EV Market Segmentation

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GitHub: https://github.com/Venkatapranay/electronicvehicles

Introduction

Electric vehicles have been gaining popularity worldwide as people become increasingly aware of the adverse effects of fossil fuel-powered vehicles on the environment. In India, the rise of electric vehicles has been slower than in some other countries, but there are indications that this trend is changing. In this article, we will explore the rise of electric vehicles in India and consider whether they could be the future of transportation.

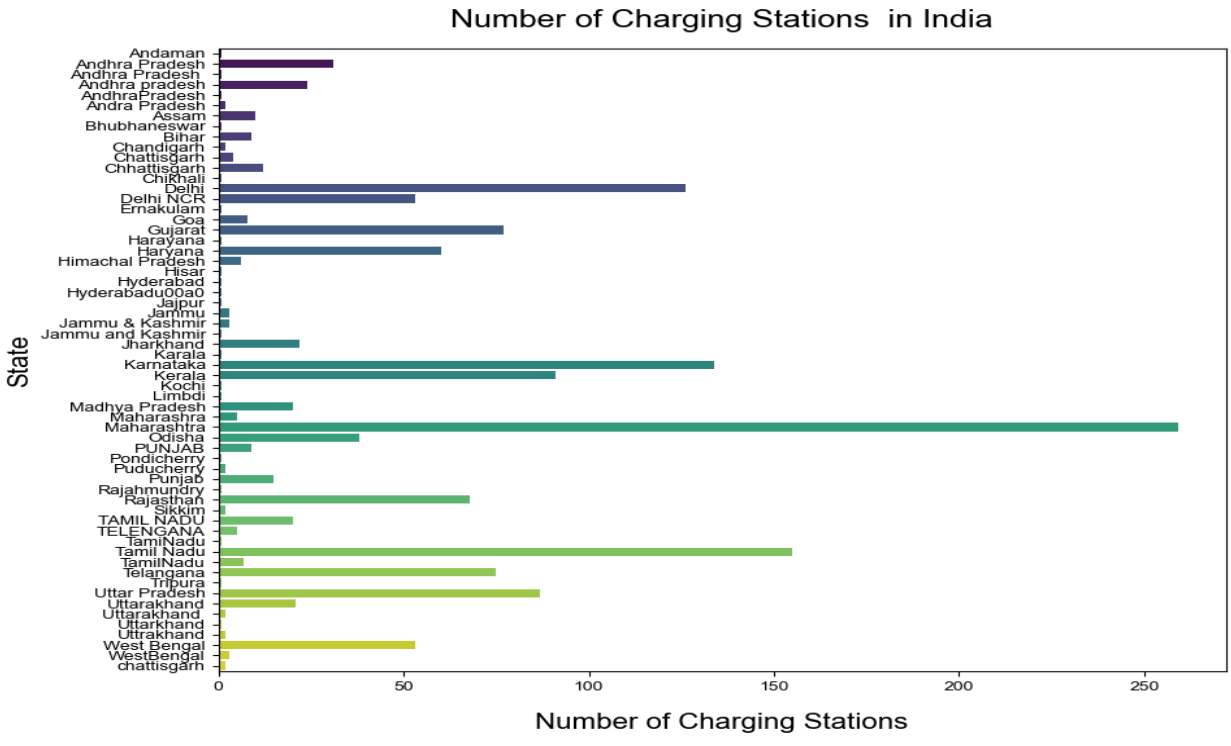
Market Analysis

- The electric vehicle (EV) market has grown in the past year. The 999,949 EVs sold in CY2022 represent a significant 210% year-over-year increase over the 322,871 units sold in CY2021.
- The two- and three-wheeler markets, referred to as the "close to the bottom peaches" of the EV business, is responsible for most of the growth. They are the main drivers of EV sales because they are cheaper than the electric passenger or commercial vehicle segments.
- According to the Economic Survey 2023, India's domestic electric vehicle industry will develop at a 94.4 percent compound annual growth rate (CAGR) between 2022 and 2030, reaching 10 million sales every year by that point.
- Furthermore, it is anticipated that by 2030, the electric automotive industry will generate 50 million direct and indirect jobs.
- **Challenges:** There are several challenges that need to be addressed for electric vehicles to become more prevalent in India. One of the main challenges is the need for charging infrastructure.
- While the government has announced plans to set up charging stations across the country, the progress has been slow, and many potential buyers are deterred by the fear of running out of charge during a long journey.

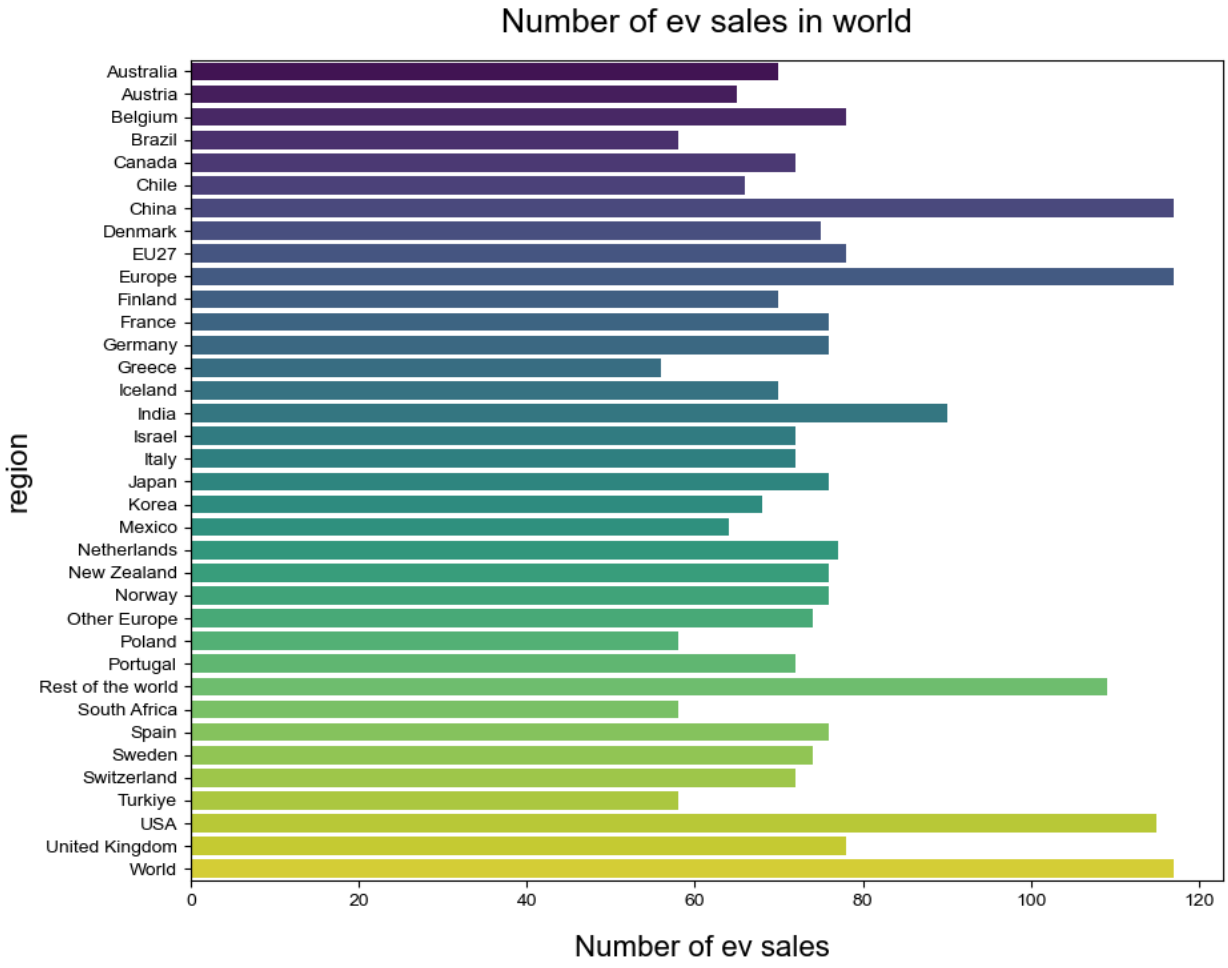
- Another challenge is the high cost of electric vehicles. While the prices of electric vehicles have been coming down in recent years, they are still more expensive than their petrol or diesel counterparts. This makes them less accessible to the average consumer.
- the range of electric vehicles still needs to be improved, which makes them unsuitable for long-distance travel. While this is less of an issue for urban commuters, it remains a significant concern for those who need to travel long distances.
- there are indications that the future of transportation in India could be electric. The government has set a target of achieving 30% electric vehicle replacement by 2030.
- The government has set a target of achieving 175 GW of renewable energy capacity by 2022, and there are plans to increase this to 450 GW by 2030.
- The Faster Adoption of Manufacturing of Electric Vehicles Scheme-II (FAME-II) and the Production Linked Incentive Scheme are two government programs that have previously been made available to electric car manufacturers (PLI).

Demographics:

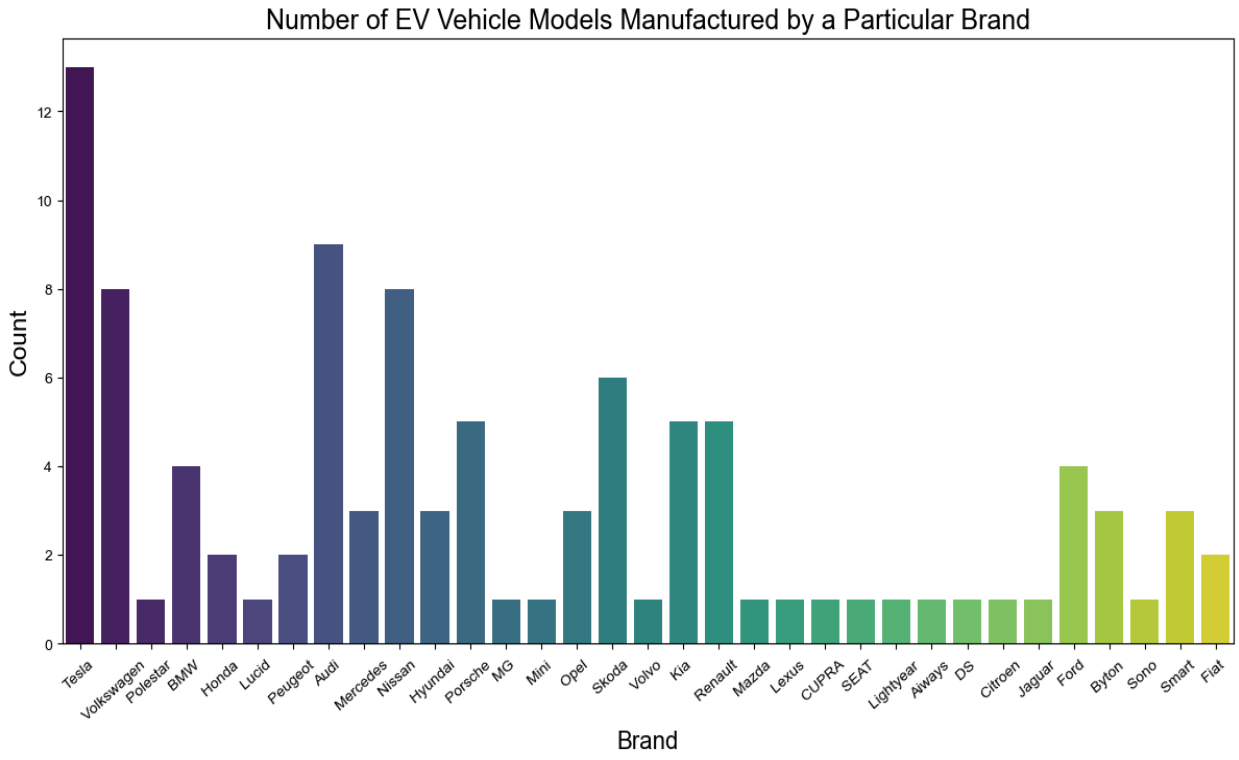
Charging stations in India:

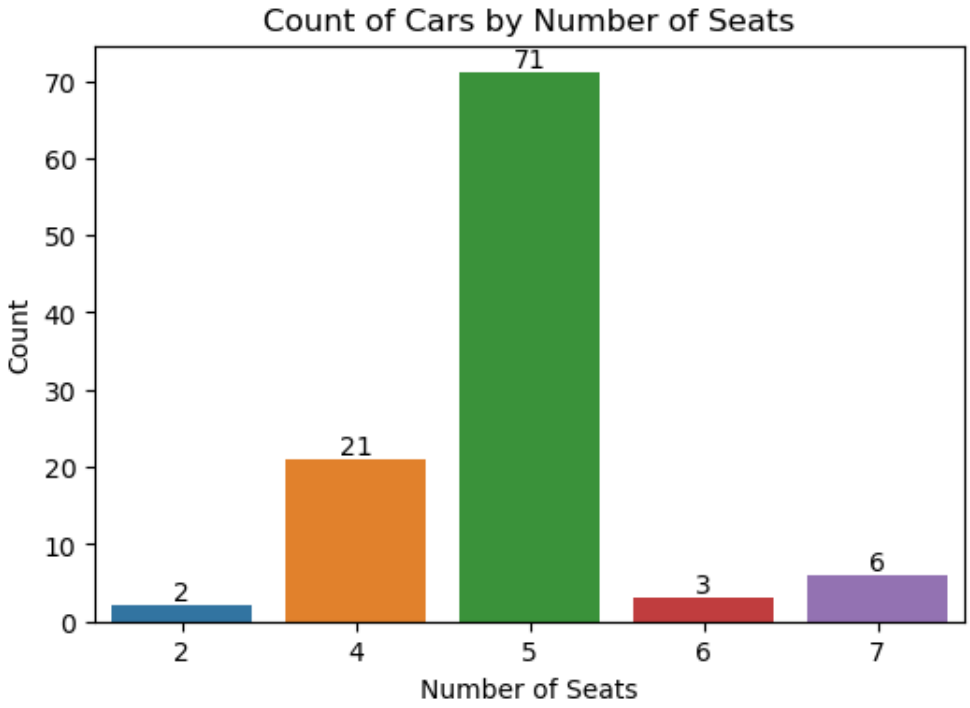


Overall sales in the world:



Elcetronic vehicles manufactured by companies:





Observations:

- Most number of charging stations in India are in Maharastra followed by Karnataka, Dehli and Tamil Nadu which has the popular cities.
- Most of the electronic vehivle sales are done in regions China,USA and Europe compared to the rest of the world.
- Telsa company produces the majority of the electronic vehicles used today.
- 70% of the total electronic vehicles are manufactured in such a way that they contain 5 seats.
- But the most efficient cars are 6 seated cars.
- Almost 60% of the electric cars are Automatic transmission rather than manual.

Conclusion:

The rise of electric vehicles in India is still in its early stages, but there are signs that this trend is changing. The Indian government has been promoting the use of electric vehicles for several years, and initiatives are underway to address the challenges currently hindering their adoption. While there are still hurdles to overcome, the future of transportation in India could be electric, and this could help to reduce the country's carbon footprint and improve air quality in its cities.