Resume Challenge #12

Introduction

- AtliQ Motors is an automotive giant from the USA specializing in electric vehicles (EV).
- With their commitment, their market share rose to 25% in electric and hybrid vehicles segment in North America.

Problem statement:

As a part of their expansion plans, they wanted to launch their bestselling models in India where their market share is less than 2%.
The chief of AtliQ Motors India requires a detailed market study of existing EV/Hybrid market in India before proceeding further.

Goal:

The Goal is to analyze the market based on States and competing Makers to significantly increase the current market share which currently holds at < 2% to a more competitive level.

AtliQ Motors (India)

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Home Page

The report provides market landscape analysis via **Maker** view, **State** view and overall **Market** trends.

Makers View

Analyze the **sales and growth** of each Maker (respective of vehicle category) based on Q**uarterly** trends & **CAGR**

State View

Provides insights as per current demand of EV in each State. Analysis based on **PR%** can help to predict growth and anticipate infrastructure demand.

Market Analysis

The revenue generated by each State and **varied demands** for 2-Wheeler/4-Wheeler in different States. **Revenue forecas**t for the coming years.

EV = Electric Vehicle TV = Total Vehicle CAGR = Compound Annual Growth Rate (%) PR = Penetration Rate (%)

Maker: All

Vehicle category: All

2022 | 2023 | 2024

Top 3 Makers by Sales

Bottom 3 Makers by Sales

Revenue

209.63bn

LY: 133.07bn (+57.53%)

PR %

4.81%

LY: 3.95% (+21.84%)

Total EV sold

1.02M

LY: 0.78M (+31.5%)

Top 5 maker by EV CAGR

Quarterly sales trend for 2024

EV = Electric Vehicle TV = Total Vehicle CAGR = Compound Annual Growth Rate (%) PR = Penetration Rate (%)

State: All

Vehicle category: All

2022 | 2023 | 2024

Top 5 States by PR %

Delhi vs Karnataka

Revenue

209.63bn

LY: 133.07bn (+57.53%)

PR %

4.81%

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Total EV sold

1.02M

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States by -ve ΔPR %

Top 10 States by CAGR for total vehicles

EV = Electric Vehicle TV = Total Vehicle CAGR = Compound Annual Growth Rate (%) PR = Penetration Rate (%)

State: All

Vehicle category: All

2022 | 2023 | 2024

Total Charging Stations in India : 12K

Revenue	PR %	Total EV sold
209.63bn	4.81%	1.02M
LY: 133.07bn (+57.53%)	LY: 3.95% (+21.84%)	LY: 0.78M (+31.5%)

EV = Electric Vehicle TV = Total Vehicle CAGR = Compound Annual Growth Rate (%) PR = Penetration Rate (%)

State	CS	EV sales	PR %
Maharashtra	3,079	3,96,045	6.49%
Karnataka	1,041	3,12,995	7.84%
Tamil Nadu	643	2,00,062	4.30%
Rajasthan	500	1,50,366	4.55%
Gujarat	476	1,81,389	4.40%

Primary Questions

Q1. List the top 3 and bottom 3 makers for the fiscal years 2023 and 2024 in terms of the number of 2-wheelers sold.

2023

2024

Q2. Identify the top 5 states with the highest penetration rate in 2-wheeler and 4-wheeler EV sales in FY 2024.

State	Penetration rate
Goa	17.99%
Kerala	13.52%
Karnataka	11.57%
Maharashtra	10.07%
Delhi	9.40%

2-Wheeler

State	Penetration rate
Kerala	5.76%
Chandigarh	4.50%
Delhi	4.29%
Karnataka	4.26%
Goa	4.25%

4-Wheeler

Q3. List the states with negative penetration (decline) in EV sales from 2022 to 2024?

4-Wheelers

2-Wheelers

Q4. What are the quarterly trends based on sales volume for the top 5 EV makers (4-wheelers) from 2022 to 2024?

Q5. How do the EV sales and penetration rates in Delhi compare to Karnataka for 2024?

Delhi has higher EV Sales Vol and Penetration Rate %

Q6. List down the compounded annual growth rate (CAGR) in 4-wheeler units for the top 5 makers from 2022 to 2024.

Maker	EV vol by maker
Tata Motors	89K
Mahindra & Mahindra	41K
MG Motor	14K
BYD India	2K
Hyundai Motor	2K

Q7. List down the top 10 states that had the highest compounded annual growth rate (CAGR) from 2022 to 2024 in total vehicles sold.

Q6.What are the peak and low season months for EV sales based on the data from 2022 to 2024?

Q9. What is the projected number of EV sales (including 2-wheelers and 4-wheelers) for the top 10 states by penetration rate in 2030, based on the compounded annual growth rate (CAGR) from previous years?

State	Penetration Rate %	CAGR %	Sales Forecast
Maharashtra	6.49%	101.89%	13.35M
Kerala	6.64%	132.83%	11.78M
Gujarat	4.40%	116.33%	8.65M
Karnataka	7.84%	93.24%	8.38M
Odisha	4.63%	102.94%	2.73M
Goa	9.84%	146.45%	2.42M
Rajasthan	4.55%	81.87%	2.40M
Tamil Nadu	4.30%	59.95%	1.58M
Delhi	6.76%	68.10%	1.05M
Chandigarh	4.04%	164.58%	0.99M

Q10. Estimate the revenue growth rate of 4-wheeler and 2-wheelers EVs in India for 2022 vs 2024 and 2023 vs 2024, assuming an average unit price.

Secondary Questions

Q1. What are the primary reasons for customers choosing 4-wheeler EVs in 2023 and 2024 (cost savings, environmental concerns, government incentives)?

Environmental benefits:

-Reduced emissions: EVs produce zero tailpipe emissions, reducing air pollution.

-Energy efficient: EVs are more efficient in utilizing battery energy % to power the vehicle.

Cost Savings:

-Low maintenance cost

-Electricity is generally cheaper than petrol, diesel thus saving Fuel Cost.

Government Schemes:

- Subsidies and tax benefits
- Increasing budget allotment for the infrastructure, easy permits and exemption form registration fees.

Q2. How do government incentives and subsidies impact the adoption rates of 2-wheelers and 4-wheelers? Which states in India provided most subsidies?

4-wheeler(s)

-Incentives of ₹10,000 per kWh, with a maximum of ₹1.5 lakh per vehicle, have been provided under **FAME-II** and state policies.

- Delhi offers up to ₹1.5 lakh per 4W and encourages adoption via policies for government and fleet vehicles.

- States like Maharashtra and Tamil Nadu emphasize high-speed charging networks to cater to 4W users.

-Delhi and Assam lead the way in providing subsidies for 4W.

2-wheeler(s)

-Under **FAME-II** the subsidy received for 2-wheelers helped in reducing the cost by 20-25% in some cases.

-**Electric Mobility Promotion Scheme** by the central govt.

-With Delhi offering interest subventions on loans, Gujarat and Maharashtra providing direct subsidies to lower upfront costs. These states are achieving higher adoption rate.

Q3. How does the availability of charging stations infrastructure correlate with the EV sales and penetration rates in the top 5 states?

Correlation b/w EV Sales and Charging Infrastructure

-Sales Growth

-Visible infrastructure changes increases buyer's confidence.

-Range anxiety mitigation

-Feedback Loop : The increase in EV Sales would lead to increase in infrastructure investment.

State	CS	EV sales	PR %
Maharashtra	3,079	3,96,045	6.49%
Delhi	1,886	1,07,312	6.76%
Karnataka	1,041	3,12,995	7.84%
Kerala	852	1,37,060	6.64%
Tamil Nadu	643	2,00,062	4.30%

Q4. Who should be the brand ambassador if AtliQ Motors launches their EV/Hybrid vehicles in India and why?

Akshay Kumar

Virat Kohli

Dia Mirza

The following celebrities can be good suggestions for brand ambassador:

- Large fan following
- known to work for the country
- Have previously collaborated for promoting many Govt. Schemes

Q5. Which state of India is ideal to start the manufacturing unit? (Based on subsidies provided, ease of doing business, stability in governance etc.)

Gujarat

-Favorable Policies and incentives.

- Ease of doing business.

- Well developed infrastructure.

Top 3 recommendations for AtliQ Motors

1. Focus on Penetration Rate :

As per the analysis, the PR % and EV sales volume is proportional. The states with higher PR % indicate adaptive infrastructure and the approach of the population residing. Introduction of products in these states would be easier.

2. Government Incentives and Subsidies :

Launching products in states already supporting EV adoption would result in competitive and attractive offers for the customers. Additionally, the govt. support also helps to null the psychological hesitation within the population.

3. Product Customization:

Certain states would show two-wheeler dominance over 4-wheeler and vice versa. The offerings in a particular state should be adaptive of local needs.