



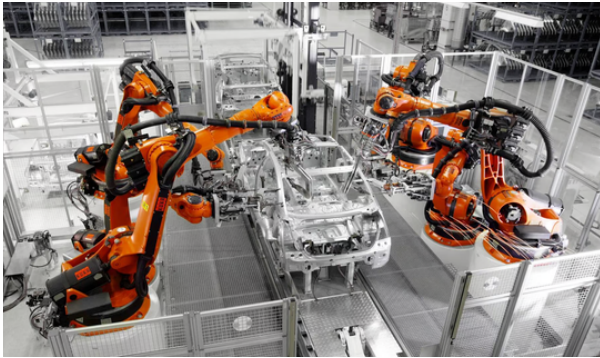
2024 Global Automotive Industry Report

Key Findings: Global Focus Countries

December 2024

2024 Global Automotive Industry Report

Overview



The automotive industry is a pivotal sector of the global economy, encompassing organizations and companies involved in designing, developing, marketing, manufacturing, and selling motor vehicles. It significantly contributes to global GDP and employment, making it one of the most dynamic and revenue-generating industries. While the sector focuses on passenger vehicles, commercial vehicles, and electric vehicles, ancillary services like fuel stations and repair shops operate outside its formal boundaries. Transformative trends,

including autonomous vehicles, electrification, digital connectivity, and supply chain optimization, are reshaping the industry landscape. With its influence spanning multiple sectors, including steel, rubber, electronics, and energy, the automotive industry offers immense growth potential through innovation, sustainability, and emerging markets, despite challenges like geopolitical tensions and evolving regulatory frameworks. This report aims to provide a comprehensive overview of these dynamics and outline strategic pathways for future growth.

Disclaimer:

This material by Xavier's Finance Community is based on publicly available data, anecdotal sources, and proprietary estimates. It may include forward-looking statements and assumptions that might differ from actual outcomes. While we strive for accuracy, we are not liable for errors, omissions, or market changes post-publication.

Reproduction or distribution is prohibited without prior written consent. This document is for educational purposes only and does not constitute financial, tax, or legal advice. Xavier's Finance Community is not SEBI-registered, and readers should consult their financial advisors before acting on this information.

Published: December 2024
© 2024 Xavier's Finance Community. All rights reserved.

 xaviersfinancecommunity.xfc@gmail.com

 xaviersfinancecommunity.com

Contributors to the Report:



Yugansh Arora
Senior Associate



Adityaa Dani
Senior Associate



Ayush Narnolia
Senior Associate



Akshat Agrawal
Senior Associate



Kushal Garodia
Junior Associate



Advika Agarwal
Junior Associate



Vaibhav Jain
Junior Associate



Rishika Jalan
Junior Associate

Contents

Market Overview	4
Macroeconomic Context	9
Regulatory Analysis	15
Competitor Analysis	20
Impex Analysis	25
Distribution Channel Analysis	31
Consumer Insight Benchmarking	35
Financial Benchmarking	39

1 Market Overview



PRODUCTION and SALES

The **Automobile Industry** consists of a broad range of organizations and companies with a critical objective of designing, developing, marketing, manufacturing, and selling of motor vehicles. The automotive industry makes a vital part of the world's economic sectors by revenue. Automobiles, however, are not entirely included in the industry. The industry also does not include companies or organizations dedicated to the maintenance of automobiles such as fuel filling stations and automobile service and repair shops.

"The auto industry is just too tough. It's a business where you have too many competitors, a huge fixed-cost structure, and the need to reinvent yourself every few years."



Warren Buffet
Chairperson and CEO
Berkshire Hathaway

Global Production Volume in 2023

China:

- Cars: Approximately 25,000,000 units
- Commercial Vehicles: Approximately 3,500,000 units

Japan:

- Cars: Approximately 8,000,000 units
- Commercial Vehicles: Approximately 1,500,000 units

South Korea:

- Cars: Approximately 3,500,000 units
- Commercial Vehicles: Approximately 400,000 units

Mexico:

- Cars: Approximately 2,500,000 units
- Commercial Vehicles: Approximately 1,000,000 units

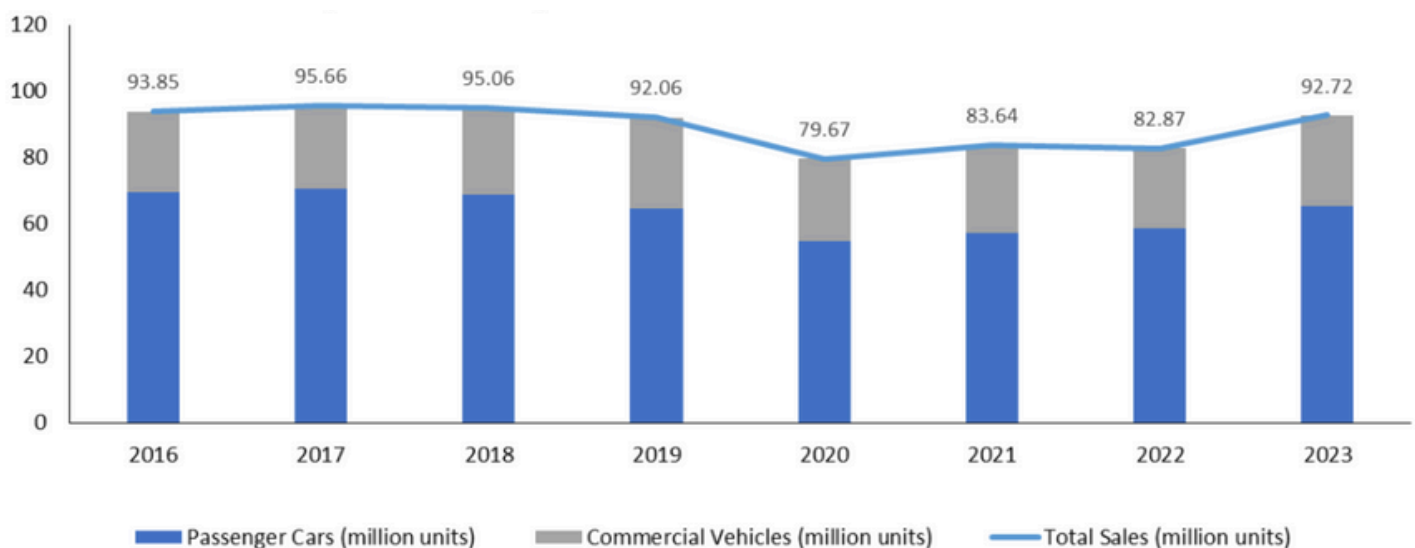
Brazil:

- Cars: Approximately 2,000,000 units
- Commercial Vehicles: Approximately 500,000 units

Canada:

- Cars: Approximately 1,000,000 units
- Commercial Vehicles: Approximately 800,000 units

Global Motor Vehicle Sales by Type from 2016 to 2023 (in million)

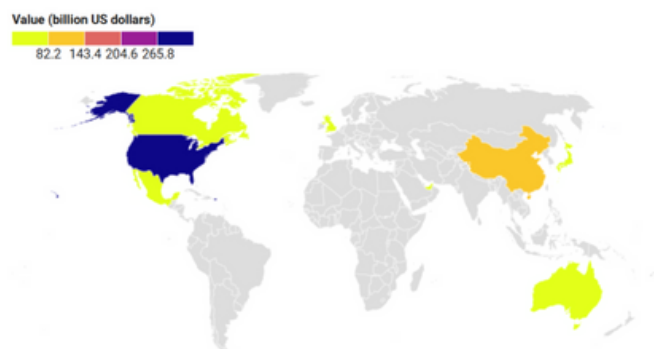


IMPORTS and EXPORTS

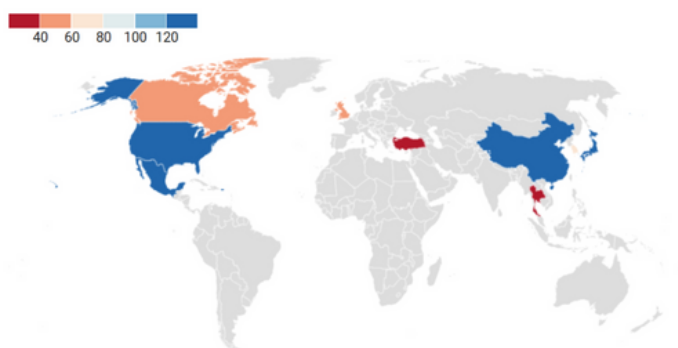
In 2022, the United States was the second largest importer of automotive products with a value of some 327 billion U.S. dollars. At the same time, the country exported automotive products to the value of approximately 138 billion U.S. dollars.

In 2022, the USA was the second largest exporter of automotive products globally with a value of approx 138 billion USD. In terms of value, the EU-27 single-market accounted for 45.4 percent of automotive products exports worldwide.

Country-wise Import of Automotives



Country-wise Export of Automotives

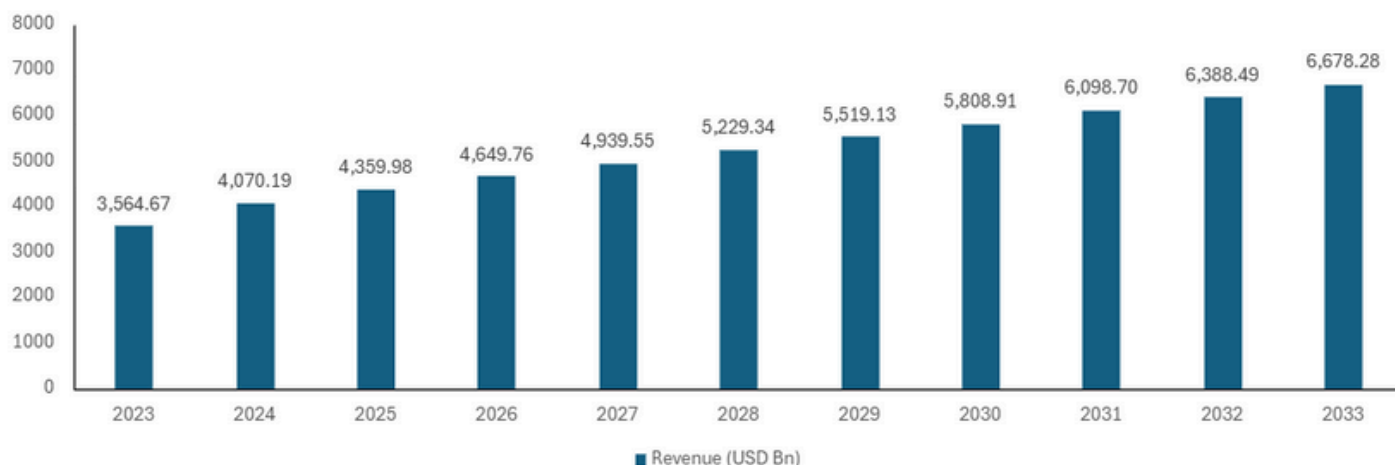


Note: Figures are in Billion US Dollars

MARKET SIZE and FORECASTED GROWTH RATE

Global Automotive Industry Market Insights Forecasts to 2033

- The Global Automotive Industry Market Size was valued at USD 3,564.67 Billion in 2023.
- The Market Size is Growing at a CAGR of 6.77% from 2023 to 2033.
- The Worldwide Automotive Industry Market Size is expected to reach USD 6,861.45 Billion by 2033.
- North America is expected to grow the fastest during the forecast period.



Market Segmentation

By Type Insights:

The commercial vehicle segment, including LCVs, heavy trucks, and buses, leads the global automotive market in revenue. These vehicles improve supply chain efficiency by reducing risks, enhancing driver visibility, and optimizing routes, playing a key role in logistics, economic growth, and global demand.

By Propulsion Type Insights:

The ICE vehicle segment is growing due to advancements in engine design that boost power and fuel efficiency. Innovations in electrification, emissions, and thermal efficiency, along with low-temperature combustion (LTC) technology, ensure that ICE engines remain essential to the industry.

Which segment should be prioritized for development and investment?

Commercial Vehicles

Leading in revenue and essential for logistics and economic growth.

ICE Vehicles

Benefiting from advancements in engine design and fuel efficiency.

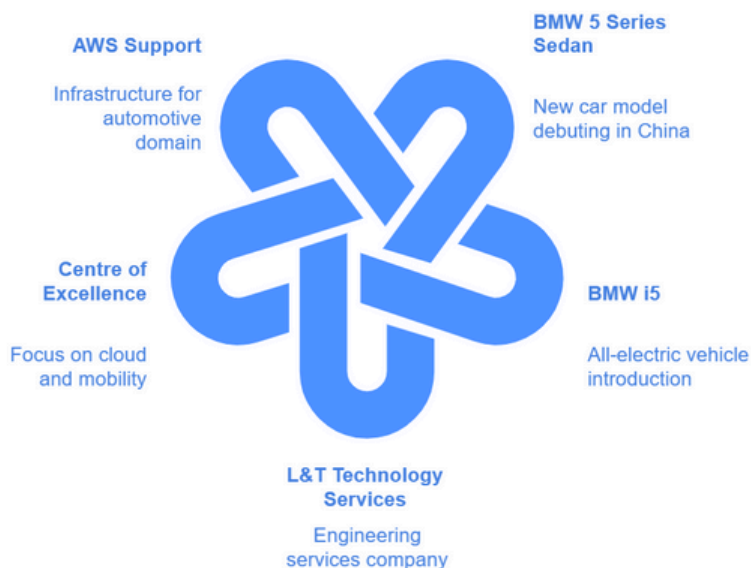


Key Market Developments

In January 2024, the new BMW 5 Series Sedan and BMW i5, developed exclusively for China and manufactured in China, will hit the country's roads just a few weeks after their debut at the Auto Guangzhou 2023 motor show. For the first time, the highly efficient combustion engines and all-electric drive of the latest version of the most popular business sedan in the world will be offered in China.

In March 2023, L&T Technology Services Limited, a leading global pure-play engineering services company, announced the establishment of a new Centre of Excellence in Mysore that harnesses the power of the cloud via Amazon Web Services (AWS). With the support of the CoE, LTTS will be able to accelerate time-to-market for end users and shift its suite of cutting-edge technologies toward the future of mobility. LTTS will offer a chance to use AWS to support the automotive domain by utilising AWS infrastructure.

Innovations in Automotive and Technology

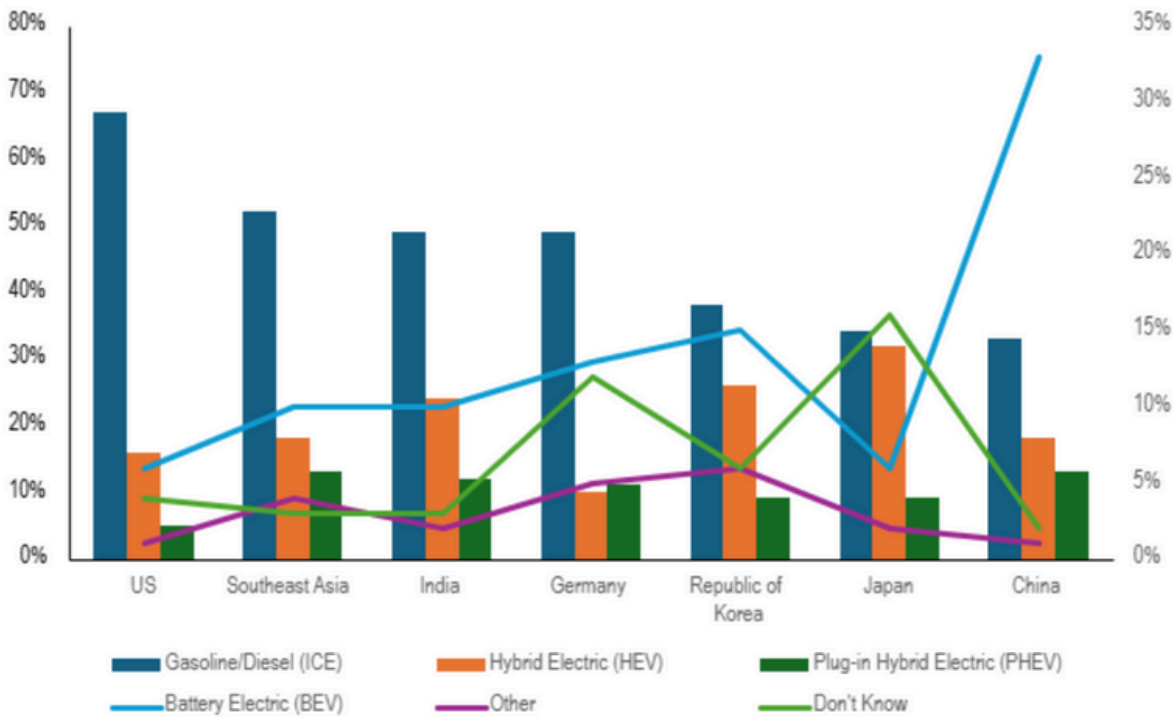


Trends in The Global Automobile Industry

Amid economic uncertainty, many younger consumers (18-34 years old) are considering giving up vehicle ownership for a subscription model, though concerns about vehicle availability, overall costs, and higher monthly fees remain.

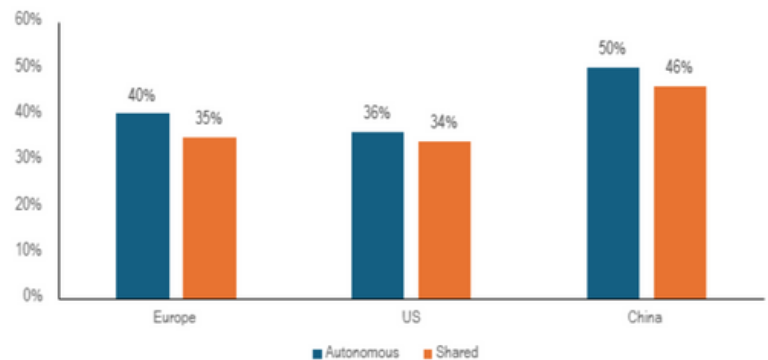
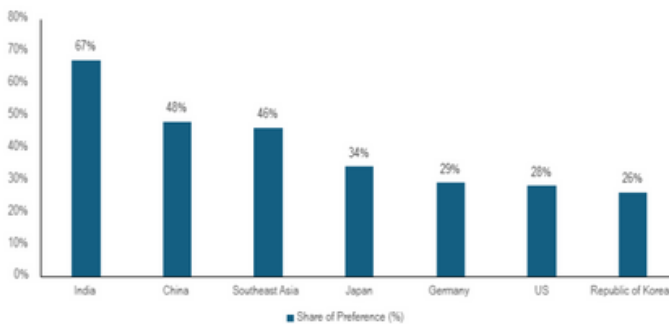
Consumer interest in giving up vehicle ownership in favor of vehicle subscription for 18- to 34-year-old respondents:

Vehicle electrification



Vehicle subscriptions

Change in our mobility habits:





2 Macroeconomic Context



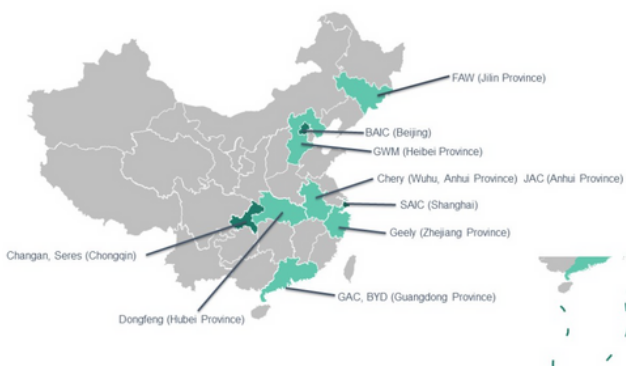
China: The world's largest automotive market

China's automotive landscape showcases its ambitious goals and achievements. The NEV market target highlights China's focus on expanding its new energy vehicle market share, while the dominance of SAIC Motor Corporation underscores its leadership among vehicle manufacturers.

The Wuling Mini EV represents the growing popularity and affordability of electric vehicles in the country. Additionally, China's global share reflects its significant role in the global automobile industry, and the total production emphasizes the immense scale of vehicle manufacturing within China.

Leading Companies

SAIC Motor topped the 2023 Fortune China 500 list for automakers, with over 744 billion yuan in 2022 revenue. In 2021, it led Chinese brands with 2.76 million vehicle sales, followed by Chang'an Automobile at 1.76 million.



Government Policies

China's 14th Five-Year Plan:

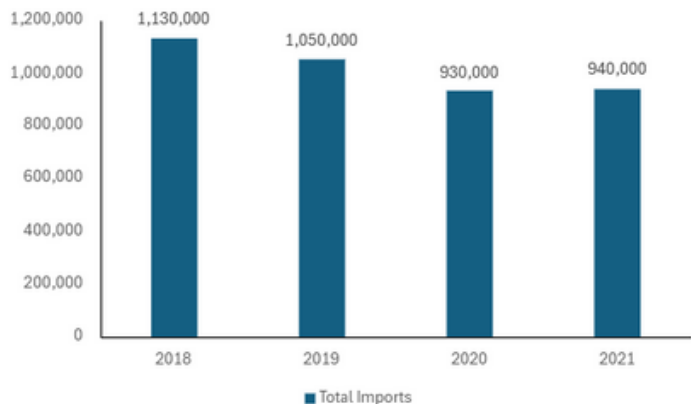
- Transformation and Upgradation
- Economic Growth
- Structural Advancements
- Technological Breakouts
- Market Vitality



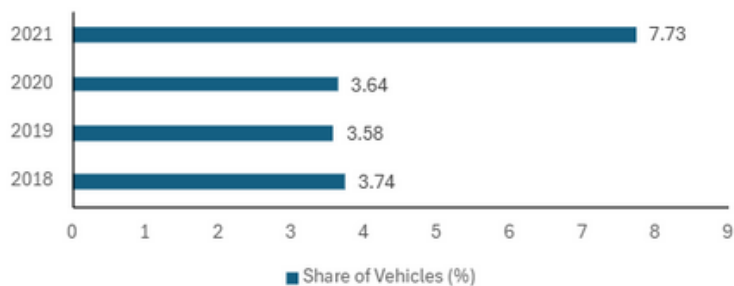
The above policies took place under Xi Jinping, President of China

Imports and Exports

From 2018 to 2021, China's imports of motor vehicles decreased from 1,130,000 to 940,000 units.



In 2021, roughly 80 million automobiles had been produced world-wide and approximately 7.73 percent of vehicles produced in China were exported to other countries.



USA: A hub of innovation and high-performance vehicles

The United States continued to stay strong as the second-largest automobile manufacturer at 12% of the total global market share. The biggest US vehicle manufacturers are General Motors Company (GM)

and Ford Motors Company (Ford). What is alarming is the sharp drop in sales of the automotive industry in the United States. Vehicle sales went down 38% from 2019 to 2020.

Leading Companies

In 2023, General Motors held the largest share of the U.S. automotive market at 16.9%.



While GM's market share had declined between 2004 and 2021, Toyota's share grew due to its focus on light trucks. Although GM's share dropped again in 2023, Toyota also saw a decline, holding about 14.5% of U.S. light vehicle sales.

Government Policies

2021-2025 National Automotive Policy (Under Joe Biden)

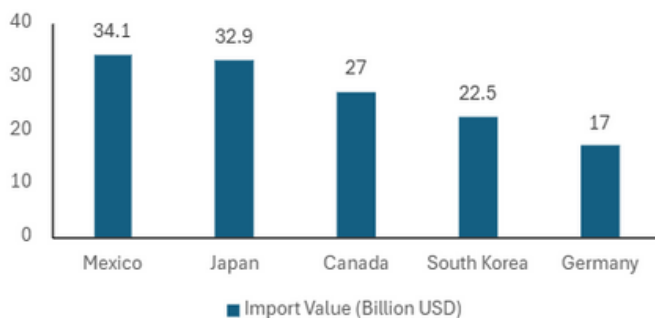
- Fuel Efficiency
- Electric Vehicle (EV) Incentives
- Infrastructure Investments
- Research and Development Funding
- Improving safety standards



The above policies took place under Joe Biden
Ex President
USA

Imports and Exports

In 2022, the United States imported \$159B in Cars, becoming the 1st largest importer of Cars in the world. In the same year, Cars was the 2nd most imported product in the United States.



In 2022, the United States exported \$57.5B in Cars, making it the 3rd largest exporter of Cars in the world. In the same year, Cars was the 4th most exported product in the United States.



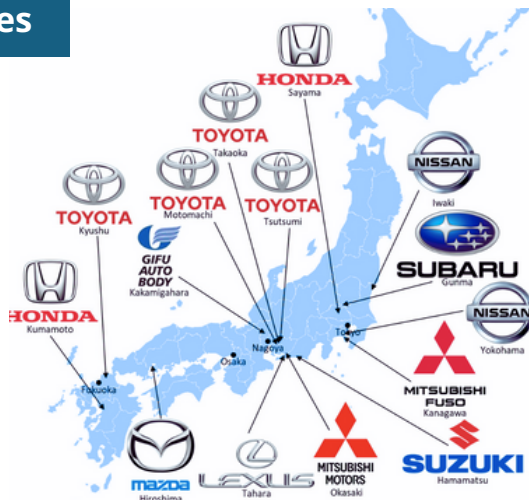
Japan: Pioneering precision and reliability

Japan's automobile industry is renowned for its innovation, reliability, and efficiency. Home to global giants like Toyota, Honda, and Nissan, Japan is a leader in hybrid technology, fuel efficiency, and advanced manufacturing.

It remains a key player in both traditional and electric vehicle markets, with a strong focus on quality and cutting-edge engineering.

Leading Companies

In 2023, Toyota led Japan's car market with 1.58 million sales out of 4.78 million total, a rise from the previous year. The Yaris and Corolla ranked first and second, with Nissan and Honda as the only other brands in the top ten. Japan continues to advance in EV technology, focusing on BEVs, hybrids, PHEVs, clean diesel, and FCEVs.



Government Policies

Strategic Energy Plan (Green Growth Strategy)

2035 Zero Emission Vehicle (ZEV) Initiative

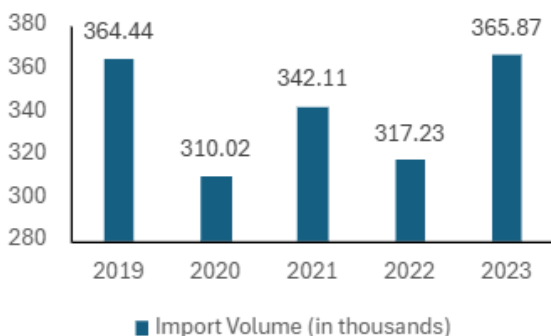
- EV Promotion
- 2035 Carbon Neutral Target
- Charging Infrastructure Expansion
- Automated Driving Technology
- Strengthen Global Competitiveness



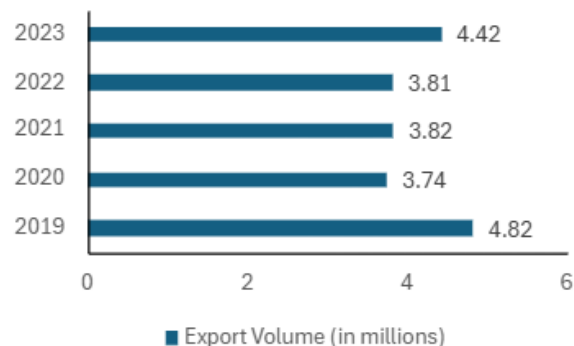
The above policies took place under
Yoshihide Suga
Ex Prime Minister
Japan

Imports and Exports

In 2022, the United States imported \$159B in Cars, becoming the 1st largest importer of Cars in the world. In the same year, Cars was the 2nd most imported product in the United States.



In 2022, the United States exported \$57.5B in Cars, making it the 3rd largest exporter of Cars in the world. In the same year, Cars was the 4th most exported product in the United States.



Germany: An engineering excellence

Germany's automobile industry is a global leader, known for precision, innovation, and luxury brands like Volkswagen, BMW, and Mercedes-Benz. It is a key player in electric and autonomous vehicle development, supported

by government initiatives promoting sustainability and green energy. The industry maintains its reputation for high-quality, performance-driven vehicles while transitioning towards a greener future.

Leading Companies

Volkswagen leads with a 25% share, followed by Daimler and BMW, each holding 15%, and Audi at 10%.

Germany's automotive industry is a global leader, renowned for its high-quality, technologically advanced vehicles. Key players like Volkswagen Group, Daimler AG, BMW Group, Audi AG, and Porsche AG drive innovation and shape the global automotive landscape.



Government Policies

Germany's Climate Action Plan 2050: German Energy Transition (Energiewende)

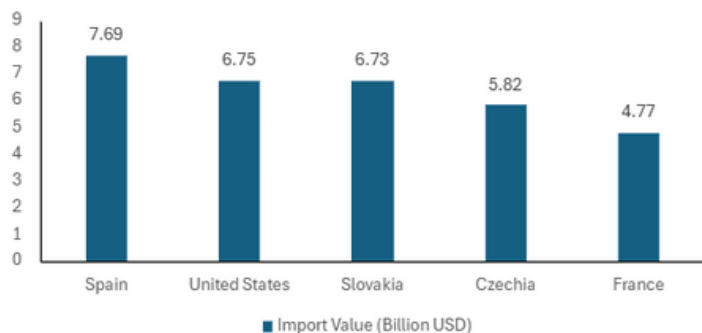
- Electromobility Act
- 2030 Climate Action Plan
- National Hydrogen Strategy
- CO2 Emission Reduction Targets
- EV Charging Infrastructure Expansion



The above policies took place under Angela Merkel Ex Chancellor Germany

Imports and Exports

In 2022, Germany imported \$67.7B in Cars, becoming the 2nd largest importer of Cars in the world.



German automakers earned €274B in 2021, a 10% increase. Cars were 13% of German exports. Germany led car exports in 2022 with \$149B.



India: A rapidly growing hub

India's automobile industry is one of the largest in the world, driven by strong domestic demand and a growing export market. Known for its cost-effective manufacturing, it is a hub for both traditional and electric vehicles. Key

players like Tata Motors, Mahindra, and Maruti Suzuki lead the market, while the government focuses on promoting green mobility and enhancing production capabilities through initiatives FAME scheme.

Leading Companies

India's automotive industry is led by Maruti Suzuki, Tata Motors, and Mahindra & Mahindra, with strengths in passenger, commercial, and electric vehicles. Hyundai, Honda, and Toyota dominate the compact, premium, and hybrid segments, while Bajaj Auto and Hero MotoCorp lead in two-wheelers.



Government Policies

India's National Automotive Mission Plan (AMP) 2026

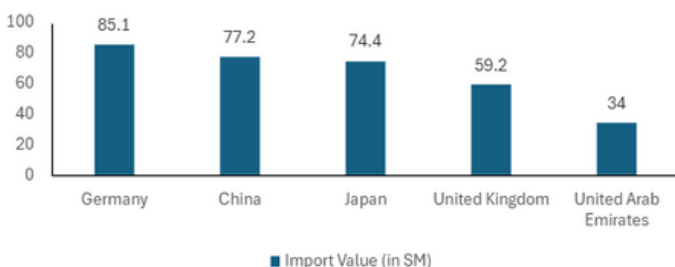
- Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME)
- Automotive Fuel Efficiency Norms
- Production-Linked Incentive Scheme
- Automotive Research Association of India (ARAI)
- Infrastructure Development Initiatives



The above policies took place under Narendra Modi Prime Minister India

Imports and Exports

In 2022, India imported \$540M in Cars, mainly from Germany (\$85.1M), China (\$77.2M), Japan (\$74.4M), United Kingdom (\$59.2M), and United Arab Emirates (\$34M).



In 2022, India exported \$6.68B in Cars. The main destinations of India exports on Cars were South Africa (\$1.24B), Mexico (\$941M), Saudi Arabia (\$579M), United Arab Emirates (\$400M), and Chile (\$355M).





3 Regulatory Analysis

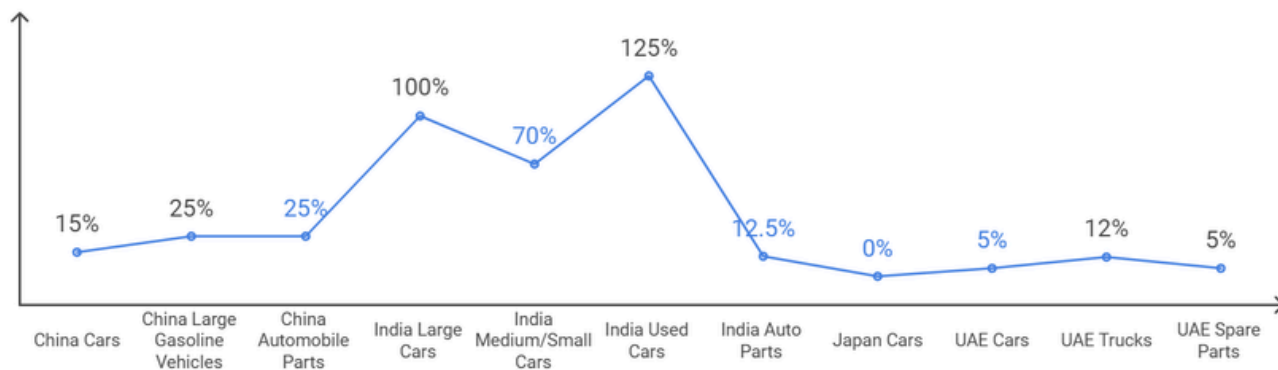


REGULATORY ANALYSIS

Tariff and Trade Policies

Country	Import Tariffs	Automobile Parts Tariffs	Trade Policies
China	15% for cars; proposed increase to 25% for large gasoline vehicles from the EU	25% charge on imported parts, based on self-evaluation	Focus on domestic production, partnerships with foreign manufacturers, and recent discussions on tariff increases for specific imports
India	100% for large cars; 70% for medium/small cars; 125% for used cars	Tariffs on auto parts reduced from 60% to 12.5% since the 1990s	Subsidies through FAME scheme, partnerships with Japan and Germany for technology transfer, and overall reduction of import tariffs
Japan	No import duties on cars	N/A	Membership in WTO, CPTPP, and RCEP; uses non-tariff barriers like safety regulations and investment laws
UAE	5% customs duty on cars; 12% for trucks; 5% for spare parts	N/A	Imposes VAT of 5%, requires designated trade agents, few trade barriers except restrictions on materials like asbestos

IMPORT TARIFFS BY DIFFERENT COUNTRIES

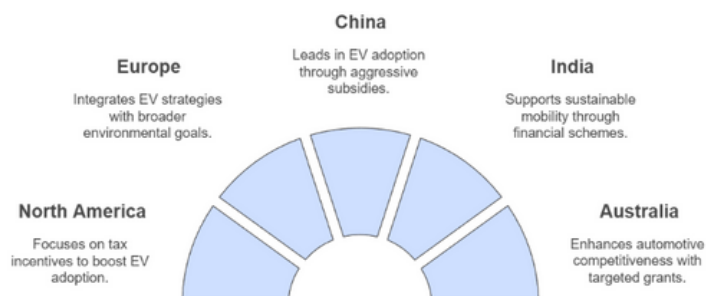


Automobile Import Tariffs by Country

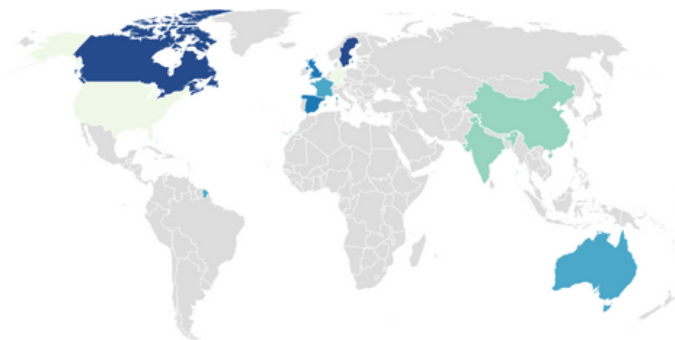


SUBSIDIES, INCENTIVES AND GRANTS

Global Electric Vehicle Adoption Strategies



KEY INSIGHTS



- The **United States** and **Canada** prioritize tax credits and rebates to stimulate the adoption of electric vehicles, with significant federal and state-level support.
- **European countries** are focusing on comprehensive frameworks that align with broader environmental goals, providing substantial funding through EU initiatives.
- **China** leads in EV adoption due to aggressive government subsidies, resulting in a remarkable increase in new registrations.
- **India's** focus on sustainable mobility is reflected in its financial support for electric vehicles under the FAME India Scheme.
- **Australia** aims to enhance its automotive sector's competitiveness through targeted grants for innovation and product development.

- **United States:** Federal tax credits up to \$7,500 for EV purchases; state incentives vary, enhancing adoption. The Biden administration promotes infrastructure investments through the Bipartisan Infrastructure Law.
- **Canada:** Offers rebates up to CAD 5,000 via the Zero-Emission Vehicle Incentive Program; provincial programs provide additional support.
- **Europe:** The Next Generation EU fund allocates €750 billion for automotive innovation; countries like Germany and France offer substantial subsidies for EV purchases.
- **Germany:** Provides bonuses up to €9,000 for EV buyers and supports R&D in automotive technologies.
- **China:** Leads in EV adoption with significant subsidies for consumers and manufacturers; new registrations surged by 82% in 2022.
- **India:** The FAME India Scheme incentivizes EV adoption; projected clean energy market worth USD 80 billion by 2030.
- **Australia:** Programs like the Automotive Innovation Lab Access Grants fund local automotive development, supporting competitiveness.

OVERVIEW OF AUTOMOBILE INDUSTRY

The automobile industry is undergoing significant transformation, particularly with the rise of electric vehicles (EVs) and advancements in sustainability practices. This overview focuses on two prominent players in the EV market: Tesla and Lucid Motors, examining their financial performance, reporting standards, and strategic positioning within the global automotive landscape.

1. COMPANY PROFILE

Tesla, Inc.

Founded: 2003

Headquarters: Palo Alto, California, USA

Market Position: Tesla leads the EV market with advanced battery technology and autonomous features, achieving rapid growth in production and sales.



CEO: Elon Musk (Tesla)

Lucid Motors, Inc.

Founded: 2007

Headquarters: Newark, California, USA

Market Position: Lucid Motors competes in the luxury EV market with advanced technology and premium models like the Lucid Air.



CEO: Peter Rawlinson (Lucid Motors)

2. FINANCIAL REPORTING STANDARDS

U.S. GAAP Compliance:

Both **Tesla** and **Lucid Motors** follow U.S. GAAP, ensuring detailed reporting on revenue, expenses, and cash flow.

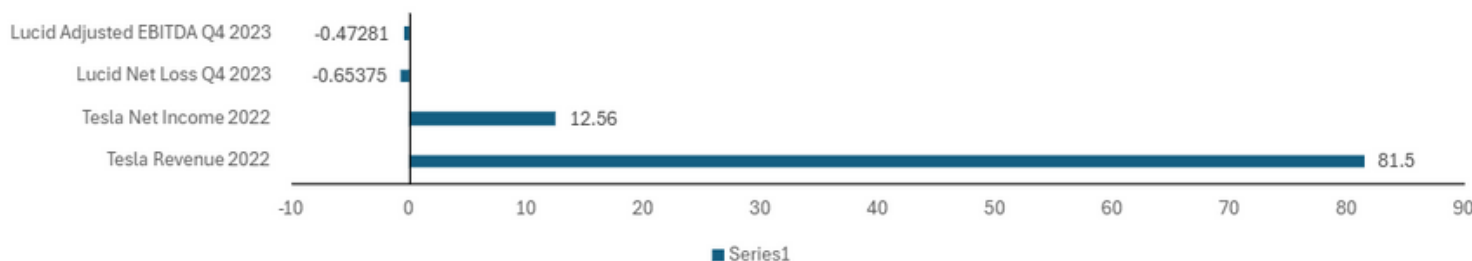
Tesla highlights revenue from vehicle sales, regulatory credits, and energy products. Lucid Motors provides similar disclosures tailored to its operations.

Sustainability Reporting:

Preparing for ISSB regulations effective January 2024.

Focus on environmental impact disclosures (e.g., emissions, resource use). Include detailed reporting on corporate governance and sustainability practices.

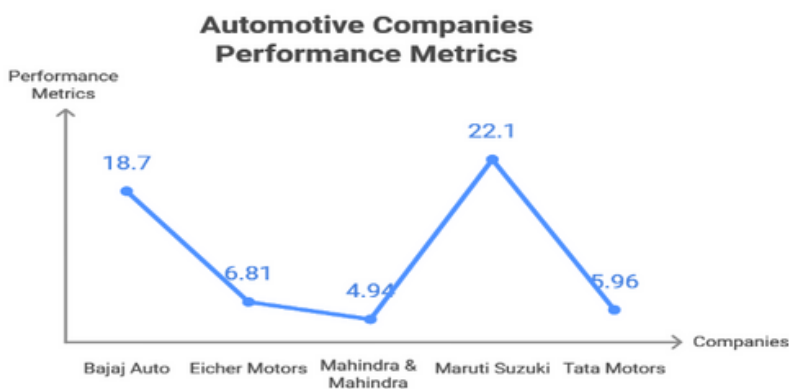
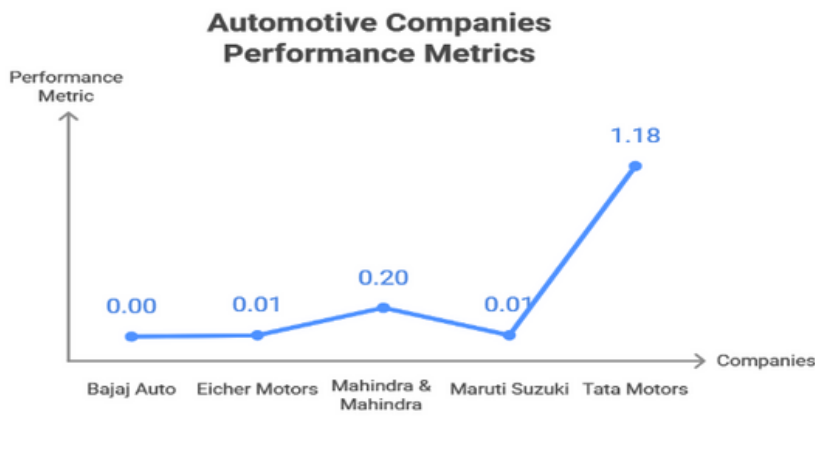
3. FINANCIAL PERFORMANCE



FINANCIAL RATIOS OF DIFFERENT COMPANIES IN THE AUTOMOTIVE INDUSTRY

Debt To Equity Ratio:

- The chart compares the performance metrics of five automotive companies.
- Bajaj Auto, Eicher Motors, Mahindra & Mahindra, and Maruti Suzuki: Display relatively low metrics, ranging from 0.00 to 0.20.
- Tata Motors: Shows a significant improvement with a performance metric of 1.18, indicating superior performance compared to its peers.

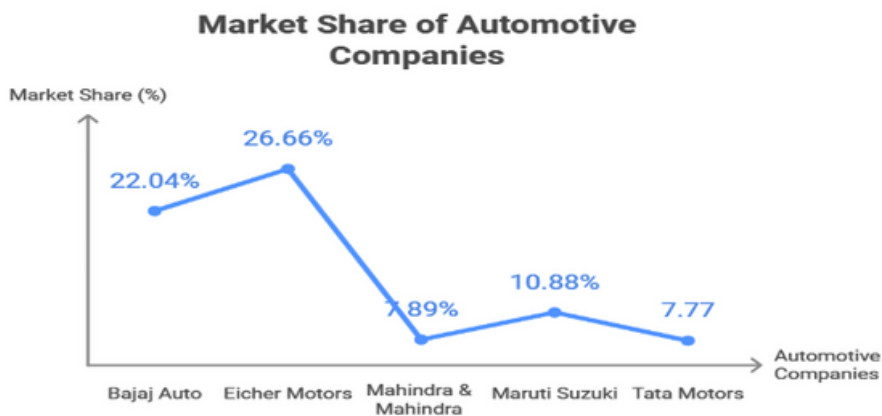


Inventory Turnover Ratio:

- Bajaj Auto: Strong start with a performance metric of 18.7, showcasing solid market presence.
- Eicher Motors: Drops to 6.81, indicating a significant decline.
- Mahindra & Mahindra: Further dips to 4.94, showing weaker performance.
- Maruti Suzuki: Tops the group with an impressive 22.1.
- Tata Motors: Moderates at 5.96, recovering slightly but still below Maruti Suzuki.

Operating Margin:

- Bajaj Auto: Holds a strong 22.04% market share.
- Eicher Motors: Leads with 26.66%, the top performer.
- Mahindra & Mahindra: Slips to 7.89%, losing ground.
- Maruti Suzuki: Slight recovery at 10.88%.
- Tata Motors: Dips to 7.77%, the lowest in the group.





4 Competitor Analysis



Competitor Analysis

Major Competitors



The global automobile industry is highly competitive, with manufacturers focusing on innovation, sustainability, and evolving consumer demands. Advancements in electric vehicles, technology, and efficiency are reshaping the market, driving the future of mobility.

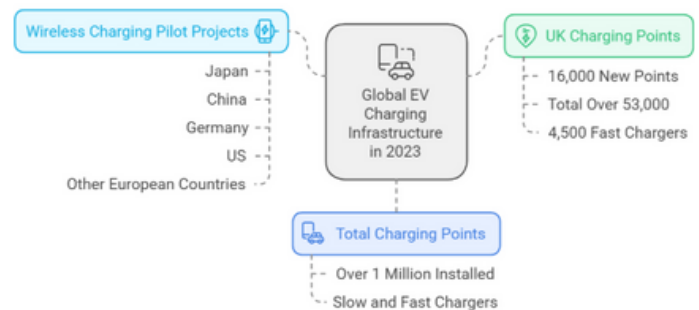
Product Differentiation : Enhancing value through innovation and uniqueness

Technological innovation: Consistent growth in the EV sector:

The EV segment has experienced significant growth, with a 30-35% annual increase since 2022, fueled by advancements such as extended battery range, faster charging, and renewable energy integration. Major automakers like Hyundai, which invested \$1.5 billion in its Ulsan EV Factory in South Korea in November 2023, along with Honda, Volkswagen, and Ford, have expanded their EV manufacturing capabilities.

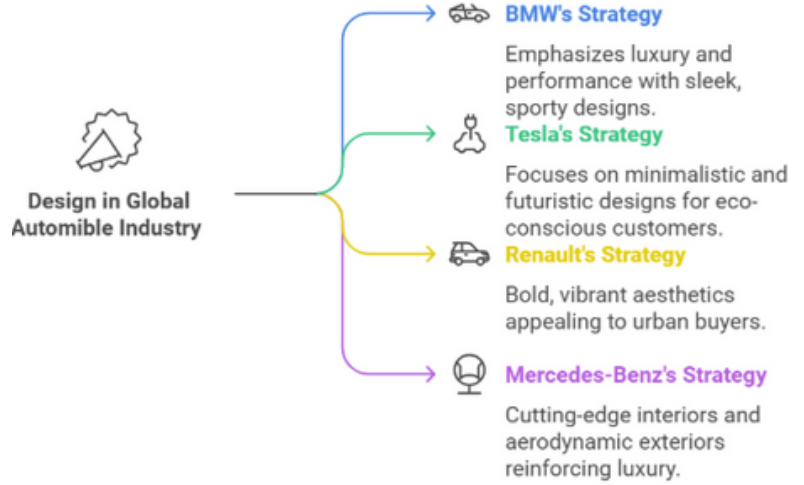
In 2023, over a million new EV charging points were installed globally, comprising both slow and fast chargers. The UK added approximately 16,000 charging points, raising its total to over 53,000, including more than 4,500 fast chargers. Meanwhile, wireless charging pilot projects were successfully implemented in countries like Japan, China, Germany, the US, and across Europe, highlighting innovation in EV infrastructure.

Advancements in L3 Autonomous Vehicle Approvals

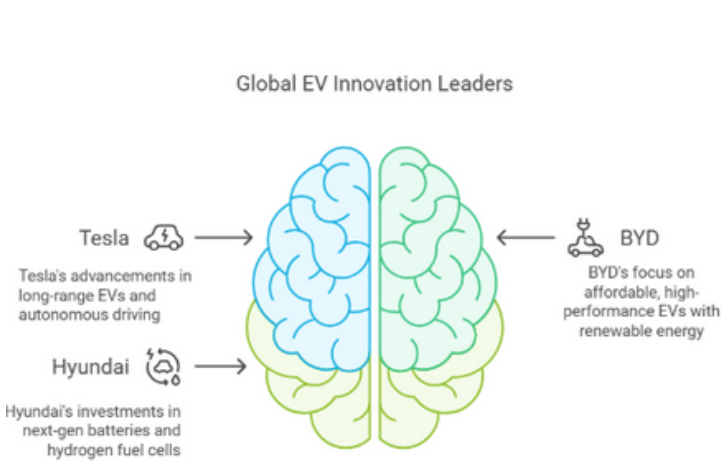


Design – a resource for competitive advantage:

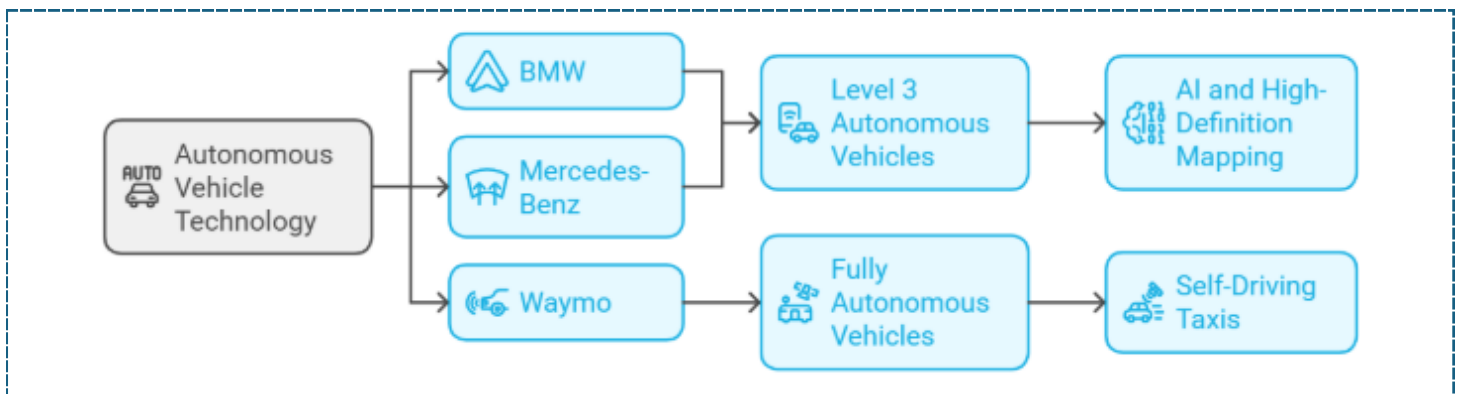
Researchers have observed the rising trend of design based strategy as a competitive advantage in different industries where companies have reinforced their positions through product design. For example, Ducati- the Italian motorcycle brand is famous as it represents Italian industry across the globe through the authentic Italian style expressed in the design of each bike.



Innovation – an integral part of dynamic capabilities:



Innovation is key to product differentiation in the global automobile industry, with automakers focusing on creating more value for customers and gaining an edge over competitors. This includes introducing new technologies, designs, and features. For example, electric vehicles (EVs) like Tesla have set a high standard in the industry, while companies in China and India are improving vehicle quality and using lower production costs to compete globally. These innovations help brands stand out in the crowded market.



SWOT Analysis

Category	Toyota (Japan)	Ford (USA)
Strengths	<ul style="list-style-type: none"> Robust brand reputation and recognition Cutting-edge technology Strong global manufacturing and distribution network 	<ul style="list-style-type: none"> Strong heritage and brand recognition in North America Manufacturing expertise Huge dealer network
Weaknesses	<ul style="list-style-type: none"> Dependence on the international market Occasional recalls and quality control issues Rigid hierarchy 	<ul style="list-style-type: none"> Over-reliance on the North American market Legacy pension and healthcare obligations Recalls and quality control issues
Opportunities	<ul style="list-style-type: none"> Expansion into emerging markets Embracing electric and autonomous vehicles Strategic partnerships and collaborations 	<ul style="list-style-type: none"> Expansion into electric vehicle market Development of smart transportation solutions Strategic marketing and collaboration
Threats	<ul style="list-style-type: none"> Intense competition in the automotive industry Cybersecurity threats Supply chain disruptions 	<ul style="list-style-type: none"> Rising fuel prices Changing consumer preferences towards sustainability Strong labor unions

Category	Mercedes (Germany)	Maruti Suzuki (India)
Strengths	<ul style="list-style-type: none"> Impressive global reach Innovation-driven approach Pool of talented professionals 	<ul style="list-style-type: none"> High market share Cost optimization After sales service network
Weaknesses	<ul style="list-style-type: none"> Dependence on mature markets Expensive luxury brand Limited global distribution 	<ul style="list-style-type: none"> Late in EV segment Weakening R&D spend Low-quality vehicles for cost saving
Opportunities	<ul style="list-style-type: none"> Advancing autonomous driving technology Enhancing digital capabilities Tapping into shared mobility and subscription services 	<ul style="list-style-type: none"> Subscription-based mobility Promoting CNG fuel vehicles Strong hybrid electric vehicle
Threats	<ul style="list-style-type: none"> Economic fluctuations Brand reputation risks Intense competition from other German luxury brands 	<ul style="list-style-type: none"> Semiconductor shortage Skyrocketing price of fuel Costly overheads



PESTEL Analysis

Factor	Details
Political Factors	<ul style="list-style-type: none"> • Governments enforce regulations on automobile production to ensure passenger safety, with potential license cancellations for non-compliance. • Companies must comply with emission limits and environmental standards, which adds costs and operational constraints. • Trade policies on imports and exports can impact profit margins, as access to cheaper, high-quality parts is beneficial.
Economic Factors	<ul style="list-style-type: none"> • Rising incomes in stable and emerging economies are driving higher car demand. • Taxes on luxury items can reduce demand for high-end cars, while affordable models may attract more buyers. • Increases in the cost of automobile parts can raise car prices, potentially decreasing demand.
Social Factors	<ul style="list-style-type: none"> • Cars are seen as status symbols, so consumer preferences influence design and sales. • Population density and family size affect the demand for larger vehicles like SUVs. • Strong public transportation systems can reduce car ownership, especially in developed countries.
Technological Factors	<ul style="list-style-type: none"> • Innovation in safety features and emission control technologies is essential for staying competitive. • The future demand for self-driving and electric vehicles requires companies to invest in and promote these technologies.
Environmental Factors	<ul style="list-style-type: none"> • Vehicle emissions are a major concern, and manufacturers must invest in electric or battery-powered cars to meet stricter environmental standards. • Compliance with environmental policies may reduce profit margins due to higher production costs. • Strict pollution tests mean only cars that meet stringent environmental standards can be launched.
Legal Factors	<ul style="list-style-type: none"> • Some countries limit vehicle numbers to reduce air pollution, affecting sales. • Legal risks arise if faulty parts or airbags contribute to accidents, potentially leading to lawsuits. • International operations must comply with local tax and environmental laws to avoid penalties or bans.

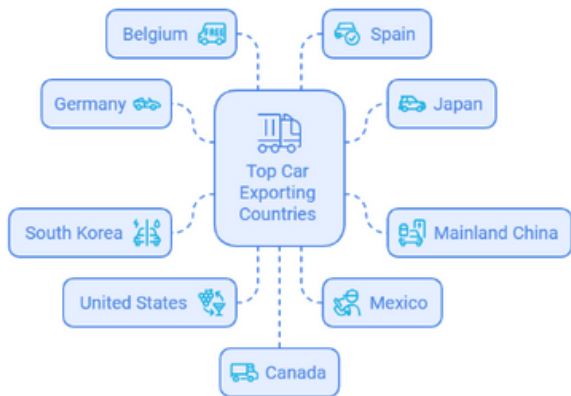


5 Impex Analysis



Impex Analysis

Top Markets with High Export Demand



In the global automotive industry, several key markets drive the demand for car exports. These countries exhibit robust consumption trends, favorable trade policies, and high levels of vehicle imports to meet consumer needs. The growing demand is fueled by multiple factors, including rising disposable incomes, rapid urbanization, and evolving consumer preferences for technologically advanced, fuel-efficient, and electric vehicles (EVs).

Regional Comparison : Future Outlook and Strategic Insights

Region	Export Value	Top Countries	% of Global Exports	Key Strengths	Challenges
Europe	\$298.8B	Germany, UK, Belgium	31.1%	Luxury & EV leader, high-tech innovation	High production costs, competition from Asia
Asia	\$256.9B	Japan, China, South Korea	26.8%	Mass-market & EVs, manufacturing efficiency	Luxury competition, trade barriers
North America	\$120.3B	US, Mexico, Canada	12.6%	SUVs, trucks, cost-efficient manufacturing	EV competition, US market dependence
Other Regions	\$37.9B	Canada	4%	Focus on SUVs & trucks, exports mainly to the US	Limited diversification, reliance on US trade

Export Competitiveness

Country	Key Export Features	Major Brands
Germany	Focuses on luxury and electric vehicles (EVs).	Volkswagen, BMW, Mercedes-Benz
Japan	Known for compact cars, hybrids, and sedans.	Toyota, Honda, Nissan
South Korea	Exports SUVs, sedans, and EVs.	Hyundai, Kia
China	Expanding EV and SUV exports.	BYD, Geely, Great Wall Motors
United States	Exports SUVs and trucks with a strong presence in the EV sector.	GM, Ford, Tesla

Import Dependency

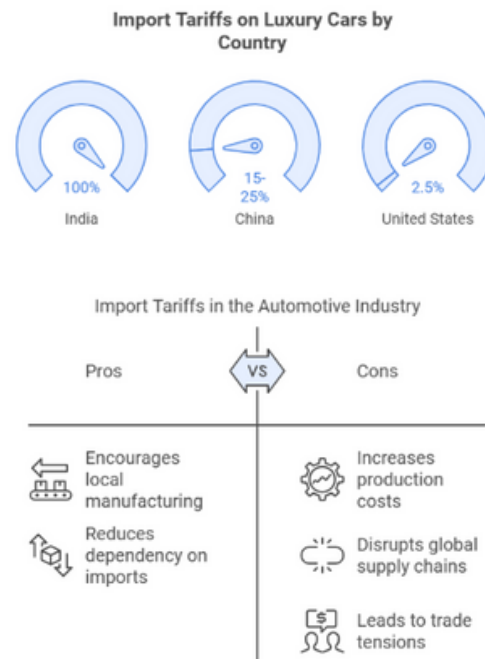
Country	Import Dependency Level	Key Imported Components	Primary Suppliers	Challenges
United States	Moderate	Semiconductors, batteries, rare earth metals	China, Taiwan, Japan	Supply chain disruptions, tariffs
Germany	Low	Semiconductors, electric batteries	China, Japan, South Korea	Semiconductor shortages
Japan	Low	Rare earth metals, semiconductors	China, Australia	Dependence on rare earth imports
South Korea	Moderate	Semiconductors, lithium-ion batteries	China, Japan, Taiwan	Competition for battery materials
China	High	Semiconductors, rare earth metals, advanced machinery	Japan, South Korea, Germany	Trade tensions, over-reliance on imports

Trade and Tariff Barriers

Import Tariff

Import Tariffs significantly impact vehicle pricing and market dynamics. High tariffs inflate the final price of vehicles, making them less affordable for consumers. For example, the Mercedes-Benz S-Class in India can be more than double the price compared to Germany due to tariffs and additional import duties.

- **Increased Vehicle Prices:** High tariffs raise vehicle prices, reducing affordability and limiting market penetration, especially for luxury brands.
- **Reduced Consumer Demand:** Higher prices limit demand for luxury and premium vehicles. In China, imported cars accounted for only 4% of the market in 2021 due to tariff-induced price increases.

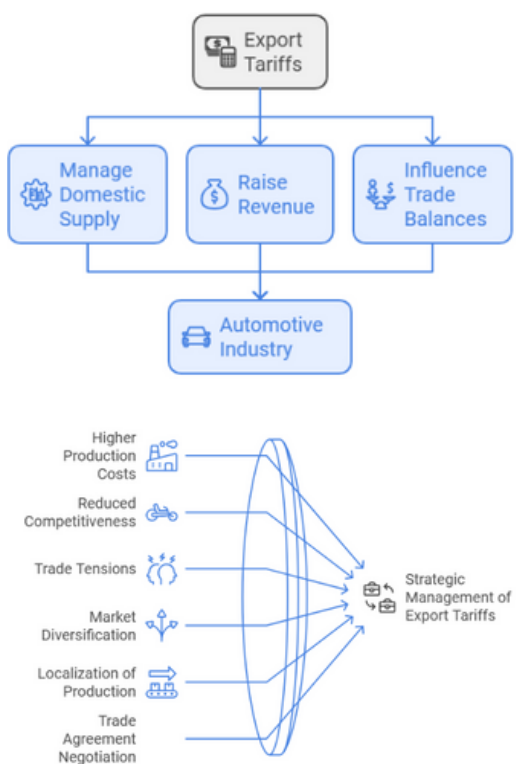


Global Comparison of Import Tariffs:

Country	Tariff Rate (Passenger Cars)	Tariff Rate (Pickup Trucks)	Key Notes
India	100%	N/A	Among the highest tariffs globally, limiting market access for luxury automakers.
China	15-25%	20-25%	High tariffs during the trade war disrupted exports for U.S.-based automakers.
United States	2.5%	25%	The "Chicken Tax" deters imports of light trucks, promoting domestic production.
European Union	10%	10%	Tariffs are uniform across member states, providing a stable trading environment.
Mexico	20%	20%	Tariffs on vehicles from non-USMCA countries make regional agreements crucial.



Export Tariff



Purpose of Export Tariffs

- **Control Domestic Supply:** Countries may impose export tariffs to prevent shortages of critical goods or resources. For example, a country with significant natural resources or raw materials might limit exports to preserve local supply for domestic industries.
- **Generate Government Revenue:** Export tariffs provide a revenue stream for governments, particularly in countries where other tax revenues may be limited or volatile.
- **Political or Trade Strategy:** Governments may use export tariffs as a tool to negotiate better trade terms or retaliate against trade practices from other nations, often seen in trade wars or economic sanctions.

Impacts of Export Tariff:

Impact Area	Description	Examples
Reduced Export Competitiveness	Tariffs raise costs, making vehicles/components less competitive.	U.S. export tariffs increase the cost of the U.S.-made parts, reducing competitiveness in China, Mexico, and the EU.
Disrupted Global Supply Chains	Export tariffs on materials like steel and batteries disrupt supply chains.	Indonesia's steel tariff raises costs and delays production for automakers like Volkswagen, Toyota.
Increased Production Costs	Tariffs raise costs for components, increasing vehicle prices.	Argentina's 20-25% export tariff on components raises costs for Brazilian automakers like Fiat, Volkswagen.
Impact on Foreign Relations	Tariffs can lead to retaliatory actions, disrupting trade.	U.S.-China trade war raised tariffs on auto exports, affecting Tesla and Ford.



Currency Impact on Automotive Import-Export Dynamics

Aspect	Description	Example
Export Competitiveness	Weaker currencies boost exports by reducing vehicle prices; stronger currencies reduce competitiveness.	Japanese Yen depreciation (2022): Toyota and Honda exports to U.S./Europe rose by 15%.
Import Costs	Weaker domestic currencies increase costs of imported parts and vehicles, raising production and consumer prices.	Indian Rupee depreciation (2021-2022): EV prices rose by 8-10% due to higher import costs from China.
Impact on Profit Margins	Fluctuations can erode or boost profit margins, depending on hedging strategies and exchange rates.	Volkswagen (2020): Lost \$1.4 billion due to unfavorable Euro-Dollar rates in U.S. operations.
Sourcing & Manufacturing	Automakers shift production to regions with stable or favorable currencies to minimize risks.	Ford/GM: Increased production in Mexico to leverage the stable Peso and proximity to the U.S. market.
Pricing Adjustments	Automakers adjust vehicle prices to offset currency impacts, balancing margins and demand.	Tesla (2021): Raised prices in Europe by 10-15% to counteract the stronger U.S. Dollar.

Quantitative Impact of Currency Changes:

Currency	Fluctuation	Trade Impact
Japanese Yen	Depreciation by 15% (2022)	Boosted exports from Japan by \$12 billion, particularly for Toyota, Honda, and Mazda.
U.S. Dollar	Appreciation by 10% (2021)	Increased import competitiveness but reduced exports, impacting Tesla and Ford's global sales.
Indian Rupee	Depreciation by 8% (2022)	Raised import costs of auto components, increasing vehicle prices in India by 5-7%.
Euro	Fluctuated by 6-8% (2020)	Reduced Volkswagen's U.S. profits by an estimated \$1.4 billion due to exchange rate losses.





6 Distribution Channel Analysis



DISTRIBUTION CHANNEL ANALYSIS

SALES AND DISTRIBUTION INSIGHTS

The global automobile industry is experiencing significant growth, driven by trends in electric vehicles (EVs), regional market dynamics, and evolving distribution networks.

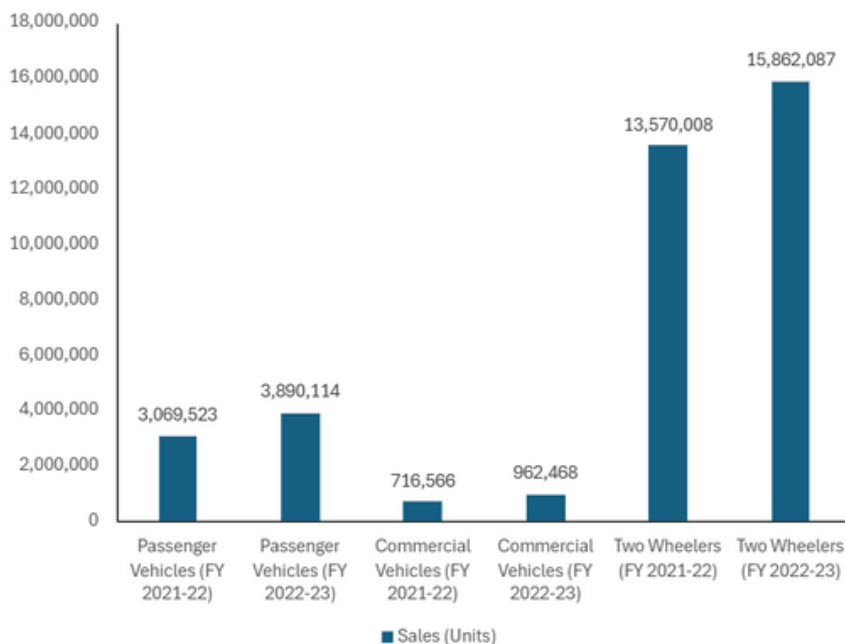
GLOBAL MARKET OVERVIEW

Year	Market Size (USD Billion)	CAGR (%)
2022	436.89	4.42
2030	1789	19.25

The increase in CAGR from 4.42% to 19.25% suggests that industries are likely experiencing transformative changes, possibly influenced by advancements in technology, shifts in consumer behavior, and increased investments in digital infrastructure. As companies adapt to these changes and leverage new technologies, the overall market landscape will likely evolve, creating numerous opportunities for growth and innovation across various sectors..

SALE TRENDS(FY 2021-23)

The global automotive market is growing rapidly, with a projected value of \$1.79 trillion by 2030. This growth is driven by increasing EV sales and demand from emerging markets, particularly India. The industry is also adapting to changing consumer preferences and technological advancements.



REGIONAL CHANNEL ANALYSIS



EMERGING DISTRIBUTION CHANNELS

- Direct-to-Consumer (D2C): Bypasses traditional dealerships, allowing manufacturers to sell directly to consumers (e.g., Tesla).
- E-commerce Platforms: Online sales channels that provide broader access to customers.
- Multi-channel Strategies: Combining traditional and online approaches to enhance customer reach.

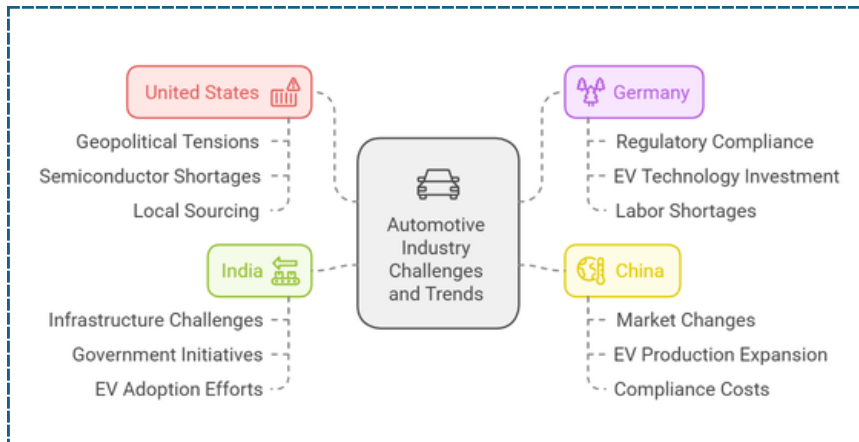
Analysis of Inventory Management Practices Across Distribution Channels

Inventory Practice	Region	Initial Setup	Ongoing Process	ROI	Key Considerations
Just-In-Time (JIT)	US	High (advanced software implementation)	Real-time tracking and coordination	Reduced holding costs, enhanced efficiency	Vulnerable to supply chain disruptions
	India	Moderate (mixed JIT & safety stock)	Balances stock with demand	Ensures supply continuity, reduces imports	Infrastructure challenges in local sourcing
Lean Manufacturing	Germany	Moderate (training & supplier setup)	Strong supplier collaboration	Optimized inventory levels, reduced waste	Complex supplier management systems
	Japan	Moderate (Kanban integration)	Efficiency through actual consumption	Reduced excess inventory, better production flow	Requires cultural alignment for success
Technology Integration	China	High (AI and predictive analytics)	Rapid demand adaptation	Quick adjustments, enhanced forecasting	Over-reliance on technology vulnerabilities
	South Korea	High (data analytics infrastructure)	Data-driven forecasting	Improved collaboration and inventory insights	High upfront investment in technology
Local Adaptations	India	Minimal (local sourcing initiatives)	Cost-efficient logistics	Reduced import dependency	Dependency on fragmented markets
	Japan	Minimal (Kaizen and continuous improvements)	Process refinement and flexibility	Improves operational consistency	Employee training is resource-intensive



AUTOMOBILE CHALLENGES AND TRENDS

Logistical bottlenecks in the automotive industry, driven by geopolitical tensions, regulatory challenges, natural disasters, and supply chain inefficiencies, impact production and costs globally. Regions like the U.S. and China adapt by sourcing locally, while Germany and South Korea invest in EV technology and advanced analytics to enhance supply chain resilience.



Comparative Analysis of Distribution Strategies:

Aspect	United States	Europe	Asia-Pacific (APAC)
Primary Channels	Dealerships, D2C models	Dealerships, online sales	Diverse channels including dealerships and direct sales
Franchise Laws	Strong protections for franchise dealerships	National laws protect established dealer networks	Varies by country; often favours local partnerships
E-commerce Adoption	Growing but still reliant on traditional models	Increasing integration with digital platforms	Rapid growth; significant online sales integration
Market Entry Strategies	Direct ownership and franchising	Franchising common; regulatory considerations	Franchising, licensing, and partnerships prevalent





7 Consumer Insight Benchmarking

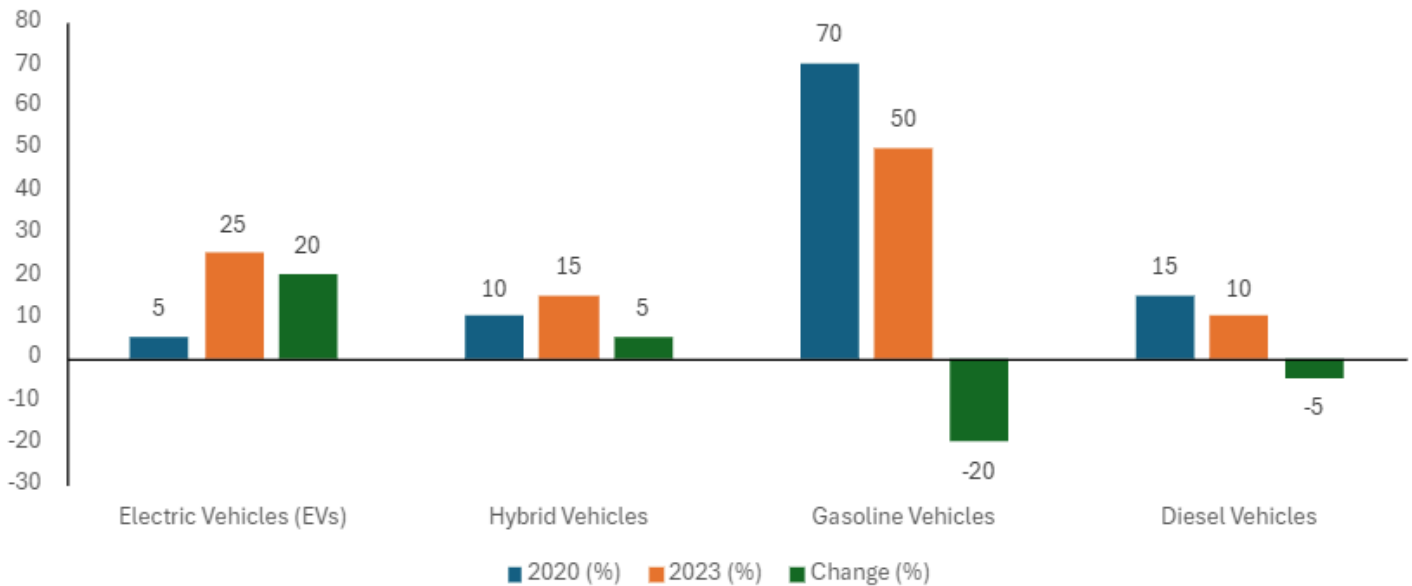


Consumer Insight Benchmarking

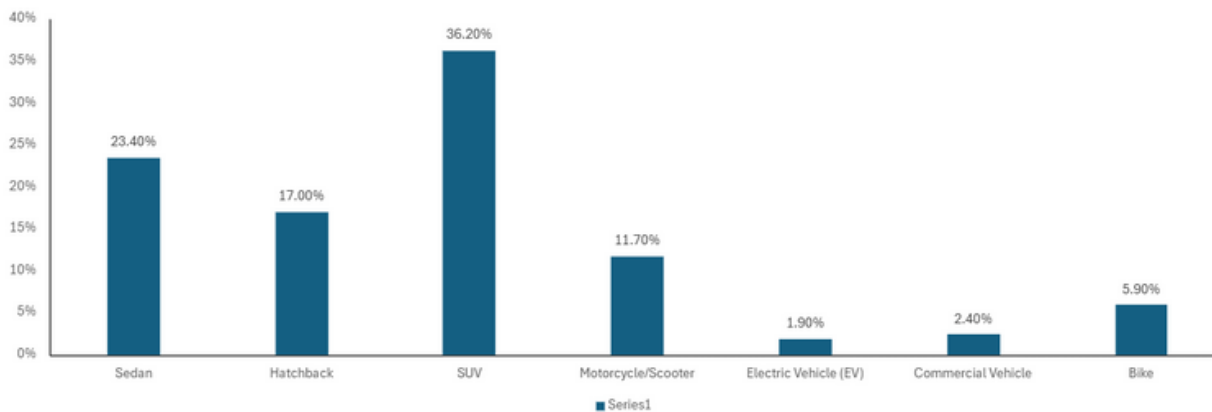
A comprehensive analysis of consumer insights provides valuable insights into the automotive market. Our findings reveal that factors such as brand reputation, vehicle features, and pricing play a crucial role in influencing consumer decisions. While traditional brands continue to hold significant market share, emerging players are gaining ground. By leveraging data-driven insights, automakers can make informed decisions to optimize their product offerings and marketing strategies.

The automotive landscape is a dynamic arena where consumer preferences are constantly evolving. Our analysis delves into the key factors that drive vehicle purchases, uncovering insights into brand loyalty, feature preferences, and pricing sensitivities. We explore the shifting market dynamics, highlighting the rise of emerging brands and the enduring popularity of traditional players. By understanding these trends, automakers can position themselves to capitalize on emerging opportunities and stay ahead of the competition.

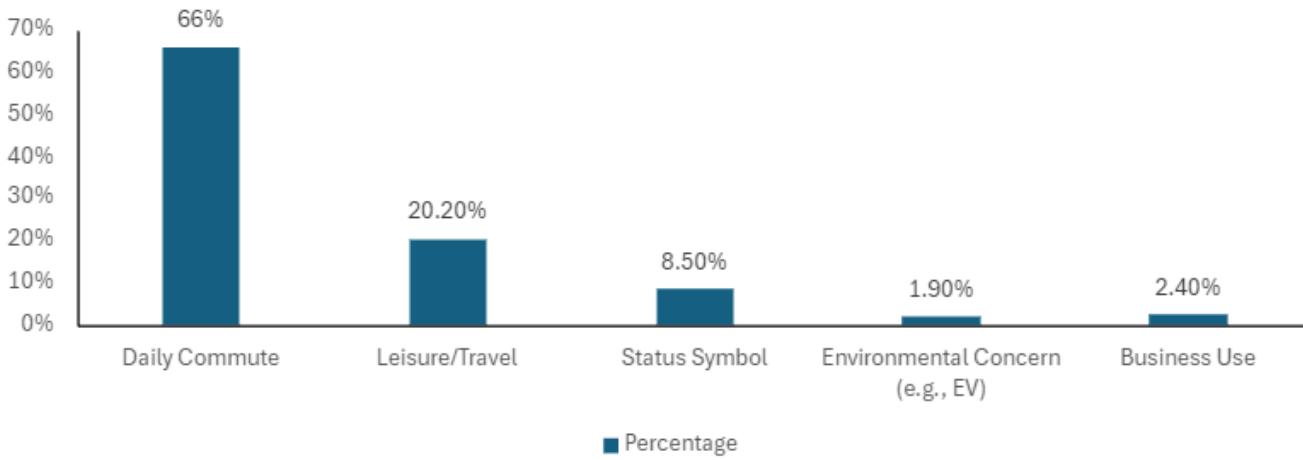
Buying Behaviour Shifts



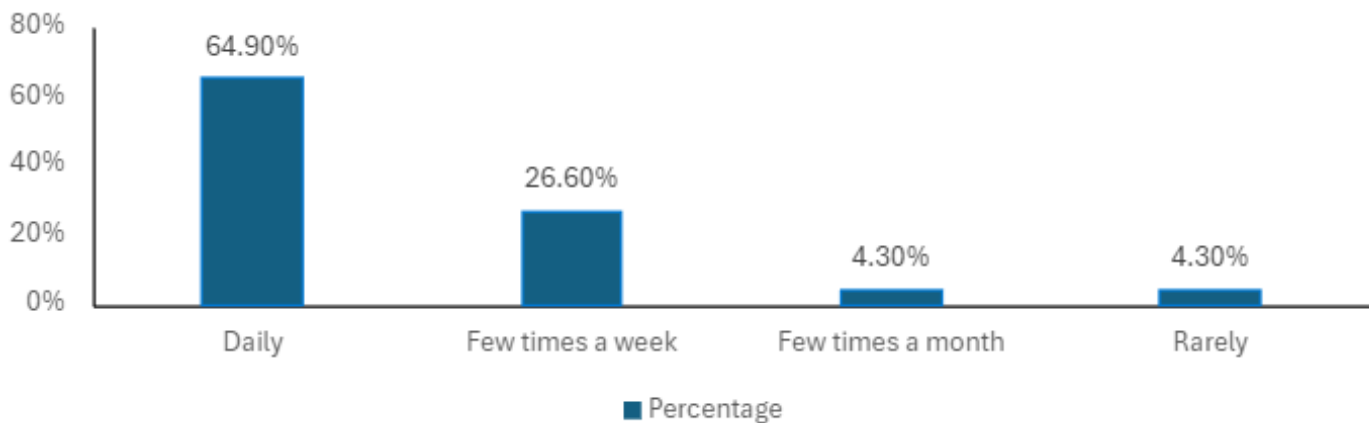
Vehicle Ownership Preferences



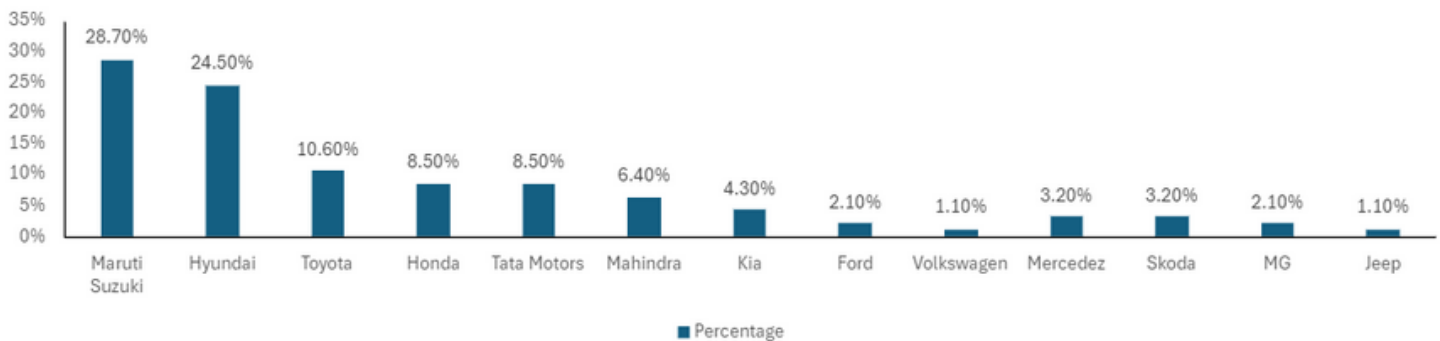
Primary Reasons for Recent Vehicle Purchases



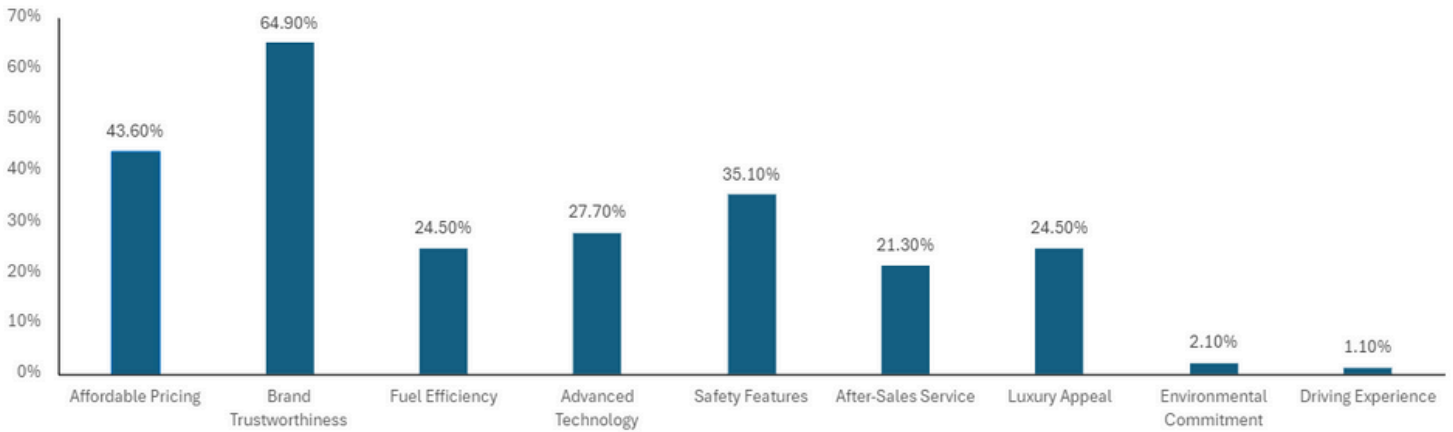
Frequency of Usage



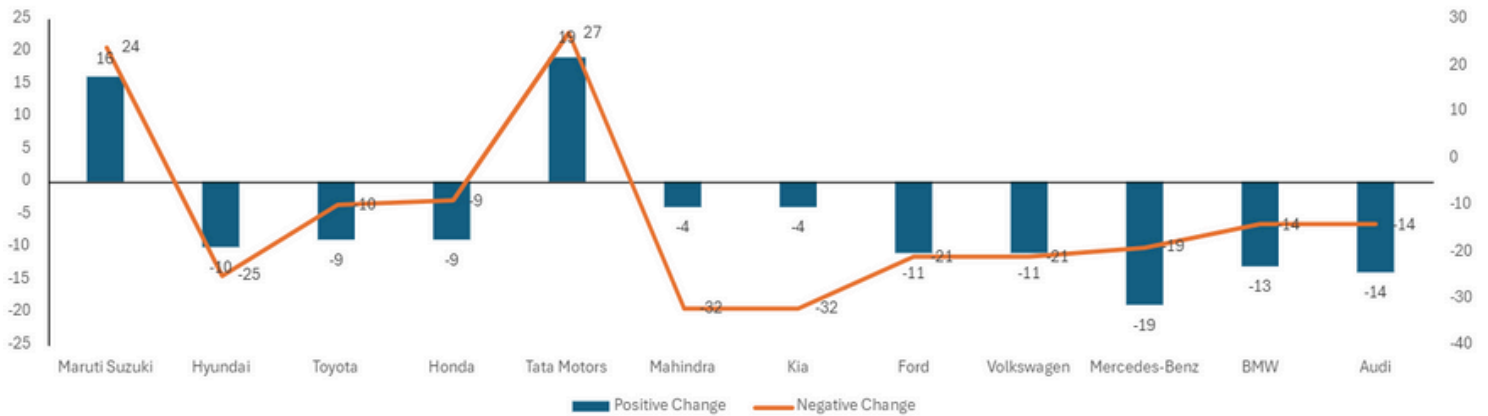
Brand Preference in Recent Vehicle Purchases



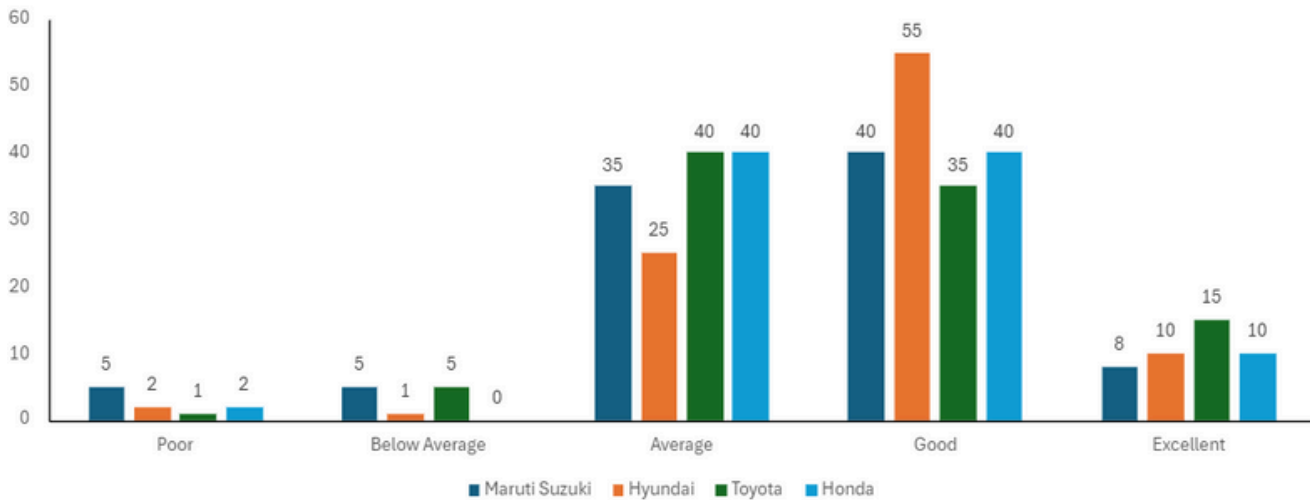
Factors Influencing Vehicle Purchases



Shifting Fortunes of Car Brands



Customer Satisfaction Across Brands



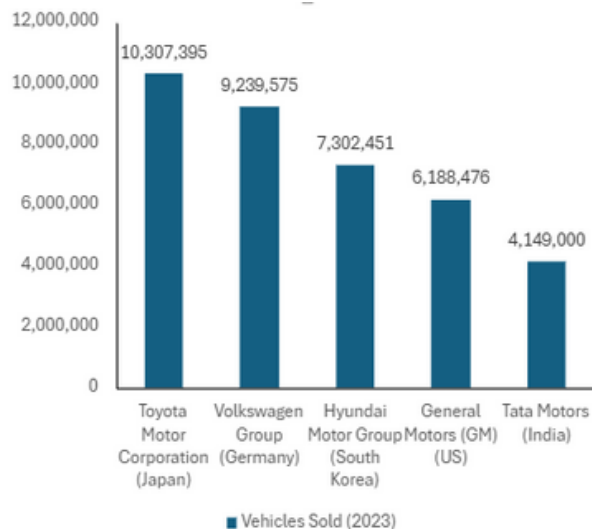


8 Financial Benchmarking

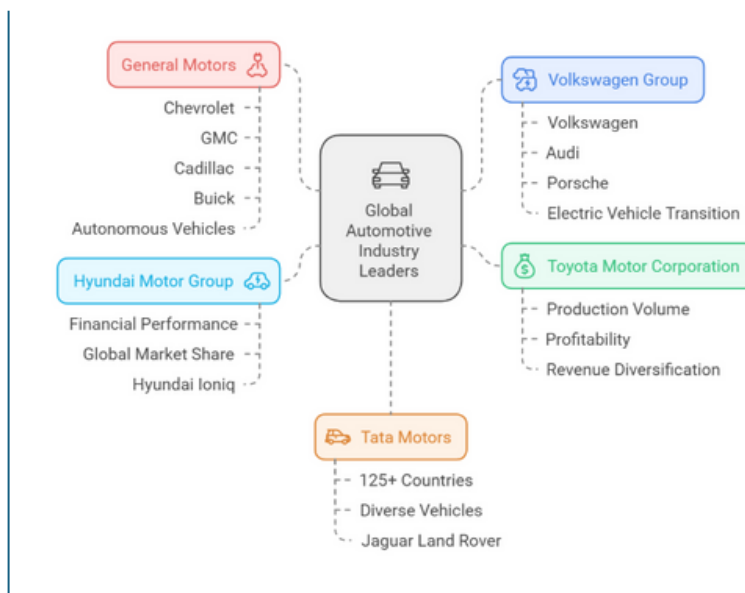


Financial Benchmarking:

Leading Automobile Companies:



Note: The values are in units



Financial Data (FY 23-24):

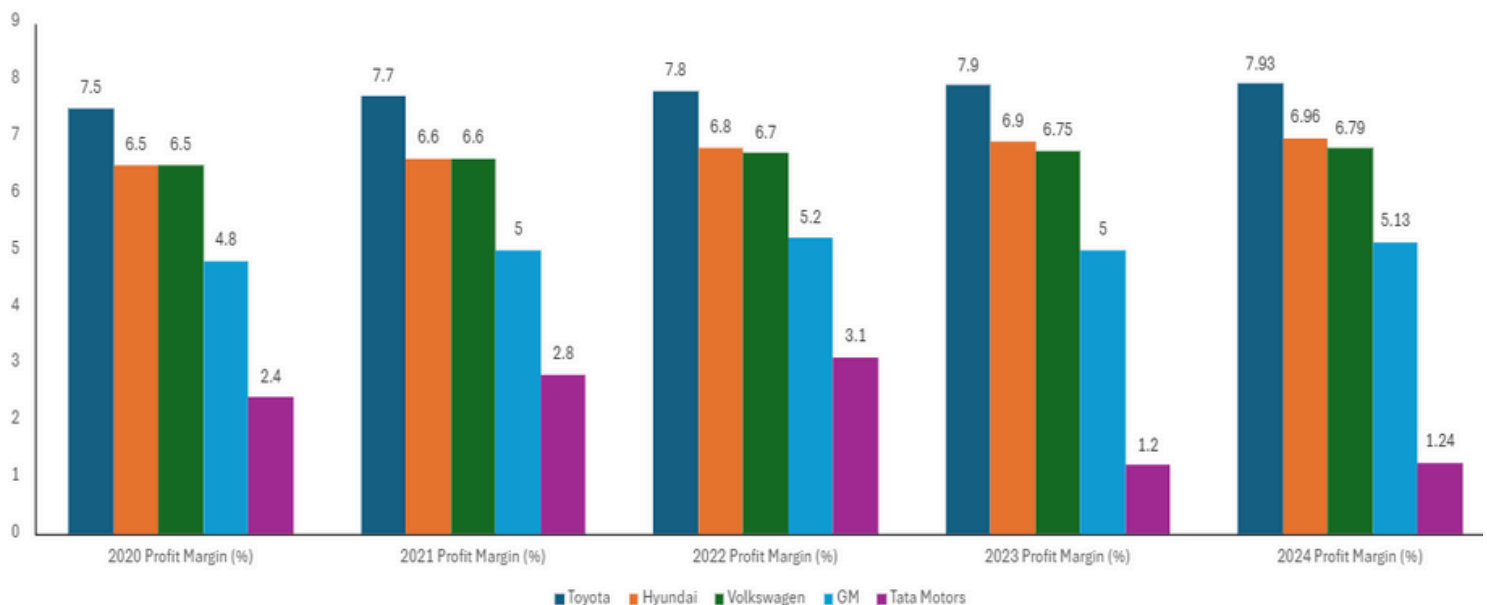
Company	Sales Revenue	Operating Income	Net Income
Toyota	45,095,325 million yen	5,352,934 million yen	5,071,421 million yen
Volkswagen	92,413 million euros	6,327 million euros	6,243 million euros
Hyundai	162,663,579 million won	15,126,901 million won	12,272,301 million won
Tata Motors	₹346,644 crore	₹18,000 crore	₹2,414 crore
General Motors (GM)	171,842 million USD	9,298 million USD	10,127 million USD



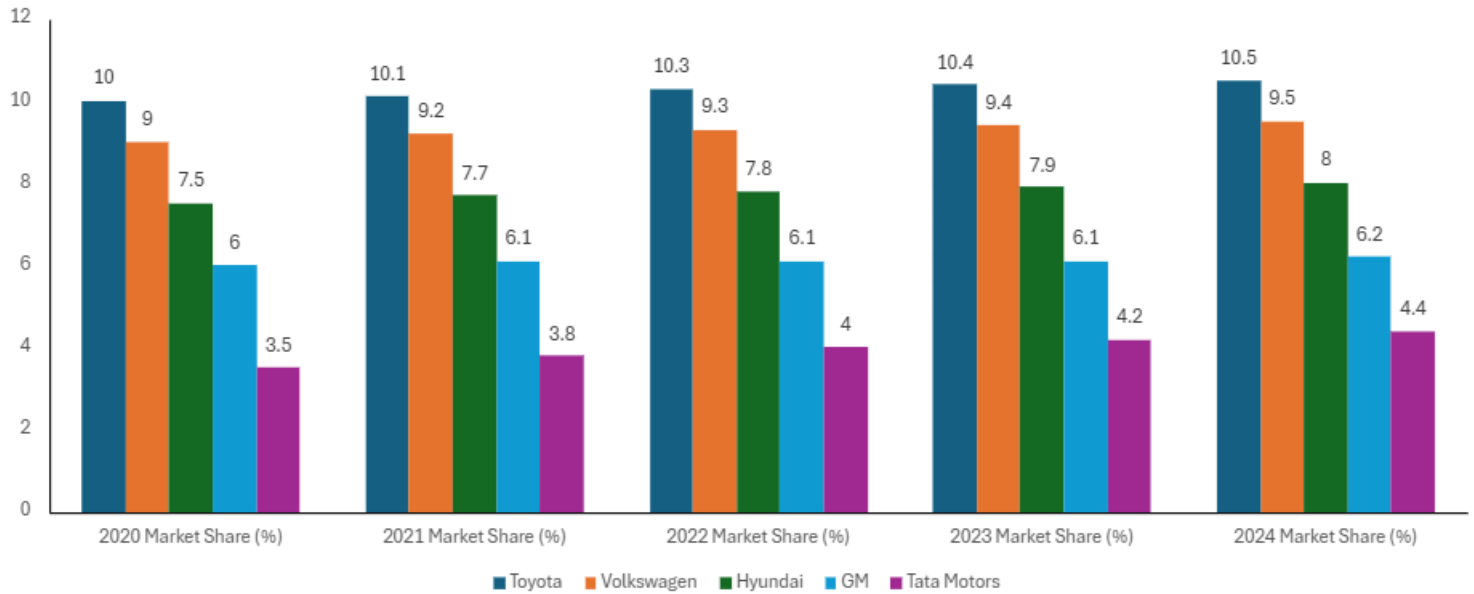
Key Financial and Market Metrics (2023) :

Company	Profit Margin (%)	Market Share (%)	Units Sold (M)	R&D Spending (\$B)
Toyota	7.93	10.5	10.5	10
Hyundai	6.96	8.0	6.8	7
Volkswagen	6.79	9.5	8.7	15
GM	5.13	6.2	6.1	7
Tata Motors	1.24	4.4	4.1	0.56

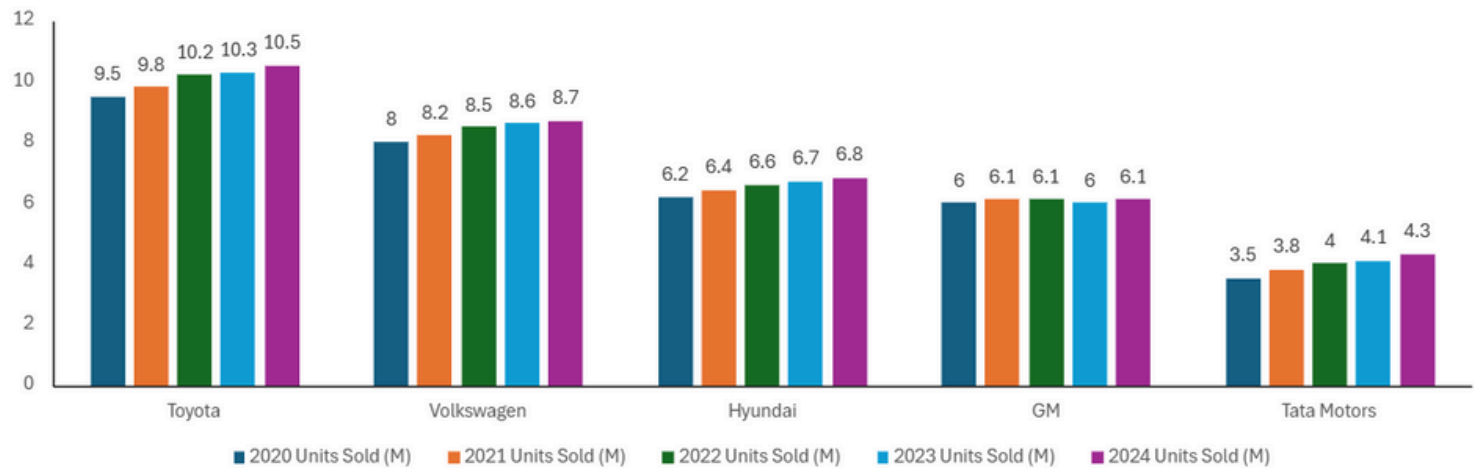
Profit Margin Trends (Last 4 Years) :



Market Share Trends (Last 4 Years) :



Units Sold Trends (Last 4 Years) :

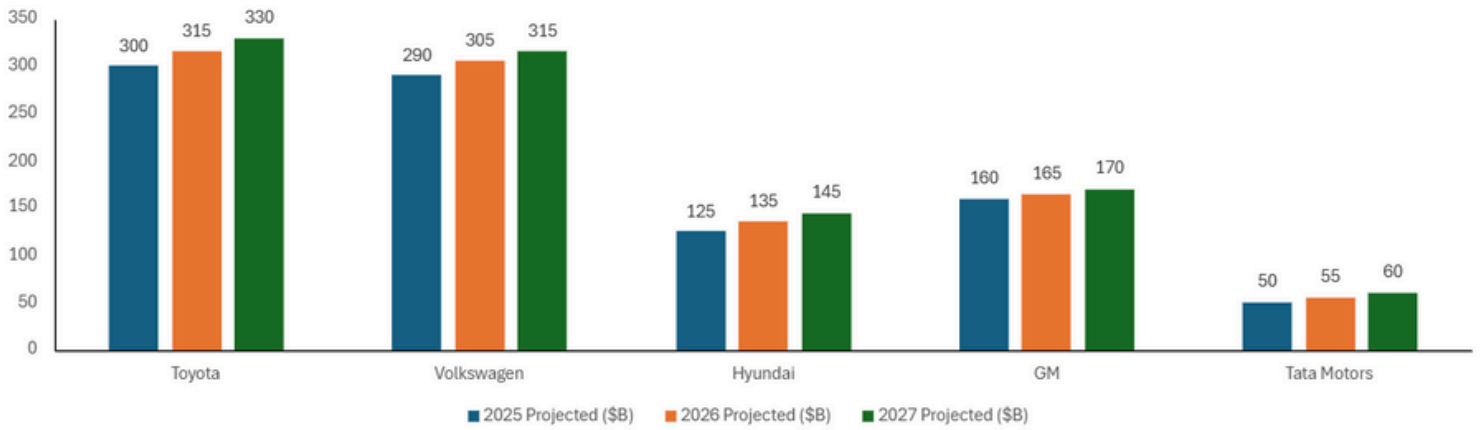


Conclusion:

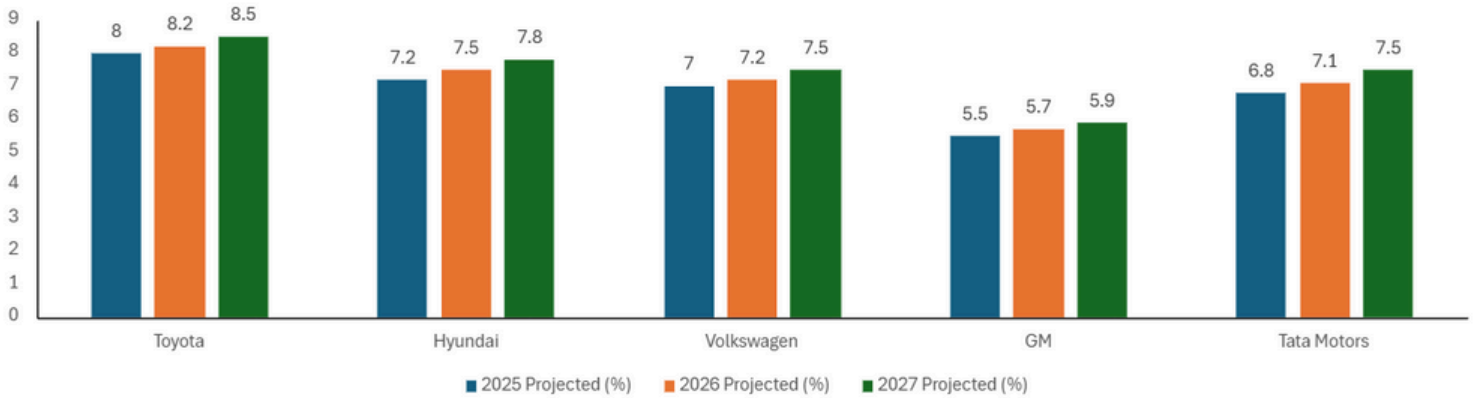
The data highlights Toyota's dominance in the global automotive industry, boasting the highest revenue (\$290B), net profit (\$23B), and market share (10.5%), with a robust profit margin of 7.93%. Volkswagen follows closely, excelling in R&D spending (\$15B) and unit sales (8.7M), reflecting its strong push towards innovation and electric mobility. Hyundai and GM demonstrate steady profitability and substantial market presence, while Tata Motors, despite having a smaller revenue base (\$49.7B) and profit margin (1.24%), shows promise with its growing EV portfolio and significant influence in emerging markets.



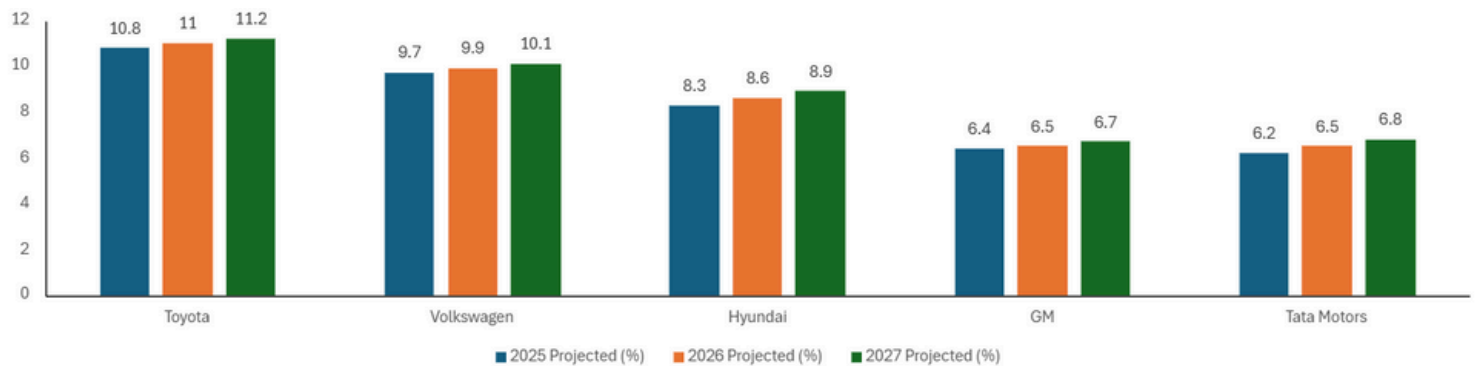
Projected Revenue Growth (2025–2027) :



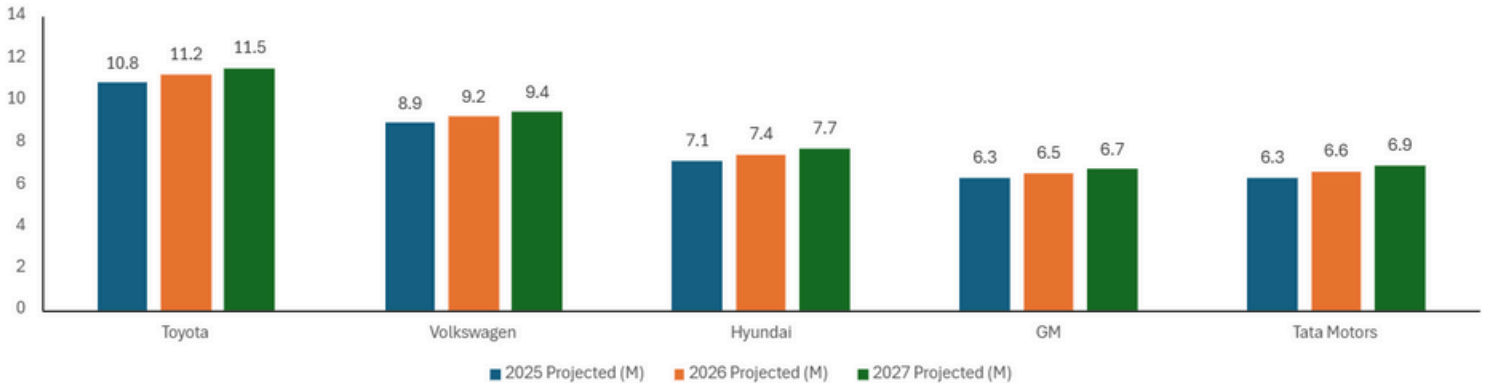
Projected Profit Margin Projections (2025–2027) :



Projected Market Share Projections (2025–2027) :



Projected Revenue Growth (2025–2027) :



Key Predictions and Insights for the Coming Years:

- EV Growth:** Toyota, Volkswagen, Hyundai, and Tata Motors will gain market share and revenue through EV investments. Hyundai and Volkswagen lead with diverse portfolios, while Tata Motors leverages India's EV market.
- Tata Motors' Expansion:** Backed by Jaguar Land Rover, Tata Motors targets emerging markets like India and Southeast Asia, meeting rising demand for sustainable mobility.

- Global Market:** Toyota and Volkswagen lead, Hyundai gains in emerging markets, and Tata Motors strengthens its EV position with innovation and sustainability.
- GM (General Motors) Challenges:** GM risks falling behind without faster EV growth and a stronger global presence, hindered by its North America focus and slower transition.

Conclusion:

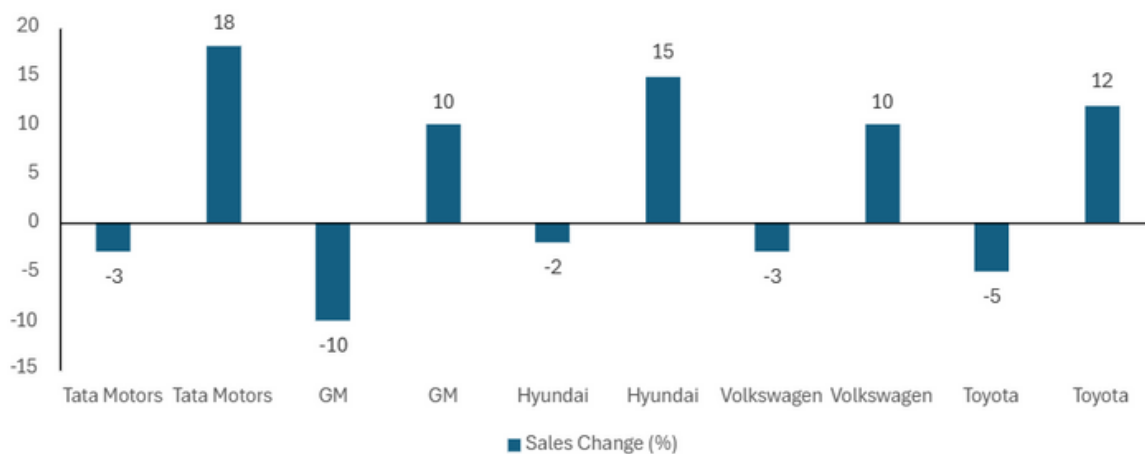
The next few years in the automotive industry will be marked by a strong focus on EVs, cost optimization, and global market expansion. Toyota, Volkswagen, and Hyundai are well-positioned to capitalize on these trends, while Tata Motors is set to enhance its presence through its growing EV portfolio and the global success of Jaguar Land Rover. GM, meanwhile, must accelerate its EV transformation and diversify its market presence to remain competitive.

Impact of Market Changes on Automotive Companies:

1. Scenario: Rising Fuel Prices

Impact on Market Sentiment:

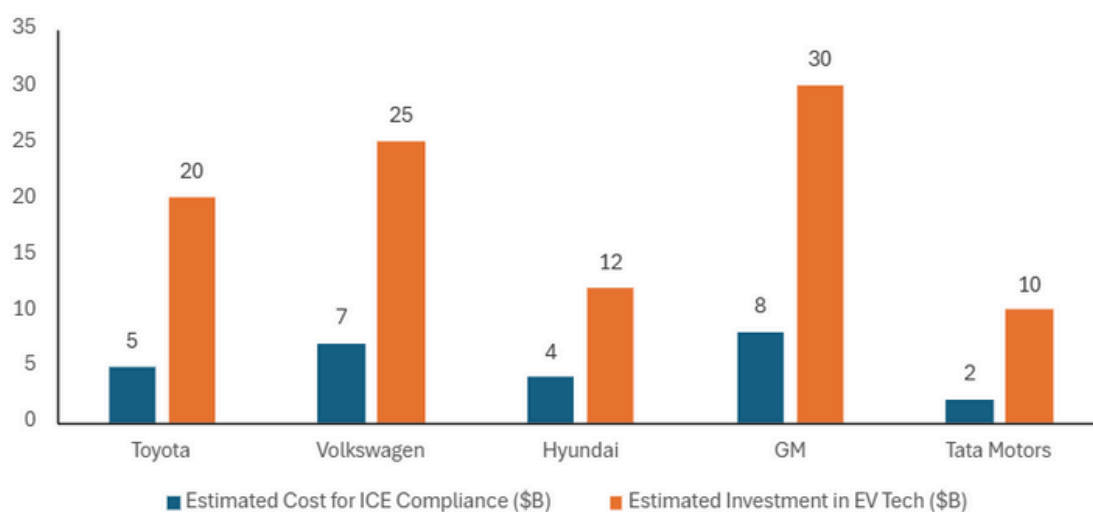
- **Increased Demand for Fuel-Efficient Vehicles:** Companies with strong hybrid and electric vehicle (EV) portfolios, like Tata Motors, will benefit as consumers shift toward more fuel-efficient options.
- **Decreased Demand for Trucks and SUVs:** Companies reliant on fuel-heavy vehicles, like GM, may face declines in their sales, particularly in regions where fuel prices rise sharply.



2. Scenario: Tighter Emissions Standards and Environmental Regulations

Impact on Market Sentiment:

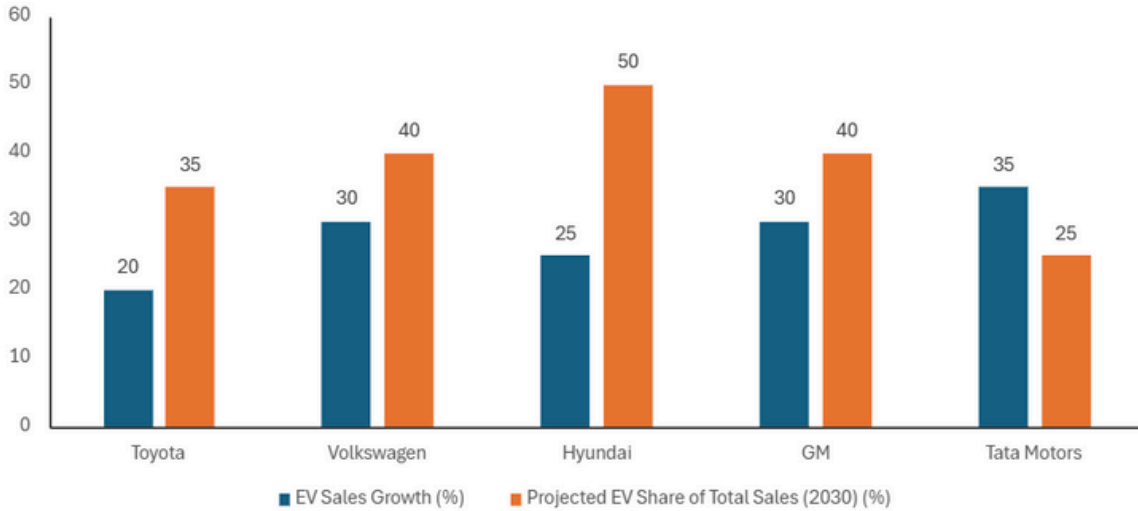
- **Cost of Compliance:** Companies with a significant proportion of gas-powered vehicles will face higher compliance costs due to stricter emissions standards.
- **Boost for Electric and Hybrid Manufacturers:** Companies with a strong EV portfolio (e.g., Tata Motors, Volkswagen, Hyundai) will have an advantage as they are better positioned to meet the stricter emission rules without facing significant price hikes.



3. Scenario: Increased Government Support for EVs (Subsidies and Incentives)

Impact on Market Sentiment:

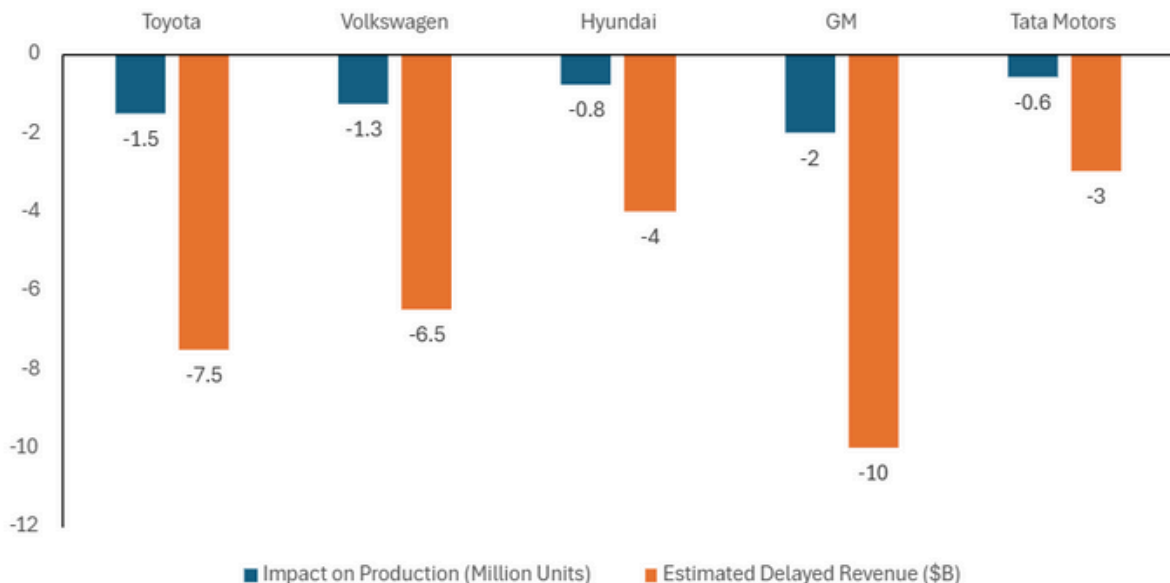
- **Growth of EV Market:** Companies with a strong EV portfolio will benefit from increasing demand due to subsidies and incentives.
- **Tata Motors:** Tata Motors stands to benefit from EV subsidies in India and global markets, where demand for electric vehicles is rising rapidly.



4. Scenario: Supply Chain Disruptions (e.g., Chip Shortages)

Impact on Market Sentiment:

- **Delays in Production:** Supply chain disruptions, such as chip shortages, can affect production schedules and lead to production delays.
- **Increased Vehicle Prices:** Disruptions may result in increased vehicle prices due to limited supply, impacting affordable vehicles in particular.



Key Quantitative Insights

Market Size and Growth:

- *Global automotive market size:* USD 3,564.67 billion (2023), projected to reach USD 6,861.45 billion by 2033.
- *CAGR:* 6.77% (2023–2033).



Global Production and Sales:

Top countries in vehicle production (2023):

- China: Cars: 25M units; Commercial vehicles: 3.5M units.
- Japan: Cars: 8M units; Commercial vehicles: 1.5M units.
- South Korea: Cars: 3.5M units; Commercial vehicles: 0.4M units.

EV Market Trends:

- *Annual Growth:* 30–35% since 2022.
- Over 1M new EV charging points installed globally in 2023.
- China leads in EV adoption with aggressive subsidies.



Import-Export Highlights:

United States:

- Imported USD 159B worth of cars (2022, highest globally).
- Exported USD 57.5B worth of cars, ranking 3rd globally.

Germany:

- Export leader with USD 149B worth of cars (2022).

Regional Market Insights:

India:

- Imports: USD 540M; Exports: USD 6.68B.
- Key markets: South Africa (USD 1.24B), Mexico (USD 941M).

China:

- NEV market share expansion with dominant manufacturers like SAIC Motor.



Policy and Tariff Impacts:

- *India:* Highest global car tariffs (100%), limiting luxury car market access.
- *China:* 15-25% tariffs on vehicles, with impactful trade policies.

R&D and Innovation:

R&D spending (2023):

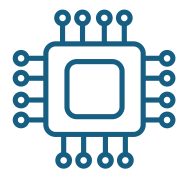
- Volkswagen: USD 15B.
- Toyota: USD 10B.

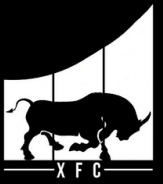
EV technology is driving global innovation.



Supply Chain Challenges:

Chip shortages and geopolitical tensions causing production delays and price increases globally.





Thank You