like EVs.

In the case of the EV market, price sensitivity is a significant challenge. Studies have shown that one of the main barriers to EV adoption is the higher upfront cost compared to traditional gasoline-powered cars (KPMG, 2018). EVs are often priced higher due to the cost of battery technology, although they offer lower operating costs over the long term. In price-sensitive markets, the upfront cost of EVs can deter potential buyers, even

when the long-term economic benefits (such as lower fuel and maintenance costs) are factored in.

Automakers have employed various strategies to mitigate the impact of high prices. One strategy is penetration pricing, where companies initially set lower prices to attract early adopters and gradually raise prices as the technology becomes more widespread (Kotler and Armstrong, 2018). This strategy is complemented by government incentives that reduce the financial burden on consumers.

Academic literature on price sensitivity theory suggests that consumers in emerging markets are generally more price-sensitive than consumers in developed countries. This aligns with the findings of Tellis (1988), who argued that in price-sensitive markets, businesses must carefully balance product pricing with perceived value to achieve market penetration.

3.3. Diffusion of Innovation Theory

Diffusion of Innovation (DoI) Theory, first introduced by Everett Rogers in 1962, explains how consumers adopt new ideas, technologies, and products over time. Rogers identified five categories of adopters: innovators, early adopters, early majority, late majority, and laggards. The theory suggests that adoption occurs in stages, with innovators and early adopters typically driving initial interest, followed by more risk-averse consumers once the innovation becomes mainstream.

In the EV market, the Diffusion of Innovation Theory helps explain the slow but growing adoption of EVs. Early adopters of EVs are typically environmentally conscious consumers willing to pay a premium for new technology and are less concerned with issues like charging infrastructure or range limitations. These consumers tend to view EVs as status symbols or as part of their commitment to reducing their carbon footprint.

Rogers' theory suggests that once these concerns are addressed through government incentives, infrastructure development, and marketing strategies emphasising long-term cost savings, the adoption curve will shift, and EVs will become more mainstream.

Existing literature on the diffusion of innovation in the automotive sector shows that the rate of EV adoption varies significantly by region, depending on factors such as government support, consumer awareness, and infrastructure. In Norway, government incentives and a well-developed charging network have helped move the EV market from the early adopter phase to the early majority phase much faster than in other countries (Chen and Zhang, 2017).

3.4. Perceived Value Theory

Perceived Value Theory, introduced by Zeithaml (1988), argues that consumers' purchasing decisions are based on their assessment of the overall value a product provides concerning its costs. This value is monetary and includes dimensions such as functional, emotional, social, and epistemic value (Sheth et al., 1991). Perceived value is subjective and varies from one consumer to another based on their individual preferences, needs, and circumstances.

In the EV market, perceived value is vital in shaping consumer behaviour. Consumers are more likely to purchase EVs if they perceive that the benefits, such as lower fuel costs, environmental friendliness, and reduced maintenance, outweigh the disadvantages, such as higher initial costs and range limitations. According to a study by Wang et al. (2018), perceived value is a multidimensional construct, and in the context of EVs, functional value (e.g., range, charging convenience) and emotional value (e.g., contributing to environmental sustainability) are the key factors that influence purchase decisions.

Literature suggests that perceived value strongly predicts consumer satisfaction and loyalty, particularly in the automotive industry. As more consumers become aware of the long-term benefits of owning an EV, the perceived value of EVs is expected to increase, leading to higher adoption rates (Zeithaml, 1988).

METHODOLOGY

This section outlines the methodology used in this study to examine the marketing challenges and opportunities for EVs in Türkiye compared to Portugal which is other developing countries. The research combines elite interviews analysis on NVIVO and BERT Topic modelling method with a MSSD comparative case study to gain insights from key stakeholders and draw comparisons across different market contexts. This hybrid approach allows for a comprehensive understanding of policy and market dynamics. It is particularly suited for investigating complex, multi-layered topics like green marketing in emerging and established EV markets.

4.1. Research Methodology (Comparative Case Study and Elite Interview Methods)

The research employs two qualitative methods: comparative case study analysis and elite interviews. Both methods offer distinct advantages in gathering detailed and context-specific data, which is crucial for understanding the nuances of EV marketing and adoption across different countries.

Comparative Case Study is a widely used qualitative research method that allows researchers to explore differences and similarities between specific cases. Yin (2009) argues that comparative case studies are instrumental when the research objective involves identifying patterns, drawing comparisons, and testing theoretical frameworks across different environments. This study will conduct a comparative case analysis between Türkiye and Portugal. Both countries provide valuable insights into various approaches to promoting EVs. Also, both countries have remarkable similarities regarding economic situation, GDP, and growth rate, and both are considered developing countries.

According to Vavrus and Bartlett (2017), comparative case studies help uncover how contextual factors, such as government policies, consumer behaviour, and infrastructure

development, influence the adoption of innovations like EVs. The horizontal dimension of this comparative approach will compare the government incentives, green marketing strategies, and market penetration rates of EVs in the selected countries. Meanwhile, the vertical dimension will assess how national-level policies trickle down to regional and local implementations.

This research will compare two states' electric vehicle market and marketing strategies are compared according to the MSSD. Then, cross-case and within-case analyses will be implemented to understand the causal inferences.

The research will examine Türkiye and Portugal as two case-study countries. According to Gerring (2004), a case study can be an in-depth investigation to comprehend a broader category of entities. The selection of these cases was predicated upon understanding the marketing strategies of electric vehicles in developing countries and the parameters that can facilitate the dominance of electric vehicles in the local markets (Gerring 2004; George and Bennett 2005). Also, this research proposal utilises a methodological approach known as paired comparisons for data analysis. In the literature, Paired comparison is a method of evaluating two entities, such as states, policies, companies or brands, simultaneously on a specific set of dimensions or criteria. Thanks to this method, a more precise idea can be obtained about the marketing strategies, obstacles, and advantages that impact the electric vehicles' popularity.

A paired comparison analysis defines a quantitative quality's comparative desirability or extent between two items. Paired comparisons can be a valuable technique for evaluating a set of objects based on a specific criterion or personal preference (Lijphart 1975; Tarrow 2010).

The present research will utilise a case study methodology to examine the investigate the findings. A case study has the potential to offer a comprehensive and detailed comprehension of the context at hand. However, it is imperative to note that a singular case study may not provide a comprehensive overview of the events that culminated in the electoral decline of social democratic parties due to their inadequate responses to the governance of identity politics. The principal challenge associated with employing a case study pertains to the issues of generalizability and validity. The attempt to derive a

universal conclusion from a restricted set of case studies may result in unforeseen erroneous outcomes (Collier and Mahoney 1996; Lijphart 1975). To address the issue at hand, my objective is to identify and utilise theoretical perspectives that have the potential to be relevant and applicable to analogous contexts or scenarios.

Furthermore, a comprehensive and rigorous examination of the issue from all perspectives is necessary. Implementing this measure can aid in overcoming the challenge of generalizability. Specifically, examining the results in conjunction with relevant literature that employs comparable theoretical frameworks can be effective (George and Bennett 2005; Gerring 2004)

The case-study methodology can yield accurate and dependable results in uncovering domestic variables and parameters. However, subjecting a singular case to more comprehensive analysis. A multiple-case study approach is deemed advantageous due to its focus on the distinctiveness and complexity of the issues under investigation. The present study will concentrate on the cases of Türkiye and Portugal, which exhibit the MSSD owing to the abovementioned constraint. Investigating a pair of instances will enhance the soundness and applicability of the proposition. The utilisation of a case study with few cases as a research method is classified as a Small-N study (Gerring 2004; George and Bennett 2005; Geddes 1990; Lijphart 1975)

The study utilises elite interviews qualitative techniques: Qualitative methods such as interviews are essential for conducting successful investigations within the scientific framework.

Examining research methods may commence with a comprehensive analysis of the interview method. Through the utilisation of in-depth interviews, it is possible to derive noteworthy insights regarding the overarching structure of marketing strategies of electric vehicles in Türkiye with its obstacles and comparative study with other developing countries. Conducting interviews with electric vehicle marketing managers on the challenges faced by the international premium car brand (Mercedes) in Türkiye and the obstacles encountered by the managers can serve as a valuable means of comprehending the prevailing circumstances of marketing strategies and the efficiency of green marketing in developing countries. The interviews necessitate comprehending the brands' marketing

tactics, consumer behaviours, and internal workings, which contribute to a refined comprehension of their shortcomings in the marketing process (Tansey, 2007; Rivera, Kozyreva, and Sarovskii, 2002).

The research will interview prominent individuals such as Mercedes, which is Premium brands' electric automobile, marketing managers to provide a comprehensive analysis. One of the primary benefits of conducting interviews is the ability to gather comprehensive perspectives and firsthand accounts of a given period through open-ended questioning techniques. Interviews can furnish comprehensive evidence, offering insights into perceptions, experiences, and attitudes that quantitative methods cannot obtain. Moreover, conducting interviews with key marketing managers who decide the strategies facilitates assessing and interpreting the process from multiple perspectives on a broad spectrum. Interviews can serve as a valuable tool for elucidating intricate matters, as researchers can pose additional inquiries to ensure comprehension of the participant's perspective. Furthermore, open-ended and challenging inquiries can be cross-checked to address reliability issues in conjunction with responses from individuals of varying perspectives during interviews (Mosley 2019; Tansey 2007; Rivera, Kozyreva, and Sarovskii 2002).

The Elite Interview Method is employed to gather insights from key stakeholders in the EVs market. Dexter (1970) defines elite interviews as interviews conducted with individuals who hold influential or expert positions in their fields. These interviews are beneficial for gaining in-depth knowledge about complex topics such as policy development, market trends, and strategic decision-making. This study will conduct elite interviews with policymakers, industry executives, and environmental advocates in Türkiye. The insights gained from these interviews will be invaluable in understanding the motivations behind government incentives, the barriers to EV adoption, and the strategies automakers use to market EVs. This research conducts an elite interview with high-level managers of international automobile brands servicing in Türkiye and Portugal.

Elite interviews are effectively used in similar studies. Harvey (2010), for instance, utilized elite interviews to explore how policymakers in the United Kingdom shaped the

rollout of EV incentives. Similarly, Byrne (2013) used this method to investigate the roles of automotive executives in promoting green technologies in global markets. These examples demonstrate that elite interviews are particularly effective when the research focuses on strategic decisions that involve multiple stakeholders and complex interactions between government, industry, and consumers.

Given the lack of established measures or findings in past literature, as demonstrated in the extensive review above, an elite interview and comparative case study as the qualitative approach is appropriate for this study. This approach is well-suited for gaining a deeper understanding of an underexplored phenomenon. Specifically, since the study aims to explore the intersection of sustainability and digital innovation in influencing consumers' choice of EVs as a preferred mode of transport, a qualitative research design is the most suitable choice. A qualitative study allows for a discovery-oriented and contextually relevant perspective (Almansour, 2022)

Key questions, displayed in the appendix, were developed based on prior literature to implement this approach in consultation with academic professors and professionals familiar with EVs and consumer behaviour. The key questions guided the online data collection through written responses to interview questions.

On the other hand, certain obstacles exist to utilising the interview methodology. The process of selecting individuals for preliminary interviews, scheduling appointments, formulating inquiries, and verifying the dependability of their responses can be time-consuming. Moreover, a crucial concern pertains to the potential impact of researcher and respondent bias on research results and their interpretations. Conducting extensive interviews with individuals from diverse perspectives is imperative to overcome this limitation (Rivera, Kozyreva, and Sarovskii 2002; Tansey 2007; Mosley 2019). It is possible that the interviewer's perspectives could impact the respondents, leading them to provide answers that align with the interviewer's expectations rather than their genuine opinions. Therefore, as a researcher, it is imperative to maintain objectivity in formulating questions and interpreting responses.

Moreover, exercising caution in addressing ethical concerns about confidentiality during interviews is imperative (Woliver 2002). Despite these obstacles, conducting interviews

is crucial in revealing primary perspectives on understanding marketing strategies for electric vehicles in Türkiye. The barriers faced by marketing managers and the lack of understanding of comparative studies with other developing countries can be revealed by in-depth interviews with elites.

This research employed a purposive sampling strategy to select interview participants who possessed specialised knowledge and professional experience relevant to the electric vehicle (EV) sector and premium automotive marketing. Purposive sampling is particularly suitable for qualitative inquiry where the objective is not statistical generalisation but the in-depth exploration of complex phenomena through insight-rich perspectives (Patton, 2014). The aim of this approach was to identify respondents who could speak authoritatively about brand strategy, market dynamics, and consumer interaction with sustainability-focused campaigns in their respective national contexts.

Given the study's focus on green marketing in the premium EV segment, it was essential to engage with professionals occupying strategic or decision-making roles within automotive companies—specifically those involved in EV marketing, product management, or public communications. Therefore, individuals were selected based on their roles as senior managers, directors, or consultants with direct responsibility for or involvement in the design and execution of EV-related promotional strategies in Türkiye or Portugal. The sampling criteria further included a minimum of five years of experience in automotive marketing, expertise in strategic brand positioning, and familiarity with environmental messaging in premium vehicle segments.

The total sample comprised eight participants, four from each country, with representation from both multinational firms and national operations. Notably, professionals from Mercedes-Benz—an internationally recognised premium brand with established EV product lines—were interviewed due to the brand's active engagement in sustainability-driven innovation, its cross-national presence in both case countries, and its distinctive approach to localised marketing adaptation. Mercedes-Benz served as a case-exemplar firm, and interviewees from this organisation were well-positioned to articulate how EV marketing is operationalised in line with both global identity and local market sensitivities.

The rationale for this elite-oriented sampling approach lies in its ability to access institutional knowledge and high-level strategic insight, which are typically unavailable through surveys or publicly accessible reports (Harvey, 2011). Elite interviews also allow for the interrogation of how marketing strategies are constructed, framed, and translated into action at the organisational level—insights that are particularly relevant in understanding cross-market variation in campaign effectiveness. As Richards (1996) notes, elite participants are not merely sources of information but co-constructors of knowledge who offer access to the discourse, logic, and internal frameworks guiding organisational decision-making.

Although the number of interviews is relatively small, this is consistent with qualitative research conventions where depth, richness, and thematic saturation are prioritised over numerical scope (Guest, Bunce, & Johnson, 2006). The combination of country balance, strategic role alignment, and brand focus ensures that the sample offers a meaningful basis for comparative thematic exploration—particularly within the logic of a Most Similar Systems Design (MSSD) approach.

This sampling design enables the study to remain faithful to its interpretivist paradigm, while also ensuring that the voices captured reflect both national contextual specificities and sector-level strategic orientations. By foregrounding the narratives of professionals who actively shape how green marketing is implemented in real-world contexts, the research gains analytical depth and practical relevance in its examination of sustainable marketing in the premium EV domain.

The interviews were conducted via phone and video conferencing and were structured to explore how Mercedes-Benz conceptualizes, localizes, and implements green marketing strategies in both Türkiye and Portugal. Participants were selected based on purposive and criterion-based sampling, targeting individuals in upper-level marketing roles who had direct strategic responsibility for EV promotion within their respective national contexts. Specifically, one senior Marketing Manager from Mercedes-Benz Türkiye and one from Mercedes-Benz AG Portugal were interviewed. Both participants had over a decade of industry experience and were directly involved in campaign planning, market

segmentation, message positioning, and consumer outreach specific to the electric vehicle line.

Their expert perspectives were instrumental in contextualizing the broader findings of this study. First, they offered a strategic-level understanding of how brand identity and messaging must be adapted to different cultural and infrastructural realities. Second, their insights provided practical validation for the thematic patterns observed in consumer-level data, such as the centrality of price sensitivity in Türkiye and the values-based environmental engagement in Portugal. Finally, these elite interviews contributed to methodological triangulation by complementing the data derived from thematic analysis and computational topic modelling with insider industry knowledge. In sum, the inclusion of brand-level insights from Mercedes-Benz added both depth and credibility to the study's examination of green marketing effectiveness in promoting premium EVs.

4.2. Data Collection Process

The data collection process will involve gathering primary data through elite interviews and secondary data through the comparative case study. Both qualitative and quantitative data will be used to provide a comprehensive view of the challenges and opportunities facing EV marketing in Türkiye compared to other European countries.

Elite Interviews will be conducted with key automotive manufacturers, managers of Mercedes in Türkiye and Portugal. Interviewees will be selected based on their expertise and influence in the EVs market. A non-probability sampling technique, purposive sampling, will be used to select participants. This approach is widely accepted in elite interviews because it focuses on selecting individuals with specialized knowledge relevant to the research topic (Goldstein, 2002). Each interview will be semi-structured, allowing for flexibility in the conversation while ensuring that critical issues are covered across all interviews. Semi-structured interviews are particularly suitable for elite interviews, as they enable interviewees to share detailed insights while also allowing them to explore related issues in depth (Harvey, 2011). The interview guide will cover several key themes:

- Government policies and incentives for EVs.
- Marketing strategies employed by automotive manufacturers.
- Consumer behaviour and attitudes towards EVs.
- Challenges and opportunities in the Turkish and Portuguese market.
- Comparisons with Portugal and Türkiye

All interviews will be conducted in person or via video conferencing, depending on the location and availability of the interviewees. Each interview will last 60 to 90 minutes and will be recorded (with permission) and transcribed for later analysis.

4.3. Data Analysis Method

The data will be analysed in two stages: thematic analysis of the elite interviews and comparative analysis of the case study data. Thematic Analysis is a widely used method for analysing qualitative data. Braun and Clarke (2006) state that thematic analysis involves identifying, analysing, and reporting patterns (themes) within qualitative data. Thematic coding will categorize the interview data based on recurring topics such as government incentives, consumer behaviour, and marketing strategies. Qualitative data analysis software such as NVivo will help organize and manage the collected interview data. Thematic analysis will be helpful in this study because it identifies key trends and insights across different stakeholders and sectors, which can then be compared with the case study data. For instance, one of the predefined themes will be government incentives, which will include all references to policies and subsidies related to EVs. Another theme will be consumer behaviour, where interviewees' insights into how consumers perceive EVs and what factors influence their purchasing decisions will be collected.

The analysis of elite interviews in this dissertation combines both qualitative and computational methodologies to uncover the underlying themes, patterns, and discursive structures shaping green marketing strategies and consumer behavior toward electric vehicles (EVs) in Türkiye and Portugal. The rationale behind adopting a dual-method approach—manual thematic analysis using NVivo and machine-assisted topic modelling

using BERTopic—rests on the epistemological benefits of triangulation in qualitative research. Triangulation enhances credibility, reliability, and depth of insights by comparing and validating findings across different methodological lenses (Denzin, 1978; Flick, 2004). Given the exploratory nature of this study and its emphasis on understanding culturally embedded consumer attitudes and strategic marketing decisions, such a combined approach offers both breadth and depth in interpretive rigor.

The initial phase of data analysis involved transcribing and organizing eight elite interviews, comprising four participants from Türkiye and four from Portugal. These participants included high-level professionals such as marketing managers, sales executives, and communication directors from premium automotive brands, notably Mercedes-Benz. The interviews were semi-structured and consisted of 28 open-ended questions designed to elicit insights into the challenges and strategies related to green marketing and EV adoption in their respective markets. The transcripts were imported into NVivo 14 Plus, a Computer-Assisted Qualitative Data Analysis Software (CAQDAS), to facilitate systematic coding and thematic organization.

Within NVivo, a grounded yet theory-informed approach was employed for the coding process. Initially, open coding was used to generate preliminary nodes from the raw data, capturing significant statements, recurring concepts, and nuanced reflections from the participants (Charmaz, 2006). These open codes were then clustered into axial codes based on conceptual similarities and aligned with the theoretical framework, including Green Marketing Theory, Price Sensitivity Theory, and the Diffusion of Innovation Theory. Higher-order themes were developed through selective coding, which involved integrating and refining categories around central phenomena such as price sensitivity, environmental awareness, infrastructure and range concerns, consumer education, marketing strategies, and brand perception.

NVivo's features such as code frequency analysis, matrix coding queries, and node comparisons were employed to quantify and visualize the thematic saturation across the dataset. A particular emphasis was placed on comparing transcripts from Türkiye and Portugal (both translating to English) to identify contextual divergences and convergences. For instance, matrix queries were used to compare theme frequency across

countries, highlighting the dominant presence of price sensitivity and infrastructural concerns in Türkiye interviews versus the emphasis on environmental values and policy influence in Portugal. Visualization tools like word trees and hierarchical charts aided in interpreting the depth and relational structure of codes, providing a more nuanced understanding of how themes are interrelated across the interviews.

In parallel, a supplementary computational method was applied using BERTopic, a transformer-based topic modelling technique. BERTopic leverages BERT (Bidirectional Encoder Representations from Transformers) embeddings to capture the semantic richness of text, and UMAP (Uniform Manifold Approximation and Projection) for dimensionality reduction. This approach was selected due to its superior performance in capturing contextual language usage over traditional models like Latent Dirichlet Allocation (LDA) (Grootendorst, 2022; Devlin et al., 2018). The pre-processed interview data—cleaned of punctuation, stopwords, and domain-specific redundancies—were tokenized and then embedded using BERT. UMAP was configured with two dimensions to enable visual interpretability, and HDBSCAN clustering was used to group similar semantic representations into distinct topics.

The dataset was structured such that each cell of the interview response matrix (28 responses per participant) was treated as an individual document. Country identifiers were retained as metadata to enable cross-national topic comparisons. After fitting the BERTopic model, topic probabilities and labels were extracted, and a topic-document matrix was constructed. These outputs were then pivoted by country groups (Türkiye vs. Portugal) to examine the relative frequency of topic mentions, supporting comparative discourse analysis. Additionally, the model output was interpreted alongside NVivo codes to explore the coherence, overlap, and distinctiveness of topics identified by each method.

The integration of NVivo and BERTopic was not merely procedural but epistemological. NVivo's manual coding provided inductive depth, capturing contextual subtleties and theoretically significant constructs that are often inaccessible to computational models. In contrast, BERTopic offered a scalable and statistically grounded validation mechanism by surfacing latent patterns in the data without researcher bias. Together, these methods functioned as complementary tools in a robust triangulation design. Instances where both

methods converged—such as identifying price sensitivity, charging infrastructure concerns, and brand perception—strengthen the credibility of those findings. Conversely, areas of divergence prompted deeper interrogation and theoretical reflection, enriching the interpretative process.

This dual-method strategy also supports methodological robustness. By employing both human-centered and machine-assisted approaches, the analysis mitigates the limitations inherent in either method alone. Manual coding, while rich in nuance, is vulnerable to subjectivity and coder bias (Silver and Lewins, 2014). Computational models, while efficient and replicable, may overlook discursive subtleties or context-specific meanings. Combining both methods not only ensures broader coverage of the dataset but also allows for validation through methodological cross-checking. This layered analytical architecture is particularly valuable in elite interviews, where discourse is often strategic, abstract, and embedded in institutional logics.

Furthermore, the application of topic modelling in a qualitative research context aligns with emerging trends in digital qualitative methods (Tsvetkova et al., 2022). The use of BERT embeddings allows the analysis to go beyond surface-level term frequency and instead capture contextual meanings, idiomatic expressions, and semantic nuances inherent in elite discourse. This is especially relevant in cross-national studies where linguistic pragmatics differ between cultural settings. The ability of BERTopic to reveal latent semantic structures added an empirical rigor that complemented the more interpretative insights drawn from NVivo.

In conclusion, the integration of NVivo and BERTopic in the analysis of elite interviews provided a comprehensive, multidimensional understanding of the challenges and strategies surrounding green marketing for EVs in Türkiye and Portugal. It enabled the identification of both overt and latent themes, highlighted national contrasts and commonalities, and enhanced the reliability and interpretive depth of the findings. This hybrid analytical model serves as a methodologically innovative and theoretically grounded contribution to the field of marketing research in sustainability and consumer behavior domains.

4.4. Validity and Reliability

Ensuring validity and reliability is crucial in qualitative research, mainly when using methods such as elite interviews and comparative case studies that involve a large amount of subjective interpretation. Validity refers to the accuracy and truthfulness of the findings, while reliability refers to the consistency of the research process.

Internal Validity will be ensured through the use of triangulation, as recommended by Denzin (1970). Triangulation involves using multiple data sources or methods to verify findings. In this study, triangulation will be achieved by cross-referencing the conclusions of the elite interviews with the comparative case study data. For example, suppose both the interviewees and the case study data suggest that government incentives are crucial in driving EV adoption. In that case, this will increase the internal validity of the research findings.

External Validity, or generalizability, is more challenging in qualitative research, where the focus is often on specific cases rather than producing findings that can be applied universally. However, Yin (2009) argues that case studies can still achieve analytical generalization, where the findings from one case study can be used to develop broader theories that apply to similar contexts. By comparing Türkiye with Portugal, as a developing country, the findings from this study can provide insights that may apply to other emerging markets facing similar challenges in promoting EVs.

Reliability refers to the consistency and replicability of the research. To ensure reliability, a detailed research protocol for the elite interviews and the comparative case study will be followed. This protocol will include clear guidelines for selecting interviewees, conducting the interviews, and coding the data. The study will document each research process step to ensure that other researchers can replicate the findings.

Establishing validity and reliability is essential in qualitative research, especially when investigating complex and context-dependent phenomena such as consumer behavior and green marketing strategies across distinct national settings. In this study, validity refers to the credibility, authenticity, and interpretive accuracy of the findings, while reliability pertains to the consistency and replicability of the data analysis procedures (Lincoln and

Guba, 1985; Yin, 2018). To ensure both dimensions were addressed rigorously, this dissertation employed multiple strategies embedded within its research design, data collection, and analytical procedures, drawing on recognized qualitative and mixed-methods principles.

The use of elite interviews required particular attention to credibility and trustworthiness. Participants were selected through purposive sampling to ensure that each respondent had direct strategic and operational responsibility in marketing premium electric vehicles (EVs), specifically within firms operating in Türkiye and Portugal. The elite nature of these participants—marketing and sales directors, communications managers, and policy liaisons—provided access to high-level insights and market-level perspectives that are both context-rich and analytically valuable. To enhance trustworthiness, all interviews followed a semi-structured guide with consistent questions designed to probe both country-specific experiences and broader marketing strategies. Member checking was integrated informally, as summaries of participants' responses were reiterated during the interviews to confirm accuracy and avoid misinterpretation.

The comparative case study design, using the logic of Most Similar Systems Design (MSSD), enhances both internal and external validity by comparing two countries that are similar in socio-economic status but different in regulatory frameworks, cultural orientations, and EV adoption rates. This design supports theoretical generalizability, allowing the research to isolate contextual factors influencing green marketing strategies (Przeworski and Teune, 1970). Validity in case study research is further strengthened by ensuring a consistent data structure across both cases—equivalent roles were interviewed, the same interview guide was used, and NVivo coding structures were systematically applied to both national datasets.

In terms of reliability, the use of NVivo 14 Plus as a Computer-Assisted Qualitative Data Analysis Software (CAQDAS) system played a pivotal role in ensuring analytic consistency. All interview transcripts were coded through a structured, stepwise procedure involving open, axial, and selective coding. Open codes were initially created through inductive reading of transcripts. These were subsequently clustered into axial codes aligned with existing theories, including Green Marketing Theory, Diffusion of

Innovation, and Price Sensitivity Theory. Selective coding allowed for the emergence of high-level themes, which were then compared across the Turkish and Portuguese datasets using NVivo's matrix coding and visualization tools. This systematic and repeatable process minimized researcher bias and improved the traceability of interpretive decisions (Silver and Lewins, 2014).

To triangulate and further validate the thematic insights generated from NVivo, the study employed BERTopic, a machine-assisted topic modelling technique. BERTopic combines BERT language embeddings with clustering algorithms such as HDBSCAN and dimensionality reduction techniques like UMAP. This tool enhances analytical robustness by offering an unsupervised, data-driven view of latent themes, independent of the researcher's interpretive bias (Grootendorst, 2022). While qualitative codes in NVivo are shaped by researcher intuition and theoretical expectations, BERTopic reveals semantic clusters based on linguistic patterns and contextual relationships embedded in the data. The coherence between themes generated by NVivo and those emerging from BERTopic analysis—such as charging infrastructure concerns, price sensitivity, and brand trust—reinforces the reliability and internal validity of the results. Areas of divergence between the two methods, rather than undermining reliability, provided opportunities for reflexive engagement with the data, prompting deeper interpretation and theoretical refinement.

Reliability in topic modelling was maintained through careful preprocessing, including the application of custom stopwords lists, tokenization, and normalization of interview responses. Moreover, the topic modelling process was made reproducible by specifying random seeds and fixed parameters in the UMAP dimensionality reduction phase. Document-topic matrices were generated to allow for country-wise comparisons, which provided a quantitative layer to the qualitative analysis and served as a robustness check for national-level themes uncovered in NVivo.

Another critical measure of reliability in this study was analytical transparency. Full audit trails of codes, category definitions, and topic labels were maintained. In NVivo, all node structures, coding matrices, and comparison diagrams were documented. In BERTopic, all model outputs—including topic IDs, top words, and country-level topic

distributions—were stored and manually reviewed. This comprehensive documentation allows for reproducibility of the analysis and offers future researchers the ability to replicate or expand upon this study.

To sum up, this dissertation upholds high standards of validity and reliability through a well-structured multi-method design. The triangulation of elite interviews, comparative case study logic, NVivo-based thematic coding, and BERTopic-driven topic modelling offers methodological depth, transparency, and interpretive rigor. This layered approach reflects best practices in qualitative and digital social research and enhances confidence in the study's conclusions regarding green marketing strategies in emerging and maturing EV markets.

4.5. Research Ethics

Ethics is a cornerstone of academic research, ensuring the integrity of the research process and the protection of participants involved in the study. This dissertation will adhere to the ethical guidelines set forth by the Istanbul Bilgi University Ethics Committee, which outlines a framework to ensure that research is conducted responsibly and ethically. Moral considerations are critical in this research, involving elite interviews with influential EVs and government stakeholders.

One of the fundamental ethical principles in conducting research is obtaining informed consent from all participants. According to Bryman (2016), informed consent ensures that participants are fully aware of the purpose of the research, their role in the study, and any potential risks involved. In this research, all interviewees will be informed about the aims of the study, the intended use of the information they provide, and their right to withdraw from the research at any point without any negative consequences. The process of obtaining informed consent will involve [specific steps in the consent process]. Written consent will be obtained before the interviews, aligning with the Istanbul Bilgi University Ethics Committee guidelines.

Confidentiality and anonymity are also critical ethical considerations in elite interviews. Given the potentially sensitive nature of interviewees' information, especially those in

high-level government or corporate positions, ensuring that their identities are protected and that the information they share is used responsibly is crucial. To maintain confidentiality, the names and affiliations of the interviewees will not be disclosed, and any identifying details will be anonymized in the final report. Cohen et al. (2011) emphasize the importance of confidentiality in elite interviews, as it encourages participants to provide honest and candid responses without fear of repercussions.

Another important ethical principle is avoiding harm to participants. This means ensuring that the research process does not cause psychological, emotional, or professional harm to those involved. Kvale (2007) argues that elite interviews can sometimes put participants in uncomfortable positions, particularly when discussing sensitive topics or disclosing insider information. To mitigate this risk, the interviews will be conducted respectfully, which will involve [specific measures to ensure respectful conduct]. Participants will be given the option to decline to answer any questions they find uncomfortable or any confidential information about their company or the sector.

Furthermore, the principle of respect for autonomy will be upheld throughout the research. Participants will have the right to refuse participation or to withdraw from the study at any stage. This respect for autonomy ensures that participation is entirely voluntary and that participants do not feel coerced or obligated to contribute to the research. This principle empowers participants, giving them control over their involvement.

The universal ethical guidelines for conducting interviews in academic research also emphasize the importance of transparency and integrity. Transparency involves providing participants with clear and accurate information about the research process, while integrity ensures that the researcher conducts the study honestly and without misconduct or misrepresentation. This research will follow these principles by maintaining open communication with participants and accurately reporting all findings. This commitment to transparency and integrity should reassure the audience of the credibility of the research process.

In summary, the ethical considerations in this research are designed to protect participants' rights and well-being, ensure the integrity of the research process, and uphold

the ethical standards established by Istanbul Bilgi University and the broader academic community. By adhering to these guidelines, this study aims to contribute valuable insights into the marketing of EVs while respecting the dignity and autonomy of all participants involved. The potential impact of this research should inspire and motivate the audience.



COMPARATIVE EVIDENCE

The Comparative Evidence chapter is structured to provide a clear rationale for selecting Türkiye and Portugal as case studies and to explain the methodological framework used for this analysis. Firstly, the chapter begins by justifying the choice of these two countries through a detailed comparison of their structural, economic, and cultural similarities, highlighting the relevance of employing the MSSD. This section will identify key variables—such as GDP per capita, educational attainment, and cultural values—while addressing the critical, such as government incentives and price sensitivity on consumer behaviour, that account for divergent outcomes in electric vehicle (EV) adoption. Following this, the chapter will justify using elite interviews as a complementary research method to validate and expand upon the findings derived from the comparative case study. A detailed explanation of the selection of interview questions will be provided, linking them to the theoretical framework and existing literature. This approach ensures that the interview questions align with the research objectives, offering valuable insights into real-world industry practices and perspectives.

5.1. Justification for Selected Cases and Most Similar System Design

The selection of Türkiye and Portugal as comparative case studies is grounded in their structural, economic, and cultural similarities, which make them ideal for employing the MSSD. This methodology is particularly useful for understanding why outcomes, such as EVs adoption rates, diverge despite a high degree of structural similarity. The central premise is that while Türkiye and Portugal share multiple socio-economic and cultural variables,—such as price sensitivity on consumer behaviour —distinguishes the two markets and accounts for the differing outcomes.

The MSSD is a comparative research methodology employed to analyze systems that share similar attributes but demonstrate variation in one or a few critical aspects (Lijphart, 1971). In this dissertation, Türkiye and Portugal are chosen for comparison because they exhibit significant similarities across key structural indicators, such as GDP per capita,

education rates, and regional classification, while differing in EV adoption rates and market success. The key point in this study is the effectiveness of green marketing strategies in the premium electric vehicle segment, as reflected in EV sales, consumer attitudes, and market penetration.

The rationale for employing MSSD is as follows:

1. Both countries exhibit structural, cultural and economic similarities, such as comparable GDP levels adjusted for purchasing power parity (PPP) and growth rates.
2. Both are classified as commercially developing economies with shared socio-economic and regional characteristics, belonging to the Mediterranean and Southern European contexts.
3. Divergence in EV adoption rates and policy frameworks makes the comparison analytically valuable, as it allows identification of specific variables that explain differing market outcomes.

By applying MSSD, this study aims to isolate and analyze price sensitivity based consumer behaviour that differentiate EV adoption patterns in Türkiye and Portugal, despite their broader structural similarities.

The MSSD, as discussed in comparative political and social sciences, is particularly suited to cases where shared attributes provide a controlled baseline for analysis, while isolated differences can be used to explain variations in outcomes (Lijphart, 1971). Türkiye and Portugal offer an ideal framework for applying MSSD, as they share substantial economic, social, and cultural similarities while exhibiting divergent results in EV adoption and green marketing efficacy. This methodological choice allows the study to explore the social and cultural similarities in shaping consumer behavior, policy implementation, and market performance.

From an economic perspective, Türkiye and Portugal are similar in several critical aspects. When adjusted for purchasing power parity (PPP), the Gross Domestic Product (GDP) per capita of Türkiye and Portugal is comparable. According to IMF data (2023), Türkiye's GDP per capita stands at approximately \$37,000, while Portugal's is around \$38,000. This similarity indicates that the two countries have relatively equivalent

economic power in terms of household purchasing capacity. Additionally, both economies have displayed moderate growth rates in recent years, with Portugal averaging 2-3% annual growth and Türkiye maintaining slightly higher rates of 3-4%. These shared economic conditions are particularly relevant for assessing the affordability and perceived value of electric vehicles in their respective markets, especially in the premium segment where price sensitivity plays a crucial role.

Employment indicators further support the comparability of these cases. Türkiye and Portugal share similar unemployment challenges, particularly among younger populations, which reflect broader labor market vulnerabilities in both countries. Portugal's unemployment rate stands at 6.5%, while Türkiye reports a rate of approximately 8.6% (UNDP, 2022). These figures suggest that economic constraints influence purchasing behavior in both markets, albeit to differing extents. Similarly, the Human Development Index (HDI) values for Türkiye and Portugal further align these two countries. Portugal's HDI is 0.866, categorized as “very high,” while Türkiye's HDI, at 0.838, also falls within the high development category. Such similarities underscore the structural commonalities that make Portugal and Türkiye ideal cases for comparative analysis.

In addition to economic factors, educational attainment and cultural values provide further justification for the selection of these two countries. Educational levels among younger populations in Türkiye and Portugal are broadly comparable, with tertiary education completion rates for individuals aged 25–34 at 39.8% in Türkiye and 47.4% in Portugal (OECD, 2022). While Portugal has a slightly higher rate, the relative alignment suggests that both societies have similarly skilled labor forces and consumer bases capable of engaging with high-tech products like electric vehicles. This is particularly significant for premium EVs, as education is often linked to technology adoption and environmental awareness.

Cultural similarities between Türkiye and Portugal also support the rationale for this comparison. Both countries share values associated with Southern European and Mediterranean identities, including an appreciation for family, community, and collective responsibility. Academic literature often groups these nations within the Mediterranean

cultural sphere, where societal attitudes toward environmental responsibility and sustainable development are increasingly relevant (Garcia and Freire, 2016). Evidence from the World Value Survey (WVS) further highlights shared attitudes toward environmental issues and post-materialist values in both countries. These cultural parallels suggest that consumer behavior in Türkiye and Portugal can be compared meaningfully, particularly in terms of attitudes toward sustainability and the symbolic value of premium electric vehicles.

Table 5.1. Highes Education Level of Respondents in Portugal and Türkiye

Educational Level	Portugal (%)	Turkey (%)	Total (%)
Lower	64.2	58.3	60.3
Middle	19.0	24.2	22.5
Higher	16.8	17.1	17.0
Don't Know	0.0	0.0	0.0
No Answer	0.0	0.3	0.2
Sample Size (N)	1,201	2,415	3,616

(Source: *World Values Survey (2018)*)

The presented data from the World Values Survey (WVS) provide a comparative analysis of Türkiye and Portugal, offering insights into societal and environmental variables relevant to this dissertation's research question: What is the role of green marketing strategies in the premium segment of electric vehicle (EV) marketing in Türkiye and Portugal? Table-2 shows that both countries have similar levels of higher education attainment, with 16.8% in Portugal and 17.1% in Türkiye, indicating similar educational foundations for adopting advanced technologies such as EVs. However, Table 3 reveals that while 12.3% of Portuguese and 10.0% of Turkish respondents are classified as post-materialist, the difference remains normal. This demonstrates that post-materialist values, often associated with environmental awareness, are not the key differentiating factor in EV adoption between the two countries. Instead, price sensitivity and government incentives play a more decisive role, which this dissertation explores in depth.

Table 5.2. Value Orientation in Portugal and Türkiye

Value Orientation	Portugal (%)	Turkey (%)	Total (%)
Materialist	34.5	31.4	32.4
Mixed	46.0	56.3	52.9
Postmaterialist	12.3	10.0	10.8
Other Missing	7.2	2.3	3.9
Sample Size (N)	1,201	2,415	3,616

(Source: *World Values Survey (2018)*)

Table 5.3. Confidence in the Environmental Protection Movement in Portugal and Türkiye

Confidence Level	Portugal (%)	Turkey (%)	Total (%)
A Great Deal	6.3	8.3	7.7
Quite a Lot	51.1	44.7	46.8
Not Very Much	26.7	28.6	28.0
None at All	9.0	13.0	11.7
Don't Know	6.6	4.5	5.2
No Answer	0.3	0.9	0.7
Sample Size (N)	1,201	2,415	3,616

(Source: *World Values Survey (2018)*)

Tables 4 and 5 highlight key distinctions in environmental attitudes and economic priorities. Table 4 shows that confidence in the environmental protection movement is slightly higher in Portugal, with 57.4% of respondents expressing “a great deal” or “quite a lot” of trust, compared to 53% in Türkiye. Despite this difference, the data suggest that environmental confidence alone does not drive EV adoption in either market. Table 5 demonstrates a critical divergence in economic priorities, where 40.5% of Turkish respondents prioritize economic growth and job creation over environmental protection, compared to only 21.3% in Portugal. This supports that Türkiye’s high price sensitivity is a significant barrier to EV adoption, while Portugal benefits from government incentives and policies that help overcome economic concerns.

Table 5.4. Preferences Between Protecting the Environment and Economic Growth in Portugal and Türkiye

Preference	Portugal (%)	Turkey (%)	Total (%)
Protecting Environment	57.1	55.4	56.0
Economic Growth and Creating Jobs	21.3	40.5	34.2
Other Answer	5.4	0.3	2.0
Don't Know	14.6	3.1	6.9
No Answer	1.6	0.7	1.0
Sample Size (N)	1,201	2,415	3,616

(Source: *World Values Survey (2018)*)

The data summarized in Tables 6 and 7 provide further context, showing shared perspectives on democracy and state roles in both countries, further validating their structural similarities. These findings justify the selection of Türkiye and Portugal for comparison using the MSSD. Both countries share similarities in GDP per capita, educational attainment, and post-materialist values, which makes them ideal for identifying the key differentiating factors—price sensitivity and government incentives—that influence EV adoption. This comparison allows for a focused examination of how economic factors and policy interventions shape the effectiveness of green marketing strategies in the premium EV segment.

Table 5.5. Attitudes Toward Democracy- State Makes People's Income Equal in Portugal and Türkiye

Response	Portugal (%)	Turkey (%)	Total (%)
Not an Essential Characteristic	4.1	5.0	4.7
Essential Characteristic	12.7	17.0	15.1
Mean Score	6.77	6.83	6.81
Sample Size (N)	1,201	2,415	3,616

(Source: *World Values Survey (2018)*)

Despite these significant similarities, the two countries demonstrate stark differences in EV adoption, which serve as the focus of this study. The primary issue that account for

this divergence include government incentives and price sensitivity. Portugal has successfully implemented generous financial incentives and tax policies to promote EV adoption. Subsidies of up to €3,000 for EV purchases, coupled with exemptions from registration taxes and road taxes, have significantly reduced the perceived cost of ownership (Chen and Zhang, 2017). In contrast, Türkiye has yet to introduce comprehensive, long-term policies to incentivize EV adoption. The absence of substantial government support in Türkiye represents a critical barrier, particularly in a market characterized by strong price sensitivity.

Table 5.6. Attitudes Toward Democracy- State Provides Aid for Unemployment in Portugal and Türkiye

Response	Portugal (%)	Turkey (%)	Total (%)
Not an Essential Characteristic	0.7	2.5	1.9
Essential Characteristic	36.1	24.1	28.1
Mean Score	7.98	7.22	7.47
Sample Size (N)	1,166	2,335	3,501

(Source: *World Values Survey (2018)*)

Price sensitivity represents a main critical variable that distinguishes the two markets. While Portuguese consumers exhibit post-materialist values and are willing to prioritize environmental responsibility over immediate cost considerations, Turkish consumers are more price-sensitive, driven by economic constraints and affordability concerns (Monroe, 1990; Ribau and Ferreira, 2014). This price sensitivity poses significant challenges for premium EV brands in Türkiye, where consumers are less likely to invest in higher-priced vehicles despite their long-term benefits.

The study focuses on understanding how green marketing strategies are interpreted and experienced within the context of premium electric vehicle promotion in Türkiye and Portugal. Rather than testing relationships between discrete variables, the research explores how strategic communication, consumer perception, and institutional structures collectively shape the outcomes of green marketing initiatives. Key areas of attention include how consumers respond to sustainability-oriented messages, how infrastructure and policy frameworks influence brand positioning, and how price sensitivity mediates consumer trust in environmentally branded products. By comparing these dynamics

across two structurally similar yet contextually distinct markets, the study aims to uncover the narrative and strategic elements that contribute to the resonance—or disconnection—of green marketing efforts within the premium EV segment.

In conclusion, the selection of Türkiye and Portugal as comparative case studies is justified by their structural and economic similarities, which provide a strong foundation for employing the MSSD. The divergence in key points—namely government incentives, and price sensitivity on consumer behaviour—offers a compelling framework for understanding the factors that influence EV adoption in the premium segment. This comparison not only highlights the challenges and opportunities of green marketing strategies but also contributes to the broader understanding of sustainable transportation in emerging and semi-developed markets.

5.2. Justification for Elite Interview and Questions

In this study, elite interviews are employed as a key qualitative research method to strengthen the comparative analysis of Türkiye and Portugal's electric vehicle (EV) markets. Elite interviews are particularly suitable for exploring complex, industry-specific phenomena such as the challenges and opportunities associated with the green marketing of premium EVs. As Marshall and Rossman (2014) suggest, elite interviews allow researchers to access expert perspectives, enabling a deeper understanding of decision-making processes, organizational strategies, and market dynamics. Given the centrality of premium EVs to this dissertation, interviewing marketing professionals at Mercedes-Benz provides valuable insights into real-world practices, aligning theoretical expectations with industry realities.

The rationale for employing elite interviews is twofold: (1) to validate findings from the comparative case study and literature review, and (2) to capture nuanced, market-specific insights that cannot be fully addressed through secondary data. Industry professionals offer an insider perspective on the effectiveness of green marketing strategies, the role of government incentives, and the cultural and economic factors shaping EV adoption. As Harvey (2011) highlights, elite interviews are particularly effective for accessing expert

knowledge, making this method ideal for understanding the premium EV market's complexities.

Furthermore, there are plenty of reason behind the using NVIVO and Topic Modelling in the dissertation. NVivo was selected as the primary tool for manual qualitative coding due to its established reliability in supporting in-depth thematic analysis. NVivo allows for a systematic and transparent coding process, ideal for managing large qualitative datasets such as the transcriptions from elite interviews. Its capabilities include creating nodes (codes), generating matrices for cross-case analysis, and visualizing themes through charts and models. This makes NVivo particularly suitable for complex case studies involving multiple respondents and comparative dimensions. For this research, NVivo enabled the capture of nuanced language used by marketing professionals, facilitated iterative coding aligned with theoretical frameworks, and helped visualize how themes differed between Türkiye and Portugal. The structured nature of NVivo's coding environment supports theory development, comparison, and data saturation analysis, which are critical in qualitative social research (Silver and Lewins, 2014).

BERTopic was employed as a complementary computational method for its capacity to uncover latent topics within unstructured text using neural embeddings. Unlike traditional models such as Latent Dirichlet Allocation (LDA), BERTopic leverages BERT (Bidirectional Encoder Representations from Transformers) embeddings to capture contextual meanings within text, resulting in more semantically coherent topic clusters (Devlin et al., 2018; Grootendorst, 2022). It also integrates UMAP (Uniform Manifold Approximation and Projection) for dimensionality reduction and HDBSCAN for density-based clustering, making it highly effective for small and medium-sized corpora like interview transcripts. The use of BERTopic in this research allowed for a more data-driven understanding of discursive regularities across the interview responses and served as a validation layer for the manually identified themes in NVivo.

The NVivo analytical procedure followed several sequential steps. First, transcripts were imported and cleaned, ensuring consistency in formatting and speaker identifiers. Second, open coding was conducted to generate initial codes based on meaningful units of text. Third, axial coding was performed to relate these initial codes to one another and to

theoretical concepts. Finally, selective coding was used to aggregate these relationships into major themes. NVivo's matrix coding queries and hierarchical visualizations facilitated the comparison of theme frequency across countries and roles, enabling both within-case and cross-case analysis.

The BERTopic process also followed a structured pipeline. First, the data were prepared by extracting each interview response as a separate document and attaching a country identifier as metadata. Next, the text was tokenized, lowercased, and cleaned using a custom stopword list tailored to the EV and marketing context. The cleaned texts were then embedded using pre-trained BERT models to capture semantic relationships. UMAP was applied to reduce the high-dimensional embeddings into two dimensions for better clustering performance and interpretability. HDBSCAN was then used to cluster the reduced vectors into coherent topics. Each topic was labeled using the top-ranked words in that cluster, and the results were visualized using topic maps and frequency tables. A document-topic matrix was generated and analyzed for cross-national comparison.

To ensure that the interviews contribute directly to the research question—What is the role of green marketing strategies in the premium segment of electric vehicle marketing in Türkiye and Portugal?—the interview questions have been carefully designed and justified using the academic literature. Each question is connected to relevant theories, such as Green Marketing Theory (Polonsky, 1994), Price Sensitivity Theory (Monroe, 1990), and Perceived Value Theory (Zeithaml, 1988), while addressing the key variables of interest. The following paragraphs provide a detailed justification for the interview questions:

The first set of questions, such as “How important is green marketing in Mercedes' overall marketing strategy for electric vehicles in Türkiye or Portugal?” and “What are the primary challenges Mercedes faces in promoting electric vehicles as an environmental-awareness product in Türkiye or Portugal?”, directly posits that green marketing strategies are less effective in Türkiye due to price sensitivity but have been more successful in Portugal. These questions explore the prioritization of green marketing within Mercedes-Benz's overall strategy and assess the unique challenges posed by consumer behavior and infrastructure in each country. Literature highlights that green

marketing's success often hinges on consumer values and perceptions, particularly in markets where sustainability competes with economic considerations (Hartmann and Apaolaza-Ibáñez, 2012; Polonsky, 1994).

Also to emphasize the role of government incentives and tax policies in driving EV adoption, questions such as “What role do government incentives and tax policies play in supporting Mercedes’ green marketing strategies for electric vehicles?” are included. These questions are grounded in studies by Li et al. (2017) and Rezvani et al. (2015), which emphasize the critical role of subsidies, tax reductions, and infrastructure investments in overcoming cost barriers. By asking industry professionals about the impact of government policies in Türkiye and Portugal, the research seeks to understand how external factors influence green marketing effectiveness in premium segments.

Questions addressing cultural differences—such as “How do consumer expectations for premium electric vehicles differ between Türkiye and Portugal?” and “To what extent do cultural factors shape consumer attitudes toward premium electric vehicles?”—underline the role of Portugal’s post-materialist values and environmental awareness have facilitated greater EV adoption compared to Türkiye. Drawing from Hofstede’s (2001) cultural dimensions and Sheth et al.’s (2011) work on consumer behavior, these questions aim to uncover how cultural attitudes toward sustainability and luxury influence the effectiveness of green marketing strategies.

To explore infrastructure-related challenges, questions such as “How does Mercedes address consumer concerns such as charging infrastructure and range anxiety in Türkiye and Portugal?” are coded. Studies by Egbue and Long (2012) have shown that inadequate charging infrastructure and range anxiety are major barriers to EV adoption, especially in developing markets. By addressing these concerns, this question examines Mercedes’ strategies to mitigate practical barriers and improve consumer confidence.

Questions focusing on competitive dynamics—such as “How does competition with other premium brands influence Mercedes’ green marketing strategies?” and “How does competition with budget-segment brands impact Mercedes’ marketing approach?”—explore how Mercedes-Benz positions itself within the broader EV market. This is

particularly relevant for understanding differentiation strategies and aligns with studies on competitive pressures in green marketing (Porter, 1980; Zhang et al., 2020).

Finally, questions related to consumer education, market segmentation, and future outlook—such as “How does Mercedes educate consumers about electric vehicles and their environmental benefits?” and “In which area do you think electric vehicles can have a larger market share in your country?”—provide forward-looking insights into potential strategies for driving EV adoption. These questions contribute to examine the role of technology adoption, diffusion of innovation, and market segmentation in shaping EV adoption patterns. Literature such as Rogers’ Diffusion of Innovation Theory (2003) and Zeithaml’s (1988) Perceived Value Theory further justify the inclusion of these questions.

In conclusion, the use of elite interviews in this study is justified by their ability to provide rich, expert insights that complement the comparative case study. Each interview question has been carefully developed and aligned with the study’s theoretical framework, and existing literature. By addressing critical issues such as pricing, cultural attitudes, infrastructure, and competition, these questions enable a comprehensive exploration of the factors influencing green marketing strategies in Türkiye and Portugal’s premium EV markets. This methodological approach ensures the research captures both theoretical insights and practical industry perspectives, enhancing its academic rigor and real-world relevance.

As a last point, The full NVivo coding process produced a series of subthemes and keyword clusters, which are summarized in the appendices (see Appendix F–J). To provide a visual representation of thematic complexity and relationships among major categories, a code network diagram was generated (Figure 1). This diagram illustrates the interconnectedness of key concepts such as price sensitivity, consumer trust, and policy awareness, reflecting their recurring presence across multiple interviews. Rather than presenting all frequency tables within the main text, the visualizations and tabular outputs of both NVivo and BERTopic analyses are documented in the appendices for reference.

5.3. Analysing the Interview

The qualitative interviews conducted with industry experts in Türkiye and Portugal revealed five prominent themes that consistently structured stakeholder perspectives on electric vehicle (EV) marketing. These included: price sensitivity and economic constraints, environmental values, infrastructural readiness, trust in policy consistency, and brand positioning. Each theme manifested differently across the two national contexts, reflecting both the distinct socio-economic realities and the varied maturity of EV ecosystems.

In Türkiye, price emerged as a dominant concern. Marketing professionals emphasized that even when sustainability messaging is effectively delivered, most consumers still anchor their decisions in financial logic. This was captured in one respondent's comment: "Most customers ask about cost first. The environmental part comes later, if at all." The implication here is that green marketing alone may be insufficient in a context where upfront costs remain high and incentive mechanisms are perceived as inconsistent or weak. Portuguese interviewees, while acknowledging the influence of pricing, portrayed a different dynamic. One participant noted that "Cost is important, but values matter too. Many are willing to pay more if it's clean." This reflects a post-materialist value orientation and suggests that green messaging is more likely to influence behavior where environmental identity is more socially embedded.

This contrast extended to perceptions of infrastructure. Turkish participants frequently described a fragmented and urban-concentrated charging network, contributing to widespread range anxiety. "Istanbul has chargers," one interviewee noted, "but outside of the city, it's like a desert." This infrastructural bottleneck undermines not only consumer confidence but also marketing campaigns promising convenience and technological advancement. Conversely, the Portuguese context was defined by greater accessibility and institutional support. The consistent deployment of the national MOBI.E network has fostered a perception of reliability, particularly in urban centres like Lisbon and Porto. As one interviewee stated, "We have a solid grid in Lisbon and Porto. That helps people

decide.” This illustrates the role of infrastructure as an enabler of consumer trust and marketing credibility.

Participants also reflected on the broader policy environment. In Türkiye, fluctuating regulations and inconsistent incentives were a recurring theme. One respondent observed, “Incentives change every year. There’s no long-term clarity,” indicating a structural uncertainty that weakens both consumer and industry commitment to sustainable mobility. By contrast, Portuguese respondents highlighted the credibility of policy efforts, linking state action to consumer belief. “The state has been consistent,” said one participant, “People believe in the policy goals.” This trust serves as a foundation for aligning brand messaging with public sentiment, reinforcing the effectiveness of value-driven marketing.

Finally, the interviews revealed that branding strategies must be adapted to local cultural and institutional realities. In Türkiye, national pride around TOGG was visible, but consumer hesitation remained. “TOGG is interesting,” noted one respondent, “but people still wait to see if it works before trusting it.” This hesitation points to a gap between symbolic appeal and market confidence. Portuguese respondents, on the other hand, described a more mature approach to localized branding: “We adapt global messages to local tone. Sustainability must feel authentic here.” This underscores the strategic importance of cultural fluency in green marketing execution.

Taken together, the findings illustrate how the perceived success or failure of green marketing in the premium EV sector is deeply contingent on structural readiness, economic viability, and cultural resonance. These themes lay the groundwork for the next chapter, which synthesizes these patterns within broader theoretical and practical frameworks.

DISCUSSION AND EVALUATION

The Discussion and Evaluation chapter compares Türkiye and Portugal's electric vehicle (EV) markets by synthesizing insights from the literature review, statistical evidence, and numerical data presented in previous chapters and outputs from the elite interviews shared in the following chapter. This section critically examines the selected countries' EV markets, marketing strategies, and the role and challenges of green marketing, emphasising the research question: What is the role of green marketing strategies in the premium segment of electric vehicle marketing in Türkiye and Portugal? Additionally, this chapter evaluates how the variables of price sensitivity, government incentives, and consumer behaviour impact EV adoption.

In this section, Firstly, an evaluation will be made based on the literature review. The primary purpose of the assessment will be to comparatively examine the premium segment electric vehicle marketing strategies, the role of green marketing and consumer behaviours in Türkiye and Portugal. Then, the interviews with Mercedes Türkiye and Mercedes Portugal product managers will be compared and analyzed. The data obtained in the interviews will be compared with the data obtained in the literature review, and the examination will be revealed. As the last step, the general evaluation section will be formed, and the outputs will be interpreted based on our research's central question.

6.1. Discussion from Literature

The EV markets in Türkiye and Portugal present intriguing similarities but also critical differences, making them suitable for analysis using the MSSD. Both countries share comparable GDP per capita, geographic positioning in the Mediterranean region, and similar levels of higher education attainment (WVS, 2018). Yet, the differences in EV sales, government incentives, environmental policies, and consumer perceptions highlight key variables that influence market outcomes.

Portugal has emerged as one of the fastest-growing EV markets in Europe due to significant investments in charging infrastructure, strong government incentives, and favorable public attitudes toward environmental sustainability (Demirtas et al., 2021; Chen and Zhang, 2017). Government policies have been instrumental in stimulating demand. For instance, the Portuguese government offers subsidies of up to €3,000 for EV purchases, alongside tax exemptions and reduced registration fees, which make EVs more accessible to consumers (Frade et al., 2011). Additionally, Portugal's EV infrastructure has seen substantial development, with public charging stations increasing from 1,000 in 2015 to over 2,500 by 2020 (Demirtas et al., 2021). This expanded infrastructure directly addresses range anxiety, one of the most significant barriers to EV adoption. Consequently, Portugal has experienced consistent growth in EV sales, driven by supportive policies and a shift in consumer perceptions toward environmental responsibility.

In contrast, Türkiye's EV market faces substantial challenges despite its similarities with Portugal. The primary barriers include high price sensitivity, insufficient government incentives, and limited charging infrastructure. Price Sensitivity Theory (Monroe, 1990) highlights that consumers in developing markets, such as Türkiye, prioritize affordability over sustainability. Unlike Portugal, where subsidies and tax reductions reduce EV costs, the Turkish government has not provided sufficiently impactful financial incentives to offset the higher initial costs of EVs (Karahan et al., 2022). Moreover, Türkiye's automotive market is characterized by high taxation, including Special Consumption Tax (SCT) rates that range from 10% to 60% depending on the engine size and vehicle type, further limiting accessibility to EVs for price-conscious consumers.

In addition to this, Green marketing strategies also play a crucial role in Portugal's EV market, where environmental awareness and post-materialist values contribute to consumer demand. This shift is evident in World Values Survey (WVS) data, where 57.1% of Portuguese respondents prioritize environmental protection over economic growth (Table 4). Marketing campaigns in Portugal have effectively aligned EVs with environmental responsibility, positioning them as sustainable and economically viable alternatives to Internal Combustion Engine (ICE) vehicles (Chen and Zhang, 2017).

Premium brands leverage Green Marketing Theory (Polonsky, 1994) by emphasizing EVs' environmental benefits, reduced emissions, and long-term cost savings.

In contrast, green marketing strategies in Türkiye face significant challenges. While environmental awareness is growing, economic priorities remain dominant. According to WVS data, 40.5% of Turkish respondents prioritize economic growth and job creation over environmental concerns (Table 4). This supports the argument that price sensitivity limits the effectiveness of green marketing. Premium EVs, such as those produced by Mercedes, struggle to gain traction in Türkiye due to their high initial costs and limited infrastructure, which exacerbate consumer concerns about affordability and usability (Egbue and Long, 2012). As a result, the environmental messaging central to green marketing campaigns does not resonate as strongly with Turkish consumers compared to their Portuguese counterparts.

Then, the development of charging infrastructure is a critical factor influencing EV adoption. Portugal's government has prioritized investments in charging networks, particularly in urban areas, where range anxiety is a significant concern. Between 2015 and 2020, the number of public charging stations in Portugal grew by 150%, providing consumers with confidence in the practicality of EVs (Demirtas et al., 2021; Frade et al., 2011). Public policy in Portugal also supports EV adoption in public transportation, with initiatives to electrify city buses and municipal fleets. These efforts demonstrate a comprehensive approach to addressing infrastructure challenges while promoting EVs as a sustainable transportation solution.

In Türkiye, the lack of sufficient charging infrastructure remains a significant obstacle. The country has made limited progress in expanding its charging network, which contributes to consumer skepticism about the viability of EVs. This suggests that EV adoption in Türkiye may be more feasible in public transportation systems than in the private consumer market. Investments in public transport electrification, such as electric buses and municipal fleets, could serve as a catalyst for broader EV adoption by familiarizing consumers with the technology (Karahan et al., 2022).

The numerical data on EV sales further illustrate the differences between Türkiye and Portugal. In Portugal, EV sales have grown consistently due to strong policy support and

increasing environmental awareness. In 2020, EVs accounted for approximately 11% of total vehicle sales, compared to less than 1% in 2015 (Frade et al., 2011). This growth highlights the effectiveness of government incentives, infrastructure development, and green marketing strategies in driving consumer adoption.

In Türkiye, EV sales remain modest despite growing interest in sustainable transportation. According to recent statistics, EVs accounted for less than 1% of total vehicle sales in 2020, reflecting the challenges of high price sensitivity and limited infrastructure (Demirtas et al., 2021). The slow adoption rate in Türkiye underscores the importance of addressing economic and practical barriers, such as reducing taxation, increasing subsidies, and expanding the charging network.

The comparative analysis highlights that while Türkiye and Portugal share similarities in GDP per capita, education levels, and cultural positioning, the differences in price sensitivity, government incentives, and infrastructure serve as key focus point influencing EV adoption.

In summary, the comparative analysis of Türkiye and Portugal highlights the critical factors influencing EV adoption and the effectiveness of green marketing strategies. Portugal's success can be attributed to strong government incentives, expanded infrastructure, and alignment with environmental values. In contrast, Türkiye's challenges stem from price sensitivity, insufficient policy support, and limited infrastructure development. This evaluation underscores the importance of economic interventions and policy initiatives in overcoming barriers to EV adoption. By employing the MSSD, this dissertation effectively isolates the variables that differentiate the two countries, providing valuable insights into the role of green marketing strategies in the premium EV segment.

6.2. Discussion of NVIVO Content Analysis

The analysis of Mercedes-Benz interview and its integration into the "Discussion and Evaluation" chapter will focus on key insights into Türkiye's electric vehicle (EV) market and Mercedes-Benz's approach to green marketing in Türkiye and Portugal. It will also

include a comparison with the insights with each other. This chapter introduces thematic analysis of the qualitative data gathered from eight elite interviews with professional marketing managers—four from Türkiye and four from Portugal—conducted as part of this research work on Green Marketing Strategy and Consumer Behaviour for Electric Vehicles in Developing Countries. The interview transcripts were coded systematically using NVivo software to identify prominent themes and subthemes that represent the participants' views on marketing strategies, consumer behavior trends, and contextual issues concerning the adoption of high-end electric vehicles (EVs) in both countries.

The general purpose of this analysis is to describe why green marketing initiatives resonate differently in two socio-economically similar but environmentally different markets. Türkiye and Portugal are good cases for comparison since they are two developing European economies with different levels of electric vehicle (EV) adoption. Türkiye is characterized by a strongly price-sensitive market and infrastructural challenges, while Portugal is characterized by a stronger level of environmental consciousness, more favorable public policies, and a growing preference for long-term, innovation-oriented consumer values.

The interviews were a thorough compilation of 28 open-ended questions specifically developed to investigate perceptions regarding consumer motivation, market problems, strategic communication techniques, infrastructure development, and the government's role. Inferences were induced and then refined through iterative comparison across various countries with the assistance of NVivo's coding functionalities. Apart from this, codes were then further sub-categorized under broader themes, including Price Sensitivity, Environmental Consciousness, Infrastructure and Availability, Consumer Behaviour, Marketing Strategy, Government Subsidies, Brand Image, Corporate vs Retail Orientation, and Technology and Innovation.

This chapter is organized around these overall themes, with each section explaining the related subthemes and evidence quotes or findings from Turkish and Portuguese participants. The contrast between the two national contexts is the focus of this analysis, with the goal of bringing out the degree to which consumer priorities and strategic marketing orientations vary in each market. Particular emphasis is placed on the

contextual factors that affect the success or constraints of green marketing initiatives, including cultural values, economic status, regulatory frameworks, and public opinion.

Thematic frequencies and data visualizations generated using NVivo are used to reinforce the credibility and transparency of analysis. By presenting a comparative qualitative view, the chapter adds towards addressing the study's main research question: "What is the role of green marketing strategies in promoting premium electric vehicles in Türkiye and Portugal?" It also supports the testing of key research questions, especially those about price sensitivity, post-material values, and innovation in consumer choice.

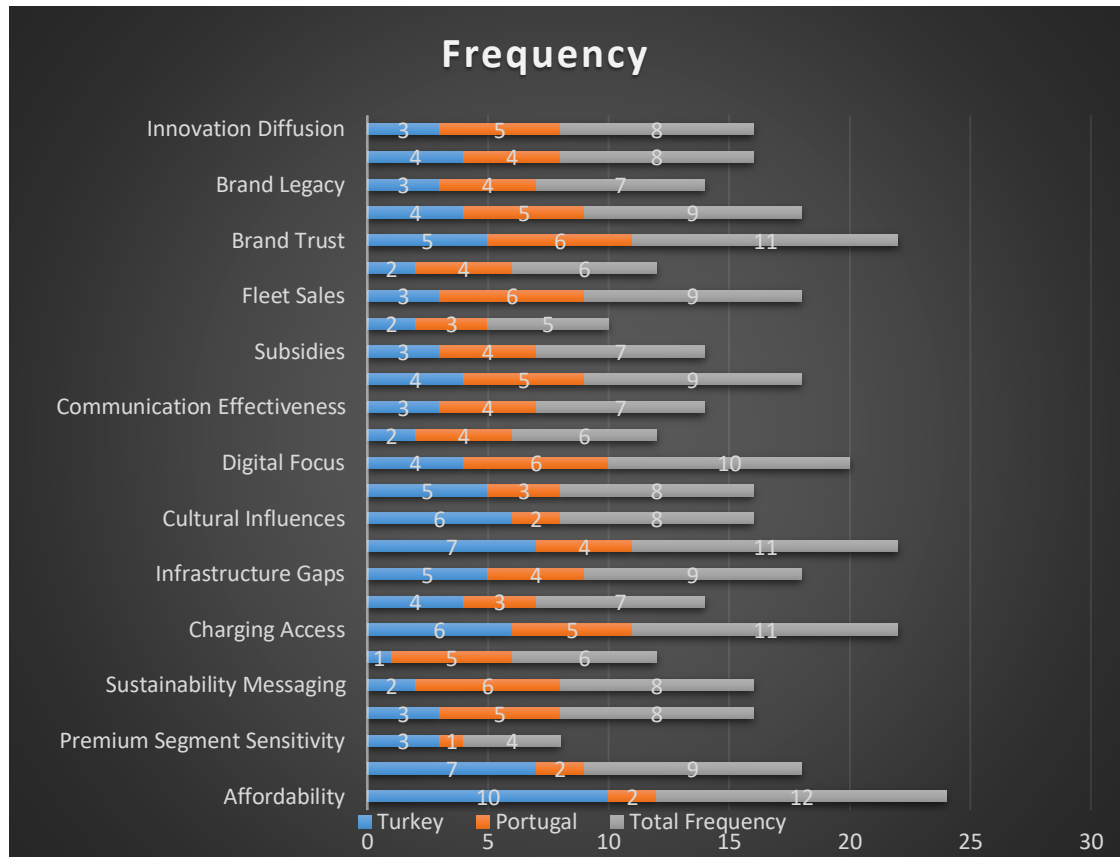
Table 6.1. Thematic Analysis Table

Theme	Subtheme	Code	Türkiye	Portugal	Total Frequency
1. Price Sensitivity	Affordability	Price Sensitivity	10	2	12
	Value Perception	Price Sensitivity and Value for Money	7	2	9
	Premium Segment Sensitivity	Lower Price Sensitivity in Premium Segment	3	1	4
2. Environmental Awareness	Green Policy Impact	Environmental Awareness and Government Influence	3	5	8
	Sustainability Messaging	Green Marketing and Consumer Appeal	2	6	8
	Eco-Driven Preferences	Eco-Conscious Consumers and Market Challenges	1	5	6

3. Infrastructure and Range	Charging Access	Charging Infrastructure Issues	6	5	11
	Range Anxiety	Charging Infrastructure and Range Concerns	4	3	7
	Infrastructure Gaps	Charging Infrastructure Gaps and Consumer Concerns	5	4	9
4. Consumer Behavior	Innovation Adoption	Consumer Behavior and Technology Adoption	7	4	11
	Cultural Influences	Cultural and Educational Influences	6	2	8
	Consumer Education	Customer Education and Sales Training	5	3	8
5. Marketing Strategy	Digital Focus	Digital and Experiential Marketing	4	6	10
	Experiential Marketing	Experiential Marketing - EV Test Drives	2	4	6
	Communication Effectiveness	Consumer Awareness and Communication	3	4	7
6. Government Incentives	Tax Benefits	Government Incentives Driving EV Adoption	4	5	9
	Subsidies	Government Incentives and Sustainability Influence	3	4	7
	Policy Influence	Government Policies and Regulatory Support	2	3	5

7. Corporate vs Retail	Fleet Sales	Fleet_Sales_Dominance_in_EV_Market	3	6	9
	Individual Buyer Behavior	Consumer Segmentation in Marketing	2	4	6
8. Brand Perception	Brand Trust	Brand_Credibility_and_Trust	5	6	11
	Brand Prestige	Premium Brand and Technological Superiority	4	5	9
	Brand Legacy	Brand Heritage and EV Transition	3	4	7
9. Technology and Innovation	Tech Orientation	Consumer Expectations on Range and Technology	4	4	8
	Innovation Diffusion	Diffusion of Innovation Theory	3	5	8

Figure 6.1. Subtheme Frequency from NVIVO



This section offers a detailed explanation of the thematic analysis carried out with NVivo software, based on eight elite interviews—four from Türkiye and four from Portugal. The interviews investigated professional marketing managers' views on consumer behavior, marketing strategies, and the difficulties of marketing premium electric vehicles (EVs) in their countries. According to the NVivo codebook and thematic coding, nine main themes were identified: Price Sensitivity, Environmental Awareness, Infrastructure and Range, Consumer Behavior, Marketing Strategy, Government Incentives, Corporate vs. Retail Focus, Brand Perception, and Technology and Innovation. Each theme is discussed in relation to its subthemes, related codes, and variations in frequency and emphasis between Türkiye and Portugal.

Figure 6.2. Code Networks of NVIVO Analysis



Theme 1: Price Sensitivity

Price sensitivity was the overarching and opposing theme between both nations. The theme was invoked by the Turkish participants a total of 20 times, while it was only referenced 5 times by the Portuguese participants. Price was always mentioned as the main barrier to EV adoption in Türkiye. With inflation rates being high, currency fluctuations, and high taxes (albeit with some tax benefits for EVs), the overall cost of owning an EV is a significant discouragement. Even top-end customers, usually considered less price-sensitive, hesitate.

As one Turkish manager said:

"Consumers factor in long-run costs, but initial price still frightens them away. They want to see if they're actually saving."

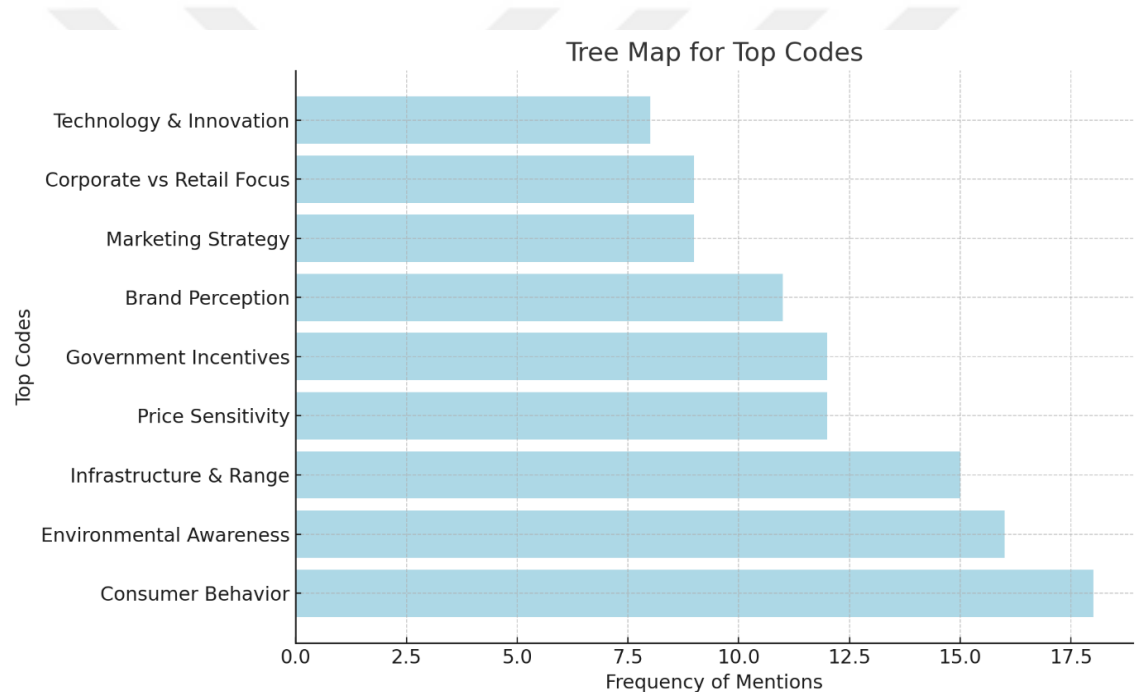
Labels such as "Price Sensitivity and Value for Money" and "Lower Price Sensitivity in Premium Segment" suggest a divide: while the premium segment is somewhat more

elastic, cost issues still reign supreme in decision-making. Portuguese managers, on the other hand, intimated that although consumers do pay attention to price, it does not discourage adoption as much. Consumers are more likely to balance long-term economic returns, government subsidies, and green values.

One Portuguese respondent explained:

"We're seeing consumers asking about battery range and tax savings, not just the sticker price."

Figure 6.3. Tree Map for Codes from NVIVO



This theme supports that green marketing practices in Türkiye need to focus heavily on economic rationale, while in Portugal, value narratives can be more encompassing and encompass social and environmental advantages.

Theme 2: Environmental Awareness

This theme had subthemes like Green Policy Impact, Sustainability Messaging, and Eco-Driven Preferences. Portuguese managers cited this theme 16 times-nearly three times the number of references made by their Turkish counterparts (6 references). Environmental awareness in Portugal seems ingrained in consumer awareness, particularly among city dwellers. This is due to the EU's strict environmental policies and the government's

support for the zero-carbon vision. Respondents characterized Portuguese consumers as "eco-conscious," and stressed that green communication strongly appeals to them:

"We don't need to persuade people EVs are good for the environment—they already think that."

Conversely, Turkish professionals perceived environmental messaging to be weak unless combined with economic messaging. Even within the high-end segment, environmental advantages were regarded as secondary to technological specifications or price reduction:

"The green message doesn't move the needle unless it comes with a discount or a tax advantage."

This theme underlies that it substantiates the argument that Portugal features a cultural and political climate open to post-materialist values while Türkiye's consumer market continues to be oriented to material and functional advantages.

Theme 3: Infrastructure and Range

Infrastructure and Range issues were major issues in both nations, with 15 references in Türkiye and 12 in Portugal. Three subthemes emerged: Charging Access, Range Anxiety, and Infrastructure Gaps. The Turkish participants stressed that the unavailability of charging stations—particularly in rural and apartment residential areas—was a key discourager. Even with an expanding network of charging stations, public opinion is still negative:

"We have more stations than people think, but perception hasn't caught up."

Range and charging time are also a major concern, particularly for intercity travel. Turkish managers pointed out in this regard that EVs could first become popular in company fleets and public transport, where charging logistics can be optimized.

In Portugal, infrastructure was not perceived as ideal, but managers reported improvements. Some issues still existed regarding rural access, but urban coverage and fast-charging facilities have increased significantly. One manager commented:

"There are still gaps, but it's improving year by year. Consumers feel more confident about going electric."

This indicates that infrastructure preparedness is a bit more developed in Portugal, which helps build consumer confidence and market expansion.

Theme 4: Consumer Behavior

This theme captured a combination of psychological, cultural, and informational factors driving consumer choice. Turkish respondents used it 18 times, and Portuguese professionals used it 9 times. Consumers in Türkiye were characterized as very interested in innovation but not willing to embrace new technology without solid evidence of value. Cultural patterns of short-term planning and low trust in infrastructure were ongoing worries. Main Theme: Consumer Attitudes towards Innovation. One manager noted:

"They adore the new technology, but they're afraid of change." Turkish marketing managers stressed the necessity of focused educational efforts and test drive experiences in order to overcome fears and create trust.

In Portugal, the consumer mindset was presented in a more optimistic manner. Consumers were portrayed as rational, environmentally aware, and more confident about new technology. Educational requirements continue to exist, but they are less about EV fundamentals and more about product details. Portuguese respondents highlighted peer-to-peer influence and media exposure in influencing behavior:

"People see their neighbours with EVs and begin to ask questions. That's how awareness develops."

The above theme captures the fact that although both countries need specific consumer education strategies, the Turkish market needs core awareness generation, whereas Portugal needs build-up of existing knowledge.

Theme 5: Marketing Strategy

Marketing Strategy was another dominant theme, with Turkish professionals citing it 9 times and Portuguese respondents citing it 14 times. Subthemes were Digital Focus, Experiential Marketing, and Communication Effectiveness.

Portuguese managers outlined a multi-faceted strategy: influencer collaborations, social media marketing, showroom visits, and attendance at green fairs. These efforts resonate

with the values of high-end customers who are looking for not only luxury but also a purpose:

"Luxury is evolving. Our clients want performance and principles."

In Türkiye, marketing is predominantly product-centric. Experts reported that digital marketing, particularly YouTube and Instagram, is an economical mean for raising awareness. Nevertheless, numerous others conceded that the message requires improvement:

"We speak features and prices. We don't do enough to inspire."

This difference implies that Portuguese EV advertising is value and aspiration-focused whereas Turkish is transactional. Experiential marketing (e.g., test drives, immersive activities) was successful in both but underutilized in Türkiye.

Theme 6: Government Incentives

This theme was invoked 12 times by Portuguese respondents and 9 times by Turkish experts. Subthemes were Tax Benefits, Subsidies, and Policy Influence. Portuguese respondents lauded the government's across-the-board support system, such as lowered VAT, exemptions from road tax, and company incentives. Such policies were not only considered economic facilitators but also signals of intent:

"When the state supports the change, consumers feel secure in making it."

Turkish professionals recognized the ÖTV taxes but also complained about the absence of holistic or long-term incentives. One interviewee described:

"There are incentives, but no one knows about them."

There was also worry about the absence of non-monetary policies, including limiting ICE cars in urban areas or providing special EV lanes. This theme emphasizes the significance of visibility, consistency, and public communication in making incentives work.

Theme 7: Corporate vs. Retail Focus

This theme captures market segmentation strategies, with subthemes of Fleet Sales and Individual Buyer Behavior. It was referred to 9 times in Portugal and 5 times in Türkiye.

Portuguese executives pointed to the key role played by corporate customers and public contracts to expand the EV market. Fleet uptake was characterized as being a driver of the market, both in terms of volume and in making electric mobility normal:

"When people see electric taxis or goods vans, they perceive EVs as practical."

In Türkiye, retail remains predominant, but experts consider fleet sales to be promising. Interviewees emphasized the role of public-private partnerships and government regulation in spurring adoption:

"Public fleets are the fastest way to build trust."

Both markets recognize the strategic value of corporate customers, but Portugal has already engaged this segment, while Türkiye is in its infancy.

Theme 8: Brand Perception

This theme explores how brand identity shapes the adoption of EVs. Its subthemes are Brand Trust, Brand Prestige, and Brand Legacy. The Portuguese and Turkish participants cited this theme more than 10 times, confirming its worldwide applicability. Mercedes-Benz was well-known in both countries as a trusted, innovative brand. In Türkiye, this trust moderates concerns regarding EVs:

"If Mercedes does it, people think it's the future."

In Portugal, the luxury, quality, and sustainability association of the brand reinforces its presence in the premium EV segment:

"Our clients want to invest in something that aligns with their values and status."

The theme exemplifies the role of brand equity in legitimating new technologies and shaping adoption, especially in premium segments.

Theme 9: Technology and Innovation

Subthemes in this category were Tech Orientation and Diffusion of Innovation. Portuguese and Turkish professionals used this theme 8 times each. Consumers of both nations indicated keen interest towards advanced technology in both nations. But

adoption mechanisms were different. Portuguese early adopters were identified as influential, vocal, driving wider social acceptability:

"People want to be part of the next big thing. EVs are cool now."

Customers in Türkiye were similarly intrigued, but more in doubt. Education, infrastructure, and peer behavior will be crucial in moving Turkish consumers along the adoption curve:

"We're at the awareness stage, not yet at action."

This validates the Diffusion of Innovation theory's relevance in explaining cross-market disparities. The thematic analysis identifies key contrasts in the marketing and perception of premium EVs in Türkiye and Portugal. While Portugal enjoys high environmental consciousness, well-organized policy support, and a sensitive consumer base, Türkiye is still plagued by economic limitations, infrastructural deficiencies, and cultural reluctance. Marketing efforts must thus be extremely contextualized. Turkish efforts need to resonate on affordability, infrastructure, and utilitarian worth, while Portuguese initiatives may play on sustainability, long-term worth, and novelty. This balanced comparative examination presents practical findings for policymakers as well as marketers of developing EV markets.

6.3. Discussion of NVIVO Thematic Analysis

This section provides an in-depth discussion of the thematic analysis findings of eight elite interviews with marketing professionals, four from Türkiye and four from Portugal, on the role and effectiveness of green marketing strategies in promoting premium electric vehicles (EVs). This comparative analysis critically examines the degree to which these strategies are congruent with consumer behavior, market reality, and infrastructural conditions in both countries based on recent scholarly research and the research questions developed in this study. It is informed by thematic data from NVivo coding representing a grounded and data-driven explanation that seeks to connect theoretical frameworks with practical marketing practices.

6.3.1. Price Sensitivity and Economic Constraints

Price sensitivity was the most salient theme among Turkish respondents and the most significant separator between the two nations. As with İmre et al. (2021), Turkish consumers, including in the premium category, remain highly sensitive to initial costs as a result of inflation, reduced purchasing power, and an unstable currency. Respondents consistently highlighted that value perception and price-performance trade-offs form the core of consumer choice in Türkiye. This is in accordance with Price Sensitivity Theory (Reynolds, 2016), which states that price sensitivity of consumers rises where there is economic uncertainty and limited disposable income. The biggest reason for the high demand for EVs is the Special Consumption Tax (ÖTV) system and the price advantage it provides”. This observation underscores that EV sales in Türkiye are less a function of long-term environmental consciousness and more an outcome of short-term fiscal opportunities. Another participant reinforced this view:

“If the government makes changes to ÖTV tax brackets, this would directly affect prices, leading to positive results” .

These quotations illustrate that green marketing in Türkiye cannot rely on intrinsic value propositions such as sustainability alone but must be coupled with clear, immediate economic benefits to gain traction.

In Portugal, on the other hand, price issues were secondary. Consumers cared more about long-term value and environmental contribution, particularly in urban and high-income segments. The contrast lends support that green marketing strategies have difficulty in Türkiye because of high consumer price sensitivity but encounter fewer obstacles in Portugal, where consumers are more open to premium sustainability stories (Crippa et al., 2020).

As one stakeholder noted,

“Many are willing to pay more if it's clean”.

This points to a value-based decision-making model where environmental and ethical concerns have a tangible influence on purchasing behaviour. The difference between the

two contexts reveals that in Portugal, green marketing strategies can operate on an aspirational or lifestyle plane, whereas in Türkiye, they must be rooted in utilitarian logics to achieve effectiveness.

These insights affirm the relevance of contextual adaptation in marketing strategy. They also support the tenets of Price Sensitivity Theory, which posits that the psychological and socio-economic environment of a market shapes the elasticity of demand in response to value-added propositions such as sustainability. In the Turkish case, green marketing remains an insufficient differentiator unless it is directly linked to economic advantage.

6.3.2. Environmental Awareness and Cultural Values

Environmental consciousness was significantly more present in Portugal. This aligns with Green Marketing Theory (Polonsky, 2008), which posits that green marketing success relies on the post-materialist values of consumers. Portuguese respondents highlighted climate awareness, government campaigning, and social norms as underscoring the ethical attractiveness of EVs. These are conditions consistent with the EU's climate policy agenda and the Portuguese government's net-zero ambitions (European Commission, 2022). One interviewee described the trend:

“We’ve seen a clear shift in urban buyers. Environment is a lifestyle issue now”.

The language here is notable—environmentalism is no longer about isolated awareness, but rather embedded in identity and lifestyle, making it a viable emotional driver in marketing strategies.

“Portuguese consumers... consider EVs a sustainable investment aligned with their values”.

The implication is that green marketing in Portugal can be constructed on moral or value-based appeals, consistent with the tenets of post-materialist theory, which suggests that individuals in more economically stable societies increasingly prioritize quality-of-life concerns, such as environmental sustainability, over material gain.

Contrarily, Turkish consumers were characterized as being primarily indifferent to environmental appeals. Although there is increasing awareness, it has not materialized in purchasing behaviour. This concurs with earlier studies that consumers in developing nations tend to value economic concerns more than environmental concerns (Skeete, 2017). For Turkish consumers, the environmental narrative has to be combined with functional and financial benefits to make a difference. In the Turkish context, environmental consciousness was described as limited, peripheral, or subordinate to more pressing economic concerns. One Turkish marketing leader explained this dynamic clearly:

“Consumers in Türkiye think in a product- and price-oriented manner. Environmental sensitivity is not a decisive factor in consumer preferences”.

This assertion underscores the cultural orientation toward practicality and financial conservatism, where ecological concerns are viewed as luxuries rather than imperatives. Another participant further emphasized the narrow demographic reach of sustainability-minded consumers, stating:

“There are environmentally conscious consumers, but they were mostly the early adopters... that phase is now over”.

This suggests that environmentalism functioned initially as a niche attribute—appealing only to a small, educated, often cosmopolitan subset—but failed to mainstream across broader consumer segments. This aligns with diffusion theory, where innovators and early adopters often exhibit different values from the mass market.

6.3.3. Infrastructure and Range Concerns

Infrastructure-related issues were common to both nations but were more pronounced in Türkiye. Regional differences were recognized by Portuguese professionals, but EU funding and public-private partnerships have facilitated the development of a relatively mature charging network (IEA, 2023). Urban centers, especially, enjoy high-density charging infrastructure, minimizing range anxiety.

In Türkiye, though, limited infrastructure is still a key hindrance. Apartment living, rural coverage deficits, and low public charging investment are all causes of pervasive range anxiety. This supports that EV take-up in Türkiye might be more viable to start with in controlled settings like public transport fleets or corporate fleets. The significance of charging infrastructure is consistent with results from Mugerwa et al. (2019), who suggest that infrastructure sufficiency is a strong predictor of EV diffusion.

One Turkish executive explained:

“Although the charging infrastructure in Türkiye is actually at a good level, there is a misconception in the market that charging stations are insufficient”.

Despite real improvements in station availability, this perception gap signals a failure of public awareness and trust. The same respondent added,

“Compared to Europe, downtime rates at charging stations are higher, which negatively impacts customer perception... when a customer arrives at a charging station and finds that it is out of service, this reinforces the belief that the infrastructure is inadequate”.

These observations underscore that technical progress alone is not sufficient; consumer-facing marketing must also confront and correct misinformation and past service failures.

Moreover, range anxiety is further amplified by behavioral and cultural habits. Another Turkish stakeholder noted,

“We use our electric vehicles like ICE motor vehicles... we spend a lot of energy on the vehicle by accelerating suddenly”.

This reflects a lack of public education on how EVs should be operated for optimal efficiency. The comment illustrates that range anxiety in Türkiye is not merely a logistical issue, but also a cognitive and behavioral challenge, shaped by conventional habits of fuel consumption and driving style.

6.3.4. Consumer Behaviour and Innovation Adoption

Consumer differences mirror the relative position of each nation on the diffusion curve. Portuguese consumers were characterized as educated, pragmatic, and peer-adoption and lifestyle-oriented. EVs are becoming more perceived as status symbols that symbolize innovation, ethics, and modernity—attributes in line with the early majority segment in Rogers' (2003) Diffusion of Innovation Theory.

Turkish consumers, on the other hand, are placed earlier on the adoption curve. Interviewees characterized high curiosity as well as fear and mistrust. This resistance is supported by low EV visibility in public life and limited experience. In accordance with Hofstede (2023), the higher uncertainty avoidance of Turkish culture can be considered to explain consumer resistance to new technologies in the absence of institutional or peer approval.

In the Turkish interviews, participants repeatedly emphasized the volatility and inconsistency of government policies, particularly in relation to tax incentives and the Special Consumption Tax (ÖTV) scheme. The tone of these responses suggests that policy uncertainty undermines both consumer trust and brand strategy.

“The biggest reason for the high demand for EVs is the Special Consumption Tax (ÖTV) system and the price advantage it provides.”

This quote captures the dependence of EV market success on fiscal levers rather than intrinsic consumer motivation. More critically, the perception that these levers may shift arbitrarily limits the sustainability of market demand.

“If the government makes changes to ÖTV tax brackets, this would directly affect prices, leading to positive results.”

This reinforces the view that the Turkish EV market is structurally fragile, susceptible to short-term policy manipulation rather than long-term strategic vision. From a marketing perspective, this creates difficulty in message consistency: consumers may hesitate to respond to green marketing initiatives if they believe the underlying economic conditions are unstable.

Portuguese participants, by contrast, framed public policy not just as a pricing tool, but as a legitimizing force for sustainability-oriented behavior. Their comments reflected not only a greater degree of institutional continuity, but also a belief in policy as an expression of national or European identity.

“Government incentives... directly impact consumer decision-making. These incentives allow us to position Mercedes EQ models as financially attractive in the long run.”

This long-term framing enhances the credibility of brand messaging, creating a synergy between marketing claims and policy narratives. Environmental policy is not just a transactional incentive, but part of a larger societal alignment toward ecological responsibility.

“Portugal has a growing environmental consciousness... many customers view EV adoption as a way to align with European values of climate responsibility.”

Such statements reveal that in Portugal, policy is not only practical—it is ideological. It helps consumers feel that their purchases reflect civic values and identity alignment. This institutional trust permits marketing strategies to build emotional resonance with policy frameworks, a dynamic that is currently lacking in the Turkish context.

These findings suggest that for green marketing to be effective, alignment with national policy frameworks must be both visible and stable. Inconsistency in tax regulations or unclear long-term commitments can severely dampen the effectiveness of environmental messaging. In contrast, a credible and consistent government narrative provides marketers with a strong foundation for framing electric vehicles not just as products, but as participatory actions in a collective ecological project.

6.3.5. Marketing Strategy Effectiveness and Localization

Brand perception and the localization of global messaging strategies emerged as a central theme in understanding how electric vehicle campaigns resonate differently across national contexts. In both Türkiye and Portugal, stakeholders acknowledged the importance of cultural fluency and the need to adapt global narratives to local market

realities. However, the orientation and efficacy of these adaptations were markedly different in each country.

In Türkiye, participants highlighted the symbolic significance of domestic brands such as TOGG, but also described persistent skepticism among consumers toward emerging technologies and newer market players. This skepticism appeared to extend even to international brands, unless reinforced through demonstrable performance and clear economic benefit.

“TOGG is interesting, but people still wait to see if it works before trusting it.”

This statement reflects a hesitancy rooted not in outright rejection but in cautious observation. It suggests that brand trust is earned over time through consistent demonstration of reliability and value, rather than assumed through national pride or branding alone. In the Turkish context, this trust deficit presents a challenge for green marketing campaigns, especially those leaning heavily on emotional or symbolic appeals without strong functional reinforcement. Participants also described how green marketing strategies were often used in peripheral ways, especially in Türkiye—focused more on public relations than direct persuasion.

“We mostly utilize green marketing on the PR side... the market resonates with product features, not environmental benefits.”

This reflects a disconnect between environmental branding and actual purchasing drivers. Product quality, performance, and cost remain paramount, and any sustainable positioning must be embedded within these functional attributes to gain traction.

In Portugal, by contrast, brand messaging was described as deeply integrated with national identity and consumer values, enabling companies to communicate ecological themes more confidently and effectively.

“We adapt global messages to local tone. Sustainability must feel authentic here.”

This quote underscores the strategic localization of global narratives, where emotional and cultural resonance is critical. Authenticity is not achieved through translation alone but requires alignment with local values and lifestyle dynamics. Portuguese consumers are described as increasingly sensitive to the coherence between brand identity and

sustainability claims, a condition that allows green marketing to operate as a central, rather than supplemental, messaging strategy.

These contrasts suggest that while both countries require localized branding approaches, the cognitive entry points are different. In Türkiye, credibility is constructed through functionality, economic rationale, and gradual exposure. In Portugal, branding strategies can operate on aspirational and identity-driven levels, assuming a higher degree of environmental and institutional trust among the public.

The implication for multinational firms like Mercedes-Benz is clear: global brand consistency must be balanced with local narrative customization, especially in culturally and economically asymmetric markets. Where environmental themes are not yet mainstreamed, such as in Türkiye, green marketing must be subtly embedded within appeals to value, reliability, and innovation. In more environmentally mature markets like Portugal, sustainability itself can function as a core brand differentiator.

6.3.6. Government Incentives and Public Policy Support

Governmental policy and fiscal incentives emerged as a powerful influence on EV adoption, shaping both consumer perception and industry strategy. Participants from both Türkiye and Portugal acknowledged the centrality of regulatory frameworks, yet the tone and implications of their observations varied significantly, reflecting the broader institutional environments of each country.

In Türkiye, respondents emphasized the instrumental role of government taxation schemes—specifically the ÖTV (Special Consumption Tax) system—in enabling or disabling demand for electric vehicles. Yet they also conveyed a sense of volatility and mistrust, rooted in the inconsistency of policy application and frequent fiscal shifts.

“The biggest reason for the high demand for EVs is the Special Consumption Tax (ÖTV) system and the price advantage it provides.”

This statement captures the extent to which EV adoption in Türkiye is contingent on state intervention rather than intrinsic consumer readiness or environmental motivation.

However, that dependency simultaneously introduces vulnerability, particularly when consumers anticipate or experience policy reversals.

“If the government makes changes to ÖTV tax brackets, this would directly affect prices, leading to positive results.”

Such remarks reinforce the perception that policy is viewed as a tactical tool—not a stable foundation for long-term ecological or industrial transformation. The Turkish EV market, as seen through these elite perspectives, is shaped by reactive behavior tied to fiscal cues, rather than proactive alignment with sustainability goals. This policy volatility undermines the credibility of long-term marketing narratives and weakens consumer confidence in the reliability of EV investments.

In contrast, participants in Portugal framed government incentives as part of a broader, coherent sustainability agenda. These incentives were not seen merely as economic triggers, but as institutional signals that reinforced environmental values and legitimized EV adoption as an ethical choice.

“Government incentives... directly impact consumer decision-making. These incentives allow us to position Mercedes EQ models as financially attractive in the long run.”

Here, fiscal instruments are integrated into a strategic narrative of alignment—between public policy, brand messaging, and consumer values. The effect is not merely transactional but symbolic, embedding EV purchases within broader lifestyle and societal frameworks.

“Portugal has a growing environmental consciousness... many customers view EV adoption as a way to align with European values of climate responsibility.”

This highlights the institutional trust underpinning the Portuguese EV market, where government policy is perceived as consistent, forward-looking, and value-aligned. Unlike in Türkiye, marketing campaigns in Portugal can build on state action to strengthen emotional appeal, rather than compensate for regulatory uncertainty.

Taken together, these findings suggest that the effectiveness of green marketing is deeply contingent on policy stability and credibility. Where governments offer transparent, long-term incentive programs, they serve as powerful enablers of consumer trust and brand

legitimacy. Where policy is seen as unpredictable or tactical, it may create a short-term spike in demand, but it also generates skepticism that hinders the sustainability of marketing impact.

6.3.7. Corporate vs. Retail Adoption Pathways

In Portugal, fleet electrification is a central driver of market normalization. Delivery services, municipalities, and companies are switching to EVs in order to achieve ESG objectives. This boosts public visibility and makes the technology familiar, further promoting the social proof necessary for consumer uptake (Bastida-Molina et al., 2020).

Türkiye, on the other hand, is in a more nascent stage. The interviewees recommended that corporate fleets, especially among logistics and public transport, offer a strategic starting point for premium EVs. This follows Mugerwa et al. (2019) finding that B2B adoption can initiate B2C behaviour by means of symbolic leadership.

Strategically, this implies that institutional partnerships and municipal tenders must be Mercedes-Benz Türkiye's top priority in order to enhance visibility and consumer trust. Portugal, having already reached this point, can then focus on maintaining and deepening individual adoption.

6.3.8. Brand Perception and Trust Capital

Brand equity was crucial in both nations. Mercedes-Benz was seen to be a trust anchor in Türkiye and prestige booster in Portugal. In Türkiye, brand resilience dampened issues regarding EV reliability and service framework. One Turkish manager commented:

"If Mercedes makes it, people assume it must be future-proof."

In Portugal, Mercedes-Benz was linked to innovation, luxury, and eco-friendliness. This double impression supports the brand's capacity to perform various roles depending on market maturity. In developing markets such as Türkiye, the brand is a bridge between credibility and innovation. In developed markets such as Portugal, it adds status and value congruence.

This validates that green marketing tactics need to capitalize on brand identity based on differing local perceptions and marketplace conditions. In Türkiye, credibility needs to be highlighted. In Portugal, lifestyle alignment and aspirational identity can come into the limelight.

6.3.9. Innovation, Technology, and the Adoption Curve

Interest was strong in both markets, but adoption paths differed. Portuguese consumers, aided by policy, infrastructure, and social evidence, are well-placed in the early majority stage. Turkish consumers are in the early adopter stage but are constrained by infrastructure, education, and trust.

This illustrates the applicability of Diffusion of Innovation Theory (Rogers, 2003). According to the theory, adoption of technology would follow a bell curve, where innovators and early adopters take the lead, followed by early majority, late majority, and laggards. Portugal is in the transition from early to mainstream adoption, whereas Türkiye is still in the validation phase.

To speed up adoption in Türkiye, green marketing has to make EVs accessible via test drives, influencer reviews, and myth-busting efforts. Portugal, on the other hand, can emphasize social status, lifestyle integration, and brand loyalty.

6.3.10. Integrated Strategic Implications

Combining all thematic insights, several integrated strategic directions emerge:

1. Green marketing has to align with local economics and culture. What sells with Portuguese consumers—innovation, ethics, identity—is not likely to succeed in Türkiye, where assurances, affordability, and education rule.
2. Infrastructure investment must keep pace with marketing promises. In Türkiye, public-private partnership is key to alleviating range anxiety and stimulating adoption.

3. Turkish government incentives have to be underlined by visibility efforts. Marketing can leverage these rewards through co-branded communications.
4. Fleet electrification provides a trust-building initiative in Türkiye. Marketing alliances with logistics and municipal organizations can drive EV visibility.
5. Mercedes-Benz can function as a change agent in Türkiye and an inspirational icon in Portugal. Branding needs to consider these contextual nuances.
6. Turkish campaigns should incorporate pragmatic messaging on EV care, charging, and cost savings. Portuguese campaigns can emphasize supporting positive stories.
7. Experiential and digital marketing (virtual showrooms, AR test drives) can close the information gap in Türkiye as well as increase engagement in Portugal.

This exchange indicates that although Türkiye and Portugal are socio-economically similar, they are in different places as far as EV adoption is concerned. Portugal is a mature, eco-sensitive market open to green stories. Türkiye is an emerging market with immense potential but against which challenges exist based on economic factors, infrastructure deficiencies, and resistance at the behavioral level. Green marketing efforts need to be extremely contextualized, integrating global brand identity with locally applicable messaging, partnerships, and educational content.

6.4. Comparative Focus on Market Priorities: Türkiye vs. Portugal

One of the pivotal postulates of this study is the distinct deviation of Türkiye and Portugal regarding consumer values, response behaviour, and market preparedness for electric vehicles (EVs), specifically in the premium segment. While both nations are alike socio-economically, consumer psychology, policy context, and cultural values between them significantly vary—yielding drastically contrasting results in EV take-up and marketing strategy performance.

Price sensitivity prevails over the decision-making process in the Turkish market by an overwhelming margin. This is a thread running through several interviews with Turks.

Even though premium buyers are targeted, marketing professionals continually stated that Turkish customers value the upfront cost of purchase much more than long-term gains. Economic prudence is quite rational given Türkiye's macroeconomic environment—high inflation, currency depreciation, and lower purchasing power against EU norms (İmre et al., 2021). For the typical Turkish consumer, and even for higher-income brackets, the monetary jump from an internal combustion engine (ICE) car to an EV is a significant gamble, particularly when augmented by concerns about unknown battery life, resale value, and limited charging facilities.

Interviewees also highlighted that economic and functional incentives have much greater impact on consumer behavior than environmental or technological stories. Advertising campaigns based on fuel economy, maintenance advantages, and reduced total cost of ownership make a quantifiable difference. Green messages based on climate responsibility, carbon neutrality, or sustainability, however, tend to have little impact on purchasing decisions unless closely linked to personal benefit. As one Turkish informant aptly expressed, "We can't sell dreams; we have to sell guarantees—financial ones." This is consistent with international literature implying that price-sensitive markets require value-focused marketing tactics that directly appeal to cost efficiency and concrete advantages (Skeete, 2017).

Conversely, the Portuguese market has a more developed consumer profile, one that is more post-materialist in its values. Portuguese respondents indicated that most consumers, particularly in urban areas such as Lisbon and Porto, are driven by long-term value, social status, and ethical purchasing. EVs in Portugal are not merely means of transport—EVs are lifestyle statements, progressive statements, and climate statements. The presence of EVs in public view, widespread charging networks, and regular government-sponsored promotion campaigns create a cultural environment in which green options are desirable and feasible.

In addition, Portuguese car buyers are generally more accepting of technology-oriented branding, having faith in innovation and product development. In contrast to Turkish buyers, the Portuguese do not require constant assurance regarding battery life, charging arrangements, or durability. Rather, they are more engaged in having features such as

smart connectivity, driver assistance systems, and sustainability. According to one Portuguese interviewee, "People want to be part of the transition—they're not just buying a car; they're investing in the future."

This difference illustrates underlying social values. Following the Diffusion of Innovation Theory (Rogers, 2003), Portugal is at the early majority stage, with the critical mass of users now taking up the technology due to word of mouth and trust. Türkiye, in contrast, is still at the early adopter stage, where the consumer is interested but holds back, necessitating more effort to break psychological and logistical hurdles.

Government policy is an enabling factor in this divergence. In Portugal, incentives related to EVs are seen, stable, and openly promoted. Tax incentives, parking allowances, infrastructure subsidies, and sustainability prizes are standard and widely announced. Institutional support not only lowers the cost of EV ownership but also sends a message of robust social approval. The Portuguese government is seen not only as a regulator but as an ally in ecological change (European Commission, 2022).

In Türkiye, the situation is reversed. While there are some incentives, such as ÖTV exemptions, their effect is undermined by low visibility and policy inconsistency. Interviewees reported that consumers do not know what benefits are available or how to claim them. This distrust of policy continuity adds to the already widespread scepticism regarding EVs, making marketing more challenging and less effective (Hwang et al., 2018). It places emphasis on policy communication and aligning with marketing strategies.

From a branding perspective, both nations have strong emphasis on trust and legacy, but in terms of operationalizing the trust, they are different. In Türkiye, Mercedes-Benz is perceived as a trust anchor—a brand whose entry into EVs gives legitimacy to the product category. Turkish customers expect that if Mercedes is launching an EV, then it should be reliable and backed. This dynamic can be strategically utilized in marketing as an opportunity to mitigate uncertainties surrounding infrastructure and performance. Within Portugal, the premium status of the brand is effective in reinforcing its positioning as the sustainability and innovation leader. Mercedes is perceived by consumers as progressive, which fits perfectly with green myths and high-tech capabilities.

This comparative perspective highlights an essential suggestion: green marketing needs to be locally adapted. One message, no matter how effective in one setting, can entirely fail in another. In Portugal, aspirational narrative, lifestyle branding, and environmental responsibility speak loudly. In Türkiye, the same message needs to be augmented—or even substituted—with tough financial logic, service assurance, and infrastructure literacy. The message needs to shift from "save the planet" to "save your money and guarantee reliability."

In general, this analysis illustrates that Türkiye and Portugal, as structurally similar countries, are significantly different in the way consumers understand and respond to green marketing communications. These results support profound contextual intelligence in EV marketing strategy, highlighting the need to combine global brand values with locally appropriate messaging, government alignment, and behavioural insight.

The thematic analysis done in this research provides a comprehensive, comparative analysis of the functioning and efficacy of green marketing measures in the sale of high-end electric vehicles (EVs) in Türkiye and Portugal. Using qualitative elite interviews with marketing executives in both countries, this analysis has deconstructed the intricate relationships between consumer activity, market processes, infrastructural conditions, and strategic communication interventions. It offers not just a theoretical explanation of the problems at stake but also practical observations that can guide policy and business marketing strategies.

A primary finding of this study is the sharp difference between the Turkish and Portuguese markets when it comes to consumer priorities and market preparedness for green marketing. Although Türkiye and Portugal possess some economic classifications and socio-demographic compositions in common, consumer psychology and market maturity levels for EV adoption vary significantly between the two countries. This variation plays a significant role in deciding the success of green marketing campaigns and highlights the necessity of contextualization in campaign formulation.

In Türkiye, the dominant theme is price sensitivity. Consumers are more concerned with financial issues than with environmental or technological factors. Even in the premium car market, consumers are extremely risk-averse and require transparent economic value

before they make a purchase. This sensitivity is exacerbated by macroeconomic uncertainty, inflationary trends, and overall institutional distrust. Consequently, green marketing in Türkiye cannot be based on idealistic or aspirational appeals. Rather, it will have to be based on applied messaging that communicates real advantages of long-term savings, fuel economy, reduced maintenance, and easy access to servicing. Campaigns need to be developed to enlighten, assure, and demystify making the shift to EVs within Turkish consumers' minds.

Portugal, on the other hand, offers a market that is much more open to environmental messages and stories of innovation. Consumers in this market are not only driven by economic motives but are also driven by post-materialist values. EVs become a statement of personal identity, eco-awareness, and status. Public exposure of EVs, combined with a strong charging network and generous government incentives, has provided a rich soil for green marketing to take root. Campaigns in Portugal can be more emotionally engaging, focusing on sustainability, innovation, and forward-looking lifestyles. Portuguese consumers are more receptive to long-term societal effect and individual contributions to climate targets messages, which makes green marketing a valuable means of speeding up EV adoption in this regard.

Another central finding is the critical influence of government support in determining consumer behaviour and market evolution. In Portugal, sustainable and transparent policy measures have contributed considerably towards boosting consumer confidence and minimising perceived risks of EV ownership. Public investment in infrastructure, tax benefits, and informational campaigns have established EVs as a mainstream choice as opposed to a niche product. In Türkiye, meanwhile, incentives provided by the government are sporadic, ill communicated, and readily overwhelmed by overarching economic problems. This obscurity and discontinuity detract from their potency, suggesting that initiatives in green marketing need to make up for or directly fill in the information deficiency.

The study also made clear the varying roles played by brand perception within each market. In Türkiye, Mercedes-Benz brand trust is the key facilitator of EV uptake. Customers look to brand reputation to reduce uncertainty and rationalize the high cost of

new technology. In Portugal, brand image is more of an aspirational influence, lifting the perceived value of EVs through identification with innovation, prestige, and leadership on the green agenda. These observations illustrate that although brand equity is significant in both settings, the manner in which it is used needs to vary: in Türkiye, it needs to reassure; in Portugal, it may inspire.

Thematic evidence also showed that technological innovation is viewed differently in every nation. In Portugal, technology is welcomed as a representation of modernity and refinement, which adds to the appeal of EVs. Customers enjoy amenities such as intelligent dashboards, autonomous driving assistance, and connectivity. In Türkiye, there is interest in technology but one that is moderated by doubt and a requirement for evidence. Marketing in Türkiye thus needs to incorporate explicit demonstrations of technological advantage, real-world applications, and educational efforts to close the trust gap.

A further level of understanding is provided by the pattern of EV take-up. In Portugal, government and fleet use of EVs has served to mainstream the technology, raise public confidence, and enhance visibility. This has had a spill-over effect into the consumer market, where the visibility of EVs in normal service fosters familiarity and acceptance. Türkiye has yet to make full use of this approach. Private and public sector collaborations towards fleet electrification may provide a good point of entry, particularly in urban environments where exposure can shape perception.

Together, the results of this thematic analysis confirm that green marketing strategies cannot be applied as a one-size-fits-all across various national contexts. The same message, brand, or campaign that works in one nation may not work in another if it fails to respond to local realities. This supports the study's central thesis: effective green marketing must not only be environmentally compelling but also economically reasonable, culturally congruent, and policy-linked.

For multinational vehicle manufacturers such as Mercedes-Benz, this entails employing a two-tracked strategy. In Portugal, the emphasis may continue to rest on affirming positive attitudes with aspirational positioning and green credibility. In Türkiye, though, a different model is needed—one that establishes credibility, minimizes perceived risk, and

presents an attractive financial opportunity. This can include collaborations with local governments, dealerships, and financial institutions to provide bundled services, financing options, or charging assistance that reduce the entry barrier for consumers.

This discussion also has more general significance for policymakers. It shows that policy design is best accompanied by smart communication efforts. Incentives that remain ill-advertised or are badly explained can have no practical impact. Governments have to cooperate with industry in presenting a comprehensive and clear-cut message regarding EV adoption benefits to assure consumers of informed, favorable support, and faith in the purchasing decision they are making.

Lastly, the comparative design of this research—using the Most Similar Systems Design (MSSD) approach—is very effective in revealing the subtleties that drive policy and marketing results. Even though Türkiye and Portugal are generally placed within the same developmental bracket, their consumer landscapes for luxury EVs differ fundamentally. Identification of these differences is important not just for the customization of green marketing efforts but also for informing overall policy and investment choices in the international transition toward sustainable mobility.

In Conclusion, this thematic analysis has shed light on the rich and multi-faceted dynamics of the promotion of high-end EVs in varied national contexts. It has outlined the primary drivers and barriers influencing consumer acceptance, signposted the strategic levers to which marketers and policymakers have access, and provided a comparative frame for designing more effective interventions in the future. As nations around the world transition to low-carbon mobility, what can be learned from Türkiye and Portugal is of great interest as case studies on how localized green marketing can promote or slow down the uptake of sustainable technologies.

6.5. Discussion from Topic Modelling

To complement the manually coded qualitative insights gathered through NVivo and enhance the validity of the overall analysis, this research incorporates BERTopic, a transformer-based topic modelling algorithm, as a second layer of discourse analysis. The

aim of including topic modelling is twofold: first, to identify latent thematic patterns within the elite interview responses that may not be immediately accessible through manual coding, and second, to triangulate findings across analytical approaches to increase the credibility and methodological robustness of the study (Flick, 2004; Denzin, 1978). This integration of manual and computational techniques offers an innovative contribution to marketing research, particularly in the emerging domain of green mobility, where stakeholder narratives are multidimensional, abstract, and often culturally nuanced.

The decision to use BERTopic, rather than classical methods such as Latent Dirichlet Allocation (LDA) or newer approaches like Top2Vec, stems from its unique capability to model language context through BERT (Bidirectional Encoder Representations from Transformers). LDA, though widely used, operates on the bag-of-words assumption and therefore ignores syntax and contextual dependencies within the data (Blei, Ng, and Jordan, 2003). This leads to the fragmentation of topics in small, semantically dense corpora such as elite interviews. Top2Vec overcomes some of these issues by utilizing vector embeddings, but it lacks the depth of contextual understanding that BERT offers and tends to collapse semantically distinct yet topically adjacent content into a single topic cluster when working with short or technical texts (Angelov, 2020). In contrast, BERTopic uses sentence-level embeddings from pre-trained BERT transformers, which allow for precise detection of discursive meaning, idiomatic phrasing, and implicit semantic structures—particularly relevant in elite interviews where language is strategic and conceptually abstract (Devlin et al., 2018; Grootendorst, 2022).

The BERTopic pipeline in this study followed a rigorous and replicable series of steps. First, the dataset—comprising 224 interview responses (28 per participant)—was structured so that each response became an individual document. Tokenization was applied using the NLTK `word_tokenize()` function, followed by custom stopwords elimination. In addition to default English stopwords, a domain-specific stopwords list was developed to remove high-frequency, low-value terms such as “vehicle,” “EV,” “Mercedes,” “electric,” and “market,” which were expected to dominate frequency

metrics but offer limited semantic differentiation. This was followed by lowercasing, punctuation removal, and normalization to prepare clean text for embedding.

Once pre-processing was complete, sentence-level embeddings were generated using BERT. These embeddings captured the semantic meaning of each document and were reduced into two dimensions using UMAP (Uniform Manifold Approximation and Projection) for visual interpretation and computational efficiency. Clustering was performed using HDBSCAN (Hierarchical Density-Based Spatial Clustering of Applications with Noise), which dynamically determined the number of optimal topic clusters without requiring manual pre-specification. The output was then refined using class-based TF-IDF (c-TF-IDF) to extract the top keywords representing each topic. Metadata was preserved throughout the process, enabling grouping and comparison by country (Türkiye vs. Portugal).

The methodological contribution of BERTopic lies in its triangulative value and its ability to detect both convergent and divergent discursive patterns relative to NVivo. NVivo captures interpretive depth based on researcher-guided frameworks—ideal for theory testing and inductive coding—but it risks subjectivity. BERTopic, by contrast, identifies patterns independent of researcher bias, operating at scale and across multidimensional semantic spaces. By using both methods in tandem, the study enhances interpretive credibility and minimizes the risk of analytical oversight (Creswell and Miller, 2000). This hybrid approach also supports a more transparent and replicable methodology in line with emerging trends in computational qualitative analysis (Tsvelkova et al., 2022).

6.6. Analysis of Topic Modelling

The BERTopic model generated five primary topics, each associated with a specific constellation of keywords and thematic patterns. These topics were compared across the Turkish and Portuguese interviews using a pivot table, which enabled a systematic evaluation of how themes were distributed by country. Each topic was labelled based on its ten most representative words, as extracted through the c-TF-IDF mechanism. Notably, Topic -1 emerged as the most prominent in both countries, with similar

frequency in Türkiye (39) and Portugal (38). This topic included keywords such as “charging,” “infrastructure,” “marketing,” “incentives,” and “government,” suggesting that infrastructural challenges, communication strategies, and public incentives are universally salient. This aligns closely with the NVivo themes "Infrastructure and Range" and "Government Incentives," which were likewise coded frequently across both national datasets. The shared prominence of this topic reinforces the conclusion that while policy and infrastructure readiness are experienced differently in Türkiye and Portugal, they are viewed as universally central to the EV marketing challenge.

Table 6.2. Top 10 Keywords per Topic from BERTopic Modelling

Top Keywords per Topic (BERTopic Results)

Topic	Top 10 Keywords
-1	charging, marketing, incentives, infrastructure, government, portugal, fleet, range, customers, public
0	turkey, consumers, price, charging, environmental, high, tax, segment, sensitivity, consumer
2	marketing, digital, customers, experience, events, channels, test, customer, effective, information
3	brand, mercedesbenz, chinese, brands, technologies, engineering, innovation, competitors, technology, new
1	portugal, incentives, sustainability, consumers, environmental, government, portuguese, premium, norway, green

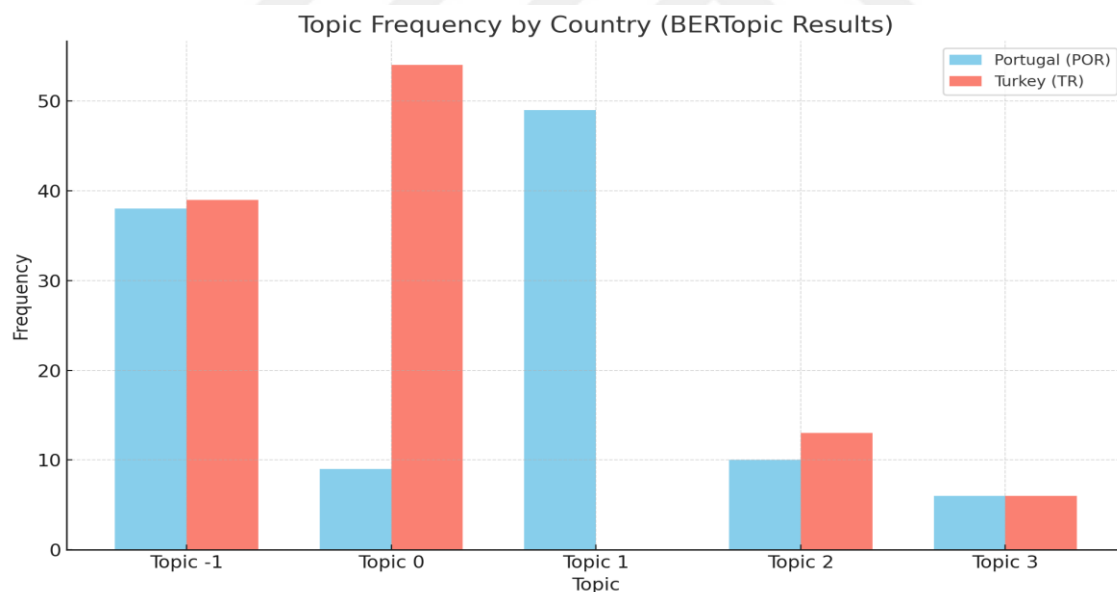
Topic 0 was overwhelmingly dominant in Türkiye (54 occurrences versus 9 in Portugal), with key terms like “Türkiye,” “price,” “consumers,” and “sensitivity.” This topic strongly corresponds to the NVivo theme "Price Sensitivity and Economic Constraints," and provides robustness. Turkish interviewees expressed recurring concerns about affordability, economic volatility, and short-term planning behaviors among consumers. In contrast, this topic had limited presence in Portugal, where consumers were perceived as more concerned with long-term value than with upfront cost. The semantic clarity and country-specific loading of this topic demonstrates how BERTopic effectively captured culturally embedded market behaviors, converging precisely with manually coded insights in NVivo.

Topic 1 appeared exclusively in Portuguese interviews (49 occurrences) and contained words such as “Portugal,” “sustainability,” “incentives,” and “environmental.” This reflects a high degree of alignment with NVivo themes such as "Environmental Awareness" and supports that Portuguese consumers are more motivated by post-

materialist values and environmentally conscious narratives. Furthermore, this topic echoes references to EU-level environmental policy and national zero-carbon strategies made by Portuguese professionals. The model thus confirmed that sustainability, as a discursive theme, is far more embedded in Portugal’s green marketing landscape.

Topic 2, which revolved around “marketing,” “digital,” “customers,” and “experience,” was evenly distributed across both countries (13 in Türkiye, 10 in Portugal). This parallels NVivo's "Marketing Strategy and Communication Effectiveness" theme, and illustrates shared cross-national trends in using digital platforms, influencer strategies, and experiential techniques (such as EV test drives) to enhance consumer engagement. The convergence of this topic across both NVivo and BERTopic suggests that while the specific content of marketing may differ, its multi-channel format is widely recognized as critical in both markets.

Figure 6.4. Topic Frequency by Country from BERTopic Results

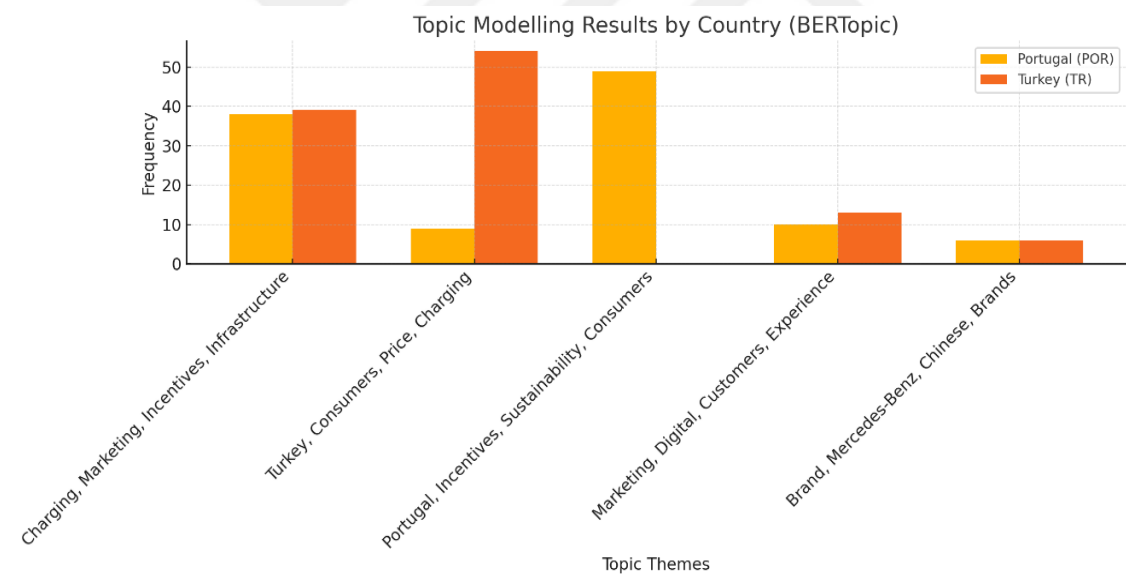


Topic 3 focused on “brand,” “Mercedes-Benz,” “trust,” “premium,” and “Chinese,” and was also evenly distributed between Türkiye and Portugal. This topic mirrors NVivo’s "Brand Perception and Trust Capital" theme posits that brand equity plays a legitimizing role in EV adoption, particularly for premium segments. Turkish professionals emphasized that a trusted global brand like Mercedes-Benz alleviates local fears about

reliability and service, while Portuguese respondents associated the brand with innovation, luxury, and social status. Although the cultural framing of brand value differs, the underlying construct—brand credibility—is clearly important in both contexts.

The intertopic distance map confirmed the semantic separability of topics, with minimal overlap. The centrality of Topic -1 and the peripheral location of Topics 0 and 1 visually underscore their country-specific salience. Turkish-specific content clustered tightly around price concerns, while Portuguese discourse orbited around sustainability and incentives. This spatial representation reinforces the NVivo observation that Türkiye and Portugal occupy different positions along the innovation adoption curve (Rogers, 2003), with Portugal more aligned to early majority characteristics and Türkiye situated within the early adopter segment, facing higher uncertainty and skepticism.

Figure 6.5. Topic Modelling Results by Country from BERTopic Modelling

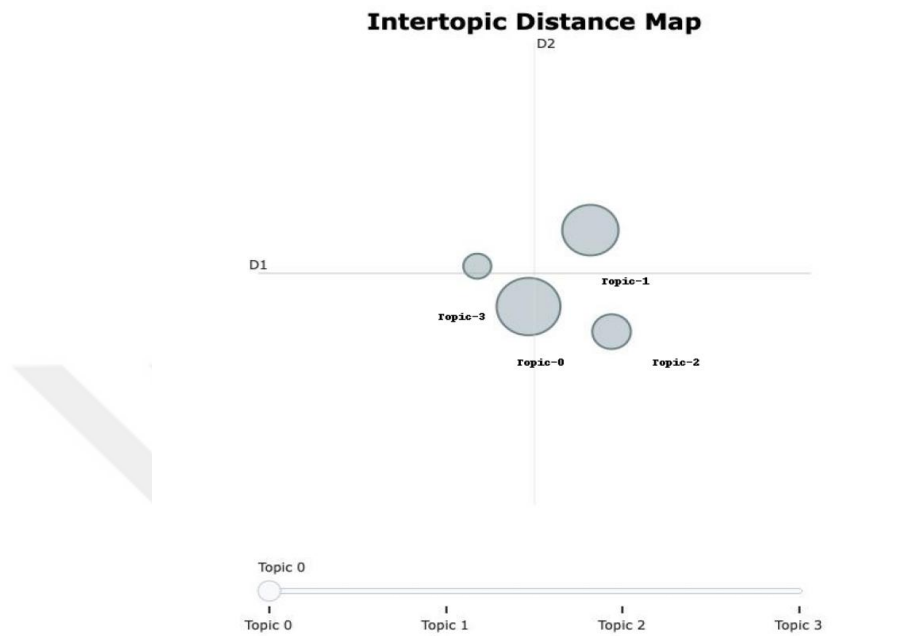


The comparison between the manual NVivo coding and the machine-assisted BERTopic modelling revealed a high degree of thematic convergence, reinforcing the internal validity and interpretive consistency of this research. Despite their differing analytical logics—NVivo being theory-informed and human-interpreted, and BERTopic being unsupervised and data-driven—both approaches independently surfaced highly similar thematic structures, particularly in relation to price sensitivity, environmental awareness,

infrastructure readiness, and brand perception. For example, the NVivo code “Price Sensitivity and Economic Constraints,” which was the most frequently cited theme among Turkish participants, directly parallels BERTopic’s Topic 0, which was overwhelmingly dominated by Turkish data and contained terms such as “price,” “charging,” “consumers,” and “sensitivity.” This alignment confirms that cost concerns are not only perceived by the researcher through qualitative immersion but also statistically reinforced through semantic clustering. Similarly, NVivo’s “Environmental Awareness” theme—frequently cited in the Portuguese interviews—corresponds almost exactly with BERTopic’s Topic 1, which was exclusive to Portugal and included high-weighted terms such as “sustainability,” “incentives,” and “environmental.” In both methods, Portuguese respondents were characterized by post-materialist attitudes and greater responsiveness to environmental communication. Another area of clear alignment lies in the theme “Marketing Strategy and Communication Effectiveness” identified in NVivo and BERTopic’s Topic 2, which included terms such as “marketing,” “digital,” “experience,” and “customers.” Both datasets confirmed that multi-channel and digital marketing strategies, especially those leveraging experiential components like test drives or showroom demonstrations, are viewed as essential tools for consumer persuasion in both markets. Even brand perception, a more abstract theme in qualitative research, was captured similarly across methods: NVivo’s code “Brand Trust and Legacy” aligns well with BERTopic’s Topic 3, containing terms like “Mercedes-Benz,” “premium,” “brand,” and “trust.” This suggests that even high-level symbolic constructs—often thought to be elusive to computational methods—can be meaningfully detected using BERT-based topic modelling. While NVivo provided richer contextualization through direct quotations and theoretical framing, BERTopic offered robust statistical validation and helped confirm that the thematic patterns were not merely researcher-imposed but embedded within the language structure of the interview data. The mutual reinforcement between NVivo and BERTopic affirms the study’s methodological integrity, as both tools, though epistemologically distinct, independently uncovered consistent narratives and market-specific concerns, enhancing both the credibility and reliability of the findings.

Figure 6.6. Intertopic Distance Map from BERTopic Model

Intertopic Distance Map (Labeled Topics)



Both methods independently identified cost as the dominant barrier in the Turkish EV market. In NVivo, this was captured under detailed coding nodes such as “Price Sensitivity,” “Affordability,” and “Value Perception,” all of which were referenced with high frequency by Turkish respondents. These insights were derived through a grounded coding approach, where Turkish professionals repeatedly emphasized inflation, currency fluctuations, and consumer reluctance to invest in unfamiliar technology without evident financial benefits. BERTopic, despite its unsupervised structure, generated Topic 0, which was heavily weighted toward Turkish data and composed of key terms such as “price,” “charging,” “consumers,” and “sensitivity.” The semantic closeness between this computational cluster and the manually coded NVivo theme indicates that both analytical techniques converged on identifying cost and financial insecurity as the most salient consumer concern in Türkiye. Equally, a strong parallel emerged in the Portuguese data regarding the salience of environmental messaging and green marketing effectiveness. In NVivo, Portuguese participants frequently invoked themes such as “Green Policy Impact,” “Sustainability Messaging,” and “Eco-Driven Preferences,” revealing a pattern where environmental discourse was internalized as a legitimate and motivating rationale

for EV adoption. These themes emerged not only through the participants' descriptions of consumer values but also in their strategic reflections on how marketing campaigns are structured. BERTopic's Topic 1, which appeared exclusively in Portuguese documents, echoed this by clustering around terms such as "sustainability," "incentives," "environmental," and "Portugal." This alignment demonstrates that both human-led and machine-led analysis methods independently detected the prominence of ecological and sustainability-oriented language within the Portuguese marketing landscape. The coherence across NVivo and BERTopic in identifying these dominant themes—economic constraint in Türkiye and environmental engagement in Portugal—reinforces the validity of the analytical process. More importantly, it illustrates that even when grounded in different epistemological logics—interpretive versus computational—both methods can yield consistent, mutually reinforcing insights. NVivo provides rich, contextual, and quote-based depth to explain how and why these themes matter, while BERTopic supports these findings through large-scale semantic association, demonstrating that the thematic differences across national contexts are embedded in the very structure of professional discourse.

EVALUATION

The triangulated findings of this dissertation—drawn from a comparative case study of Türkiye and Portugal, elite interviews with automotive professionals, NVivo-based thematic analysis, and BERTopic topic modelling—collectively offer a robust multi-dimensional understanding of the challenges and drivers of green marketing strategies for premium electric vehicles (EVs) in developing markets. Despite Türkiye and Portugal being classified as similar in their economic tier, substantial divergences were identified in environmental values, price sensitivity, and the efficacy of sustainability messaging. These differences were reinforced by both qualitative and computational results, as well as by cultural and behavioural data derived from the World Values Survey (WVS).

A central finding across all layers of analysis is the contrast in consumer sensitivity to price. In the Turkish context, price emerged as a dominant constraint on EV adoption. NVivo analysis highlighted price-related nodes—such as "Affordability," "Upfront Cost," and "Consumer Hesitation"—as the most frequently referenced themes by Turkish professionals. These were echoed in BERTopic Topic 0, dominated by Turkish interview data, where terms such as “price,” “consumers,” and “charging” reflected a cost-centric discourse. This observation is strongly supported by the WVS data, which indicates that Turkish respondents overwhelmingly prioritize economic growth and income equality over environmental protection. In contrast, Portuguese discourse consistently emphasized environmental values and institutional trust. NVivo coding showed themes like “Environmental Policy Influence” and “Sustainability-Oriented Consumers” recurrent in Portuguese transcripts, and BERTopic’s Topic 1—exclusively composed of Portuguese entries—clustered terms such as “sustainability,” “incentives,” and “environmental,” aligning directly with this thematic direction.

This contrast is also apparent in the comparative case study component, which illustrates that while Portugal has effectively mobilized green marketing through the support of government incentives and an environmentally literate consumer base, Türkiye’s market has remained constrained by a combination of infrastructural deficiencies and low

perceived economic value. Portugal's integration of EV adoption into broader sustainability narratives corresponds with WVS results showing higher post-materialist value orientations and a stronger societal consensus around ecological responsibility. On the other hand, Turkish interviewees frequently mentioned the inadequacy of infrastructure and the perception that EVs remain elite, inaccessible commodities. These concerns, visible both in NVivo-coded interviews and BERTopic clusters, corroborate prior literature emphasizing Türkiye's underdeveloped EV ecosystem and high consumer price elasticity (Chen and Zhang, 2017; Karahan et al., 2022).

Notably, the alignment between NVivo and topic modelling results reinforces the internal robustness of this study. The semantic patterns surfaced by BERTopic—specifically, the prevalence of cost-oriented topics in Türkiye and green-value discourse in Portugal—closely mirrored the inductive themes extracted through manual coding. This dual-method validation enhances both the construct validity and the generalizability of the thematic outcomes, providing a coherent narrative across epistemologically distinct methods. Furthermore, this methodological triangulation mitigates the limitations of any single approach: NVivo's strength in contextual depth complements BERTopic's scalability and latent pattern detection, creating a synthesis that allows for both macro- and micro-level interpretive precision.

The theoretical framework also finds empirical support in these findings. Green Marketing Theory (Polonsky, 1994) finds resonance in the Portuguese case, where ecological messaging aligns with consumer values and policy frameworks. In contrast, Price Sensitivity Theory (Monroe, 1990) explains the difficulty of penetrating the Turkish market with premium EV offerings like Mercedes-Benz, whose environmental features are often overshadowed by affordability concerns. Diffusion of Innovation Theory (Rogers, 1962) is reflected in the Portuguese adoption curve, wherein high-income early adopters perceive EVs as technological and ethical innovations. Meanwhile, Perceived Value Theory (Zeithaml, 1988) is particularly relevant in explaining Turkish consumers' skepticism: the long-term value of EVs is often not sufficient to outweigh short-term financial burdens.

7.1. Policy Implication

The findings of this research, developed through an in-depth comparative analysis of Türkiye and Portugal, offer substantial implications for public policy makers, business strategists, automotive brands, and the academic community. Grounded in qualitative data from elite interviews and thematically supported by NVivo and BERTopic modeling, this study uncovers how the effectiveness of green marketing strategies is shaped by complex and deeply contextual factors such as fiscal structures, cultural values, infrastructure perception, and consumer trust. These findings carry profound significance for governments attempting to promote electric vehicle (EV) adoption, and for brands like Mercedes-Benz that aim to position themselves as leaders in sustainable mobility.

Electric mobility is not merely a technological transition—it is a socio-economic and cultural transformation that must be accompanied by tailored policies, persuasive communication, and stakeholder alignment. This research highlights that policy structures and communication effectiveness are pivotal in shaping consumer decision-making. In Türkiye, where fiscal sensitivity dominates and policy instability creates consumer hesitation, governments must design incentive mechanisms that are not only financially impactful but also perceived as credible and consistent. Conversely, in Portugal, a nation where environmental awareness is more culturally normalized and policy communication is more stable, the focus should be on amplifying behavioral nudges, expanding infrastructure usability, and integrating EVs into broader climate policy narratives.

States aiming to increase EV adoption must first address perceived and real infrastructure challenges. A national EV adoption strategy must include the creation of a publicly accessible, real-time digital map of charging stations, visible signage across cities and highways, and partnerships with shopping centers, hotels, and municipalities to normalize charger visibility. Second, incentive structures must be depoliticized and long-term, ideally codified through parliamentary legislation rather than ministerial discretion. Tax credits, purchase subsidies, scrappage incentives, and registration fee waivers must be bundled and communicated clearly. Third, governments should invest in public education

campaigns that demystify EV ownership, correct misconceptions about range and maintenance, and reposition EVs as economically beneficial, not just environmentally friendly. Special focus should be placed on collaborative campaigns with brands to co-market vehicles and policy in a unified voice—an approach that has proven successful in various European countries.

Mercedes-Benz, as a global premium brand, stands at a unique intersection of luxury, innovation, and sustainability. However, this research demonstrates that its brand strength is interpreted differently across contexts. In Portugal, where the brand's engineering pedigree aligns well with cultural values around innovation and sustainability, Mercedes-Benz should lean into emotional storytelling and lifestyle branding. Marketing narratives should emphasize the vehicle not just as a product but as a statement of values—highlighting carbon neutrality, cutting-edge German engineering, and alignment with EU sustainability goals. Furthermore, the brand should collaborate with public entities and NGOs to enhance trust and credibility, and pursue urban experiential marketing such as green driving festivals, EV roadshows, and eco-tourism partnerships.

In Türkiye, where consumer behavior is shaped more strongly by price sensitivity and infrastructural skepticism, Mercedes-Benz must adapt its strategy. While prestige remains a key component of the brand's appeal, the message architecture must shift from abstract environmental ideals to concrete economic benefits. Communication should focus on cost-efficiency over time, tax advantages (ÖTV), fuel savings, and performance stability. Trust-building is critical. Offering free at-home charger installation, extended warranties, or even “EV confidence trials” where consumers can test vehicles under real-life scenarios would be high-impact. Mercedes should also consider working closely with Turkish government agencies to pilot fleet electrification programs, particularly with municipalities and airports, where visibility is high and usage regular. Additionally, brand ambassadors that resonate with aspirational Turkish values—not just global eco-icons—should be utilized to localize the brand voice.

The study's policy insights are not confined to vehicle pricing or infrastructure. They extend into institutional trust-building, regulatory clarity, and cultural alignment, all of which are essential in building the kind of market maturity that EVs require. Government

entities must engage in regulation that signals long-term market commitment, such as EV-only zones, ICE (internal combustion engine) vehicle restrictions, and mandatory EV fleet quotas for public institutions. These measures not only stimulate demand but provide brands with a clear runway for long-term planning and investment.

In terms of academic contribution, the study advances the understanding that green marketing must be interpreted through a culturally grounded, policy-aware, and brand-sensitive lens. The comparative framework not only highlights national differences but demonstrates how the same brand operating in two different contexts must recalibrate its strategic levers to achieve market traction. By using both NVivo and BERTopic, this study also showcases a novel methodology that blends qualitative depth with machine learning-driven discovery, offering a replicable model for future researchers examining brand-policy alignment in sustainability transitions.

Finally, the study has implications for cross-cultural marketing theory and innovation adoption research. It affirms that emerging markets may not follow linear diffusion patterns seen in developed economies and instead exhibit complex adoption behaviors shaped by local governance, macroeconomic stability, and perceived institutional credibility. This calls for a rethinking of innovation marketing in diverse cultural and economic landscapes, where the convergence of regulatory, infrastructural, and psychosocial variables plays a critical role.

In sum, this dissertation provides both strategic insight and practical guidance for a wide array of stakeholders involved in the green mobility transition. It shows that EV marketing is no longer solely a function of engineering excellence or branding creativity but is increasingly about aligning corporate narratives with local realities, policy structures, and consumer psychology. The road to electric mobility is paved not just with innovation but with trust, context, and collaboration.

CONCLUSION

This dissertation explored the challenges and dynamics of green marketing strategies for electric vehicles (EVs) in developing markets, with a comparative case study focused on Türkiye and Portugal. It aimed to uncover how cultural, economic, and institutional factors shape consumer behavior and the effectiveness of premium EV marketing campaigns, using a combination of qualitative methods, including elite interviews, manual thematic analysis through NVivo, and computational topic modelling with BERTopic. The study contributes to the growing literature on sustainable marketing, electric vehicle adoption, and cross-cultural consumer behavior by integrating advanced methodological tools and a rich comparative framework.

Chapter 1 introduced the study's core research question: What are the challenges that the green marketing strategy of electric vehicles will face in the Turkish market? It contextualized the significance of EV marketing within broader global sustainability transitions, underscoring the importance of understanding localized consumer and institutional dynamics in developing economies.

Chapter 2 reviewed relevant literature across green marketing theory, consumer behavior, price sensitivity, innovation diffusion, and government incentives. It also provided a comparative backdrop, outlining the global and regional EV adoption landscapes and highlighting Portugal's policy success in contrast with Türkiye's market stagnation.

Chapter 3 developed the theoretical framework, integrating Green Marketing Theory, Price Sensitivity Theory, Diffusion of Innovation, and Perceived Value Theory. These frameworks guided both the research design and the interpretation of results. Chapter 4 outlined the methodology, justifying the use of qualitative research through elite interviews, comparative case study design, and triangulated analysis. NVivo was used for grounded thematic coding, while BERTopic offered a supplementary computational discourse analysis, enhancing the robustness and reliability of the findings.

Chapter 5 presented the empirical findings. In Türkiye, the dominant themes included price sensitivity, low consumer awareness, insufficient government incentives, and

infrastructural inadequacy. Portuguese participants, by contrast, emphasized environmental awareness, effective state-led incentives, and alignment with long-term sustainability goals. NVivo analysis identified themes such as “Price Sensitivity,” “Brand Trust,” and “Green Messaging Effectiveness,” while BERTopic revealed latent semantic clusters that reinforced these findings. Notably, topic modelling highlighted a strong focus on affordability in Türkiye and sustainability discourse in Portugal—validating and complementing the NVivo themes.

Chapter 6 evaluated these findings through an integrated lens. The comparative case study revealed how similar macroeconomic classifications mask significant cultural and policy-based divergences. Turkish consumers were portrayed as short-term, cost-driven, and cautious toward innovation, while Portuguese consumers were more receptive to green messaging and long-term ecological commitments. These observations were strongly supported by World Values Survey data and aligned with the theoretical assumptions. The integration of NVivo and BERTopic confirmed the reliability of the key insights and demonstrated the added value of combining manual and machine-assisted methods in elite discourse analysis.

This dissertation offers several contributions to the literature. First, it advances understanding of how green marketing strategies function in structurally similar but culturally distinct markets, highlighting the importance of localized consumer insight for sustainability-oriented campaigns. Second, it contributes to methodological innovation in marketing research by demonstrating the effective integration of BERTopic into qualitative, interview-based designs. Third, it provides strategic implications for marketing professionals operating in transitional or hybrid markets, suggesting that success in the EV sector depends not only on technical features or pricing but also on cultural framing, trust-building, and policy alignment.

Nonetheless, this study is not without limitations. The sample size of eight elite interviews, while appropriate for qualitative depth, restricts broader generalizability. The focus on premium EV brands, particularly Mercedes-Benz, may also bias findings toward upper-market strategies, leaving mid- and low-tier brand perspectives underexplored. Moreover, while BERTopic offered valuable computational insights, its application is

still emerging in qualitative domains and could benefit from further methodological refinement and cross-validation.

Future research could build on this study by expanding the sample size to include a broader range of industry actors and consumer groups, enabling more diverse perspectives. Longitudinal research tracking how consumer attitudes shift over time in response to policy changes or brand campaigns would also be valuable. Methodologically, integrating sentiment analysis or cross-lingual topic modelling could further enhance the depth and scalability of discourse-based research. Additionally, replicating this study in other developing or hybrid markets, such as Brazil, South Africa, or Indonesia, could provide comparative insights into how socio-political contexts shape green marketing effectiveness globally.

In conclusion, this dissertation provides a nuanced, theory-driven, and methodologically robust investigation of green marketing strategies for EVs in Türkiye and Portugal. By combining elite interviews, comparative analysis, NVivo coding, and BERTopic modelling, it demonstrates that sustainable marketing cannot be detached from local cultural values, economic realities, and institutional frameworks. The findings underscore the need for market-specific strategies and contribute to a richer, more interdisciplinary understanding of sustainability transitions in the automotive sector.

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APPENDICES

Appendix A. Result of the Evaluation by the Ethics Committee

Result of the Evaluation by the Ethics Committee is available in the printed version of this dissertation.



Appendix B. Consent Form in English

Dear Respondent,

You are invited to participate in a research study. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

Procedures: During the study, you will be asked to answer questions about consumer behavior.

Your participation here today should take approximately 30 minutes.

Risks and Benefits of Being in the Study: There are no known physical risks or benefits to participating in this study beyond those in day-to-day life.

Voluntary Nature of Participation: Participation in this research study is voluntary. If you decide not to participate, you may end the survey at any point.

Confidentiality: The records of this study will be kept private. Any sort of report we might publish will not include any information that will make it possible to identify you. Research records will be kept in a locked file (file with password); only the personnel on this study application will have access to the records.

If you have any questions about the study, please contact the researchers via Yasemin EDESEN (.....@bilgiedu.net)

Statement of Consent: I have read the above information. By clicking the button below, I consent to take part in the study.

☐ I am 18 years of age or older and I agree to participate

☐ I do not agree to participate

Appendix C. Consent Form in Turkish

Etik Onam Formu

Sayın Katılımcı,

Takip eden sayfalarda “**elektrikli araçların pazarlama stratejiler ve tüketici davranışları**” ile ilgili çeşitli konularda görüşleriniz sorulacaktır. Bazı sorular birbirine benzer ya da aynı görünebilir ancak her sorunun bir amacı bulunmaktadır. Soruların doğru veya yanlış cevapları yoktur. Bu çalışmaya katılımınız tamamen isteğe bağlıdır; katılmayabilirsiniz veya herhangi bir noktada bırakabilirsiniz. Bu anket kapsamında kişisel bilgileriniz talep edilmeyecektir. Cevaplarınız tamamen bilimsel amaçlarla kullanılacaktır. Anketin doldurulması yaklaşık 30 dakikanızı alacaktır. Sorularınız olursa@bilgiedu.net_ adresinden bizimle temasa geçebilirsiniz.

Katılımınız için şimdiden teşekkür ederiz.

- Evet, 18 yaşından büyüğüm ve bu çalışmaya katılmayı onaylıyorum.
- Hayır, bu çalışmaya katılmak istemiyorum

Appendix D. In-Depth Interview Questions in English

This research examines the role of green marketing strategies in Türkiye and Portugal's premium electric vehicle market, focusing on factors such as consumer behaviour, price sensitivity, and government incentives. As part of this study, I am conducting interviews with key stakeholders and industry professionals to gain insights into the challenges and opportunities within these markets. Your valuable participation will help enhance your understanding of these dynamics, contributing to academic and practical knowledge in this field.

The information you share during the interview will be used solely for research. Participation in this research is entirely voluntary, and you may withdraw at any time without providing a reason. Should you decide to end your participation, your data will not be used further and will be removed from the study.

By agreeing to participate in this interview, you confirm that you have read and understood this statement and voluntarily consent to be part of this research. You may withdraw your consent at any stage, and your right to halt the collection and use of your data will be fully respected.

I appreciate your willingness to contribute to this critical study.

Questions:

1. How important is green marketing in Mercedes' overall marketing strategy for electric vehicles in Türkiye or Portugal?
2. What are the primary challenges Mercedes faces in promoting electric vehicles as an environmental-awareness product in Türkiye or Portugal?
3. How does Mercedes position itself as a luxury brand while adopting green marketing strategies for electric vehicles in Türkiye/ Portugal?
4. How does your customer base in your country compare to other European countries in terms of interest in electric vehicles and environmental awareness?

5. What role do government incentives and tax policies play in supporting Mercedes' green marketing strategies for electric vehicles?
6. What different marketing strategies are or should be given importance in your country compared to countries with high rates of electric vehicle sales such as Germany, Norway, and Denmark?
7. How do consumer expectations for luxury electric vehicles differ between Türkiye and Portugal?
8. To what extent do cultural factors shape consumer attitudes toward luxury electric vehicles in Türkiye and Portugal?
9. How do Turkish and Portuguese consumers perceive the integration of sustainability with luxury in Mercedes' electric vehicles?
10. What is the role of pricing in shaping the success of Mercedes' green marketing for electric vehicles in Türkiye and Portugal?
11. Do you think there is a high price sensitivity in your customer portfolio?
12. How does Mercedes address consumer concerns such as charging infrastructure and range anxiety in Türkiye and Portugal?
13. Is there a prejudice in your country's market and consumer behavior in electric vehicles?
14. How does Mercedes communicate the long-term value of electric vehicles to consumers in Türkiye and Portugal, especially in terms of environmental and economic benefits?
15. How does competition with other luxury brands influence Mercedes' green marketing strategies in Türkiye and Portugal?
16. How does competition with budget-segment brands impact Mercedes' marketing approach for electric vehicles in Türkiye and Portugal?
17. Which marketing channels (e.g., digital, experiential, traditional) have proven most effective in promoting luxury electric vehicles in Türkiye and Portugal?

18. What is the biggest supporting factor and the biggest inhibiting factor in the market shifting toward electric vehicles in your country?
19. How does Mercedes educate consumers about electric vehicles and their environmental benefits in Türkiye and Portugal?
20. To what extent are the factors affecting luxury segment vehicle sales in your country similar to other European countries? To what extent are they different?
21. Do you believe public transportation and fleet electrification can positively influence consumer attitudes and social perception of electric vehicles?
22. How does Mercedes' heritage as a luxury brand impact its ability to transition to green marketing strategies in your market?
23. Have lessons from non-European markets, such as the US or China, influenced Mercedes' approach to green marketing in Türkiye or Portugal?
24. Looking ahead, what are the key factors determining the success of marketing strategies for Mercedes' electric vehicles in Türkiye or Portugal? Can Green Marketing play a significant role or another strategy (government incentives, infrastructure investment, or price sensitivity)?
25. Do you think there is a high price sensitivity in your customer portfolio?
26. In which area do you think electric vehicles can have a larger market share in your country (Retail sales, fleet sales, commercial sales, or public transport sales)?
27. How do Turkish and Portuguese consumers respond to Mercedes' environmental messaging compared to other aspects like luxury and performance?
28. What lessons has Mercedes learned from its green marketing campaigns in other markets, and how are these lessons applied in Türkiye and Portugal?

Appendix E. Python Script for Topic Modelling

```
import pandas as pd

import nltk

from nltk.corpus import stopwords

from nltk.tokenize import word_tokenize

from bertopic import BERTopic

from umap import UMAP

df = pd.read_excel('Rodi/Yasemin/yasemin_interview.xlsx')

text_entries = []

for i in range(len(df)):

    country_id = df.iloc[i, 0]

    for col in range(1, 29):

        cell = df.iloc[i, col]

        if isinstance(cell, str) and cell.strip():

            text_entries.append((country_id, cell))

stop_words = set(stopwords.words('english'))

custom_stopwords = [

    ':', ',', '"', "'", '?', '!', ':', ';', '(', ')', '[', ']', '{', '}',

    'or', 'at', 'not', 'but', 'are', 'is', 'to', 'of', 'in', 'on', 'for', 'with', 'as',

    'by', 'from', 'about', 'an', 'a', 'the', 'and', 'it', 'that', 'this', 'was', 'be',

    'were', 'have', 'has', 'had', 'do', 'does', 'did', 'can', 'could', 'will', 'would',

    'shall', 'should', 'may', 'might', 'must', 'here', 'there', 'where', 'when', 'how',

    'why', 'what', 'who', 'whom', 'which', 'whose', 'whichever', 'whatever', 'whomever',

    'whenever', 'wherever', 'however', 'whyever', 'all', 'any', 'both', 'each', 'few',
```

'more','most','neither','other','some','such','no','nor','not','only',
 'own','same','so','than','too','very','s','t','can','will','just','don',
 'should','now','d','ll','m','o','re','ve','y','ain','aren','couldn','didn',
 'doesn','hadn','hasn','haven','isn','ma','mightn','mustn','needn','shan',
 'shouldn','wasn','weren','won','wouldn','i','me','my','myself','we','our',
 'ours','ourselves','you','your','yours','yourself','yourselves','he','him',
 'his','himself','she','her','hers','herself','it','its','itself','they',
 'them','their','theirs','themselves','am','been','being','if','because',
 'until','while','against','between','into','through','during','before',
 'after','above','below','up','down','off','over','under','again','further',
 'then','once', 'vehicle', 'market', 'evs','ev','also','mercedesbenz','mercedes',
 'still','benz','increasingly','electric','vehicles'
]

```
stop_words.update(custom_stopwords)
```

```
filtered_texts = []
```

```
countries = []
```

```
for country_id, text in text_entries:
```

```
    words = word_tokenize(text)
```

```
    filtered = [word for word in words if word.lower() not in stop_words]
```

```
    filtered_texts.append(" ".join(filtered))
```

```
    countries.append(country_id)
```

```
topic_model = BERTopic(umap_model=UMAP(n_components=2,
random_state=19880106))
```

```
topics, probs = topic_model.fit_transform(filtered_texts)
```

```

topic_info = topic_model.get_topic_info()

topic_labels = {row["Topic"]: row["Name"] for _, row in topic_info.iterrows()}

df_result = pd.DataFrame({
    "Country": countries,
    "Document": filtered_texts,
    "Topic": topics
})

df_result["Topic_Label"] = df_result["Topic"].map(topic_labels)
topic_model.visualize_topics().show()

df_result["Country_Group"] = df_result["Country"].str.extract(r'^(TR|POR)')

topic_dist = df_result.groupby(["Country_Group",
                                "Topic_Label"]).size().reset_index(name="Count")

pivot = topic_dist.pivot(index="Topic_Label", columns="Country_Group",
                           values="Count").fillna(0).astype(int)

print(pivot)

topics_dict = {}

for topic_id in df_result["Topic"].unique():
    words = topic_model.get_topic(topic_id)
    if words:
        top_words = [word for word, _ in words]
        topics_dict[topic_id] = top_words

topic_words_df = pd.DataFrame.from_dict(topics_dict, orient='index')

topic_words_df.columns = [f"Word_{i+1}" for i in topic_words_df.columns]

topic_words_df.index.name = "Topic"

topic_words_df.reset_index(inplace=True)

```

```
print(topic_words_df)
```

