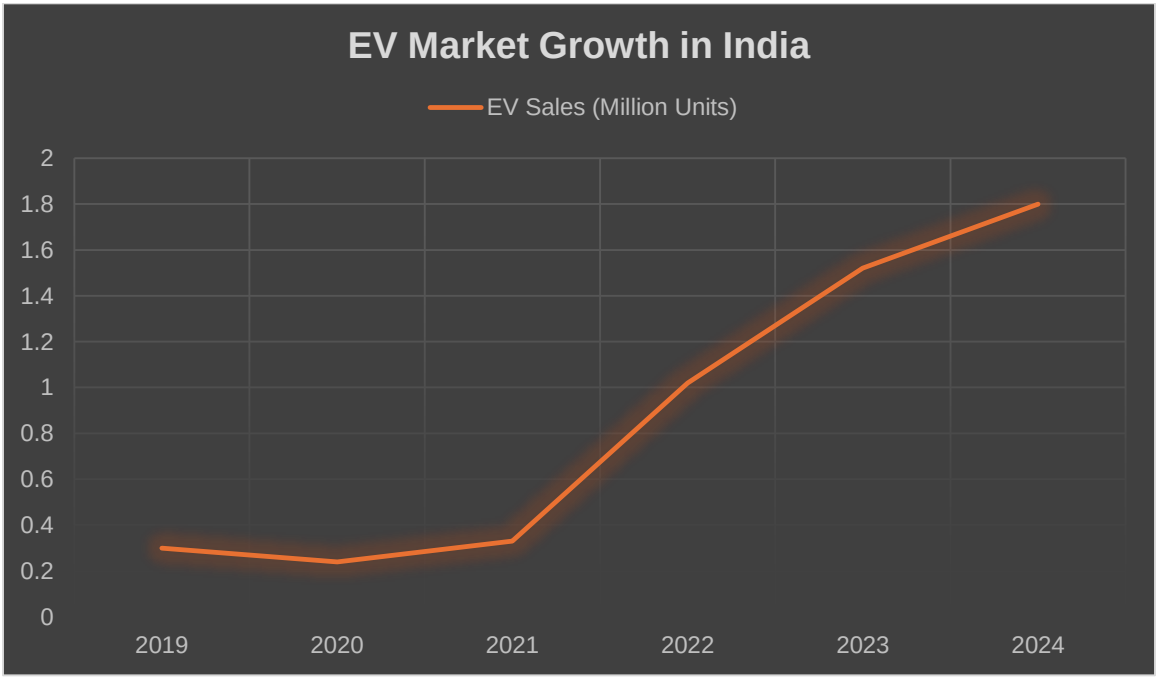
Task 1: Market Research Report – Electric Vehicle Industry

1. Introduction

The electric vehicle (EV) industry is undergoing rapid, global expansion. According to market analyses, the EV market was worth about **$713.9 billion** in 2024 and is expected to grow at over **13% CAGR** through 2032. A **SWOT analysis** (Strengths, Weaknesses, Opportunities, Threats) reveals key insights into this industry. By definition, “a SWOT analysis is a study conducted by a company to identify its strengths, weaknesses, opportunities, and threats”. Applying this framework to the EV industry helps us assess its competitive position and future prospects.



2. SWOT Analysis

i. Strengths

The EV industry's strengths include advanced technology and strong policy support. Leading EV manufacturers (e.g. Tesla, BYD) have built powerful brands based on cutting-edge battery and powertrain technologies. Governments worldwide have introduced generous incentives and emissions standards that favor EV adoption. For example, U.S. tax credits and state rebates have encouraged buyers (about half of U.S. EVs sold in 2024 benefited from an immediate $7,500 discount). Moreover, global policy trends (stricter CO_2 limits, zero-emission vehicle mandates) create a favorable environment. As a result, EV sales surged: in 2024, EVs accounted for roughly **10% of new car sales in the U.S.** and **over 50% in China**, illustrating the industry's strong growth drivers.

ii. Weaknesses

Key weaknesses stem from high costs and consumer hesitancy. EVs still carry higher upfront prices than conventional cars, partly due to expensive batteries. Consumers frequently cite limited driving range and charging infrastructure gaps as barriers. For instance, surveys show that many buyers demand about **500 km** real-world range (well beyond typical daily use) and often will not purchase an EV unless it's cheaper than an ICE vehicle. The perception of range anxiety and uncertain resale value can slow adoption. Furthermore, the industry faces supply-chain challenges (e.g. battery raw materials) and is still maturing its sales/service networks. These factors can hinder performance if not addressed.

iii. Opportunities:

The EV market has substantial growth opportunities. Emerging markets are showing particularly strong demand: in 2024, EV sales in developing economies (Asia, Latin America, Africa) rose **over 60% year-on-year**, with market share nearly doubling from 2.5% to 4%. This growth is bolstered by falling battery costs and new affordable models (often from Chinese OEMs), allowing EV makers to target cost-sensitive buyers. Technological advances (e.g. solid-state batteries) promise to improve range and

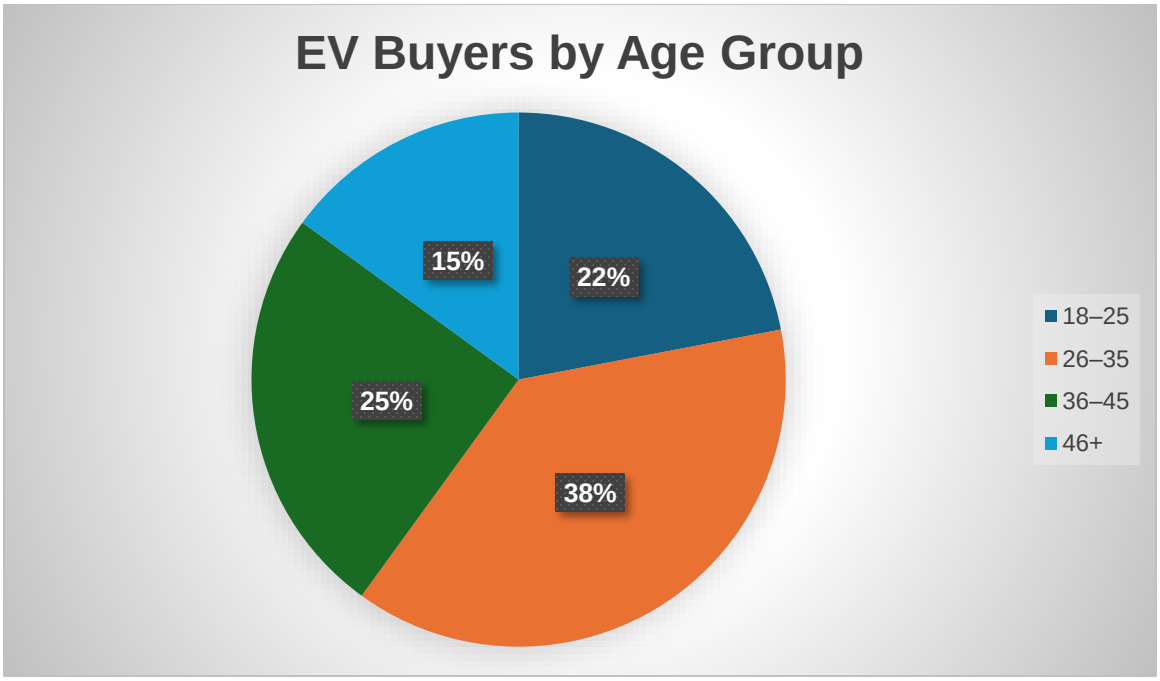
reduce prices. Additionally, expanding applications (electric buses, two-wheelers, grid storage) create new markets. The industry can also capitalize on **shifting consumer attitudes**; for example, many current EV owners intend to buy another EV as their next car. As fuel prices rise and urbanization increases, demand for electric mobility is likely to keep expanding.

iv. Threats:

Several external threats could impede the EV industry. Competition is intensifying: traditional automakers and new startups are launching hundreds of EV models. Indeed, 24 new EV models appeared in 2024, which drove down Tesla's U.S. market share from 60% in 2020 to 38% in 2024. Rising competition can squeeze margins and fragment the market. Policy shifts also pose risks – in Europe, for example, reducing purchase subsidies has recently slowed EV sales growth. Geopolitical and supply-chain disruptions (for materials like lithium) are additional concerns, as is the possibility of consumer fatigue if infrastructure fails to keep up. In summary, the EV sector's threats include **intense rivalry and policy uncertainty**.

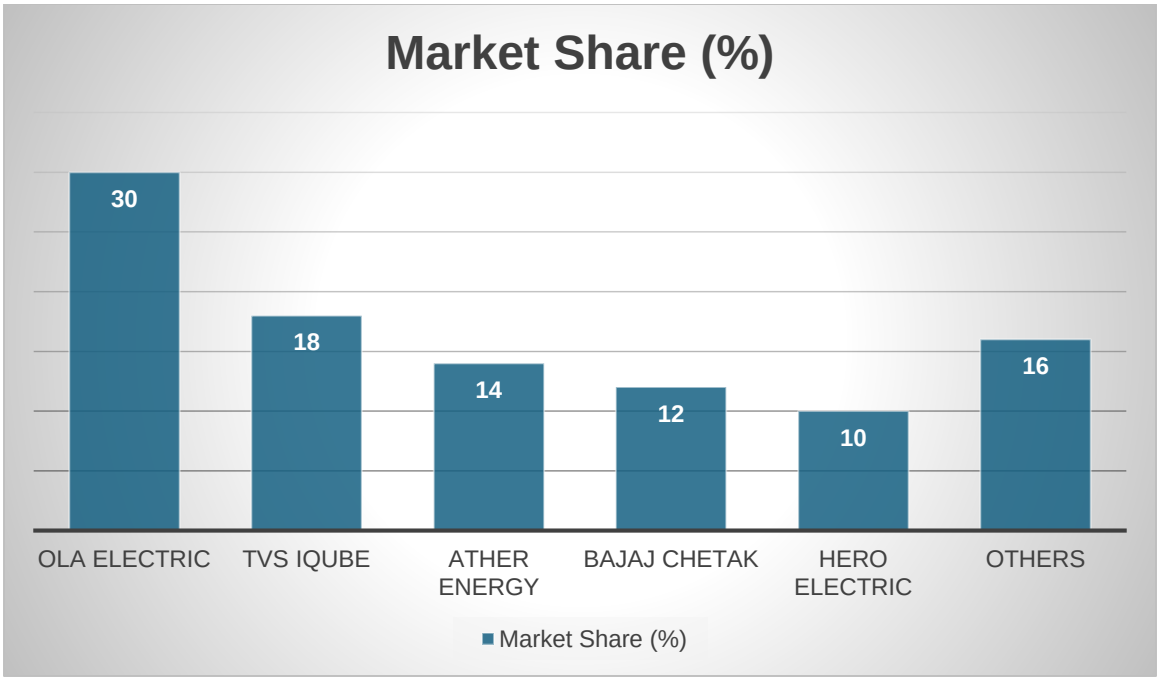
3.Target Audience

EV customers tend to be urban, environmentally conscious, and relatively affluent. Studies show urban younger buyers focus on technology and innovation (often less concerned about range), whereas rural or older customers give more weight to cost and charging infrastructure. For instance, younger or well-informed consumers cite advanced driver-assist features and performance as purchase drivers, while many view long driving range as essential. Early adopters often include tech-savvy professionals and families who view an EV as either a daily driver or a practical upgrade for household use. Overall, the market segments most receptive to EVs are those motivated by sustainability and novel technology.



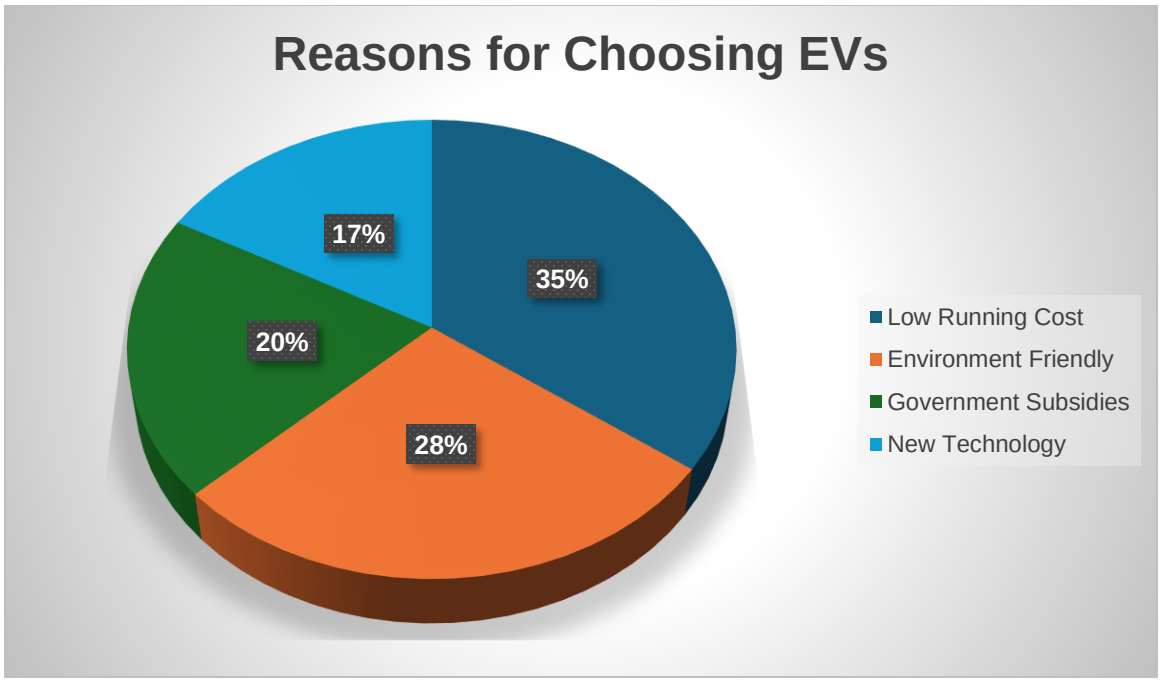
4.Competitor Analysis

The EV industry's leading companies include global automakers and specialized EV firms. For example, **BYD, Tesla, and Volkswagen Group** were among the top players in 2024. Tesla currently leads in brand recognition, but legacy firms (Volkswagen, GM, Renault, Hyundai, etc.) are rapidly expanding EV lineups. Chinese OEMs like BYD, NIO and XPeng are also growing their global presence. Competition can be illustrated by market-share distributions. *Figure: Example market-share pie chart of German luxury cars (2009) – note how one brand (Mercedes) dominates while others split the remainder.* In the EV market, similar dynamics are seen: a few models (e.g. Tesla Model Y/3, or BYD's models in China) capture large shares, but this is changing as more models enter. Competitive analysis must also consider substitute threats; for EVs, this includes efficient hybrids and improving ICE vehicles.



5.Market Trends

EV adoption trends strongly upward across regions. China has already seen EVs reach **about 50% of new car sales** in 2024. European markets vary – Norway's new sales were **~88% electric**, the UK's were ~30% in 2024, and the EU average ~20%. In contrast, the U.S. reached just over **10%** share, though sales are growing. One key trend is the diversity of models: over 100 new EV models have launched globally since 2020, giving consumers more choices. This competition has started to **broaden market appeal** and drive down prices. Sales growth has been especially strong in emerging markets: for example, Brazil saw EV sales double and reach ~6.5% of market share in 2024 due to incentives. In many regions, PHEVs (plug-in hybrids) are a stepping stone, with hybrid purchase intent now nearly as high as fully electric. Overall, the trend is clear: regulatory pressure, broader model availability, and growing consumer intent (especially in urban areas) are expected to push EV penetration steadily upward.


Reasons for Choosing EVs
17%
35%
20%
28%
Low Running Cost
Environment Friendly
Government Subsidies
New Technology