

EV Vehicle Market Segmentation Analysis

Abstract

Market segmentation becomes a crucial tool for evolving transportation technology such as electric vehicles (EVs) in emerging markets to explore and implement for extensive adoption. EVs adoption is expected to grow phenomenally in the near future as low emission and low operating cost vehicles, and thus, it drives a considerable amount of forthcoming academic research curiosity.

The main aim of this study is to explore and identify distinct sets of potential buyer segments for EVs based on psychographic, behavioral, and socio-economic characterization.

Target Market

The target market of Electric Vehicle Market Segmentation can be categorized into Geographic, SocioDemographic, Behavioral, and Psychographic Segmentation.

Behavioral Segmentation: searches directly for similarities in behavior or reported behavior. Example: prior experience with the product, amount spent on the purchase, etc.

Psychographic Segmentation: grouped based on beliefs, interests, preferences, aspirations, or benefits sought when purchasing a product. Suitable for lifestyle segmentation. Involves many segmentation variables.

Socio-Demographic Segmentation: includes age, gender, income and education. Useful in industries.

Process Flow:

1.Data Cleaning and Data Collection.

Data set link :

[https://github.com/Kayyalapavankumar/EV_Market_Seg_Analysis/blob/main/data%20\(1\).csv](https://github.com/Kayyalapavankumar/EV_Market_Seg_Analysis/blob/main/data%20(1).csv)

2.Exploratory Data Analysis . We have done the analysis on the following segments-

1. Which car has top speed?
2. Which car has fast acceleration?
3. Pair plot.

4. Analyzed different brands in the dataset.
5. Top speed achieved by each brand.
6. Maximum Range achieved by each brand.
7. Efficiency achieved by each brand.
8. Seats in a car.
9. Price range of the cars.
10. Comparison on car speeds.

Target Segments:

So from the analysis we can see that the optimum targeted segment should be belonging to the following categories:

Behavioral: Mostly from our analysis there are cars with 5 seats.

Demographic:

- Top Speed & Range : With a large area of market the cost is dependent on Top speeds and Maximum range of cars.
- Efficiency : Mostly the segments are with most efficiency

Psychographic:

- Price : From the above analysis, the price range is between 16,00,000 to 1,80,00,000.

Finally, our target segment should contain cars with most Efficiency, contains Top Speed and price between 16 to 180 lakhs with mostly with 5 seats

Github code link : https://github.com/Kayyalapavankumar/EV_Market_Seg_Analysis