Classic Models Sales Analysis

Introduction

Classic Models, a global provider of vintage vehicles, is seeking insights into the performance of its products across different regions. The company aims to optimize its sales strategy, identify lucrative markets, and understand how net profit aligns with various product categories. This comprehensive analysis enables Classic Models to make informed decisions, enhancing its market presence and profitability.

In response to the need for a comprehensive analysis and visualization of sales data for classic transport vehicles, this project focuses on creating a robust database and exploring the data using SQL Server, Excel, and Power BI.

Summary of Findings

- **Sales Distribution by office:** USA emerged as the primary region for sales, leading in net profit with **1,30$ million**, closely followed by France at **1,24$ million.**
- **Sales Performance Metrics:** The calculated average order value, at 29,46K$, provides a useful metric for understanding the typical transaction size.
- **Product Profitability:** Classic Cars consistently outperform other products in generating profits, meanwhile the product line of Trains remains the lowest in sales.

Conclusions

- **Regional Influence:** While the USA dominates, the combined sales from other regions showcase a significant impact on the overall sales landscape.
- **Focus on USA Market:** Given the dominance of the USA Market, allocating resources and marketing efforts towards this region is crucial for maximizing sales.
- **Classic Cars vs. Vintage Cars:** Classic Cars prove to be the flagship product category, generating a substantial 1,52$ million in sales compared to the 0,74$ million generated from Vintage Cars.
- **Leveraging Classic Cars:** Capitalize on the popularity and profitability of Classic Cars, emphasizing their timeless appeal.
- **Usability Impact:** The usability and timeless appeal of Classic Cars position them as a preferred choice among consumers, followed by Vintage Cars.

Challenges

- **Data Syntax Optimization**: The initial dataset presented challenges with syntax compatibility for SQL Server Management Studio (SMSS). The adaptation process involved troubleshooting and adjustments to ensure seamless compatibility during data transformation.
- **Structural Organization for Readability**: To enhance readability and prevent potential errors, I divided the data into distinct files. Each file focused on different purposes, splitting the creation of the tables along their relationships definition from the data insertions of each. This organizational approach streamlined the transformation process.

- **Identification and Correction of Inconsistencies:** A thorough examination during the data adaptation revealed inconsistencies, especially in the identification of string values. To address this, new columns were introduced when necessary. Excel played a pivotal role in merging updates with existing data to preserve the integrity of the dataset.
- **Adaptation to Unique Row Requirements:** Recognized the need for distinct rows in certain tables, new columns were defined. The adaptation of existing data to accommodate this change was executed meticulously using Excel. This method allowed for the seamless integration of updates while preserving the overall integrity of the dataset.

Techniques Employed

- **SQL Server Management Studio (SMSS):** Identified and resolved syntax incompatibilities for optimal execution in *SMSS*. Meticulously adjusted SQL statements to ensure compatibility and efficient data transformation. Structured data into diverse files for enhanced readability and explored the dataset using SMSS to extract valuable information for posterior representation.
- **Data Enhancement:** Utilized Excel to merge updates with existing data to preserve the overall integrity on the dataset.
- **Visualizations:** Created an intuitive interface for executing prepared queries, facilitating efficient exploration of the data. Utilized PowerBI to help understand sales distribution, net profit trends and other key metrics.

Data Sources

- **Kaggle:** I employed a dataset sourced from Kaggle, a reputable platform for sharing and discovering datasets. The dataset was instrumental in providing comprehensive information about sales of Classic Models for different Vehicles.

  https://www.kaggle.com/datasets/martatavares/classicmodels

  ***Note:** To facilitate visualization, a notes archive is added to this project folder with the dataset extracted before correcting and processing it in SQL Server.