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Omar Frey El-Jandali, June 2025

**Supervisor:** Waheed Akbar Bhatti **Number or of characters:** 20905

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#### **Preface**

The thesis work was written and investigated by Omar Frey El-Jandali and is a part of the 4th and final semester of MSc in Sales & Marketing, at AAUBS. The basis of the thesis is based upon an Research on the EV segment Automobile BYD entry strategy in Saudi Arabia. The researchers want to express gratitude to Waheed Akbar Bhatti, for supervision, advice, and help, regarding the thesis work. Furthermore, the researchers express gratitude towards Al-Futaim Motors, the showroom owner of BYD in Riyadh for kind cooperation. Thank You. Aalborg, Denmark - 01.06.2025

## **Declaration of Authorship**

This thesis is written by: Omar Frey El-Jandali. The reference style in this thesis is referred to as APA 7th.



#### Abstract

This thesis is written as part of the MSc in Marketing at Aalborg University Business School, researching BYD's entry strategy into the Saudi Arabian Electric Vehicle (EV) market. The research addresses key questions regarding the competitive landscape of the Saudi EV market, consumer attitudes towards EVs, and effective marketing and communication strategies for BYD which has launched only in May 2024 in Saudi Arabia. It explores the impact of government initiatives, like the Saudi Green Initiative (SGI), the Public Investment Fund (PIF) focussed on EV sector's growth in the country. The study uses a comprehensive approach to analyze the present market condition, consumer behavior besides the strategic recommendations for BYD. BYD is a global leader in Battery Electric Vehicles (BEVs) and Plug-in Hybrid Electric Vehicles (PHEVs). Key areas of focus in the thesis include understanding the challenges posed by extreme climatic conditions on EV performance, the importance of the charging infrastructure development by government entities, and the importance of adapting to local market dynamics. This thesis has the objective to provide a set of key actionable insights for BYD to successfully establish its brand and achieve the desired market penetration in line with its global dominance in Saudi Arabia's rapidly evolving EV automotive sector.



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#### List of abbreviations:

**AC**: Alternating Current

AI: Artificial Intelligence

**BEV:** Battery Electric Vehicle

BYD: Build Your Dream

**CAGR:** Compound Annual Growth Rate

**DC:** Direct Current

**DM-i:** Dual Mode intelligent

**EVs:** Electric Vehicles

**EVIQ:** Electric Vehicle Infrastructure Company

**ICEVs:** Internal Combustion Engine Vehicles

**KOL:** Key Opinion Leader

KSA: Kingdom of Saudi Arabia

**kWh:** Kilowatt-hour

MOU: Memorandum of Understanding

**PHEV:** Plug-in Hybrid Electric Vehicle

PIF: Public Investment Fund

**SEC:** Saudi Electricity Company

**SGI:** Saudi Green Initiative

**TAM:** Technology Acceptance Model

V2L: Vehicle-to-Load

WLTP: Worldwide Harmonized Light Vehicles Test Procedure



#### **Part 1: Introduction**

#### 1.1 Introduction

Electric Vehicles (EVs) are transforming the automotive industry, with Saudi Arabia seeing significant growth in EV market share from under 1% in 2016 to over 5% in 2021 (IEA). This surge is mostly driven by government efforts to reduce carbon emissions and combat climate change (Adnan et al., 2016). The Saudi Arabian EV market is expected to grow substantially, with a Compound Annual Growth Rate (CAGR) of 42.5% from 2021 to 2027 (Research and Markets, 2022). This aligns with **Saudi Vision 2030**, which stresses upon renewable energy and a shift away from oil-based economies, leading to increased EV demand. Collaborations, like the MOU with the UK on smart grids and EV development, further support this growth.

EV technology has almost matured over the years, enabling efficient long-distance travel besides extensive research that supports electric mobility across technology, economics, logistics, and environmental aspects (Ehrler et al., 2012). EVs are seen as a cost-effective urban transportation solutions, reducing fuel dependency and carbon emissions. Global initiatives target 150 million EVs on roads worldwide by 2030 (Class et al., 2010). While EVs promise to reduce greenhouse gas emissions, widespread adoption depends on complementary incentives which include pollution controls and fluctuating gasoline prices. Economic capacity and product distribution also influence EV growth and customer adoption. Saudi Arabia holds significant potential for EVs but building trust and promoting their adoption over conventional fossil fuel powered vehicles remains a challenge.

Consumer attitudes are crucial in shaping purchase intentions and behaviors (Klabi and Binzafrah, 2023). While EVs offer potential for greenhouse gas reduction, widespread adoption depends on factors such as pollution controls and gasoline prices. Saudi Arabia is having some of the cheapest oil globally, consumer adoption of EVs remains understudied. The existing literature often focuses on environmental concerns and government incentives (Axsen and Kurani, 2020; Gavalas et al., 2020), but understanding unique socio-economic and cultural factors influencing EV attitudes in Saudi Arabia is essential. This research gap is significant, given the country's reliance on cheap fossil fuels (Appendix 2).

The global automotive industry is shifting towards EVs due to environmental concerns, technological advancements, besides changing consumer preferences. **Tesla** has been a



dominant force in this change setting benchmarks for consumer acceptance and charging infrastructure. **BYD**, has emerged as a global leader in battery technology and EV manufacturing, demonstrating significant success in various markets. headquartered in China, BYD entered Saudi Arabia in May 2024. BYD's success in Saudi Arabia will depend on overcoming the standards set by Tesla and navigating local market dynamics. This research focuses on BYD's strategic ambitions in the Saudi Arabian market, given its substantial growth potential driven by Vision 2030 initiatives.

#### 1.2 Research Objectives and Goals

#### 1.3 Primary Research Question:

How can BYD effectively overcome the standards set by Tesla in Saudi Arabia regarding consumer acceptance, range anxiety, and charging infrastructure challenges to increase its market share to its global standards?

This research question guides the entire research process. It necessitates a comprehensive investigation into the challenges BYD faces in the context of Saudi Arabian society. The research aims to provide actionable insights and strategic recommendations for BYD to achieve significant market penetration and replicate its global success within the unique dynamics of the Saudi Arabian EV market.

#### 1.4 Secondary Research Questions:

What are the key factors influencing consumer acceptance of EV brands in Saudi Arabia, and how do these factors currently favor Tesla?

This question deep dives into the complexities of consumer behavior in Saudi Arabia, specifically concerning the adoption of electric vehicles. It also seeks to understand the attributes and perceptions that decide the consumer preferences for EV brands, and why Tesla currently has an advantage in terms of its brand recognition and trust. Understanding these factors is crucial for BYD to develop targeted strategies to develop a strong brand trust and credibility among Saudi consumers.

What are the prevailing perceptions and concerns regarding range anxiety among potential EV buyers in Saudi Arabia?



This question focuses on a key barrier to the EV adoption in Saudi: the fear that an EV may not be having a sufficient range to complete a journey. This parameter also aims to find out Saudi consumers' specific concerns and perceptions regarding the driving range of EVs. Considering factors such as the Kingdom's harsh climate and long distances between cities. Addressing range anxiety is of paramount importance for BYD to achieve a broader acceptance in the Saudi market.

What is the current state of the EV charging infrastructure in Saudi Arabia, and what are the key challenges and opportunities for expansion?

This question delves into the present ecosystem for charging electric vehicles in Saudi Arabia. It seeks to identify the availability and accessibility of charging stations, the types of charging options available, and the challenges hindering the development of a robust charging infrastructure. Understanding these challenges and opportunities are essential for BYD to formulate strategies for contributing and leveraging the charging infrastructure in the Kingdom. How can BYD strategically address these challenges to align with Saudi Arabian consumer preferences and market conditions?

This question analyses the findings from the previous secondary research questions to explore the potential strategic pathways for BYD Company Limited. It requires an analysis of how BYD can tailor its products, marketing strategies, and infrastructure initiatives to resonate with the specific preferences and needs of Saudi Arabian consumers and the unique characteristics of the Saudi market.

## 1.5 Research Objectives:

The research targets to identify factors that influence the EV adoption among the Saudi consumers, considering economic, environmental, technological, and social aspects of BYD's strategies. The study seeks to evaluate the impact of range anxiety on Saudi EV buyers, which includes concerns about driving range and charging infrastructure It will analyse the current EV charging availability in Saudi Arabia to identify gaps and opportunities. It will evaluate BYD's brand acceptance compared to Tesla in Saudi Arabia, evaluating brand awareness, perceived quality, and trust. The research intends to propose strategic recommendations for BYD to enhance consumer acceptance and mitigate range anxiety and leverage the charging infrastructure to increase market share in Saudi Arabia (Appendix 2).



### 1.6 Problem Statement

"Despite BYD's global success in the EV market, its market share in Saudi Arabia remains limited compared to Tesla. The growth in the first six months of its launch does not reflect its success in other markets. As per data collected by the author during initial study, BYD could sell only 1000 vehicles in the first nine months. This disparity is attributed to challenges overcoming Tesla's established standards regarding consumer acceptance, range anxiety, and charging infrastructure. Influenced by Tesla's reputation and performance, Saudi Arabian consumers exhibit high expectations for EV quality, range, and charging convenience. The lack of a robust charging infrastructure and consumer concerns about range limitations further hinder BYD's ability to compete effectively. Therefore, this research seeks to identify and analyze the specific barriers BYD faces and propose strategies to overcome them, enabling it to achieve a market share commensurate with its global standing in Saudi Arabia." BYD's ability to effectively address these expectations is crucial for its market expansion.

## 1.7 Explanation of the Research Question

"The research question, 'How can BYD overcome the standards set by Tesla in terms of Consumer Acceptance, Range Anxiety, and Charging Infrastructure Challenges to increase its market share to its global standards in Saudi Arabia?' aims to explore the strategic pathways BYD can take to achieve significant market penetration.

The Consumer Acceptance is the primary parameter for consideration. This drives into how BYD can build brand trust and credibility among Saudi Arabian consumers, who are currently influenced by Tesla's established reputation. It analyses understanding consumer perceptions of BYD's vehicle quality, design, and after-sales service.

Range Anxiety is a critical factor. This dimension focuses on how BYD can alleviate consumer concerns about the driving range of its EVs. It involves how BYD can effectively communicate its range of vehicles.

The Charging Infrastructure poses a key challenge. This factor examines the availability and accessibility of charging infrastructure in Saudi, besides how BYD can contribute to its development. It encompasses assessing the present state of charging stations, identifying gaps, and proposing strategies for BYD to collaborate with stakeholders in expanding the charging network.



The objective to Increase Market Share to its Global Standards is a key factor. This parameter means that BYD has already proven that it can gain a large market share in other countries, and the goal of this research is to find out how to replicate that success within KSA.

By addressing these critical areas, BYD can potentially overcome Tesla's influence and establish a strong presence in the Saudi Arabian EV market."

## 1.8 Research Philosophy and Approach:

This research aims to adopt a positive research philosophy, focusing on the practical solutions to the defined and identified problem. It allows for the integration of different research methods and perspectives to address the research questions effectively. It emphasizes the importance of the research findings being applicable and useful in the real-world scenario of BYD's market entry and expansion in Saudi Arabia. A mixed-methods approach will be employed, combining both quantitative and qualitative research methods to provide a comprehensive understanding of the challenges and opportunities for BYD in the Saudi Arabian EV market. This approach is considered suitable as it allows for statistical analysis of consumer preferences and behaviors, while also providing in-depth insights into their motivations, perceptions, and concerns. The quantitative data will provide a broader overview of market trends and consumer attitudes, while the qualitative data is expected to provide a broad overview of market trends and consumer attitudes, while the qualitative data will offer richer, contextualized explanations for these trends.



#### Part 2: Literature review

#### 2.1 Establishing the Competitive Landscape of the Saudi Arabian EV Market

The global automotive sector is shifting towards **electric vehicles** (**EVs**), driven by environmental concerns, battery advancements, and supportive government policies. Saudi Arabia, a major Middle Eastern automotive market, is increasingly interested in EVs, aligning with its **Vision 2030** for economic diversification and environmental sustainability, which includes substantial investment in sustainable mode of transportation (ResearchAndMarkets.com. 2023).

Saudi Arabia's automotive market has traditionally relied on imports, the focus on EVs creates opportunities for global manufacturers. **BYD**, aims to expand its market share in Saudi Arabia to match its global success. **Tesla** has already established a strong presence and set high standards in the nascent Saudi EV market as Tesla is being imported into the country regularly. BYD faces challenges in competing with Tesla, specifically regarding consumer acceptance of a new brand, range anxiety among potential buyers, and navigating the existing charging infrastructure (Khalid, M. S., & Al-Hosani, I. 2019). Saudi Arabia's market has high potential for EV expansion due to proactive government support and evolving consumer preferences. This dynamic environment offers fertile ground for competition, where BYD's global reputation could be a key asset if it strategically addresses the dominance of established players like Tesla (Abu-Alkeir, N. I. 2020).

The average Saudi consumer prioritises practicality and lifestyle in vehicle choices, valuing reliability, comfort, and status, with growing consideration for environmental impact and technological advancement (MDPI.2022). This points out that there is an increasing interest in eco-friendly and technologically advanced options, BYD needs to understand these preferences to tailor its market entry strategy. Dealership service quality, while crucial elsewhere, might be valued differently by Saudi buyers, which BYD must consider in its long-term regional strategy (Abu-Alkeir, N. I. 2020).

A vast majority of Saudi Arabian residents, 7 out of 10, are "very" or "moderately" likely to purchase a battery-electric vehicle (BEV), a figure projected to rise to 85% by 2035, indicating high growth potential. This contrasts with slower growth in BEV sentiment in Europe and USA (AlixPartners, 2024).



Globally, cost and charging are primary concerns for BEV. Saudi Arabian respondents are less worried about costs, instead more on complexity, safety, and aftermarket factors. Charging flexibility and extended range are main reasons for choosing a PHEV over a BEV in Saudi, which is similar in trend as in Europe and USA. Notably, 93% of Saudi residents considering a BEV are also likely to consider a PHEV (The Arabian Mirror. 2025).

#### 2.2 Predictors of Consumer Attitude Towards Electric Vehicles

This literature review evaluates relevant existing research on EV adoption and purchase behavior, with a focus on Saudi Arabia. Studies identify factors influencing consumer decisions, including economic incentives, environmental concerns, driving range, charging infrastructure availability, and vehicle performance. Cultural and social factors, like social norms, perceptions of EVs, and government policies, also play key roles. EV adoption is gaining momentum globally, including in Saudi Arabia (Al-Saggaf, Y. A., Alamri, M. M., & Al-Yami, S. H. 2020). Consumer attitudes towards EVs are driven by factors such as performance expectations, range anxiety, charging infrastructure (Alawaji et al., 2020), economic value, safety ratings, social influence, product variety, operating costs, after-sales service, and government policies. Understanding these factors are extremely vital for promoting large scale EV adoption in Saudi Arabia. Government initiatives, social influence, operating costs, after-sales service (Alhammad et al., 2023), product variety, economic value (Alqahtani et al., 2022), and safety ratings have been identified as influencing consumer attitudes towards EV adoption in Saudi Arabia.

### 2.3 Range Anxiety and Charging Infrastructure

"Range anxiety" or the fear of an EV running out of power or not finding available charging significantly hinders EV adoption globally (U.S. Department of Energy, n.d.; Transportation Research Part A: Policy and Practice, 2018). This concern arises out of unfamiliarity with EV capabilities, inaccurate range estimates, and the perceived scarcity of charging stations compared to gas stations (U.S. Department of Energy, n.d.). The earlier EV models with limited ranges exacerbated these fears (U.S. Environmental Protection Agency, n.d.).

In Saudi Arabia, range anxiety poses a unique challenge due to the Kingdom's large geographical area and long distances between cities, requiring substantial EV ranges (Alotaibi et al., 2022; European Journal of Sustainable Development, 2021). Studies show Saudi drivers



express "range anxiety," emphasizing the requirement for charging stations along all main roads for intercity travel (Alotaibi et al., 2022; Arab News, 2024). The hot desert climate may also impact battery performance, potentially reducing effective range (Alotaibi et al., 2022; International Journal of Recent Scientific Research, 2018).

Significant advancements in battery technology have led to EVs with long range, which is comparable to or exceeding gas/petrol vehicles. EVs can travel over 300 miles on a single charge. Some high-end models exceed 400 or even 500 miles (U.S. Environmental Protection Agency, n.d.; Edmunds, n.d.; EVLife, n.d.). This addresses the range anxiety (U.S. Department of Energy, n.d.). Research also suggests that the range anxiety decreases with experience, with present EV owners reporting lower levels than potential buyers (Journal of Transport Geography, 2016; Connected Kerb, n.d.), implying it may naturally go down as more Saudis adopt EVs.

Branding, marketing and education are crucial in mitigating the range anxiety by providing reliable information about EV capabilities, battery advancements, with some real-world testimonials (Green, 2024; Kortx.io, n.d.; Baker Donelson, n.d.). Integrating navigation system and smartphone apps along with real-time charging station information can also enable EV owners to plan routes effectively, further reducing anxiety (Green, 2024).

#### 2.4 Charging Infrastructure: The Backbone of EV Mobility

A comprehensive and accessible charging infrastructure is important for overcoming range anxiety and boosting EV adoption (Alotaibi et al., 2022; U.S. Department of Energy, n.d.; International Energy Agency, 2023). "Charging anxiety" comes from concerns about charger functionality, availability, and charging times at the public stations (Connected Kerb, n.d.).

Saudi Arabia has understood the importance of charging infrastructure and has initiated efforts to develop a robust network (EVLife, n.d.). This enables significant EV adoption by ensuring wide spread charging access and will integrate advanced, user-friendly technologies (EVIQ, n.d.). The Saudi government also encourages the private sector participation through a partnership and incentives (EVLife, n.d.; Saudi Energy Consulting, n.d.). Collaborations with charging providers and local manufacturing of EV chargers are in the pipeline (EVLife, n.d.; Wallbox, n.d.). Saudi Vision 2030 includes EV adoption targets and requires charging facility expansion (EVLife, n.d.). Initiatives like the Electric Vehicle Infrastructure Company (EVIQ),



which is a joint venture between the Public Investment Fund (PIF) and Saudi Electricity Company (SEC) (EVLife, n.d.; Public Investment Fund (PIF), n.d.), aim to deploy over 5,000 fast chargers across more than 1,000 locations by 2030 (EVIQ, n.d.). The Ministry of Municipal Rural Affairs mandates EV parking space reserved with charging stations in car parks of malls, retail (MDPI, 2022; International Journal of Recent Scientific Research, 2018).

Saudi consumer mostly prefers simple charging options: workplace, home, and public stations at malls and gas/petrol stations (ResearchAndMarkets.com, 2023; Arab News, 2024). The development of a comprehensive network to address these needs is crucial for enhancing the consumers' confidence (ResearchAndMarkets.com, 2023). Smart technologies like AI and mobile apps for locating and managing charging will also improve user experience (Future Energy, n.d.; McKinsey & Company, 2023).

### 2.5 Interplay of Range Anxiety and Charging Infrastructure in Saudi Arabia

The range anxiety and charging infrastructure development are closely linked together (U.S. Department of Energy, n.d.; International Energy Agency, 2023). A reliable charging network directly reduces range anxiety by assuring EV owners of easily available charging (U.S. Department of Energy, n.d.; International Energy Agency, 2023). Continued range anxiety can deter EV adoption, reducing the demand for infrastructure (Duke University, 2019).

Saudi Arabia's investment in the augmenting the charging infrastructure is crucial for reducing the range anxiety and creating a positive environment for EV adoption (EVLife, n.d.; WAM Saudi News Agency, 2025). As the charging network improves and EV ranges improve, ownership perceived risks of the client will likely decrease, leading to more consumer acceptance (Journal of Transport Geography, 2016; Arab News, 2024).

In order to effectively address the range anxiety besides leveraging the ongoing charging infrastructure development in Saudi Arabia is crucial for BYD for increasing market share (Arab News PK, 2024; McKinsey & Company, 2023). This can be achieved by offering a competitive range of vehicles suitable for the local context (EVLife, 2025). This can be done by actively participating in charging infrastructure expansion through partnerships (EVLife, 2025), and implementing targeted marketing to educate consumers and build brand trust (American Business Review, 2020; Nielsen, 2021). Focusing on these aspects will position BYD as a strong competitor in the buoyant Saudi EV market (The Brew News, 2025).



Range anxiety and charging infrastructure are key to EV adoption in Saudi Arabia (Alotaibi et al., 2022; World Future Energy Summit, 2023). Range anxiety persists for potential buyers (Duke University, 2019). Advancements in battery technology due to BYD's research and increased driving ranges are addressing it (Bluegrass Auto, n.d.; U.S. Environmental Protection Agency, n.d.). The Saudi government's commitment to developing comprehensive charging infrastructure through significant investments and partnerships is crucial for building consumer confidence and facilitating the EV transition (EVLife, n.d.; WAM Saudi News Agency, 2025). For BYD to succeed, offering vehicles with adequate range, actively engaging in infrastructure development, and effectively communicating these advancements will be essential in overcoming the Tesla's established standards and achieving its market share goals in the Kingdom (Arab News PK, 2024; McKinsey & Company, 2023).

## 2.6 Competitive Landscape of the Saudi Arabian EV Market

The Saudi Arabian EV market's competitive landscape is highly dynamic, with multiple players and rapidly evolving consumer preference. EVs currently constitute just over 1% of total car sales but are projected to grow significantly due to Vision 2030 (PwC Middle East, 2024; Saudi Green Initiative, 2021).

### 2.1.1 Tesla's Established Position

Despite its relatively recent entry at the end April 2025 in Saudi (Team-BHP, 2025), Tesla has built an extremely strong reputation in Saudi Arabia, particularly among luxury and techoriented consumers (Global Business Outlook, 2025; Saudi Gazette, 2024). Tesla faces challenges like extreme heat's impact on battery performance, limited charging stations, and increasing competition (PwC Middle East, 2024; Saudi Gazette, 2024; The National, 2025). The innovative technology, futuristic designs, and performance of BYD have influenced consumer expectations for EV technology, range, and charging infrastructure (Global Business Outlook, 2025). Tesla's global brand recognition provides a very strong advantage in shaping perceptions of premium EVs, despite recent global sales dips (The National, 2025). (Appendix 4)

### 2.1.2 BYD's Global Success and Saudi Market Entry

BYD, the leading global EV manufacturer, surpassed Tesla in global sales volume in 2024



(CnEVPost, 2025; EVLife, 2024a; Reuters, 2025; The Economic Times, 2025). It has officially entered Saudi Arabia in April 2024 with strategic partnership with Al-Futtaim Electric Mobility, part of Majid Al-Futtaim group of UAEs (BYD Saudi Arabia, n.d.; Saudi Gazette, 2024). BYD employs competitive pricing and offers diverse EV models, including BEVs and PHEVs (BYD Saudi Arabia, n.d.). Recognizing the region's climate, BYD has developed technologies suitable for the Middle East and Saudi Arabia, particularly robust battery thermal management systems (CnEVPost, 2025; EVLife, 2024b; Saudi Times, 2025). The Arabian Mirror, 2025) (Appendix 3). BYD's extensive global experience and battery expertise offer a considerable advantage if effectively communicated to local consumers. A partnership with Saudi Aramco on new energy vehicle technologies could lead to region-specific advancements (Arab News, 2025; CnEVPost, 2025; Saudi Times, 2025).

#### 2.1.3 Other Key Players

The Saudi EV market also includes Lucid Motors, supported by the PIF. Lucid is aiming to be a luxury EV supplier with an operational manufacturing facility (Arab News, 2024; PwC Middle East, 2024; Saudi Gazette, 2024; The National, 2025). CEER is Saudi Arabia's first domestic EV brand, and is expected to launch its vehicles by 2026, intensifying competition (Arab News, 2024; PwC Middle East, 2024; Saudi Gazette, 2024; The National, 2025). Global giants like BMW and Mercedes-Benz are also targeting the luxury EV segment (PwC Middle East, 2024). Other Chinese brands, like Morris Garage and Changan Motors, are gaining market share by offering more affordable EV options (PwC Middle East, 2024; Saudi Gazette, 2024). This dynamic landscape necessitates BYD differentiating its offerings to secure a significant market share (Appendix 3).

#### 2.2 Market Dynamics

Current market share shows Tesla leading the luxury EV segment (PwC Middle East, 2024; Saudi Gazette, 2024). Strategic partnerships are critical, including that with Saudi Aramco. BYD's collaboration on new energy vehicle technologies, and EVIQ's partnership with BYD to enhance the charging infrastructure (Arab News, 2025; CnEVPost, 2025; Saudi Times, 2025; The Arabian Mirror, 2025). Saudi consumers are willing to pay a premium for EVs (Arthur D. Little, 2024). These collaborations, especially those focusing on local strengths, will be vital for BYD's competitive position. Consumer interest in hybrid vehicles is also growing, potentially serving as a stepping stone for wider EV adoption (Arab News, 2024).



The summary of the competitive landscape is presented in the Appendix 3

#### 2.2.1 Environmental Concerns and the Push for Electric Vehicles in Saudi Arabia

Saudi Arabia is committed to **environmental sustainability** through its **Vision 2030**, which aims to diversify the economy and reduce oil dependence (PwC Middle East, 2024; Saudi Green Initiative, 2021; Vision 2030, n.d. a, n.d. b). This focus creates a favorable policy landscape for EV adoption, which **BYD** can leverage. The **Saudi Green Initiative** (**SGI**) reinforces this with targets for carbon emission reduction and achieving net-zero by 2060 (Saudi Green Initiative, 2021; Vision 2030, n.d. a). Riyadh targets 30% of its vehicles to be electric by 2030, alos promised significant investments in EV infrastructure and manufacturing (PwC Middle East, 2024).

The transformation to EVs directly supports Saudi Arabia's goals to reduce reliance on oil and cut transportation sector carbon emissions (PwC Middle East, 2024; Saudi Green Initiative, 2021; Vision 2030, n.d. a). This environmental benefit offers a good marketing message for BYD to attract environmentally conscious consumers. EVs can reduce air pollution and improve public health, especially in urban canters like Riyadh (PwC Middle East, 2024; Saudi Green Initiative, 2021). Studies show that even with the current energy consumption mix in Saudi, EV adoption can reduce emissions, with greater benefits as the country transitions to cleaner energy sources (KAPSARC, 2023).

Environmental awareness is rising among Saudi consumers, with many expressing interests in purchasing EVs (Arthur D. Little, 2024; PwC Middle East, 2024; Saudi Gazette, 2024). Surveys indicate a substantial percentage of Saudi residents are likely to consider BEVs in the coming years. This growing awareness presents an opportunity for BYD to position its EVs as both technologically advanced and sustainable solutions. This is again driven by a growing understanding of environmental benefits (Arab News, 2024).

The Saudi government has already implemented various **incentives** for EV adoption, including tax exemptions, purchase subsidies, and reduced electricity rates for home charging (PwC Middle East, 2024; Saudi Gazette, 2024; Vision 2030, n.d. a). The strong government support and developing infrastructure will be crucial in alleviating range anxiety and fostering broader EV adoption, creating a more favorable environment for BYD. More efforts are also underway to expand the **EV charging infrastructure** across the Kingdom, with the **Electric Vehicle** 



**Infrastructure Company** (**EVIQ**) playing a central role, collaborating with companies like BYD to deploy charging stations (Arab News, 2025; EVLife, 2024c; Saudi Gazette, 2024; The Arabian Mirror, 2025). The government is aiming to install a good number of charging stations by 2025 and 2030, demonstrating a clear commitment to a comprehensive EV ecosystem (PwC Middle East, 2024).

### 2.2.2 Performance Expectancy and Consumer Acceptance

**Tesla's** early entry into the Saudi EV market has set a performance benchmarks, influencing consumer expectations for range, charging speed, and technological sophistication (Global Business Outlook, 2025). Concerns about range anxiety are diminishing, possibly due to increased awareness and ongoing infrastructure development (Arthur D. Little, 2024). This fast-evolving landscape requires **BYD** to meet or exceed these established expectations to gain consumer acceptance (Arab News. 2024). Saudi consumers view Tesla as a high-quality, technologically advanced brand (Global Business Outlook, 2025).

BYD offers a wide range of EV models in Saudi Arabia with varying range and charging capabilities (BYD Saudi Arabia, n.d.). Consumer reviews offer valuable insights into BYD's reception and areas for improvement (Saudi Gazette, 2024; YallaMotor, 2025). BYD's strategy of offering models at a more reasonable price points than Tesla could attract a broader consumer segment, provided performance expectations are met. These vehicles feature technologies designed to be in line with Saudi consumer preferences for safety, comfort, and advanced features (BYD Saudi Arabia, n.d.; Saudi Gazette, 2024). The availability of both fully electric and plug-in hybrid models caters to diverse consumer needs in the market (BYD Saudi Arabia, n.d.).

Despite infrastructure progress, some Saudi consumers may still have concerns about EV range limitations, especially for long-distance travel (PwC Middle East, 2024; Saudi Gazette, 2024; The National, 2025). The ongoing expansion of charging infrastructure is important for addressing these concerns and boosting EV adoption (Arab News, 2025; EVLife, 2024c; Saudi Gazette, 2024; The Arabian Mirror, 2025). Collaborations with EVIQ to install high-speed chargers at BYD facilities demonstrate a proactive approach addressing the range anxiety for BYD through advanced battery technology and actively participating in charging infrastructure expansion will be crucial for effective competition. (The Arabian Mirror, 2025).



Model Name	Battery	WLTP Range	Charging	Fast	Notable Features
	Capacity	(km)	Type	Charging	
	(kWh)			(80%)	
BYD HAN	85.4	565	AC, DC	45 min DC)	15.6" Rotating Screen12
					Speaker Dynaudio,
BYD SEAL	82.5	570	AC, DC	30 min DC	
BYD ATTO 3	60.48	420	AC, DC	45 min DC	12.8" Rotating Screen and
					Panoramic Sunroof,
BYD SONG	18.3	115 (EV) / 1200	AC		DM-i Hybrid Technology
PLUS (PHEV)		(Hybrid)			
BYD QIN	8.32	100 (EV) / 1100	AC		DM-i Hybrid Technology
PLUS (PHEV)		(Hybrid)			

Table 1 Specifications

Note: Specifications may vary based on the specific variant available in Saudi Arabia (BYD Saudi Arabia, n.d.).

#### 2.3 Social Influence

The social influence, encompassing the impact of society, individuals and groups, on beliefs and perceptions are crucial roles in EV adoption. According to the Theory of Planned Behaviour (Ajzen, 1991). The purchase intentions, like buying an EV, are shaped by **subjective norms** or as perceived by social pressure. Peer influence is a significant driver of EV adoption, especially in Saudi Arabia, where social norms heavily influence decisions. Al-Hazmi et al. (2020) found that the positive attitudes towards EVs among peers and family significantly increased adoption likelihood.

## 2.4 Operating Cost

Operating costs are a significant factor influencing EV adoption in Saudi Arabia. EVs typically have a higher initial purchase price due to battery and electrification technology costs, they offer significant advantages in lower operating costs from reduced fuel expenses, decreased maintenance, and potential tax incentives or subsidies (Hackbarth et al., 2020). The



government aims for a sustainable transportation system. This acts as an incentive. The lower fuel and maintenance costs reduce long-term ownership expenses, making EVs much more attractive.

#### 2.5 After-Sales Service

The after-sales service and spare parts availability are crucial for EV adoption. A Danish study by Ninh et al. (2014) exhibited that EV technology's novelty results in limited to qualified repair workers, leading to high repair costs and extended repair times. Quak et al. (2016) noted that the non availability of EV repair centers, compared to those for internal combustion engine vehicles (ICEVs), has disappointed existing EV owners.

#### 2.6 Economic Value

Khalid and Al-Hosani (2019) found that reduced oil consumption from EV adoption could lead to significant cost savings for Saudi Arabia. The economic value of EVs for consumer adoption includes reduced dependence on oil, improved air quality, and cost savings. They also highlighted economic benefits like reduction in healthcare costs from improved air quality and decreased spending on fossil fuel imports. These arguments lead to the hypothesis:

## 2.7 Product Variety

Kahn, 2017). Lin et al. (2019) commented that product variety and range significantly determines EV adoption in Saudi Arabia. A diverse range of EV models stimulates consumer interest, addresses quality and risk concerns, and enhances the perceived value of EVs. According to the Variety Seeking Theory (VST), consumers are motivated by novelty (Kahn, 2017). Lin et al. (2019) further demonstrated that in Saudi, wider EV model selection increased the consumer interest and adoption inclination.

### 2.8 Safety Rating

Studies consistently show safety ratings are among the most important factors influencing purchase decisions, alongside price, range, and charging infrastructure (Al-Qahtani et al., 2021). Al-Bogami et al. (2022) found that higher safety ratings positively influence consumers' perceptions of EV safety in Saudi Arabia, increasing adoption. The safety ratings are a key consideration for vehicle purchasers, reflecting occupant protection in crashes. In Saudi Arabia, road safety is very important, making consumers particularly sensitive to safety.



#### 2.9 Consumer Attitude and Purchase Behavior Towards E-Vehicles

Perceived benefits like reduced greenhouse gas emissions, lower the operating costs, and preferential parking/charging facilities significantly impact intentions (Kesharwani and Biswas, 2019). Consumer intention is pivotal in shaping the purchasing behavior for EVs, driven by growing sustainable transportation emphasis. Environmental consciousness, government incentives, and technological advancements propel this shift. On the other hand, perceived risks, including low driving range, insufficient charging infrastructure, and high initial costs, deter adoption (Bamberg and Möser, 2007). Understanding these factors is important for stakeholders to develop effective strategies. Policymakers can offer financial incentives, enhance charging infrastructure, and implement awareness campaigns (Sierzchula et al., 2014).

#### 2.10 Consumer Attitude and Purchase Intention

Research has consistently shown a positive correlation between favorable attitudes and heightened purchase intentions (Eagly and Chaiken, 1993; Fishbein and Ajzen, 1975). The consumer attitudes toward EVs significantly impact purchase intentions. Attitudes encompass individuals' evaluations and emotions towards EVs, including perceptions, beliefs, and emotions. The positive attitudes towards EVs incline individuals to express their purchase intentions, with significant implications for manufacturers, marketers, and policymakers. The theories like the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB) affirm the key role of attitudes in predicting behavioral intentions (Ajzen and Fishbein, 1980; Ajzen, 1991). Environmental concerns are a prominent driver of the positive attitudes, as consumers prioritize sustainability and view EVs as tools for curbing carbon emissions (Jung and Yoon, 2019). These perceived benefits like reduced operating costs, governmental incentives, and technological advancements further help to increase positive attitudes (Bashir et al., 2021).

#### Consumer Purchase Intention and Purchase Behavior Towards EV

The research on consumer purchase intention and behavior towards EVs in Saudi Arabia is gaining momentum, indicating a global shift towards sustainable transportation. Studies highlight factors influencing Saudi consumers' intentions to purchase EVs, including environmental awareness, economic considerations, and government incentives. Alwadain et al. (2024) commented that younger, more educated consumers are more inclined to consider



EVs due to its environmental benefits and cost savings. Government policies, like subsidies and charging infrastructure investments, are significant motivators (AlGhamdi et al., 2021). High initial costs and limited charging stations remain barriers. Abu-Alkeir et al. (2020) emphasize addressing these barriers to enhance consumer confidence and to stimulate market growth. Despite a growing positive attitude towards EVs in Saudi Arabia, concerted efforts are required to overcome challenges and realize market potential.

#### 2.14. The Mediating Role of Purchase Intention

Strong purchase intention increases the likelihood of actual purchase behavior. This empirical evidence supports purchase intention's mediating role, acting as an intermediate variable transferring consumer attitude's influence to purchase behavior. The mediation points out that purchase intention serves as both a cognitive and motivational mechanism translating attitudes into purchasing decisions. The purchase intention critically mediates consumer attitude and purchase behavior. Authors like Bagozzi (1982) show the purchase intention as a reliable predictor of subsequent purchase behavior. This relationship is based on the assumption that individuals are more likely to act on their intentions (Ajzen, 1991). Lim et al. (2015) showed purchase intention effectively mediated the relationship between the independent variables (trust, attitude, subjective norm,) and online shopping behavior.

The SaudiEV market is dynamic and highly competitive, with **BYD** facing significant challenges despite its global success, largely due to **Tesla's established brand and technological influence**. Other manufacturers like Lucid, CEER and few Chinese EV brands are increasing competition, the strong **environmental focus of Saudi Vision 2030 and the Saudi Green Initiative**, and rising consumer environmental awareness besides robust government support (incentives, infrastructure development), creates a favorable playground for BYD's growth. The key barriers for BYD include building a solid **brand trust** among Saudi consumers who favor Tesla's premium image, effectively addressing **range anxiety** despite expanding charging networks, and clearly communicating its superior EV technology's suitability, particularly battery performance and thermal management, for Saudi Arabia's challenging climate.



### Part:3 Research methodology

## 3.1 Research Methodology

This thesis employs a **mixed-methods approach**, combining a comprehensive literature review, surveys, and data analysis to investigate factors influencing consumer adoption and purchase behavior of EVs in Saudi Arabia. A **structured survey design** was adopted to collect quantitative data from a defined population. This is for ensuring reliability and comparability. **Stratified random sampling** was used to ensure representation across demographics (age, gender, income) and vehicle ownership (current EV owners, potential buyers, ICE vehicle owners). This would enhance the generalizability of the findings. Data collection utilized online and face-to-face questionnaires distributed via social media, EV dealerships, and public spaces, ensuring inclusivity and addressing potential biases. (Appendix 1)

The questionnaire, designed to cover predictors of consumer attitude, purchase intention, and purchase behavior, used a **Likert scale**. Measurement variables for consumer attitude were developed based on a prior research (Alzahrani et al., 2019; Alshehri and Alharthi, 2021; Alawaji et al., 2020; Almutairi and Alkhatib, 2021; Alhammad et al., 2023; Alqahtani et al., 2022). Purchase intention variables were based on Ajzen (1991), Habib et al. (2022), and Kala and Chaubey (2023), while purchase behavior variables drew from Jun and Park (2018) and Ho et al. (2016).

## 3.2 Conceptual Framework and Methodology

The conceptual framework is as developed in **Davis's (1989) Technology Acceptance Model (TAM)**, focusing on a perceived usefulness and ease of use. **Ajzen's (1991) Theory of Planned Behavior** informs understanding of subjective norms, attitudes, and perceived behavioral control. **Rogers' (1962) Diffusion of Innovations theory** explores the role of early adopters and social networks in EV diffusion within Saudi Arabia, providing a comprehensive understanding of factors shaping consumer adoption and purchase behavior.

#### 3.3 Target Population and Sampling

The **target population** for the quantitative survey comprises potential and the current car buyers in Saudi Arabia. The sample size will be determined by statistical power analysis for generalizability using pre-existing models of excel analysis. The **Stratified random sampling** 



will ensure proper representation across demographics (age, gender, income, region). Saudi Arabia has high urbanization, the survey will focus only on Riyadh, where BYD has a showroom. Online surveys will be the primary data collection method besides face to face due to their effectiveness, reach, anonymity, and cost-efficiency (Appendix 1).

### 3.4 Survey Instrument Design

The survey will be culturally sensitive, available in both Modern Standard Arabic and relevant Saudi dialects, considering social hierarchy and Islamic values. Specific items will measure brand trust and perceived quality for BYD and Tesla. The survey instrument will target to address key research questions, including sections on consumer acceptance, range anxiety, and charging infrastructure. The questionnaire is designed on Likert scales and multiple-choice questions. Range anxiety questions will explore the perceived importance of range, acceptable driving range, and current charging habits. The charging infrastructure section will assess awareness of charging stations, locations, and perceived adequacy (Appendix 1).

## **Pilot Testing and Data Collection**

The survey will undergo a desired **pilot testing** with a smaller target group consisting of other students and family of the author to identify ambiguities or clarity issues. Feedback will refine the survey before full-scale distribution via online platforms and social media. Ramadan has restriction of timelines and the author shall focus on a clear timeline to ensure timely data collection (Author's opinion).

## 3.5 Qualitative Interview Protocol and Execution

**Qualitative interviews** will gather in-depth perspectives from a diverse participant, including current EV owners (Tesla or other brands), industry experts, potential EV buyers. The number of interviews will aim for theme saturation within each of the group, providing insights from early adopters, potential buyers, and industry professionals (Appendix 1).

## 3.6 Interview Guide Development

**Semi-structured interview guides** will be developed for each group, covering motivations for EV consideration/purchase, perceptions and experiences with the different EV brands (specifically BYD and Tesla), experiences with vehicle range and charging, and expectations



regarding after-sales service. For range anxiety, questions will cover the concerns about driving range, perceptions of current charging infrastructure, and willingness to consider EVs. Guides will be flexible to explore emerging themes. The potential differences in after-sales service expectations in the Saudi, this will be a key focus. Questions on brand perception will explore the familiarity, quality, reliability, besides trust (Appendix - 1).

## 3.7 Interview Execution and Recording

Interviews will also be conducted face-to-face or online based on the participant availability. Participants will receive adequate research information and provide an explicit informed consent. Anonymity and confidentiality will be ensured, and interviews will be audio-recorded with permission for accurate transcription (Appendix - 1).

## 3.8 Secondary Data Sources and Analysis

Secondary data indicates a growing EV market along with strong government support, but also highlights challenges like high initial costs and charging infrastructure limitations, which BYD's strategy must address. Analyzing existing academic research will provide a foundation for understanding local market dynamics and inform primary research design. A comprehensive review of the **secondary data sources** will provide context, including industry reports, market research publications, academic articles, government publications (Vision 2030, EV initiatives), and competitor analysis of Tesla and BYD's strategies in Saudi Arabia. Attention will be paid to reports on the Saudi automotive market, Middle Eastern EV trends, and academic studies on consumer behavior and the technology adoption in Saudi Arabia.

#### **Data Extraction and Synthesis**

Relevant data will be extracted and synthesized from identified secondary sources to provide a comprehensive overview of the Saudi Arabian EV ecosystem, consumer preferences, and the competitive landscape. This involves identifying trends, statistics, and insights from various reports and publications. The synthesized information will inform the development of survey and interview guides, and contextualize primary data findings



Factor	Findings			
	Tesla has established early brand recognition; dealership service			
	quality might be valued lower than in other markets. Prioritize			
Consumer Preferences	comfort, status; reliability, growing interest in technology and			
for the Brand	environmental impact;			
	key determinants of satisfaction- Increasing demand for advanced			
Consumer Preferences	infotainment, connectivity, and driver assistance; fuel efficiency			
for Features	and after sales costs.			
Consumer Preferences	High initial cost is a barrier and willingness to pay is influenced by			
on pricepoint	the perceived value, social and environmental awareness.			
	A major concerns include Inadequate charging infrastructure and			
	long duration of charging times are sensitivity to driving range			
Range Anxiety for EV	levels.			
Charging Infrastructure	Saudi Government initiatives to expand charging infrastructure to;			
of EV	focus on key cities and highways.			
	Saudi Vision 2030 targets sustainability and EV adoption; financial			
KSA Government	benefits and infrastructure investments; new licensing framework			
Initiatives & Policies	favoring EVs.			

Table 2 Findings Source: Author's finding

## 3.9 Data Analysis and Synthesis

This study uses a **mixed-methods approach**, integrating the quantitative and qualitative data to comprehensively understand factors influencing EV adoption in Saudi Arabia, focusing on BYD vs. Tesla (Appendix - 1).

## 3.10 Quantitative Data Analysis

**Descriptive statistics** will summarize demographics and survey responses, providing an overview of consumer attitudes and preferences towards BYD and Tesla (Pallant, 2016). Quantitative data from surveys of Saudi EV owners (current and potential) will be analyzed using **standard software tools.** The analysis will assess the impact of brand perception and trust (independent variables) on purchase intention (dependent variable) for both brands,



determining how Tesla's reputation affects consumer choice as compared to BYD. Analysis will also examine the relationship between perceived charging infrastructure availability and range anxiety among Saudi consumers, providing insights into charging concerns and BYD's strategies. (Field, 2018).

### 3.11 Qualitative Data Analysis

Interviews will be audio-recorded and transcribed.or hand writing or captured via software Analysis will involve reading the transcripts, identifying preliminary codes, and organizing them into broader themes reflecting consumer perceptions, motivations, experiences, and expectations regarding EVs, particularly BYD and Tesla. Qualitative data from semi-structured interviews with Saudi consumers, industry experts, and stakeholders will be analyzed using **thematic analysis** (Braun & Clarke, 2006). The thematic analysis will focus on consumer perceptions of BYD's vehicle quality, design, and after-sales service versus Tesla's standards. Analysis will explore range anxiety drivers and views on charging infrastructure adequacy, along with the perceived EV performance in Saudi Arabia's climate and driving conditions. Identified themes will provide an in-depth insight into quantitative trends and challenges/opportunities for BYD (Guest et al., 2012).

#### 3.12 Data Synthesis and Triangulation

**Triangulation** will compare and contrast the results from various methods to validate findings, enhancing robustness and reliability. The findings from quantitative surveys, qualitative interviews, and secondary data (market reports, industry publications, government documents) will be synthesized for a comprehensive understanding. (Creswell & Plano Clark, 2017). Synthesis will integrate the statistical findings with in-depth interview insights to create a holistic view of Saudi EV consumer behavior. For instance, quantitative purchase intention data will be contextualized with qualitative reasons behind those intentions. This integrated approach will examine how BYD can overcome Tesla's standards in consumer acceptance, range anxiety, and charging infrastructure challenges to increase market share in Saudi Arabia (Mertens, 2014).



## 3.13 Expected Outcomes and Contribution

This research is expected to yield valuable insights into the dynamics of the Saudi Arabian EV ecosystem, specifically concerning the competitive landscape between BYD and Tesla, and provide an understanding of factors influencing Saudi consumers' EV adoption decisions.

## 3.14 Expected Outcomes

The research anticipates clarifying the consumer brand preferences, assessing range anxiety factors, evaluating charging infrastructure needs, and informing strategic recommendations for BYD. Specifically, it aims to the following points:

It is important to clarify Consumer Brand Preferences. To determine the relative importance of brand reputation, technological innovation, price, and features in Saudi consumer EV purchase decisions, comparing BYD and Tesla (Al-Saggaf et al., 2020).

Author has proposed to Inform Strategic Recommendations for BYD to the showroom owner. Based on the analysis, to offer a set of strategic recommendations for Al-Futtaim showroom of BYD in Saudi Arabia to enhance consumer acceptance, address range anxiety through technology and communication, and leverage charging infrastructure through partnerships and service offerings to gain market share in Saudi Arabia (BYD Saudi Arabia, n.d.).

Assess Range Anxiety Factors are of primary concern. To identify the primary drivers of range anxiety among Saudi consumers, including concerns about driving distances, charging station availability, and the battery performance in extreme climates, and evaluate how BYD can effectively address these (Hazmi et al., 2020).

To evaluate charging infrastructure needs of the customer falls under a hygiene factor. To provide insights into consumer expectations for EV charging accessibility, speed, and its reliability in Saudi Arabia, and assess BYD's potential role in such development (Alqahtani et al., 2022).

The research aims to provide actionable recommendations for BYD, Saudi to tailor products, marketing, and infrastructure initiatives to meet Saudi consumers' needs and expectations, aligning its market share with its global position (appendix4)



### 3.15 Contribution to Knowledge

This thesis will contribute to existing knowledge by the following points.:

Providing an in-depth analysis of the consumer behavior in Saudi Arabia's EV adoption context which is an emerging market. This will fill a gap in global EV adoption literature particularly in the MENA region by offering significant empirical evidence specific to the region's consumer preferences, environmental conditions, and policy landscape (AlFayez et al., 2023; KAPSARC, 2023).

Providing practical recommendations for EV companies entering or expanding in the Saudi Arabian market, particularly addressing the consumer acceptance, charging infrastructure and range anxiety,. Findings will also offer evidence-based strategies for BYD and others to serve Saudi consumers, enhance the market penetration, and support Vision 2030's sustainable transportation goals (Vision 2030, n.d. a). These recommendations will be grounded in a rigorous analysis of the consumer perspectives and market conditions, ensuring relevance.

Offering insights into competitive dynamics between the globally established players like Tesla and new entrants like BYD in the fast transforming EV market of Saudi. The direct comparison will provide valuable insights into the competitive advantage strategies in emerging EV markets, contributing to broader understanding of the automotive industry competitive dynamics during the electric mobility transition (ReportLinker, 2025).

#### 3.16 Content Validity and Reliability

The Content validity, item clarity, and alignment with research goals were evaluated by faculty experts and author's review. Primary data collection involved surveys of a representative sample of the Saudi Arabian consumers. The author targets current and potential EV owners in Riyadh, gathering insights on their attitudes, intentions, and purchase behavior. A pilot test with 10 respondents (10% of the sample) demonstrated questionnaire representativeness and feasibility. Out of approximately 100 responses, 82 complete and sincere ones were deemed suitable for analysis. The proposed mixed-methods research methodology provides a robust framework for analyzing and reaching the answer of the research question.



#### Part 4: Data and Analysis

This chapter analyzes the data collected through primary research, which includes surveys conducted with prospective BYD users, current BYD users, and BYD showroom staff in Saudi Arabia. The objective of the analysis is to provide insights into consumer acceptance, range anxiety, and charging infrastructure challenges, which are crucial for BYD to increase its market share in Saudi Arabia and answer the research question (Appendix -1).

### 4.1 Profile of Respondents

Understanding the demographic and psychographic profile of the respondents is important for analyzing the findings in proper context.

## **4.1.1** Prospective BYD Users

A total of 100 responses were collected from prospective EV buyers in Saudi .

**Gender:** The majority of respondents were male (85%), with 12.5% female, and a very small percentage preferring not to say or identify as other. (Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 20)

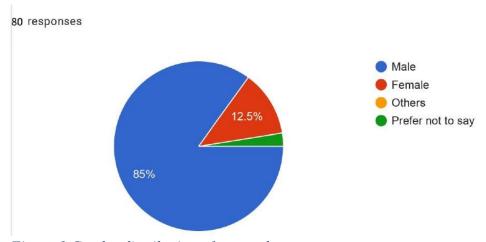


Figure 1 Gender distribution of respondents



**Age:** The largest age group was 25-34 years (35%), followed by 35-44 years (27.5%). Respondents aged 18-24 were 22.5%, 45-54 years were 7.5%, and 55-64 years were 5%. (Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 20)

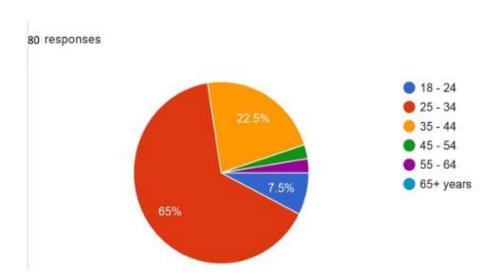


Figure 2 Age distribution of respondents

Nationality: The respondents belonged to various nationalities, Saudi nationals comprising 32.5%. Other nationalities included Indian, Egyptian, Pakistani, and others collectively making up 67.5%. (Appendix -1 Prospective BYD Users in Saudi Arabia\_With chart\_updated.pdf, p. 21)

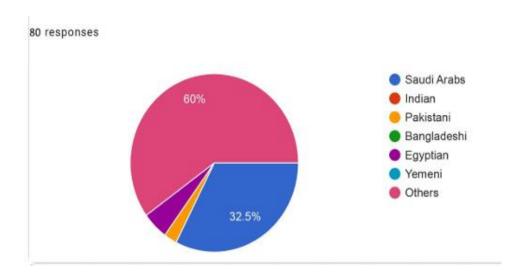


Figure 3 Nationality of respondents



**Location:** All respondents from this survey were located in the Riyadh Region by design(100%). (Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 22)

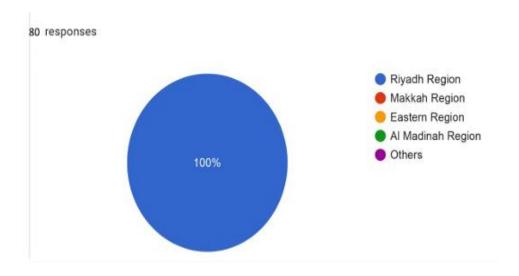


Figure 4 Region of respondents

**Education Level:** A significant majority (75%) held a Bachelor's Degree, Master's Degree holders (25%). (Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 21)

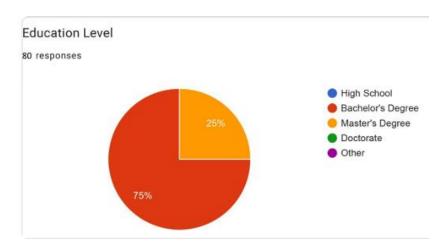


Figure 5 Education Level of respondent

**Annual Household Income:** Income levels varied, with 24.3% reporting income between SAR 100,000-200,000, 21.6% above SAR 300,000, 18.9% between SAR 50,000-100,000.



(Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf,p.22)

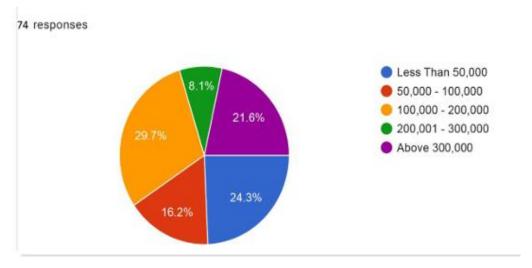


Figure 6 Annual Salary of respondents

**Current Car Ownership:** 82.1% of prospective EV buyers already own a car. There were only 12% who could be first time owner (Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 23)

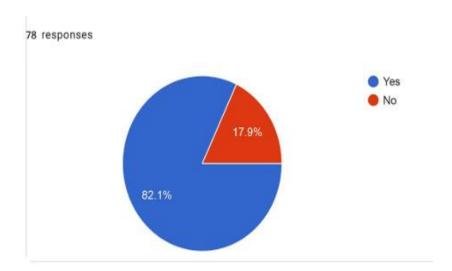


Figure 7 Current car ownership

**Age Distribution of the Prospective BYD Users** 25 to 34 is the preffered age group of the target universe.



(A pie chart illustrating the age breakdown of prospective users is mentioned below)
(Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 20)

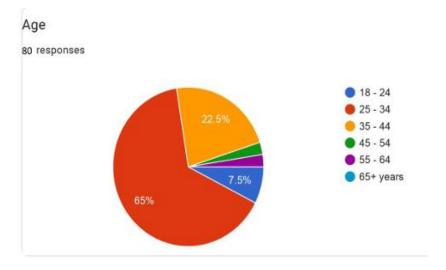


Figure 8 Age distribution of prospective users

Chart 5.2: Nationality of Prospective BYD Users 80% from local Saudis are the biggest. (A pie chart showing the nationality distribution mentioned below) (Appendix -1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 21)

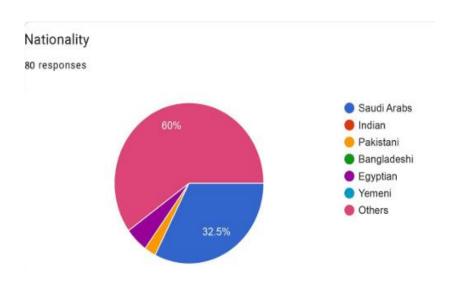


Figure 9 Nationality of prospective users

### 4.1.2 Current BYD Users

Ten responses were collected from individuals who currently own a BYD vehicle in Saudi Arabia.



**Gender:** All respondents (100%) were male. (Appendix -1 BYD Users in Saudi Arabia.pdf, p. 9). Females have got the permission to drive 5 years ago in Saudi.

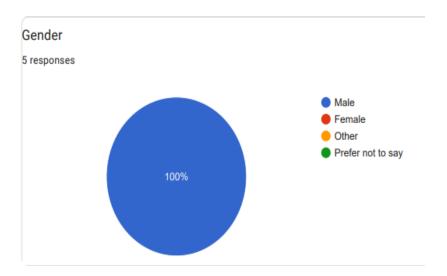


Figure 10 Gender of current users

**Age:** Among the owners, the majority (60%) were in the 45-54 age group, the remaining 40% in the 35-44 age group. (Appendix -1 BYD Users in Saudi Arabia.pdf, p. 9)

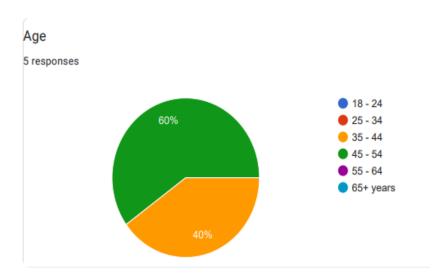


Figure 11 Age of current users

Nationality: 60% of respondents were 'Others' (non-Saudi, non-listed, etc.), and 40% were Indian. (Appendix -1 BYD Users in Saudi Arabia.pdf, p. 10)



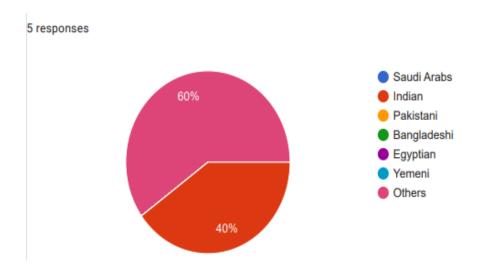


Figure 12 Nationality of current users

Location: Users purchased from Riyadh and took the car to other regions. 60% were in the Eastern Region, and 40% were in the Makkah Region (mostly Jeddah, as indicated in openended responses). (Appendix -1 BYD Users in Saudi Arabia.pdf, p. 11)

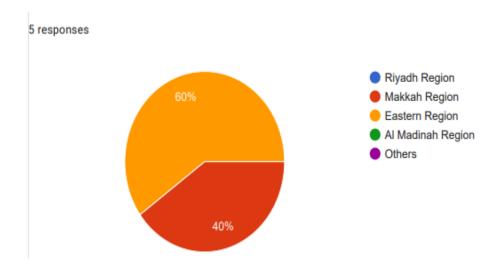


Figure 13 Location of current users

Education Level: All are educated. 80% had a Bachelor's Degree, and 20% held a Master's Degree. (Appendix -1 BYD Users in Saudi Arabia.pdf, p. 10)



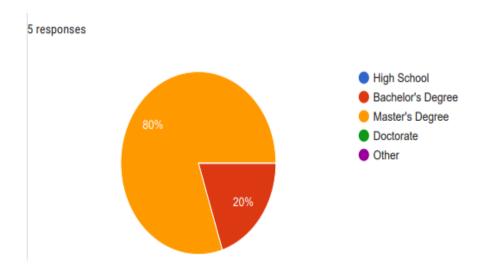


Figure 14 Education Level of current users

**Primary Use of Vehicle:** Its a daily use car. 80% used their BYD for commuting, while 20% used it for family trip purposes. (Appendix -1 BYD Users in Saudi Arabia.pdf, p. 13)

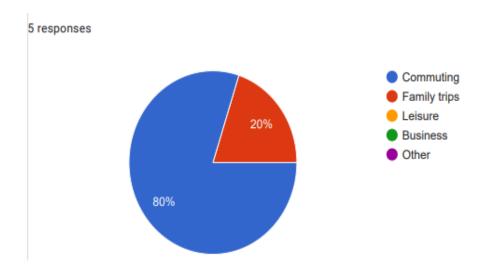


Figure 15 Primary use of vehicle

Location of Current BYD Users (A pie chart showing the regional distribution of current BYD users mentioned below) (Appendix -1 BYD Users in Saudi Arabia.pdf, p. 11)



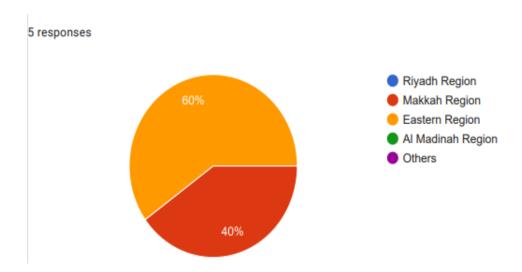


Figure 16 Location of current user

#### 4.1.3 BYD Showroom Staff

Eight responses were collected from BYD showroom staff in Riyadh. The staff respondents were employees in sales and other showroom roles, providing perspectives from the front lines of customer interaction.

## **4.1.4** Consumer Acceptance of BYD

#### **Consumer Acceptance of BYD: Perceptions and Influencing Factors**

Consumer acceptance is key for BYD's success, with perceptions, brand awareness, and factors influencing consideration playing key roles.

## Perceptions of the BYD Brand and Vehicles

Prospective users hold diverse perceptions of the BYD and its range of vehicles.

Positive views are analyzed from the survey data and reveal vital insights. Most respondents commented on BYD's expanding presence and future potential. Many commend BYD for offering the "affordable and reliable electric vehicles with a good range and modern technology," remarking as "Good and economical" and even a "Future car."The positive remarks were "Great technology and good value," "Has the best battery quality," and "Growing brand with a huge potential to gain market share."



Number of respondents came up with Neutral or Uncertain Views. A large portion of respondents have limited familiarity with BYD or express neutrality without taking any side. comments like "Not sure I know it is a Chinese car," "I don't know the BYD brand," and "Unknown, but I've heard some good things about it" are frequently mentioned. Some also describe the brand as "New" or "Getting popular recently."

Some of the respondents also spoke about Concerns and expressed Negative Views. Top few respondents in this parameter stated, "Not sure I know it is a Chinese car" or "It is a Chinese car made afraid of the quality." The brand's Chinese origin is a matter of concern and often linked to perceived poor quality issues. Concerns include "long-term durability and service availability." Many also view BYD as a "Third tier" or "weak brand," with one respondent noting, "I don't have much information about BYD, and I think they are not well-known in the Saudi Arabian market."

The biggest concerns or hesitations on purchasing a BYD Vehicle of a Prospective Users were as below

Concern for Quality and Durability linked to Chinese origin remained the top concern. Comments include "It is a Chinese made afraid of the quality", "quality and maintenance", "Chinese manufacturing". "The durability and the scrap value of the vehicle",

Concerns regarding After-Sales Service and Spare Parts was the next key parameter. The key comments include "want to make sure servicing and parts are easy to find", "After-sales services - spare parts", "It's chines and expensive spare part", "Spare parts and maintenance", "Price, available of parts" (Prospective BYD Users in Saudi Arabia. With Chart\_updated.pdf, p. 11). (As per annexure A)

The Brand Reputation and Longevity of the BYD range also was a matter of concern. Key comments are "it being relatively new to the Saudi market" "The brand and longevity", "Brand Recognition & Reputation", (Prospective BYD Users in Saudi Arabia. With Chart\_updated.pdf, p. 11). (As per annexure A)

Uncertainties on Resale Value of the car was a major concern. The "resale value". "The durability and the scrap value of the vehicle", are the main two remarks

The Performance & Reliability of the BYD cars was also questioned. The main comments include "performance and durability of the vehicle, since it hasn't been around for long", "long-term reliability".



The Charging Infrastructure and Time needed to charge was a concern. Top comments were "Charging time", "Availability of charging outlets", "Shortage of Charging station".

The above details is summarized from the detailed analysis attached in Annexure - 1.

- **4.1.5** Likelihood to Consider Purchasing a BYD in the Future (Prospective Users) Analyzing on a scale of 1 (Not at all likely) to 5 (Very likely), prospective users rated their likelihood to consider purchasing a BYD:
  - 35% rated 3 Neutral
  - 22.5% rated 4 Likely
  - 20% rated 1 Not at all likely
  - 17.5% rated 2 (Unlikely
  - 15% rated 5 (Very likely) Which indicates a largely undecided optimistic market.

The above details is summarized from the detailed analysis attached in Annexure - 1.

**4.1.6** Reasons for Choosing BYD (Insights from Current Users & Showroom Staff)

Current BYD users highlighted the following primary factors for their purchase:

Top opinion include "New technology with high quality makes me future proof".

**Also, Hybrid Model (PHEV) was successful in addressing range anxiety The Hybrid model** which addressed my range anxiety while giving me an opportunity to try EV.

The fuel efficiency continues to be an advantage. BYD's fuel efficiency is superior and its options in comparison to other vehicles on the road.

Quality, Comfort, refinement of the cars beat the best.

The mode of Hybrid- plug in is also the reason for the purchase decision.

BYD showroom staff reported that most customers visiting showroom choose BYD over other EV brands, including Tesla.

BYD's Brand reputation as a reliable EV car is yet to be established. One staff member noted, BYD is more experienced and specialized in electronics to the level of providing batteries to Tesla. Also better prices. however this was not supported by the prospective users. Affordability and Value is an identified advantage. Affordable according to the prices and car quality means its a value for money.



Respondents also had high regards for BYD's Quality and Technology. Choose the BYD quality and futuristic Technology yet to be experienced elsewhere.

**4.1.7 Challenges in Selling BYD Vehicles (Showroom Staff Perspective)** Showroom staff identified the following as the biggest challenges:

The perception of Chinese brands is a deterrent for BYD. It is an uphill task of how to convince the customers that it's a new resurgence of the Chinese brands, Chinese made items still have a reputation of inferior quality generally in KSA.

Infrastructure for charging, service etc play an important role for acceptance of BYD cars. This points to broader market challenges beyond just brand perception.

# 4.1.8 Consumer Awareness of BYD (Prospective Users & Showroom Staff)

## **How Prospective Users First Heard About BYD:**

Online ads: 32.5%

Social media: 32.5%

O Word of mouth: 22.5%

o Dealership visit: 15%

Other: 2.5% (Prospective BYD Users in Saudi Arabia. With Chart\_updated.pdf,
 p. 26) This suggests a strong reliance on digital channels for initial brand exposure.

Sample snaps and screenshot collected by author in Annexure 1

Chart 5.5: Likelihood of Prospective Users Considering a BYD Purchase (Prospective BYD Users in Saudi Arabia. With Chart\_updated.pdf, p. 19)



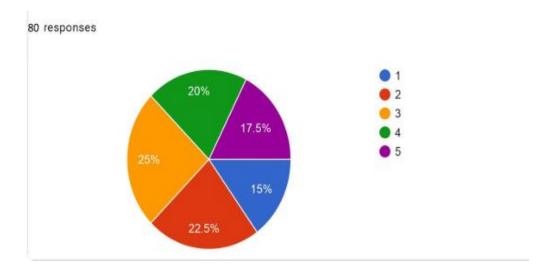


Figure 17 Likelihood of prospective user

**How Prospective Users First Heard About BYD** (Annexure 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 26)

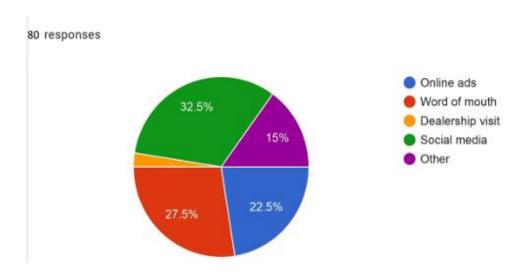


Figure 18 Prospective Users First Heard About BYD

**Showroom Staff Rating of Customer Awareness of BYD's Charging Solutions:** In terms of a scale of 1 (Very Low) to 5 (Very High), 50% of staff rated customer awareness as 1 (Very Low), and 50% rated it as 2. This indicates a significant gap in consumer knowledge regarding BYD's charging solutions and partnerships and indicates reason for aggressive promotions..

The above details is summarized from the detailed analysis attached in Annexure - 1.

A

## **5.7 Range Anxiety**

The range anxiety is a well-documented barrier to EV adoption in Saudi. This section explores its prevalence and nature among Saudi consumers.

**5.7.1 Primary Considerations When Purchasing an EV (Prospective Users)** Range and battery-related concerns were extremely important for prospective EV buyers:

Range is the biggest consideration. For a car, rated range, rated lifespan of the battery and the practicality of the model, Driving range distance on a single charge.

Charging Anxiety include How easy it is to charge it, Electric stations, charging stations, Places to charge the car nearby.

Battery Life and Durability Concerns are Battery operation duration, battery life and how well it holds up over time, Availability of maintenance and battery durability/lifetime, charging infrastructure, reliability, maintenance, and overall value for money, My key consideration is battery overheating in the Saudi Arabian weather and maintenance.

# **5.7.2** Importance of Range and Ideal Range (Prospective Users)

Importance: Most stressed that the range on single charge is "Very important" or a "Top priority," especially for longer trips or intercity travel (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 12 (As Per Annexure B), 13 (As per Annexure C) One noted, Range is vital since I want to avoid frequent charging, even on longer trips. Ideally, I want at least 400 - 500 km per charge to feel secure" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 12). Another stated that the Range is one of the most critical factors when considering the purchase of an EV. For short trips 350-400 KM, and for long trips 450-500 KM is suited (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 12 (As Per Annexure )).

**Ideal Range:** The preferred driving ranges per charge varied:

o <200 km: 7.7%

o 200-300 km: 17.9%

o 300-400 km: 25.6%

Others (typically higher, e.g., 500km, 600km, >600km): 48.7% (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 20) Open-ended responses often cited figures like "Ideal range 300 miles (approx. 480 km)," "900 km," "1000 km per charge," "800 km,"



"600km," "Minimum 800Km," and "Range should be 600 km and above" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 12 (As Per Annexure A). Some specified ranges such as "300-400 miles (480-640 km) per charge would be perfect for peace of mind" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 13 (Details in Annexure 1)).

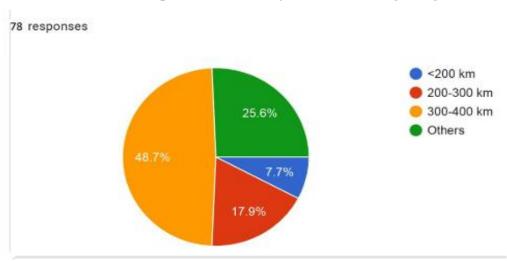


Chart 5.8: Prospective Users' Preferred EV Driving Range

Figure 19 Prospective Users' Preferred EV Driving Range

## **5.8.1** Experience with Range Anxiety (Current BYD Users)

Satisfaction with Range: Thirty percent current users were "Highly satisfied" or "Satisfied" with their BYD vehicle's range covered. One of the users with a hybrid model commented, "Very satisfied - Being a hybrid model, I have absolutely no range anxiety". Another commented, "No, it has been great. I'm not sure real-world conditions are as accurate as claimed range on their advertising, but it is still significantly better than my old car and much more relaxing". However, one noted, "Range is good combined EV and HEV but EV is low accuracy".

#### Frequency of Experiencing Range Anxiety:

• Never: 40%

o Rarely: 40%

Monthly: 20% (BYD Users in Saudi Arabia.pdf, p. 9). This suggests that existing BYD users, many of whom opted for PHEV models, experience range anxiety less frequently. The user who experienced it monthly likely had a full EV or relied more on the EV mode of their PHEV.



The above details is summarized from the detailed analysis attached in Annexure - 1.

Chart 5.9: Frequency of Range Anxiety Experienced by Current BYD Users (Annexure 1 BYD Users in Saudi Arabia.pdf, p. 9)

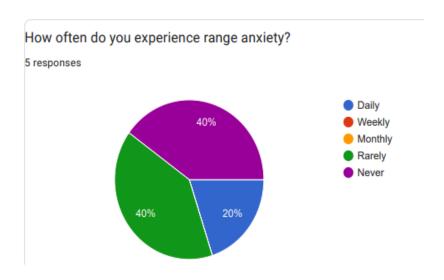


Figure 20 Frequency of Range Anxiety Experienced by Current BYD Users

**5.9.1 Addressing Customer Concerns About Range Anxiety (BYD Showroom Staff)** Staff members employ various strategies. The interaction highlights are as under:

Understanding Usage needed a direct question to a walkin: Do you want it as a second car or as a main car.

Highlighting Infrastructure Development has the following key comment - I mainly explain them the enhancement in the infrastructure in KSA while having chargers everywhere that can be found on maps, in addition to having a charger at home.

**Model-Specific Information:** Depends what is the model EV/PHEV.

**5.9.2** Percentage of Potential Customers Expressing Range Anxiety Concerns (BYD Showroom Staff) Staff estimates varied: "20%," "70%," and "Low". One of the staff members did not provide a numerical answer. The staff may be conservative in their reply. This wide variation suggests that while range anxiety is a known issue, its prominence in customer interactions might differ or be perceived differently by the staff.

#### **5.10 Charging Infrastructure**

The availability of charging infrastructure are intrinsically linked to range anxiety and overall EV adoption.



**5.10.1 Thoughts on Current State of EV Charging Infrastructure in Saudi Arabia** (**Prospective Users**) Prospective users generally perceive the current charging infrastructure as underdeveloped but improving:

The Underdeveloped/Limited charging infrastructure were criticized by most respondents. Top comments highlighted were It is a major factor," "Not good," "very weak, likely not to purchase an ev," "It's not found everywhere yet," "Currently low because Saudi Arabia has not yet built the infrastructure for charging stations across the country and within the cities so in the meantime this is a big factor," Most noted comments include "Still in start-up stage," "I have seen only one charge station and don't have good knowledge on how EV charging systems work," "Still limited compared to Europe, For example," "Weak," "Poor.. it would surely influence my decision," "Underdeveloped. "There are no charging stations across the city, it's a big problem" (Annexure Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 14, 15, 16) (As per Annexure D,E,F).

The opinion of the target universe points out that it is expanding, and more effort should be made to increase the charging infrastructure to allow more consumers to purchase electric vehicles, EV charging infrastructure is booming KSA with having Aramco leading this, th charging ecosystem is getting better in Saudi, but it's not everywhere yet, EV charging stations are becoming more accessible, but are still limited. It has a positive influence on my decision, The government is investing heavily, planning for 5,000 fast chargers by 2030 (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 14, 15) (As per Annexure D,E of Appendix 1).

Influence on Purchase Decision was high on charging infrastructure. Most respondents stated charging infrastructure would heavily influence their decision, with some saying it's a "major factor" or a "reason of hesitation" (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 14) (As Per Appendix 1 Annexure D). One person commented that this would make me hesitant to purchase an EV unless home charging solutions are reliable and widely available (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 15) (As Per Annexure E Appendix 1).

**5.10.2** Importance of Charging Station Availability When Considering an EV Purchase (**Prospective Users**) On a scale of 1 (Not at all important) to 5 (Very important):

72.5% rated 5 - Very important, 15% rated 4 and 12.5% rated 3 (Appendix 1 Prospective BYD Users in Saudi Arabia With Chart\_updated.pdf, p. 19) Rating scale being one as lowest



and 5 as highest. This clearly indicates that the availability of charging stations is a critical factor for potential EV buyers.

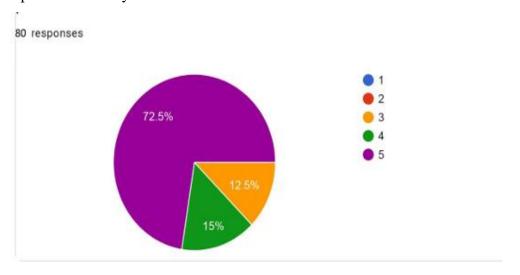


Figure 21 Importance of Charging Station Availability

Chart 5.11: Importance of Charging Station Availability (Prospective Users) (A pie chart showing these ratings.) Rating scale being one as lowest and 5 as highest. (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 19)

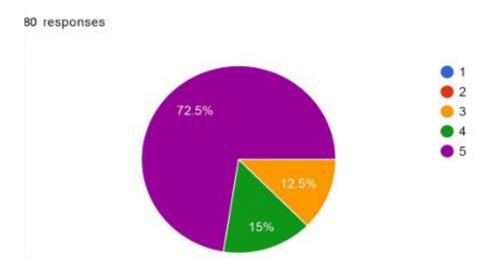


Figure 22 Importance of Charging Station Availability

**5.11.1** Convenience of Finding and Using Charging Stations (Current BYD Users) Experiences is depending on location and the vehicle type (PHEV vs. BEV):

The remote regions like Jeddah (Makkah Region) were different from those in Riyadh. Users from Jeddah region described the network of free stations as hit and miss, with some in busy



workshops or requiring users to bring their own cables. One user also pointed out issues with installing home chargers when renting. This user planned to get the free home installation offered with the car.

The Challenges in Eastern Province respondents also came back with infrastructure issues. One person stated that no charging infrastructure is present in Eastern Province. That's why a plugin hybrid was an obvious choice for me. Another person from Khobar region mentioned anxiety due to lack of stations, stating, the first fear is not to have a charging station where some are available to serve the purpose but still not confident on the full electric cars.

On a scale of 1 (Very Inconvenient) to 5 (Very Convenient) for charging station availability as detailed in Appendix 1:

- 80% rated it 1 (Very Inconvenient)
- 20% rated it 2 (BYD Users in Saudi Arabia.pdf, p. 8) This indicates a high level of inconvenience perceived by current users.

Chart 5.12: Convenience of Charging Station Availability (Current BYD Users) (*A pie chart showing these ratings here.*) (Appendix 1 BYD Users in Saudi Arabia.pdf, p. 8) Rating scale being one as lowest and 5 as highest.

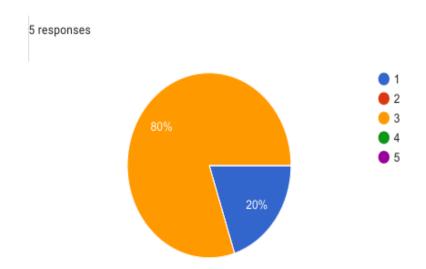


Figure 23 Convenience of Charging Station Availability

**5.12.1 Handling Customer Inquiries About Charging (BYD Showroom Staff)** Staff provided following information during interview:



Resources mentioned: Yes Saudi EVIQ and just a simple search in google, with the Saudi electricity company.

I advised them directly on the process they can find the stations or how they can install the chargers in the home. Partnerships for home charging: Showroom Staff affirmed they have resources or partnerships, with one mentioning "EVIQ" and another "Saudi electricity company". he stated, "There are many companies working to build a charger station". Future is bright.

#### 5.13 BYD vs. Tesla and Other Competitors

Understanding how consumers and staff perceive BYD in relation to its main competitor, Tesla, and the broader market is key.

## 5.13.1 How Prospective Users Perceive BYD Compared to Tesla and Other EV Brands

Tesla's has a strong footprint and is seen as an established product with superior technology and brand reputation. "I think Tesla is better than BYD because it's been developing EVs for a long time. Tesla seems to have a more sophisticated technology than BYD" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17) (As Per Appendix 1 Annexure G). "Tesla is a household name that is a pioneer in electric vehicles" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 18)(As Per Appendix 1 Annexure H). "Tesla cars have a far better reputation in the market" (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17) (As Per Appendix 1 Annexure G). "With Tesla being older in the market is an advantage" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 18) (As Per Appendix 1 Annexure H).

BYD also has a range of Potential Strengths/Differentiation. Affordability, battery technology, and practicality were noted. "BYD is expanding and growing and it may become the best electric vehicle in the market. The power and design are the key factors that would influence my choice for purchase" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17) (As Per Appendix 1 Annexure G). "I would consider that BYD and Tesla are on the same level, but I would consider having BYD for the following reasons: Better interior finish, Better batteries quality" (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17) (As Per Annexure G). "BYD has blade battery, more budget friendly" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 18) (As Per Appendix 1 Annexure H). "BYD seems more affordable and practical, while Tesla stands out



for its tech and performance" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17) (As Per Appendix 1 Annexure G). "Actually comparing both BYD making significant improvements in quality and affordability" (Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 18) (As Per Appendix 1 Annexure H). "BYD is very practical, while Tesla excels in technology, performance, and charging" (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 19).

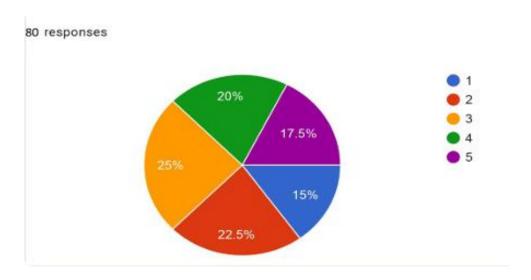


Figure 24 BYD's Potential Strengths/Differentiation

There are multiple factors Influencing Choice for purchasing EV. These include Cost, charging network, reliability, service, brand reputation, features, and personal priorities (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17, 18) (As Per Appendix 1 Annexure 1 C). One user mentioned, "BYD being a Chinese origin might be an economic option at inception but US based Tesla might have an advantage on scrap value" (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17) (As Per Annexure G). Another said, "BYD is an unknown brand to me, but spare parts and its longevity are a big worry" (Appendix 1 Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 19).

#### **5.13.2** How Current BYD Users Compare BYD to Other EVs (Including Tesla)

## **BYD Strengths:**

**Interiors:** BYD has far better interiors than Tesla.

**Hybrid Option:** MY BYD Song plus is a hybrid which Tesla does not offer. This was a significant advantage for one user.



**CEO Perception:** It was commented that BYD does not have a toxic CEO like Tesla. This element is Subjective but reflects on brand image for some..

**Brand Trust** (**Long-term Awareness**): one evidence in support of BYD is by an existing user's comment - I have known BYD for over 10 years Warren Buffet investing in them was one of the best signs of quality that I could have thought of so I trusted them. Annexure D **Suitability for Climate** (**PHEV advantage**): It was also commented that Tesla isn't really an option because of the current battery and heat issues. PHEVs are easily the best choice for bridging the gap.

**Better Value Proposition than Toyota Hybrids:** One user compared BYD favorably to Toyota hybrids available in the kingdom due to the Toyota's higher prices and "rubbish options".

## BYD Weaknesses/Areas for Improvement (from a user perspective):

The Mark-up on imported vehicles from China is considered as a weakness. The desire to own the latest generation models is an area of improvement as clients feel that they are not launched in Saudi. BYD's uncertainty about the aftersales service as the user hadn't experienced it yet. 'No leather' interior which is not preferred by one user. Limited AI capabilities, though acknowledging potential future updates, was pointed out by a respondent. It was also commented that the soft suspension gives a "boaty" feeling. Respondents felt that the steering wheel with a slight "dead zone". Cruise control limited to just 120 km/h was seen as a limitation. Customers wish BYD hybrids had faster chargers. One used even said that only granny charger provided, no Type 2 to Type 2 cable. (Appendix 1)

# **5.13.3 Showroom Staff Positioning of BYD Against Tesla and Competitors** Staff emphasized:

The Competition Level is still not yet properly defined. Tesla was often not perceived as direct competition due to its focus on a more premium segment: "Tesla is not here Lucid is more into primer customers so no competition" (referring to Lucid and premium customers).

The Price, Features, Target Market for BYD is defined by its positioning. BYD positioned as more experienced in electronics (supplying batteries to Tesla), offering far better prices, and much more reliable and affordable.

The Rating of Competitiveness (vs. Tesla - Scale 1-5) provides a clear picture on its competitive positioning. The responses were split: 33.3% rated 1, 33.3% rated 3, and 33.3% rated 5. This



inhibits a lack of consensus among staff on how competitive BYD currently is against Tesla in terms of features, price, and perceived quality.

Chart 5.14 exhibits the: Showroom Staff Rating of BYD's Competitiveness vs. Tesla (Appendix 1 BYD Showroom Staff in Saudi Arabia\_with charts.pdf, p. 9) Raing being 1 is the least and 5 is the highest.

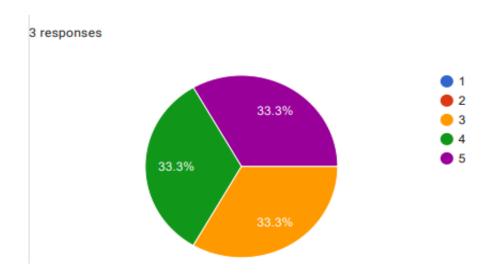


Figure 25 Showroom Staff Rating of BYD's Competitiveness vs. Tesla

## **5.15 Marketing and Sales Efforts**

**5.15.1 Effectiveness of BYD's Current Marketing (Showroom Staff)** Measured on a scale of 1 (Very Ineffective) to 5 (Very Effective):

- 50% rated 3
- 25% rated 4
- 25% rated 5 (BYD Showroom Staff in Saudi Arabia\_with charts.pdf, p. 8) This suggests staff generally view current marketing as moderately to very effective.



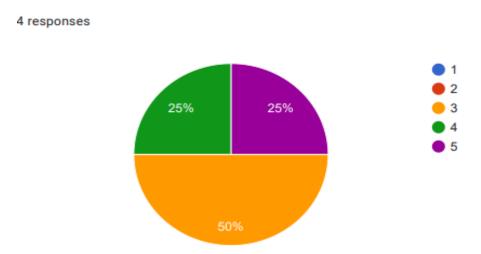


Figure 26 Effectiveness of BYD's Current Marketing

Rating being 1 is the least and 5 is the highest.

(Detailed analysis in Appendix 1.

Chart 5.16 shows the Showroom Staff Rating of BYD's Marketing Effectiveness. (Appendix 1 BYD Showroom Staff in Saudi Arabia\_with charts.pdf, p. 8) Rating being 1 is the least and 5 is the highest.

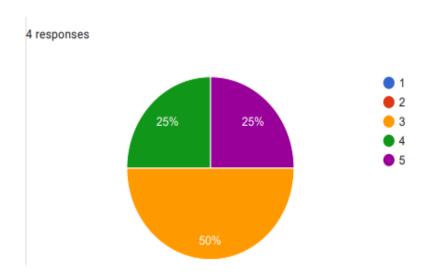


Figure 27 Showroom Staff Rating of BYD's Marketing Effectiveness

5.16.1 Suggestions for Improving Sales and Marketing Efforts as recorded from the Showroom Staff interviews



The Customer Experience and Community Building holds the key. Building a community, Better Customer Experience. . Awareness campaigns are the key to success. We might need to invest in customers and community members for more engagement.

The Product and Pricing needs to align with its positioning. BYD should launch more models at a reduced price with certain desired specifications.

There is a need for awareness and PR. BYD should generate more brand awareness and remove the misconceptions about EV cars. Need more public acceptance through Klo and aggressive PR marketing. They are moving in the correct direction and also they should pick the correct vloggers which will increase the number of customers walking to the showroom. (Appendix 1 Annexure 6)

BYD need to get into Infrastructure Collaboration. Start a plan to cooperate with government authorities to expand the infrastructure facility.

The Showroom Expansion is required to cater to larger target market and serve present users better. BYD Needs to open more showrooms to be close to customers" in other cities too. "To open another branch in a certain area where a lot of people can see the car and discover the product itself. These can be in Jeddah, Dammam and other key cities.

The range of Financial Solutions need to be enhanced. We can do the target with more offers and finance options to ease purchase.

#### **5.17 Key Selling Points Emphasized by Staff at** Showroom focus on are as below:

Technology and Efficiency is the primary USP. The technology of reducing the consumption of the battery and majority of the clients looks for this.

The Quality, Service, and Spare Parts can be a selling point. Quality and availability for service and spare parts. The car is cost effective and is a key USP for sales. BYD is "Economic car and low expense compared to ICE car or conventional cars. The Range and Battery can be a selling point for BYD. Range the plate battery and the service packages we have referring to Blade Battery advantage (Appendix 1).

#### 5.18 Overall Satisfaction and Performance

**5.18.1 Overall Performance Satisfaction (Current BYD Users)** On a scale of 1 (Very Dissatisfied) to 5 (Very Satisfied):

• 60% rated 5 - Very Satisfied



• 40% rated 4 - Satisfied (Appendix 1 BYD Users in Saudi Arabia.pdf, p. 8) This indicates high overall satisfaction among current users who responded.

**Chart 5.19: Overall Performance Satisfaction of Current BYD Users** (BYD Users in Saudi Arabia.pdf, p. 8)

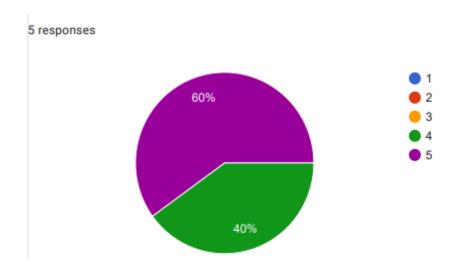


Figure 28 Overall Performance Satisfaction of Current BYD Users

**5.19.1 Customer Satisfaction Post-Purchase (Showroom Staff Feedback)** The staff reported positive feedback:

After two days when I go back to the customer and ask for feedback for their experience. Revive positive feedback - Very satisfied. Annexure.

**5.20** Most Popular BYD Models (Showroom Staff) according to the four staff members, "Song" was the most popular model (75% of responses), with "Song plus" also mentioned (25%). This aligns with a current user owning a Song Plus and are praising its hybrid feature (Appendix 1).

**5.21** Government Incentives Showroom staff had mixed awareness or perspectives on government incentives for EV purchases, with some stating "No government help" or "No government support," while others mentioned initiatives like "Green Riyadh, 2030" and the general sentiment that "Any support from government is matter". This indicates a potential lack of clear and direct financial incentives perceived at the point of sale by some staff, or that existing incentives are not consistently highlighted (Appendix 1).



#### **5.22 Synthesis of Data Analysis**

The primary data provides a complex but promising landscape for BYD in Saudi Arabia.

Range Anxiety is the key factor. This factor remains a major concern for most prospective buyers, who desire long ranges (often 400-600 km+). This highlights PHEVs as a transitional technology for the Saudi market. Staff address range anxiety by discussing ongoing infrastructure improvements and understanding usage need. Current BYD users, many of whom decided to choose PHEVs, experience less anxiety. The varied staff estimates on how many customers express this concern suggest a requirement for a more unified approach to addressing it (Appendix 1).

The prospective and current users perceive the charging infrastructure as a significant barrier, rating its convenience as very low. There is an acknowledgment of ongoing improvements and government initiatives, the current state influences purchase decisions and causes inconvenience for EV owners. The home charging setup and information about public charging availability (including partnerships) are critical. Staff awareness of charging solutions and partnerships also to need further reinforcement (Appendix 1).

Tesla has set a benchmark for its technology and superior brand reputation. Prospective users very often compare BYD against this benchmark. Current users value these features. However, showroom staff showed divided opinions on BYD's direct competitiveness with Tesla, possibly reflecting market segmentation or Tesla's limited official presence at the time of this survey. BYD's strengths are seen in affordability and potentially better interiors. Also its PHEV offerings, which Tesla lacks.

Digital channels are proven to be key for initial awareness. Showroom Staff also suggest that improving customer experience, targeted KOL marketing, building a community, and expanding physical presence are important. Highlighting technology, economy, and service availability are present sales tactics.

There is a large segment of the prospective buyers who are either unaware of BYD or have reservations, primarily concerning quality linked to its Present users, particularly those with PHEV models, report high levels of satisfaction. A key challenge for BYD is to bridge the information gap and build trust, converting the neutral or hesitant prospects. The brand's association with quality components as an OME for supplying batteries to Tesla is a strong but perhaps underutilized selling point.



The survey underscores that BYD has strong products, particularly its PHEVs and battery, lots of effort is needed in brand building, mitigating range concerns through education and collaboration. Refining its marketing and sales strategies to align with the specific dynamics of the Saudi market is essential. The positive experiences of existing users can be a powerful tool if it is leveraged effectively (Appendix 1).

## Part 5: Findings, Conclusion and Recommendation

This research targeted to understand how BYD can enhance its market share in the Kingdom of Saudi Arabia by overcoming challenges related to consumer acceptance, range anxiety, and charging points, particularly in view of Tesla's strong market position. The study utilized a mixed-methods approach, integrating survey data from prospective EV buyers, existing BYD users, and showroom staff, alongside existing literature. The research identified critical insights across three core areas:

Consumer Acceptance: The perceptions of BYD among prospective EV buyers in Saudi Arabia are varied. Some acknowledge its technological strengths, especially in the battery technology, and its value proposition like affordability, good range, a sizable segment remains unaware with the brand or expresses reservations about vehicle quality and durability. Concerns are often linked to its Chinese origin. BYD's brand recognition is still in its nascent stage, with initial awareness primarily driven by online advertisements and social media. Besides quality perceptions, prospective buyers' main hesitations regarding BYD include after-sales service, the availability and cost of spare parts, and concerns about resale value, indicating a need for greater assurance from the brand. Tesla is generally perceived as an established and technologically advanced pioneer in the EV sector. Despite these challenges, existing BYD users, primarily those having PHEV models, report high level of satisfaction with their vehicles' performance, comfort, and fuel efficiency, forming a positive foundation for brand trust. The showroom staff also identified negative perceptions of Chinese brands as a primary sales hurdle and noted that customers are attracted to BYD's pricing, quality, and technology (Authors Analysis).

Range Anxiety: This is a major concern for a large proportion of potential EV buyers in Saudi Arabia. The desired driving range is often high (400-600km or more), reflecting the country's geography and travel patterns. The current BYD users, many of whom own PHEV models, report experiencing range anxiety infrequently. Battery lifespan and performance in the Saudi climate are also important considerations. This highlights the strategic importance of the



PHEVs as a transitional technology in mitigating range concerns. Although some PHEV users did note discrepancies in EV mode range display. BYD showroom staff attempt to counter the range anxiety by emphasizing on improving charging infrastructure and by understanding individual customer usage patterns (Authors Analysis).

Charging Infrastructure: Both prospective and current EV users perceive the current EV charging infrastructure in Saudi as grossly underdeveloped and a key barrier to EV adoption. The perceived lack of convenient charging options significantly influences EV purchase decisions and causes hesitation. The availability of charging stations is considered "very important" by most of the prospective buyers, and current users find the convenience of public charging to be very low. Customer awareness of BYD's specific charging solutions or partnerships is analyzed as low, according to showroom staff, despite efforts to direct customers to resources like EVIQ and mention home charging installation. The overall perception is that major development is still needed in this area, with a clear preference for reliable home charging solutions (Authors Analysis).

In conclusion, BYD has a sizable opportunity in the emerging Saudi EV market. The success will largely depend on a thorough understanding of local consumer needs and concerns, a strategic approach to brand building, proactive engagement with infrastructure development, and the effective communication of its unique value proposition.

#### 5.1 Recommendations to BYD

The recommendation is based on the author's analysis derived from the above research. As analyzed above BYD can enhance its market share in the Kingdom of Saudi Arabia by strategically addressing consumer acceptance, range anxiety, and charging infrastructure challenges posed by Tesla's benchmark. The recommendations below, derived from the thesis data and conclusions, outline actionable steps to align BYD's Saudi Arabian market share with its global standards.

#### **5.1.1** Enhancing Consumer Acceptance and Brand Trust

#### Recommendation 1: Launch a Targeted "Trust and Technology" Marketing Campaign.

This campaign can be targeted to directly counter quality concerns linked to "Made in China" and build brand credibility. BYD should showcase its global leadership, international awards, and stringent quality control, highlighting its position as a leading global technology company.



Leveraging local Arabic testimonials and influencers by highlighting satisfied owners and partnering with credible journalists can further boost trust. It's important to spotlight the Blade Battery through the right kind of content, detailing its safety, durability, and resilience in hot climates. Providing transparency in sourcing and manufacturing and the technological advantages will also reinforce quality perception.

Recommendation 2: Strengthen and Promote After-Sales Service and Spare Parts Availability. To address concerns about maintenance costs and vehicle downtime, BYD needs to expand its network of authorized service centers, potentially through partnerships if direct expansion is not working. Introducing competitive after sales service packages and comprehensive warranties, particularly for critical EV components, can build customer confidence. Investing in logistics is essential to ensure timely availability of common spare parts across the Kingdom, with clear communication on sourcing and delivery. Investing in technician training and certification to ensure EV and BYD-specific diagnostics expertise and considering mobile service units for minor repairs in key urban areas, will enhance support.

Recommendation 3: Enhance the Showroom and Test Drive Experience. The goal is to create a premium and engaging customer experience. Showrooms should be designed as experiential centres for interactive learning about EV technology and BYD innovations. Offering extended and diverse test drives, including both PHEVs and BEVs, allows potential buyers to experience vehicles in varied driving conditions. Proactively addressing resale value concerns by presenting data from different established markets or offering future buy-back/certified pre-owned programs is also important.

## **5.1.2** Mitigating Range Anxiety

Recommendation 4: Promote PHEV Models and Clearly Segment BEV Offerings. This provides an immediate solution for range-conscious consumers while building confidence in the full EV adoption. BYD should promote the PHEV models like the Song Plus through high decibel campaigns as a solution for Saudi families and car users in general. Transparent range communication is very important, providing WLTP ratings alongside realistic, Saudi-specific estimates that account for factors like AC usage in extreme heat. Developing an online tool to estimate range based on driving patterns and addressing reported inaccuracies in EV range display are also vital. For BEV models, targeted marketing should focus on segments whose driving habits are mostly urban and is align with current BEV ranges and charging availability.



Recommendation 5: Educate Consumers on EV Ownership and good Smart Charging Habits. Educating users with knowledge can reduce the perceived range limitations and concerns. BYD should develop professional educational resources (videos, workshops etc) on areas like maximizing EV range, understanding the battery health, charger types, and planning for long-distance tours on EV. Promoting the benefits of home charging, including convenience and cost-effectiveness, and ensuring easy access to installation information besides tariff

benefits is crucial. Installing in-car trip planning tools that map routes with charging stops and

#### **5.1.3** Addressing Charging Infrastructure Challenges

display the real-time charger availability will further reduce the anxiety.

## **Recommendation 6: Participate and Advocate for Charging Infrastructure Development**.

This would exhibit the commitment to the Saudi EV ecosystem and can directly improve charging accessibility. Developing a "BYD Destination Charging" program with shopping malls, hotels and other retail locations for Level 2 chargers will enhance convenience. BYD should forge and deepen strategic partnerships with EVIQ, the Saudi Electricity Company, and other private charging network operators to install BYD-compatible fast chargers at key locations. Offering a tailored fleet charging solutions and advocating for standardization of the connectors, payment wallet systems, and proper signage will improve the overall user experience.

Recommendation 7: Enhance Information and Support for Charging. In order to make finding and using the chargers easier, the BYD Connect App should provide comprehensive and real-time information on the public charger locations (both BYD-partnered or third-party), availability, speed, and cost, enabling the trip planning and payment system easy. Also, all showroom and service staff must be thoroughly knowledgeable about BYD's charging solutions and public options to confidently assist customers. Providing a dedicated customer support channel for any charging-related queries is essential.

#### **5.1.4** Pricing and Product Strategy

Recommendation 8: Maintain Competitive Pricing While Emphasizing Value and Technology. To attract price-sensitive consumers without compromising quality perception, BYD should position models as offering significantly superior value by highlighting technology, features, range, and safety at the given price point. Collaborating with local



financial institutions to offer attractive financing options, loans and mortgages will also increase accessibility. Continuing to offer a diverse line-up catering to various segments, from entry-level to more premium models, is important.

#### 5.1.5 Monitoring and Adaptation

**Recommendation 9**: Establish a Robust and dynamic Market Monitoring and Feedback System. This recommendation is to ensure continuous tracking of market dynamics, consumer preferences, and competitive actions for agile strategy adaptation. Implementing a system for regularly collecting and analyzing the dealer feedback from showroom staff and service centers is important. Continuous competitive intelligence—products, pricing and monitoring rivals' strategies, will enable responsive actionable. Engaging with online communities will generate vital insights into their sentiment. BYD should conduct regular consumer surveys to track brand perception besides emerging needs.

By strategically implementing these recommendations, BYD can effectively address the main challenges identified in this research thesis, building a strong brand reputation, gaining consumer confidence, addressing EV ownership anxieties, and as a result achieving a significant market share in Saudi Arabia that reflects its global leadership in the electric vehicle industry thus fulfilling the aim and objective of this thesis.

#### **5.1.6** Limitations of the Study

This research is subject to certain limitations that is acknowledged. These limitations may influence the scope of the findings:

As BYD is a new entrant to the Saudi Arabian market, the availability of historical sales data specific to BYD in this region might be limited. There are no known research on similar topic. This could impact the depth of analysis.

Market dynamics in rapidly evolving sectors like EV, are subject to change. The data collected reflects the market conditions at the time of the study. The future developments in government policies, technology, infrastructure expansion, or competitive strategies could change the ecosystem and may not be fully captured by this research.



This study is focused exclusively on the Saudi Arabian market. This provides in-depth insights into a specific emerging EV market. The findings may not be directly applicable to other countries with different economic, cultural, regulatory, and infrastructural landscapes.

Also, consumer acceptance data sometimes depend on stated preferences through surveys or interviews and the actual behavior can sometimes differ from stated remarks due to external factors like unforeseen market shifts, or personal circumstances.

Al Futtaim electric mobility was cooperative with the author to the extent possible. However, access to proprietary sales figures, financial data from BYD within Saudi Arabia was restricted due to competitive reasons.

#### 5.1.7 Future Research

Several avenues for future research emerge to further deepen the understanding of the EV market in Saudi Arabia and BYD's strategic positioning:

Future researchers can conduct a Longitudinal Study of BYD's Market Performance as a follow-up to the study in 2 to 5 years for assess the long-term impact of BYD's strategic implementations on its market share, brand perception, and consumer loyalty in Saudi Arabia. This would provide valuable insights into the effectiveness of the proposed strategies over time.

A detailed Comparative Analysis of After-Sales Service and Customer Experience in EV segment with a detailed study comparing the after-sales service quality, spare parts availability, and customer experience of BYD versus and other competition in EV segment in Saudi Arabia. This is to find out the impact of long-term consumer acceptance and customer retention.

A Consumer Segmentation and Market Opportunities to conduct a more granular segmentation of Saudi consumers based on psychographics, lifestyle, and specific needs to identify market opportunities for BYD beyond direct competition with Tesla or any other emerging challanges.

The study on impact of Government Policies and Incentives to Investigate the specific impact of evolving Saudi Arabian government policies, subsidies, tax breaks, charging infrastructure development plans besides regulatory frameworks on EV adoption rates and competitive dynamics between BYD and Tesla can reveal more details.



The study of psychological drivers of Range Anxiety can be done to analyze a more in-depth qualitative study using focus groups to find out a the deeper psychological drivers behind range anxiety among Saudi Arabian consumers



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# Appendix 1

Analysis of survey data

- Prospective BYD Users in Saudi Arabia\_With Chart https://drive.google.com/file/d/11qPVg5f6g5VPtGE\_bxLbE8Wpidlikszj/view?usp=sh
   aring
- 2. BYD Showroom Staff in Saudi Arabia\_with charts 
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- 3. BYD Users in Saudi Arabia –

  <a href="https://drive.google.com/file/d/1k0Q6hVoHSFH7K12t4H-C4hV7DPks3j5r/view?usp=sharing">https://drive.google.com/file/d/1k0Q6hVoHSFH7K12t4H-C4hV7DPks3j5r/view?usp=sharing</a>
- 4. Interview transcripts and forms
  - a. BYD Showroom Staff in Saudi Arabia https://docs.google.com/forms/d/e/1FAIpQLSf8DJhF\_DVGrdyaNeeVIP7INhl0A
     <u>LU-</u>
     aaEhl7\_fgSUzecdryA/viewform?usp=sharing&ouid=109195411311415987508
  - b. Prospective BYD Users in Saudi Arabia https://docs.google.com/forms/d/e/1FAIpQLSeh2y1ArQeHH8ewZ8uQRsD\_JKm B4PmRx5xiIkMqsddYkqED5g/viewform?usp=sharing&ouid=109195411311415 987508
  - c. BYD Users in Saudi Arabia https://docs.google.com/forms/d/e/1FAIpQLScbawkDJsF5wqRhTasfFmOEjVOX 7jOuqdiNV9fNIYPGMGc1CA/viewform?usp=sharing&ouid=109195411311415 987508
- Annexure A Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf,
- Annexure B Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 12
- Annexure C Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 13
- Annexure D Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 14
- Annexure E Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 15
- Annexure F Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 16
- Annexure G Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 17



- Annexure H Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 18
- Annexure I Prospective BYD Users in Saudi Arabia\_With Chart\_updated.pdf, p. 20

## Questionnaire in PDF -

BYD Showroom Staff in Saudi Arabia https://drive.google.com/file/d/1kESmLpimeYHB05JPyTsSPhremmL15vqc/view?usp
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BYD Users in Saudi Arabia https://drive.google.com/file/d/15JoFljnlOVAbf5cLmas66M HLYZot4Pl/view?usp=sharing

3. Prospective BYD Users in Saudi Arabia - <a href="https://drive.google.com/file/d/1Y0Bbnyw15ePT11wXuF7AzzUdT8VoxyII/view?usp">https://drive.google.com/file/d/1Y0Bbnyw15ePT11wXuF7AzzUdT8VoxyII/view?usp</a> = sharing

# Appendix 2

Table 3: Competitive landscape of EVs in Saudi Arabia



#### Saudi Arabia Electric Vehicle Market

## By Vehicle Type

- Electric Cars
- · Two Wheelers
- Trucks
  - LCV (Up to 4 Tons)
  - MHCV (4 to 8 Tons)
  - HCV (Above 8 Tons)
- Buses

## By Power Source

- Battery Electric Vehicle (BEV)
- Plug-In Hybrid Electric Vehicle (PHEV)
- Hybrid Electric Vehicle (HEV)

## By Battery Type

- Lithium-Ion
- Lithium-Titanate
  Oxide (LTO)

#### By Region

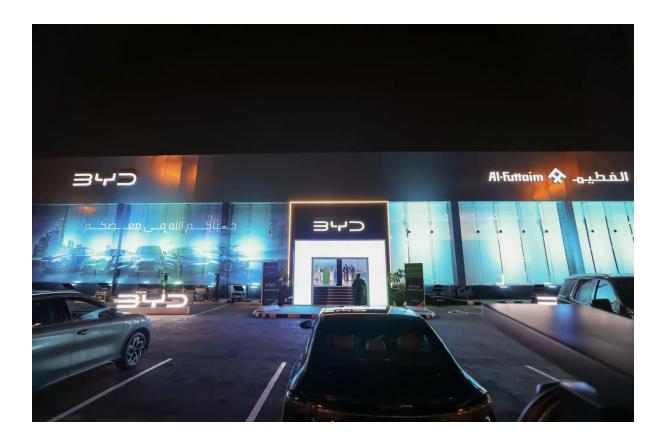
- Central
- East
- West
- South

#### By Competitors

- Chevrolet
- Renault Group
- BMW AG
- Canoo Inc. (GOEV)
- Lucid Group
- Nissan Motor Corporation
- Ford Motor Company
- Porsche Middle East &
  - Africa
- Toyota Motor Corporation
- Tacita
- Tajeer Group (MG Motor
- n Group)
- Electromin
- Caterpillar
- Other



Appendix 3 - BYD Showroom









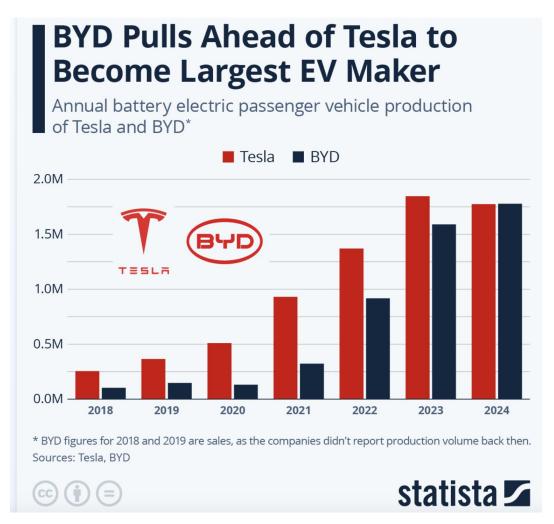


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Appendix 4 - Tesla vs BYD and other EV players

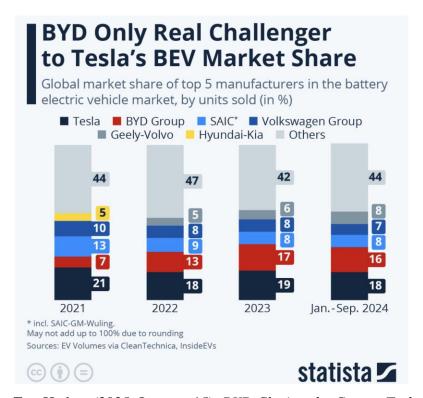


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BYD vs. Tesla: Detailed Comparison		
Feature	BYD	Tesla
Price	Lower, more budget-friendly	Higher, premium pricing
Range	Up to 420 km	Up to 570 km
Charging	Standard and public charger compatible	Tesla Supercharger Network
Technology	Ample tech, no full autonomy	Autopilot and advanced autonomy
Build Quality	Consistent, well-crafted	High-quality, some occasional issues
Interior Design	Comfortable, feature-packed	Sleek, minimalist
Performance	Good for city and commuting	Unmatched acceleration
Reputation	Emerging, fast-growing	Established, tech-forward brand



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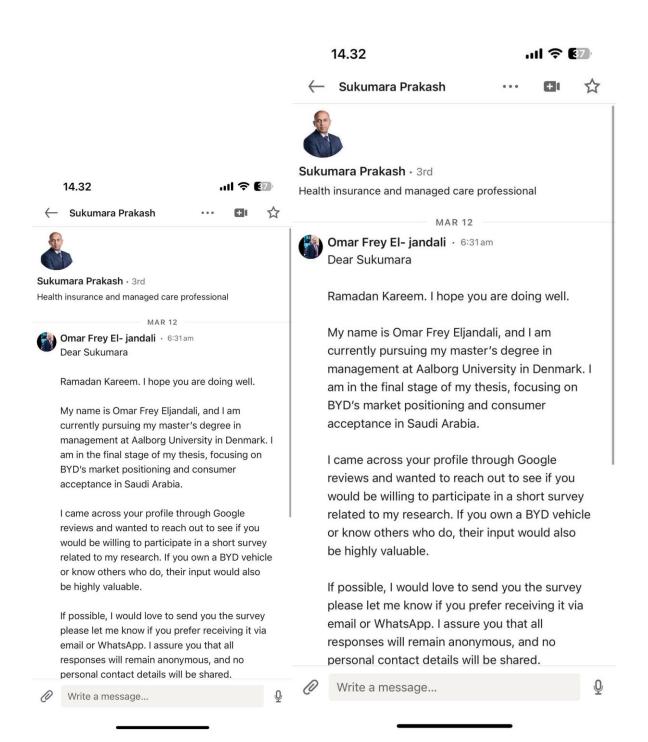


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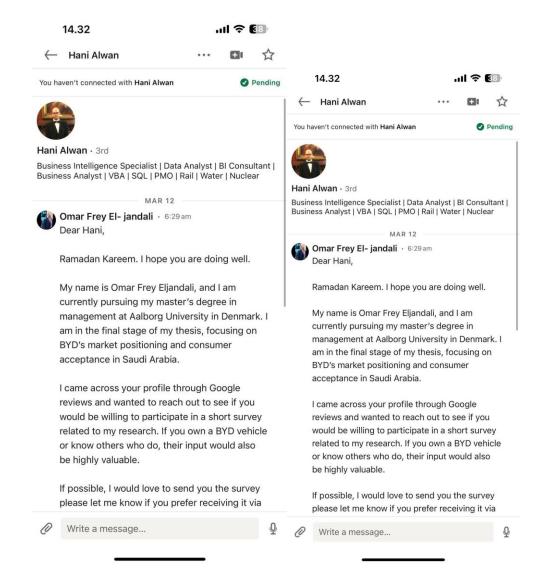


# Appendix 5:

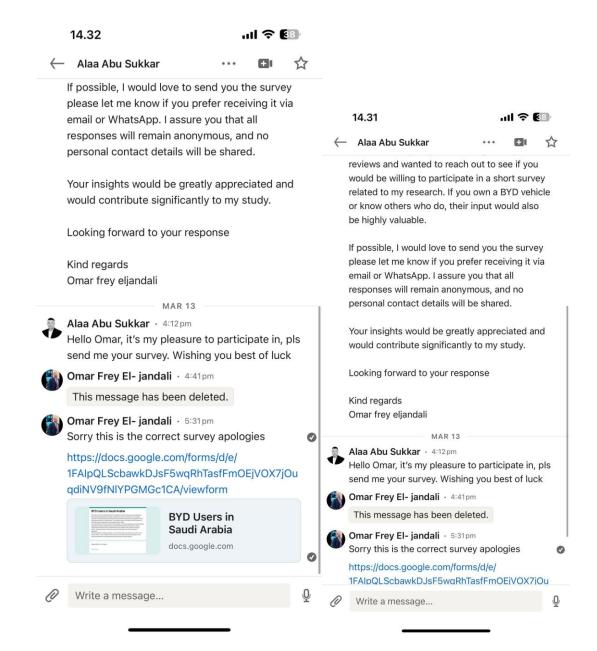
Social media response samples - Linkedin



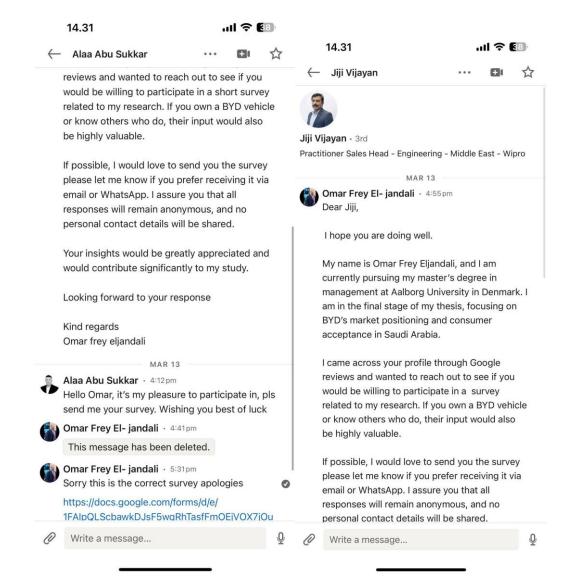




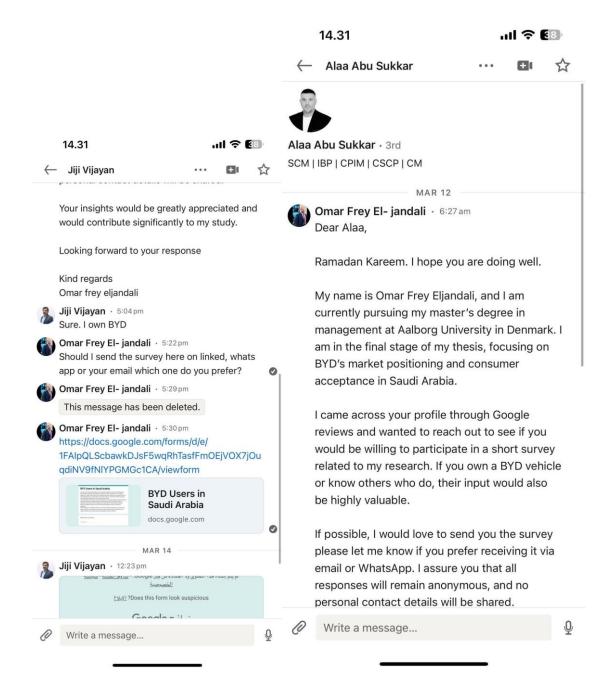




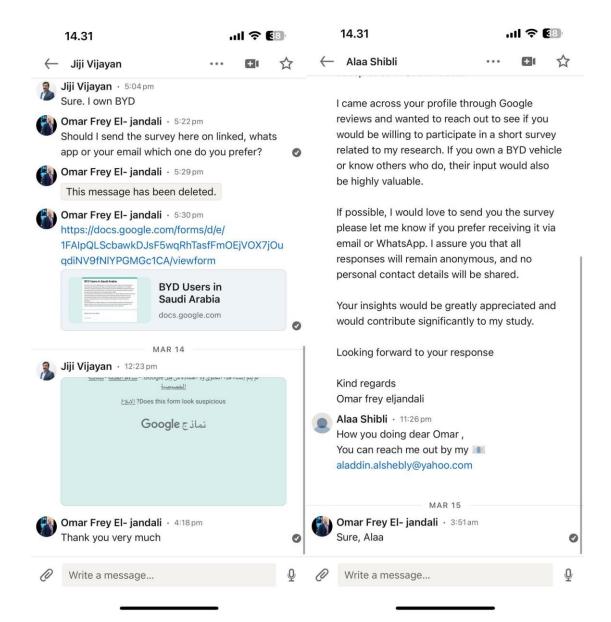




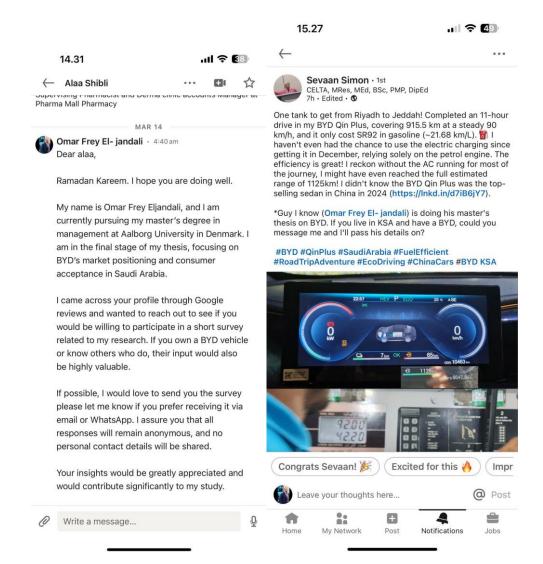




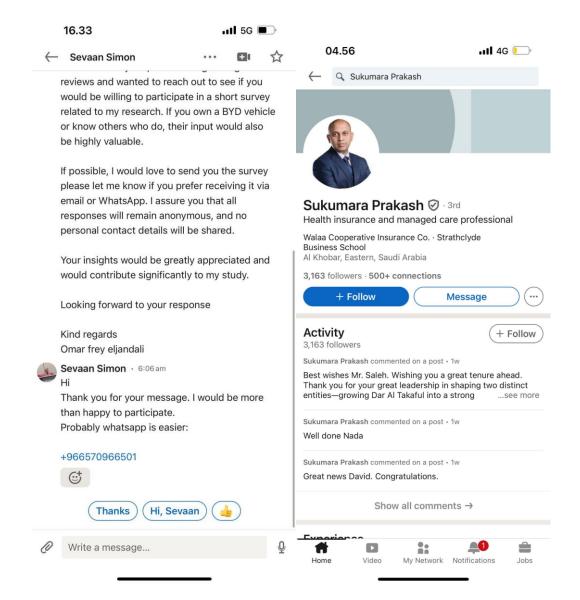




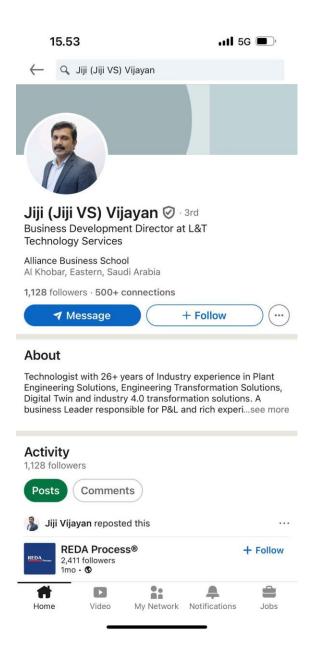












## Social media interaction samples Instagram

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