

Chapter 7

The Evolution of Electric Vehicle Market Dynamics

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ABSTRACT

The global EV market is rapidly expanding due to technological advancements, environmental concerns, and changing consumer preferences. This chapter examines consumer behavior, focusing on factors like environmental awareness, economic considerations, and technological affinity. Consumers prioritize sustainability, with economic factors like cost, government incentives, and fuel savings driving EV adoption. Technological advancements enhance battery efficiency and charging infrastructure. The chapter explores demographic differences in EV adoption, highlighting younger, tech-savvy consumers, and urban dwellers' higher adoption rates, while also examining the impact of social norms and peer behavior. The chapter explores marketing strategies for the EV market, focusing on environmental ben-

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efits, cost savings, and digital platforms, while also discussing future challenges and opportunities.

INTRODUCTION

The global automobile sector is witnessing a transition as electric cars (EVs) gain popularity. This chapter investigates consumer behavior in this industry, highlighting issues that influence purchase decisions and the ramifications for stakeholders. Understanding customer preferences becomes increasingly important as EV technology progresses and environmental concerns rise. The electric vehicle (EV) market has altered the automobile industry, moving from niche goods to popular alternatives as a result of technology breakthroughs, environmental concerns, and regulatory actions. This section summarizes significant trends, growth drivers, and future prospects in the EV industry (Mahiban & Emimal, 2023).

The worldwide electric vehicle (EV) market has grown significantly, with millions of vehicles sold annually. This rise is likely to continue as a result of government legislation, lower battery costs, and growing charging infrastructure, which will accelerate the market's trajectory. Advances in battery technology, electric drivetrains, and vehicle networking have increased electric cars' performance, range, and price. Lithium-ion battery chemistry and manufacturing economics have cut costs, allowing EVs to compete with conventional automobiles. Autonomous driving and V2G technologies are also revolutionizing transportation and energy (Secinaro et al., 2022).

The need to cut greenhouse gas emissions and battle climate change has accelerated the adoption of electric vehicles (EVs) as a sustainable transportation alternative. With an increasing awareness of the environmental consequences of fossil fuel burning, consumers, corporations, and governments are turning to electric vehicles (EVs) as a cleaner way to become carbon neutral. Government assistance and regulatory regulations are critical in promoting electric car adoption. Countries provide incentives such as tax credits, refunds, and subsidies, while strict pollution rules and car electrification objectives hasten the shift away from internal combustion engines. These initiatives promote EV uptake and investment in sustainable transportation infrastructure (Hossain et al., 2022).

The electric vehicle (EV) industry is highly competitive, with major automakers, technology firms, and startups all fighting for market dominance. Traditional manufacturers are launching a variety of electric models, while new entrants are introducing fresh business structures and cutting-edge technologies (Muratori et al., 2021). This competitive environment encourages ongoing improvements in EV performance, price, and user experience. The electric car industry is expanding rapidly due to

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