

AtliQ Motors

Electric Vehicles Analysis

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Problem Statement

AtliQ Motors is an automotive giant in the USA that specializes in electric vehicles (EVs). In the last 5 years, their market share rose to 25% in North America's electric and hybrid vehicles segment. As a part of their **expansion** plans, they wanted to launch their bestselling models in India where their market share is less than 2%. Bruce Haryali, the chief of AtliQ Motors India, wanted to do a **detailed market study** of India's existing EV/Hybrid market before proceeding further.

Approach

Elements of inclusive market research:

Seasonality & Trends



Example:

- See how the industry is performing over time in terms of sales and growth
- Identify the peaks and drops in the market.

Customers



Example:

- Preferences
- Characteristics
- Locations

Competitors

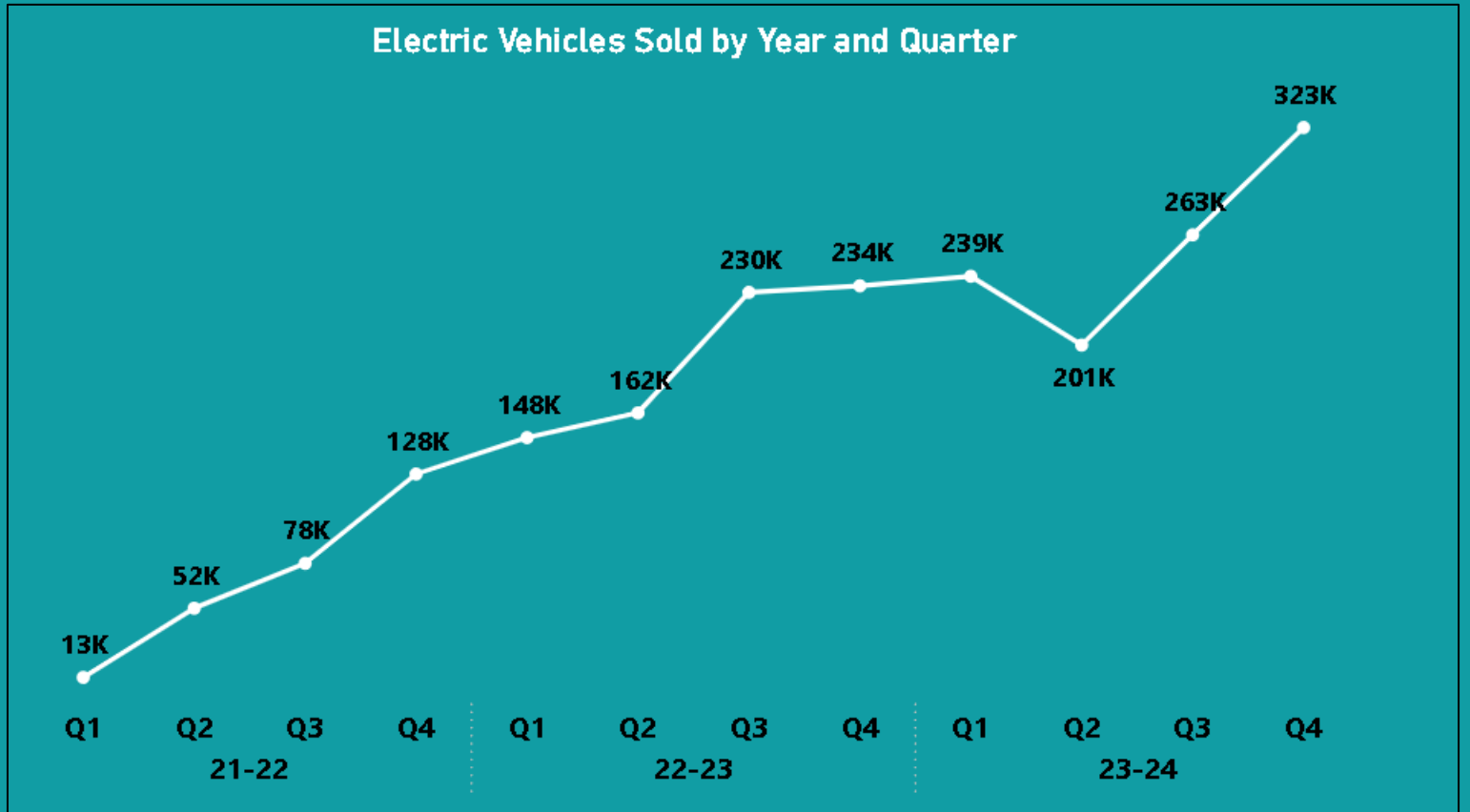


Example:

- Leadership
- USF (Unique Selling Feature)
- Growth

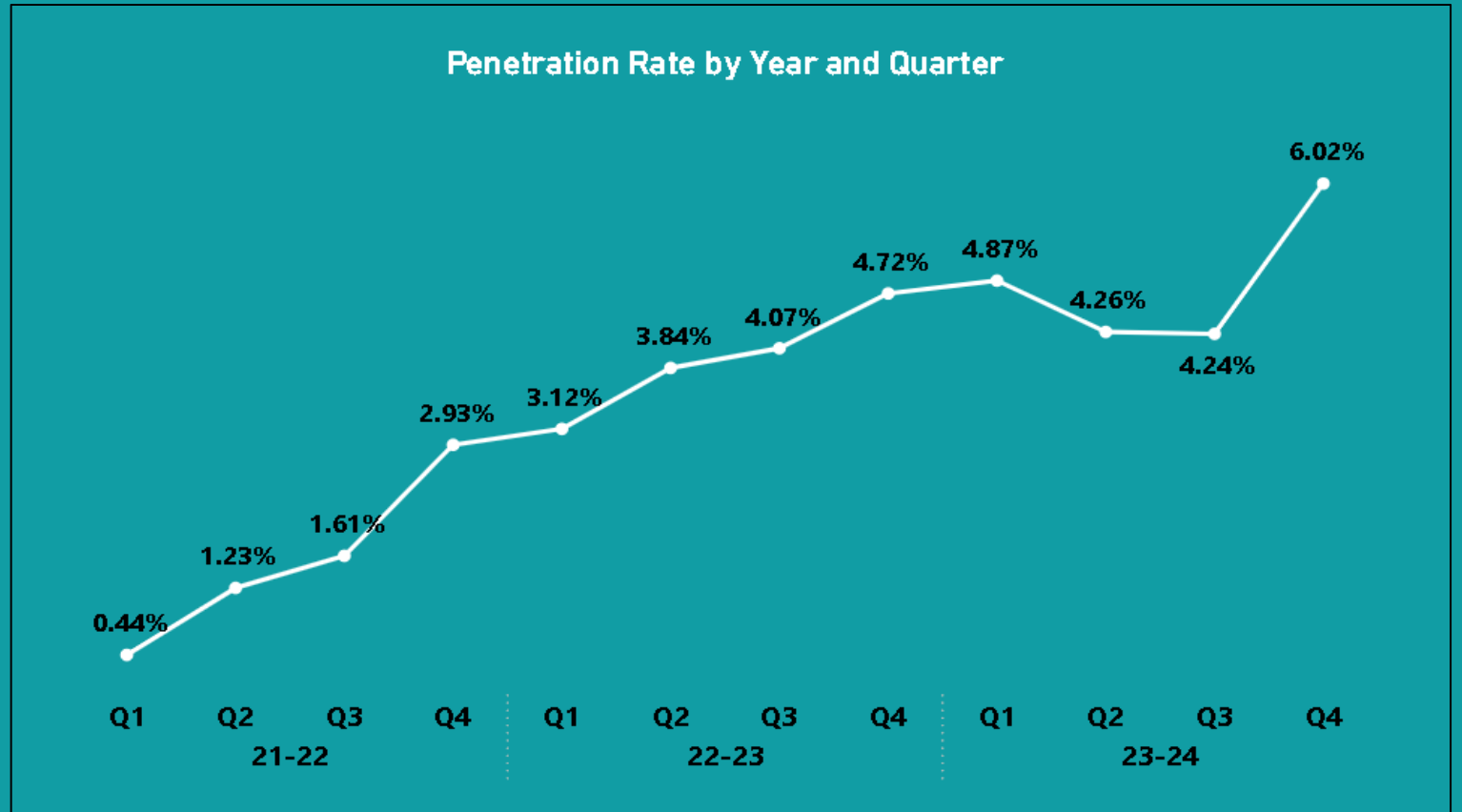
1. Seasonality & Trends

- In the past 3 fiscal years, **2.07M** EVs were sold with an average growth rate of **56% every year (CAGR)**, and at that rate, **1.6M** vehicles are expected to be sold the next year.



1. Seasonality & Trends

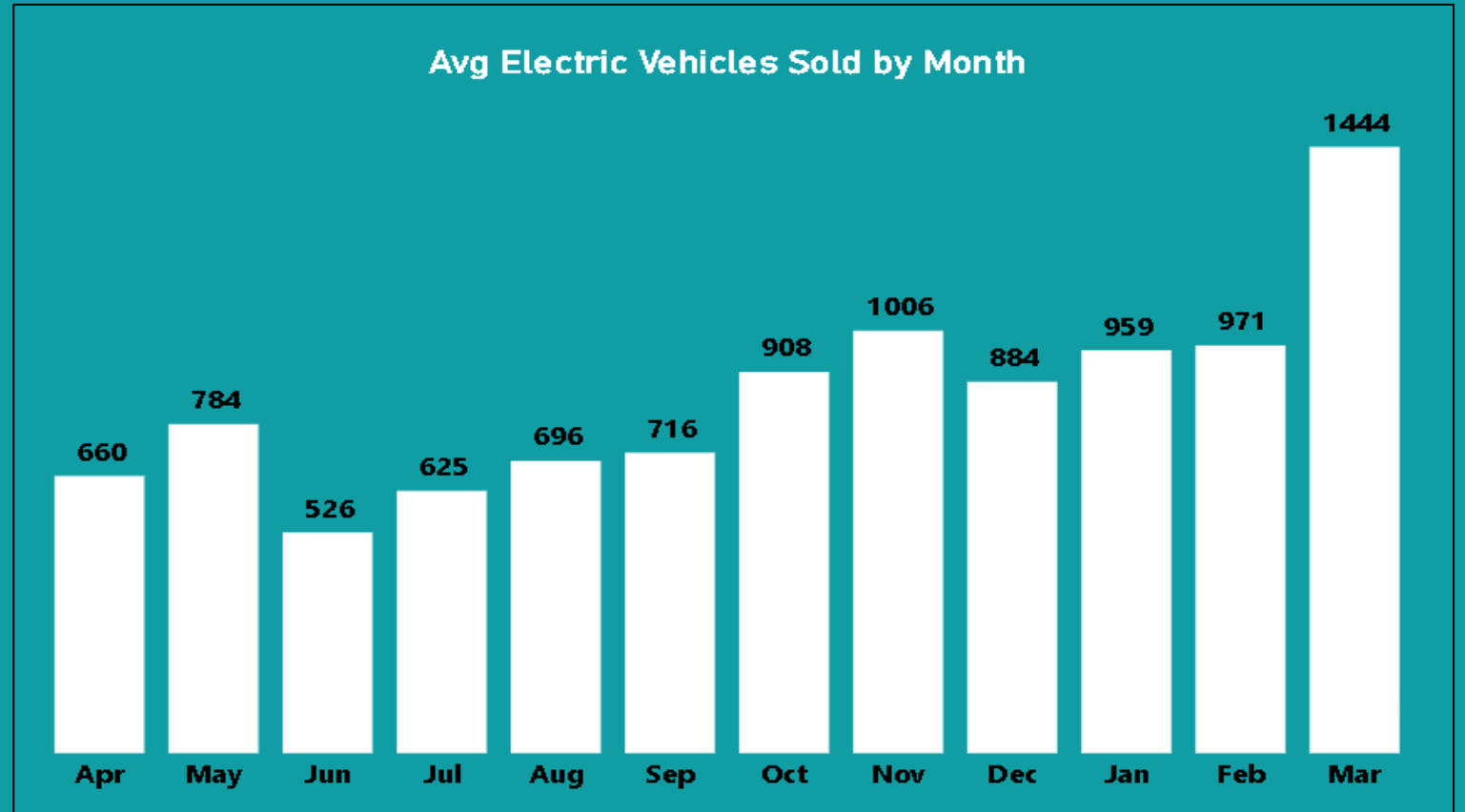
- EVs are getting more popular with time, in 2021's Q1 the EVs represented less than 0.5% of the total vehicles in India and this ratio increased to 6.5% in 2024's Q4, it's still low but on the other hand, the industry is growing and there are a lot of opportunities.



1. Seasonality & Trends

- Based on the data, sales increase in the 2nd half of each fiscal year (from Oct to Mar), especially in Mar.

Note: As we're using the average, the numbers shown in the graph are skewed by the gap between very high and very low values but we only want to compare between months and won't do any calculations with them.



2. Customer Locations

The data contains the number of EVs sold by state, after analyzing the data, I'll divide them into 3 main groups:

Established Markets



- Combining both high market share and continuous growth.

Promising Markets



- Showing faster and higher growth than any other state with relatively high market shares.

Potential Markets



- Showing faster and higher growth than other states with small market shares.

2. Customer Locations

1. Established Markets

1. **Maharashtra:** the richest state in India and the second most populous, with a market share of **19%**, a CAGR of **60%**, and the last PR recorded was **10.5%**.
2. **Karnataka:** The 5th economy in India, with a market share of **15%**, a CAGR of **55%**, and a max PR of **12%**.
3. **Tamil Nadu & Gujarat:** 2nd and 3rd economies in India, their market share is similar about **9%**.
however, Gujarat is growing faster and is expected to surpass Tamil Nadu next year.
4. **Rajasthan:** shares with **7.25%** of EVs' production

2. Customer Locations

2. Promising Markets

1. **Kerala:** The most promising state based on CAGR **81%** and is expected to be in **third** place next year after Maharashtra and Karnataka, the recent penetration rate recorded in 2023 Q4 was **17.5%**.
2. **Uttar Pradesh:** Showed significant growth last year, with a **122%** increase in the number of EVs sold in 2023 compared to 2022, in addition, It's the **most populous state in India**, meaning it has a wider range of potential customers.
3. **Madhya Pradesh:** **76%** growth and the 5th in population.

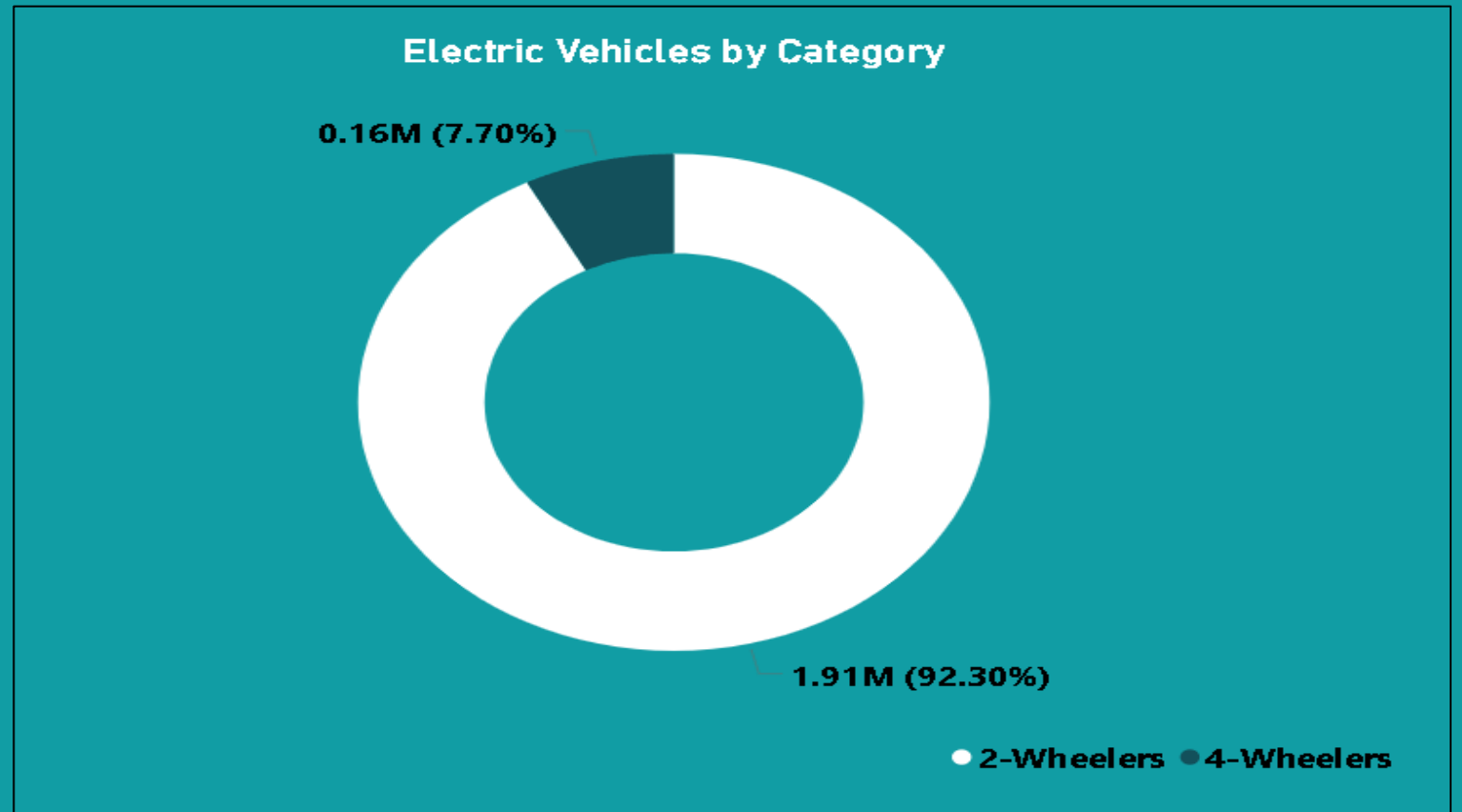
2. Customer Locations

3. Potential Markets

1. **Chhattisgarh:** Recorded **85% CAGR** and is the highest state in values among these 3.
2. **West Bengal:** The 4th state in population and the 6th in economy, with an **85% CAGR**.
3. **Goa:** Recorded the Highest PR among all states **19%** in 2023 Q4, however, it's a small state in terms of population and economy.

3. Customer Preferences

- More than **92%** of EVs in India are 2-wheelers (bikes, scooters,...). That's because it's more affordable and provides easy navigation through cities. In addition, India has more rural areas than urban ones.



4. Competition

Here we have 2 separate markets:

4-Wheelers



2-Wheelers



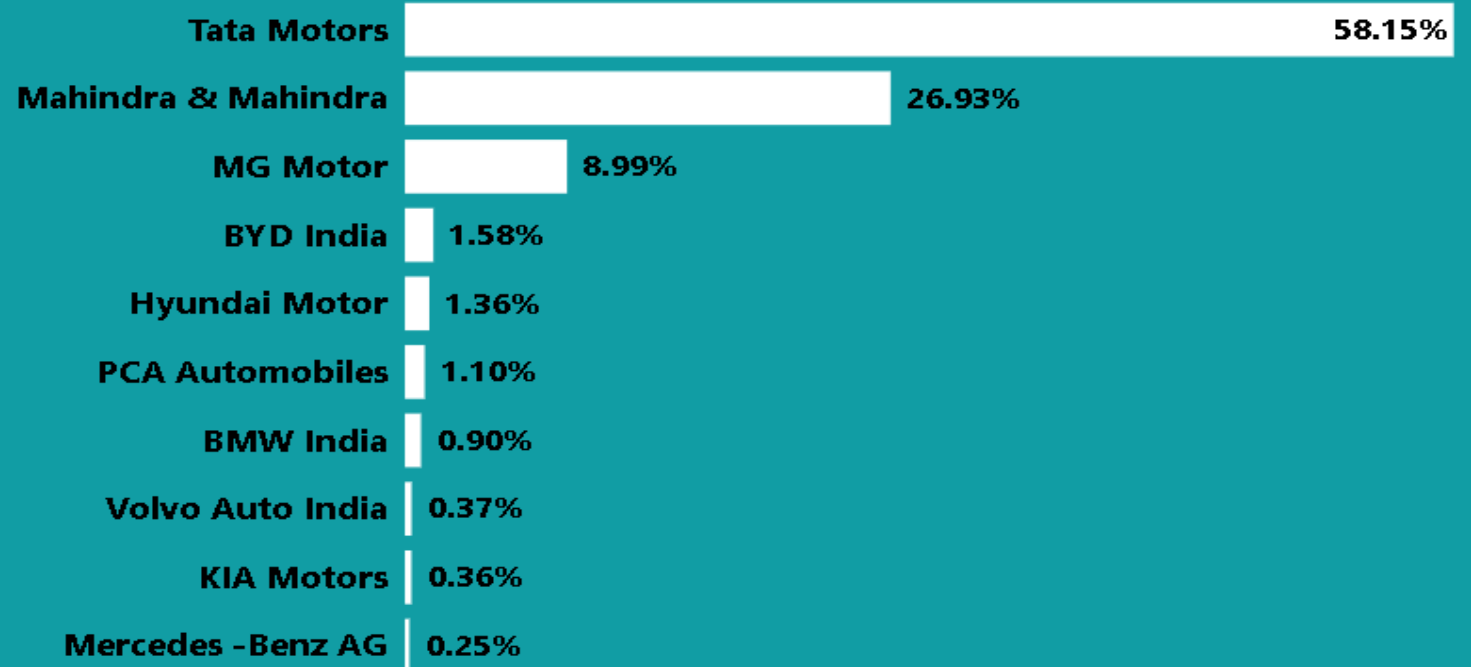
4.1 Market Share

4-Wheelers



- 10 Makers
- 3 Leaders
- Low Competition

Market Share



4.2 Leaders Info

Company	Products	EVs	Average Price
Tata Motors	Tata Motors produces a wide range of vehicles, including cars, trucks, vans, and buses	They focus on passenger EVs, including SUVs and regular cars. They currently have four EV models: Nexon EV, Tigor EV, Tiago EV, and the upcoming Curvv EV	₹13.67 lakh.
Mahindra	a leader in the 3-wheeler industry in India and produces both passenger and commercial vehicles. They also specialize in tractors and SUVs	They currently have one electric SUV, the XUV400. They have announced plans to launch five new models in 2025 under the XUV.e and BE series	₹13.49 lakh
MG Motors	both electric vehicles (EVs) and hybrid vehicles (HVs). They focus on passenger vehicles and target premium customers with their superior models.	Their EV lineup includes models like the MG ZS EV and the MG Comet EV	₹17.50 lakh

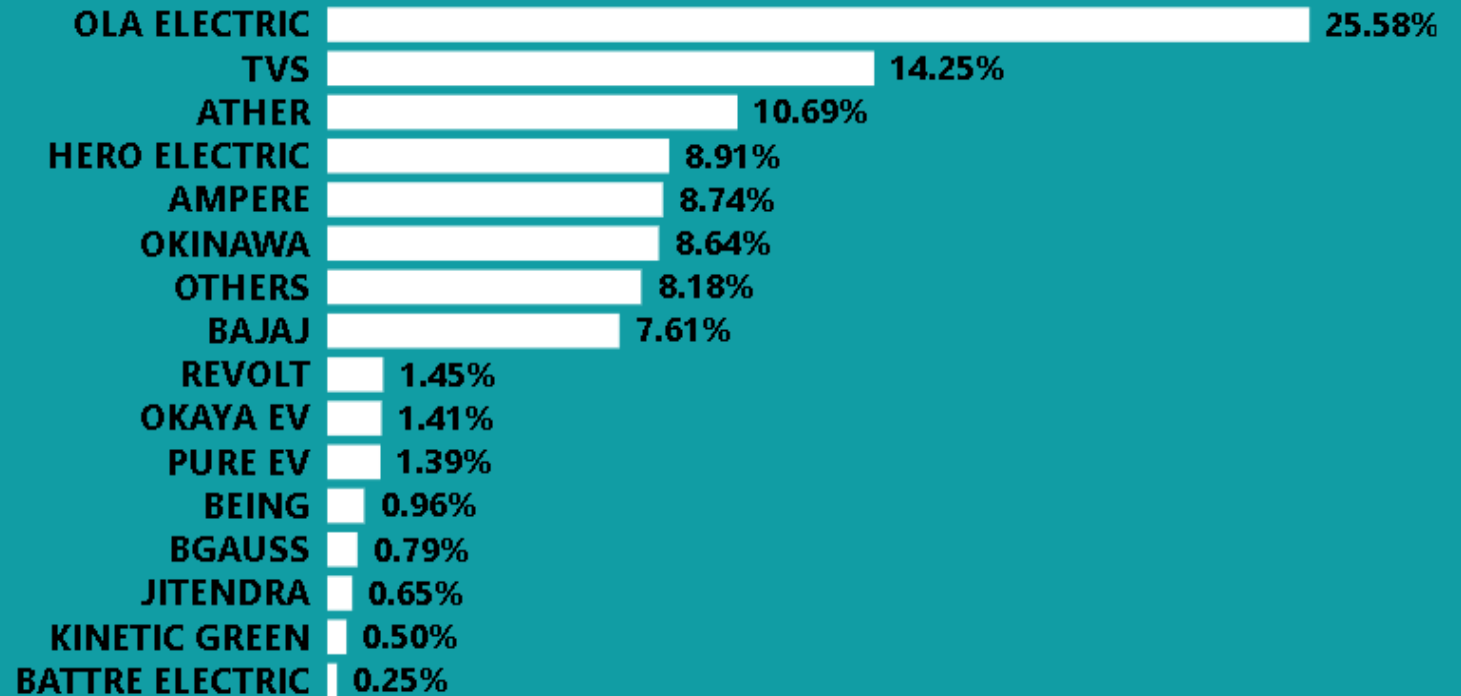
4.3 Market Share

2-Wheelers



- 16 Makers
- 7 Competitors
- High Competition

Market Share



4.4 Models Comparison

Company	Lowest Price	Lowest Price Model	Highest Price	Highest Price Model	Most Popular Model	Most Popular Model Price
Ola Electric	₹1,29,999	Ola S1 Air	₹1,49,999	Ola S1 Pro	Ola S1 Pro	₹1,49,999
TVS	₹1,26,970	TVS iQube ST	₹1,61,056	TVS iQube ST	TVS iQube ST	₹1,61,056
Ather	₹1,28,443	Ather 450S	₹1,58,453	Ather 450X	Ather 450X	₹1,58,453
Hero Electric	₹86,459	Hero Electric Optima CX	₹1,30,000	Hero Electric Optima CX	Hero Electric Optima CX	₹1,30,000
Ampere	₹66,799	Ampere Magnus EX	₹1,05,900	Ampere Primus	Ampere Magnus EX	₹66,799
Okinawa	₹74,500	Okinawa R30	₹1,87,012	Okinawa OKHI-90	Okinawa PraisePro	₹99,645
Bajaj	₹1,41,600	Bajaj Chetak	₹1,53,202	Bajaj Chetak	Bajaj Chetak	₹1,41,600

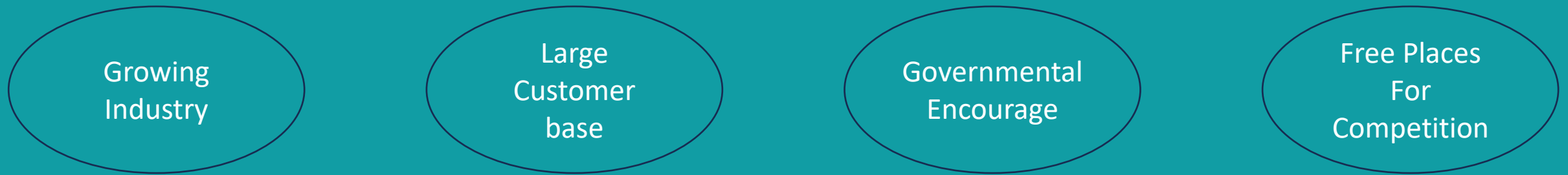
4.5 Leadership Shifts

- In 2021, Hero Electric and Okinawa were the top two makers; however, their production reduced significantly in 2023, putting them at the bottom of the seven competitors.
- Ola Electric and TVS showed significant increase in production with a CAGR of 180%, and 165% respectively.

Makers Production Over Fiscal Years				
maker	21-22	22-23	23-24	Total
OLA ELECTRIC	14,401	152,583	322,489	489,473
TVS	9,739	82,093	180,743	272,575
ATHER	19,976	76,921	107,552	204,449
HERO ELECTRIC	69,452	88,993	11,949	170,394
AMPERE	25,510	87,376	54,388	167,274
OKINAWA	47,665	96,945	20,621	165,231
OTHERS	24,858	52,953	78,660	156,471
BAJAJ	7,114	32,797	105,695	145,606
REVOLT	7,641	12,933	7,254	27,828
OKAYA EV		13,172	13,864	27,036
PURE EV	14,968	11,556		26,524
BEING	7,374	11,018		18,392
BGAUSS			15,051	15,051
JITENDRA	3,875	8,563		12,438
KINETIC GREEN			9,585	9,585
BATTRE ELECTRIC			4,841	4,841

Note: The darker the color the higher the values

5. Conclusion



Yes, we should start releasing our models for several reasons:

1. The market is growing fast.
2. There are a lot of potential customers, as currently EVs represent almost 6% of total vehicles in India.
3. The government in India encourages this industry, they even launched the “Go Electric” Campaign to raise awareness about the benefits of using EVs and have the desire to reduce pollution by implementing such technologies.
4. With this wide range of customers and variety, there are places for new companies to compromise on different features, prices, quality, facilities,... etc., and target different segments.

Dashboard

Market

Total EV
2.07M

2-Wheelers
92%

4-Wheelers
8%

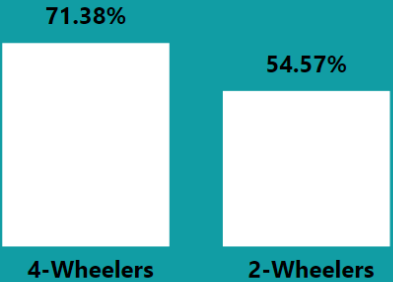
Next Year Sales
1.60M

Revenue
402bn

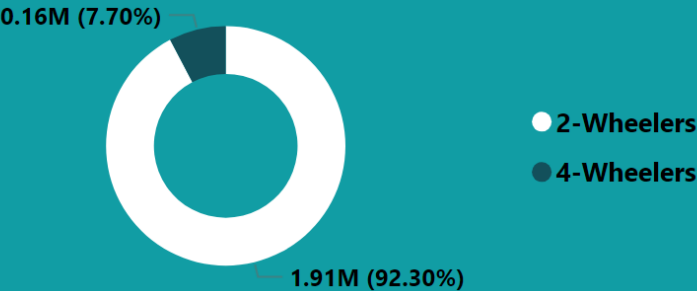
CAGR
55.84%

Penetration %
3.62%

CAGR by Category



Electric Vehicles by Category

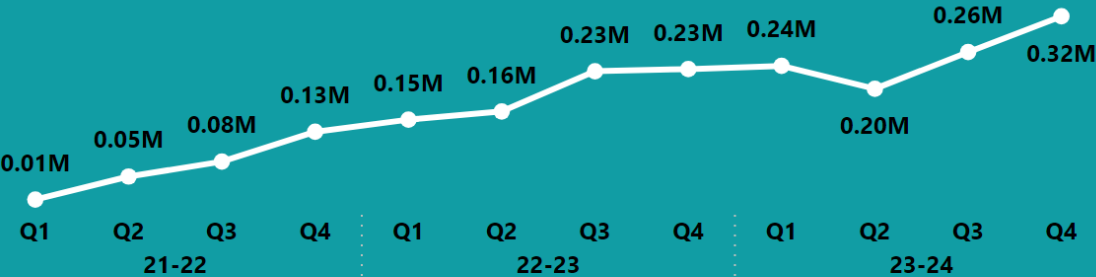


Market

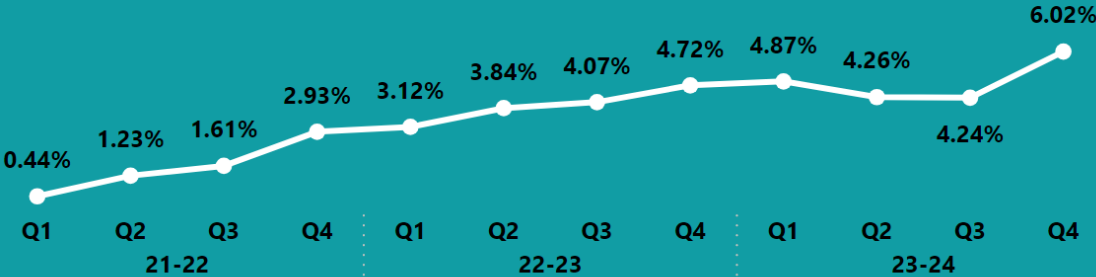
States

Competitors

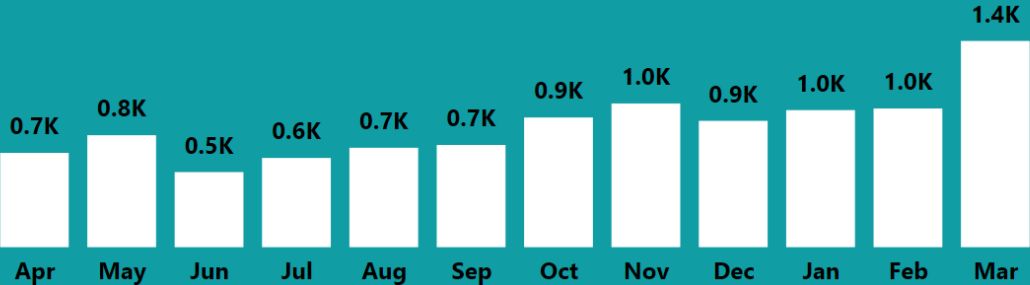
Electric Vehicles Sold by Year and Quarter



Penetration Rate by Year and Quarter



Avg Electric Vehicles Sold by Month



States

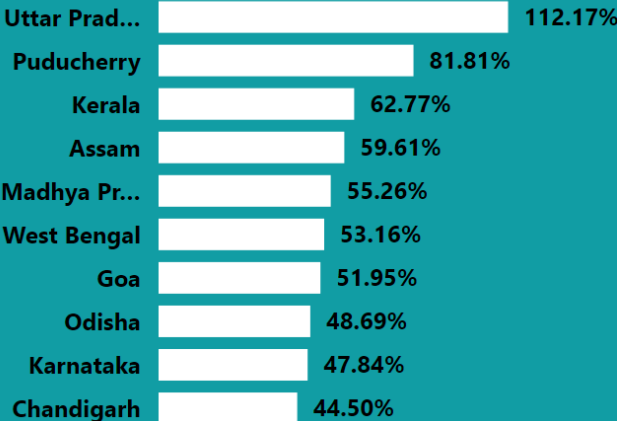
Market

States

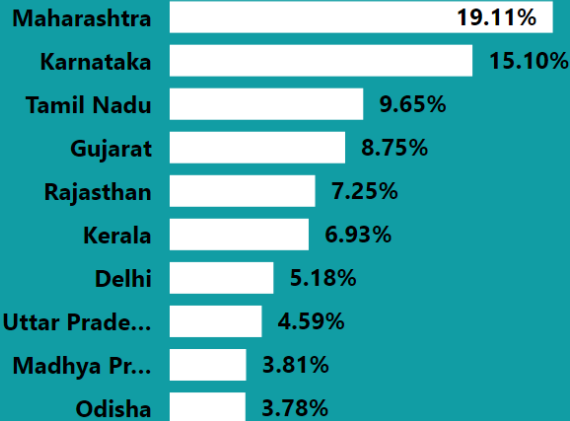
Competitors

state	EV	CAGR	EV In 2024	Penetration %
Goa	19,684	82.45%	19,703	9.84%
Karnataka	312,995	55.14%	249,765	7.84%
Kerala	143,666	80.75%	145,585	6.90%
Delhi	107,312	41.38%	66,057	6.76%
Maharashtra	396,045	59.74%	314,954	6.49%
Odisha	78,267	60.29%	62,703	4.63%
Rajasthan	150,366	49.00%	99,000	4.55%
Gujarat	181,389	67.27%	141,105	4.40%
Tamil Nadu	200,062	36.77%	128,995	4.30%
Chandigarh	5,279	91.29%	5,504	4.04%
Chhattisgarh	53,804	84.64%	52,696	4.03%

Growth in 2024



Market Share



Uttar Pradesh

- Andhra Pradesh
- Assam
- Bihar
- Chandigarh
- Chhattisgarh
- Delhi
- Goa
- Gujarat

Total EV
95K

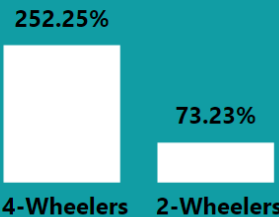
Next Year Sales
103K

CAGR
78.11%

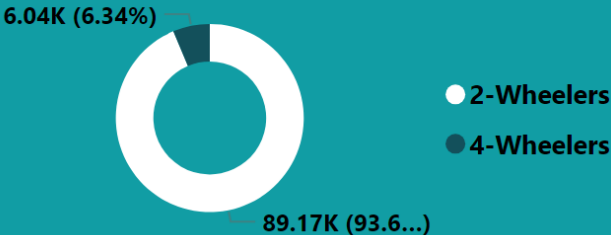
Penetration %
1.17%

Revenue
17bn

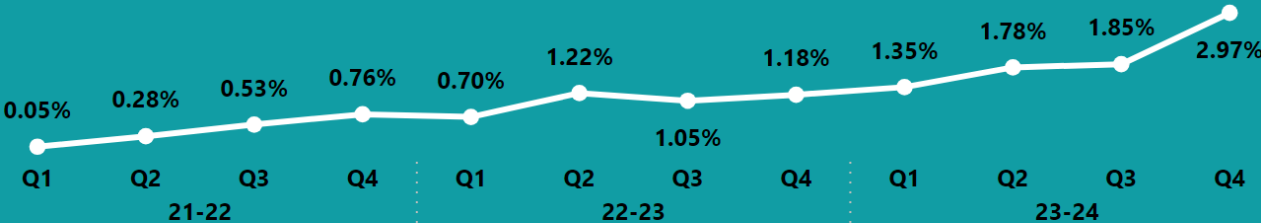
CAGR by Category



Electric Vehicles by Category



Penetration Rate by Year and Quarter



Competitors

Market

States

Competitors

Year

All

Quarter

All

Month

All

4-Wheelers

Vehicles Sold : 152.94K

Revenue : 229bn

CAGR : 67.24%

Next Year Sales : 145.34K

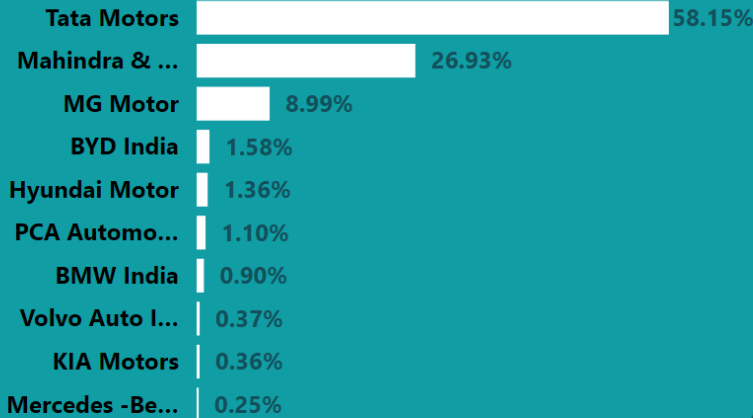
Avg Unit Price : 1.50M

Competitors : 10

Makers Production Over Fiscal Years

maker	21-22	22-23	23-24	Total
Tata Motors	12,708	28,046	48,181	88,935
Mahindra & Mahindra	4,042	13,805	23,346	41,193
MG Motor	1,647	3,277	8,829	13,753
BYD India	33	920	1,466	2,419
Hyundai Motor	110	576	1,390	2,076
PCA Automobiles	0	151	1,533	1,684
BMW India	7	285	1,078	1,370
Volvo Auto India	4	105	459	568
KIA Motors	0	229	328	557
Mercedes -Benz AG	26	71	291	388

Market Share



Year

All

Quarter

All

Month

All

2-Wheelers

Vehicles Sold : 1.91M

Revenue : 163bn

CAGR : 54.57%

Next Year Sales : 1.44M

Avg Unit Price : 85.00K

Competitors : 16

Makers Production Over Fiscal Years

maker	21-22	22-23	23-24	Total
OLA ELECTRIC	14,401	152,583	322,489	489,473
TVS	9,739	82,093	180,743	272,575
ATHER	19,976	76,921	107,552	204,449
HERO ELECTRIC	69,452	88,993	11,949	170,394
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PURE EV	14,968	11,556		26,524

Market Share

