PROJECT - 3

EV MARKET

USING MARKET SEGMENTATION ANALYSIS

For analysing the EV Market, we use a csv file as dataset. The csv file used consists of:

- Age
- Profession
- Marrital Status
- Education
- Number of Dependents
- Personal Loan
- Total Salary
- Price

The dataset collected is a behavioural dataset.

Market Segmentation consists of the following steps:

- Data Collection
- Exploring Data
- Extracting Segments
- Profiling Segments
- Describing Segments
- Customizing the Market Mix
- Evaluation and Monitoring

Market segmentation analysis is a crucial process in marketing and business strategy, allowing companies to identify and target specific groups of customers within a broader market. This process involves several key steps to ensure that the segmentation is effective and actionable.

Type of Dataset

This dataset is a tabular dataset with demographic, behavioural and financial information. It could be used for various analyses such as:

- Financial status analysis.
- Loan eligibility modeling.
- Market research for financial products.

Implementation of Market Segmentation

1. Data Collection

To comprehend the varied interests and behaviors of consumers, efficient data collection is crucial for market segmentation in the electric vehicle (EV) industry. In order to categorize customers according to their purchasing power and lifestyle preferences, demographic information such as age, income, and education levels must be gathered. Understanding regional variations in EV adoption rates and infrastructure preferences is possible through geographic segmentation. Psychographic information is useful in determining how consumer opinions about technological adoption, environmental sustainability, and lifestyle choices affect their choice to buy electric vehicles. Behavioral data, such as brand loyalty and purchase patterns, helps to improve segmentation by providing insight into how customers make decisions. Competitive analysis completes the picture by examining competitors' strategies and market positioning. By leveraging these data sources through surveys, interviews, and market research reports, marketers can develop targeted strategies to effectively reach and engage distinct consumer segments within the EV market.

2. Exploring Data

Analyzing data for market segmentation in the Electric Vehicle (EV) market dataset requires a thorough examination of a number of variables that are essential to comprehending customer preferences and behavior. First, socio-economic characteristics of EV users can be inferred from demographic data like age, Profession, Marital Status, Education and Total Salary, which helps with affordability and lifestyle segmentation. Targeted marketing and distribution tactics are guided by the infrastructure preparedness and regional preferences for electric vehicle adoption that are revealed by geographic research. Consumer values, attitudes toward sustainability, and technology choices are all influenced by psychographic insights, which in turn affect the EV models and features that they choose. Consumers are further divided into groups according to their

interactions with EV technology and associated services by behavioral data, which includes brand loyalty and purchase habits.

3. Extracting Segments

To aid in targeted marketing efforts, market segmentation entails breaking up a large consumer or corporate market into more manageable subgroups of consumers that share certain attributes. Data from the EV market, including demographics (age, education, marital status), financial details (salary, loan details), and behavioral elements (preferences, purchase patterns), are evaluated in order to identify segments. Usually, this information is gathered into a CSV file with multiple columns that each represent a particular attribute of a possible customer. Statistical methods such as principle component analysis (PCA) and cluster analysis can be used to convert and divide the data into discrete parts. Companies are able to successfully customize their goods, services, and marketing initiatives since each segment represents a distinct group with particular demands and activities.

4. Profiling Segments

Segments can be discovered and profiled based on these features by using the data provided in the CSV file, which contains variables like age, profession, marital status, education level, number of dependents, personal loan status, total wage, and price. Because each segment represents a distinct group with shared characteristics, firms are better able to customize their marketing strategy. For instance, a market segment consisting of young professionals with high incomes and educational attainment might show distinct tastes and buying patterns from an older, married market segment that includes dependents. Businesses can better understand the requirements, interests, and behaviors of various consumer groups by profiling these segments. This knowledge helps with focused marketing campaigns and product creation that is in line with the unique traits of each segment.

5. Describing Segments

The dataset most certainly includes a range of consumer factors in the context of market segmentation, including age, profession, marital status, education level, number of dependents, status of personal loans, total wage, and price preferences. These characteristics are employed to recognize different market categories. One group could consist of young professionals (25–35 years old), single, well-off, and without children. Their disposable cash and environmental conscience may encourage them to buy more luxurious electric cars. Middle-aged people (40–55) with families may make up another sector. They value economy and usefulness above all else, thus they are inclined to select mid-range cars that strike a compromise between price and performance. Additionally, older consumers (aged 55 and above), possibly retired, may form a segment that looks for comfort and reliability, leaning towards vehicles that offer ease of use and maintenance. By understanding these segments, companies can tailor their marketing strategies and product

offerings to better meet the specific needs and preferences of each group, enhancing customer satisfaction and loyalty.

6. Customising the Marketing Mix

Based on the segmentation of our dataset, we identified three distinct customer segments, each with unique characteristics and preferences, guiding a tailored approach to the marketing mix. Segment 0, composed of high-income individuals with a strong preference for luxury, would benefit from a focus on premium products featuring advanced technology and superior quality, offered through exclusive channels and accompanied by high-end pricing strategies. Promotional efforts for this segment should emphasize exclusivity and status, leveraging targeted marketing campaigns and influencer partnerships. Segment 1, consisting of younger, budget-conscious consumers, requires affordable and practical products with essential features. These products should be competitively priced and widely available through mass-market retailers and online platforms. Promotional tactics should focus on value for money, utilizing social media and discounts to attract price-sensitive buyers. Segment 2 represents middle-income customers with balanced preferences, necessitating mid-range products that offer a mix of quality and affordability. These products should be distributed through both traditional and online retail channels, and promoted through a combination of traditional advertising and digital marketing strategies, highlighting the balance between cost and quality. This customized approach ensures each segment's specific needs and behaviors are addressed, enhancing customer satisfaction and market effectiveness.

7. Evaluation and Monitoring

It is essential to put in place a thorough framework that tracks key performance indicators like sales volume, market share, customer acquisition, and retention rates in order to assess and track the effectiveness of the customized marketing mix strategies for each segment found in the dataset. Frequent evaluation of these indicators will enable the discovery of patterns or changes in consumer behavior as well as insights into the success of marketing campaigns. Furthermore, utilizing consumer feedback and satisfaction surveys will provide qualitative information that identifies each segment's areas of strength and progress. Through ongoing assessment of financial indicators such as profit margins and return on investment, the company can make sure that marketing funds are being used effectively. Employing advanced analytics and real-time data tracking will enable the agile adjustment of strategies, ensuring that the marketing mix remains relevant and responsive to market changes and customer needs. This proactive approach to evaluation and monitoring will help in maintaining a competitive edge and achieving long-term business objectives.