Project on Retail Analysis

Overview of Project for Retail Database

The Project for the Retail Analysis is a comprehensive and insightful analysis done to analyse various aspects of the retail business. It focuses on four key areas: Sales Analysis, Product Analysis, Customer Analysis, and Demographic Analysis.

Sales Analysis: The Sales Analysis section of the Retail Analysis provides a detailed overview of the retail business's sales performance. It includes key metrics such as total revenue, sales trends over time, and sales by product categories. Users can drill down into sales data to identify top-selling products, best-performing regions, and peak sales periods.

Product Analysis: The Product Analysis section focuses on understanding product performance and trends. It showcases product sales, inventory levels, and customer feedback for each product category. Users can explore product-specific data, such as best-selling items, slow-moving products, and product profitability. This analysis enables retailers to make data-driven decisions about product assortment, pricing, and marketing strategies.

Customer Analysis: The Customer Analysis section provides insights into customer behaviour and preferences. It includes metrics like customer demographics, purchase frequency, and customer loyalty. By segmenting customers based on buying patterns, retailers can tailor marketing campaigns and enhance customer retention strategies.

Demographic Analysis: The Demographic Analysis section focuses on understanding the customer base's demographics. It presents visualizations of customer age groups, gender distribution, and geographic locations. Retailers can use this information to identify target demographics, customize marketing messages, and expand into new markets based on customer profiles.

Objective

The objective of this project is to develop a Power BI dashboard using the Retail Database and also do Exploratory Data Analysis (EDA) that provides comprehensive insights into the retail business's performance. The dashboard and EDA aim to facilitate data-driven decision-making, optimize sales strategies, and enhance customer experiences.

Scope
The analysis will focus on four key areas: Sales Analysis, Product Analysis, Customer Analysis, and Demographic Analysis. It will cover sales trends, product performance, customer behaviour, and customer demographics to offer a comprehensive understanding of the retail business.

Goal
The primary goal of the Project is to empower retail stakeholders with actionable insights. The dashboard and EDA will help identify top-selling products, peak sales periods, customer preferences, and target demographics. It will enable retailers to make informed decisions to boost sales, optimize inventory, and tailor marketing strategies.

Insights & Recommendations
The Power BI dashboard and EDA will provide valuable insights into sales performance, product trends, customer behaviour, and demographic patterns. It will identify high-performing products, low-performing items, customer preferences, and opportunities for customer engagement and retention.
Both analysis of Power BI dashboard and EDA will give in depth understanding of the problems and solutions needed and retails can implement the marketing strategies suggested in the report and improve their business.

Significance of the Project

The importance or significance of this project lies in its analysis of problems through Power BI and EDA. It will provide us with many features like Insights, Improvements in Business and also it helps in Trends identification to change business accordingly.

Insights
The Power BI Dashboard offers valuable insights into the retail business's performance, including sales trends, product performance, customer behaviour, and demographic patterns. These insights enable stakeholders to make data-driven decisions, identify lucrative opportunities, and address potential challenges effectively.

Improvements
By analysing sales data, customer behaviour, and product performance, the dashboard helps retail businesses focus on areas that require improvement. Retailers can identify low-performing products, optimize inventory management, and implement targeted marketing strategies to enhance overall business performance.

Trend Identification
Through trend analysis, the dashboard identifies patterns in sales, customer preferences, and demographic trends. It helps retailers understand seasonal sales fluctuations, popular categories, and customer buying behaviours over time. Identifying trends enables proactive planning and adapting strategies to changing market dynamics.

Benefits
1. Data-Driven Decision Making:
The Power BI Dashboard empowers retail stakeholders to make informed decisions based on data-driven insights. It reduces reliance on intuition and ensures more accurate and effective decision-making processes.
2. Business Optimization:
By focusing on areas that need improvement and identifying growth opportunities, the dashboard enables retailers to optimize their business strategies, leading to increased efficiency and profitability.
3. Proactive Strategy:
With trend identification and evaluation of effectiveness, the dashboard helps retailers take a proactive approach to adapt to market changes and implement successful business strategies ahead of competitors.
4. Enhanced Customer Experience:
Understanding customer behaviour and demographics allows retailers to tailor marketing efforts and improve customer satisfaction. Personalized experiences foster stronger customer relationships and loyalty.

By this analysis retailer will get the holistic view of his business and what steps to be taken to improve his business.

DATA DICTIONARY

In this Data dictionary we have information about all the data given by retailer to analysis and also, we have some calculated data as well, because the data given by retailer was not in proper format. I have converted it to meaningful data by creating additional columns and data tables.

Offices Table

This table stores information about the different offices of the retail company, including the office code, city, phone number, address, state, country, postal code, and territory. Each office is uniquely identified by its office code.

Employees Table

The employees table holds data about the company's employees. It includes fields such as employee number (a unique identifier for each employee), last name, first name, extension, email address, office code (identifying the office where the employee works), reports to (the employee number of the person to whom the employee reports), and job title.

Customers Table

This table contains information about the retail company's customers. It includes fields like customer number (a unique identifier for each customer), customer name, contact last name, contact first name, phone number, address, city, state, postal code, country, sales representative employee number (identifying the employee responsible for the customer), and credit limit.

Products Table

The products table stores details about the various products sold by the retail company. It includes information such as the product code (a unique identifier for each product), product name, product line (categorization of the product), product scale, product vendor, product description, quantity in stock, buy price, and Manufacturer's Suggested Retail Price (MSRP).

Product Lines Table

This table is used to describe the different product lines available in the company's inventory. It includes fields such as the product line name, text description, HTML description (for web-based content), and an image (stored as a BLOB) to represent the product line visually.

Orders Table

The orders table stores data related to customer orders. It includes information like the order number (a unique identifier for each order), order date, required date, shipped date, order status (using an ENUM for predefined statuses), comments, and customer number (identifying the customer who placed the order).

Order Details Table

This table contains information about the individual items (line items) included in each order. It includes fields such as the order number (linking to the orders table), product code (linking to the products table), quantity ordered, price per item, and order line number.

Payments Table

The payments table stores details about payments made by customers. It includes fields such as the customer number (linking to the customers table), check number, payment date, and the payment amount.

Fact Table

This table contains the information about calculated columns and relationship between tables required to analyses data accurately. In Fact table we have all the foreign keys that have relationship with all the other tables.

Entity Relationship (ER Diagram)
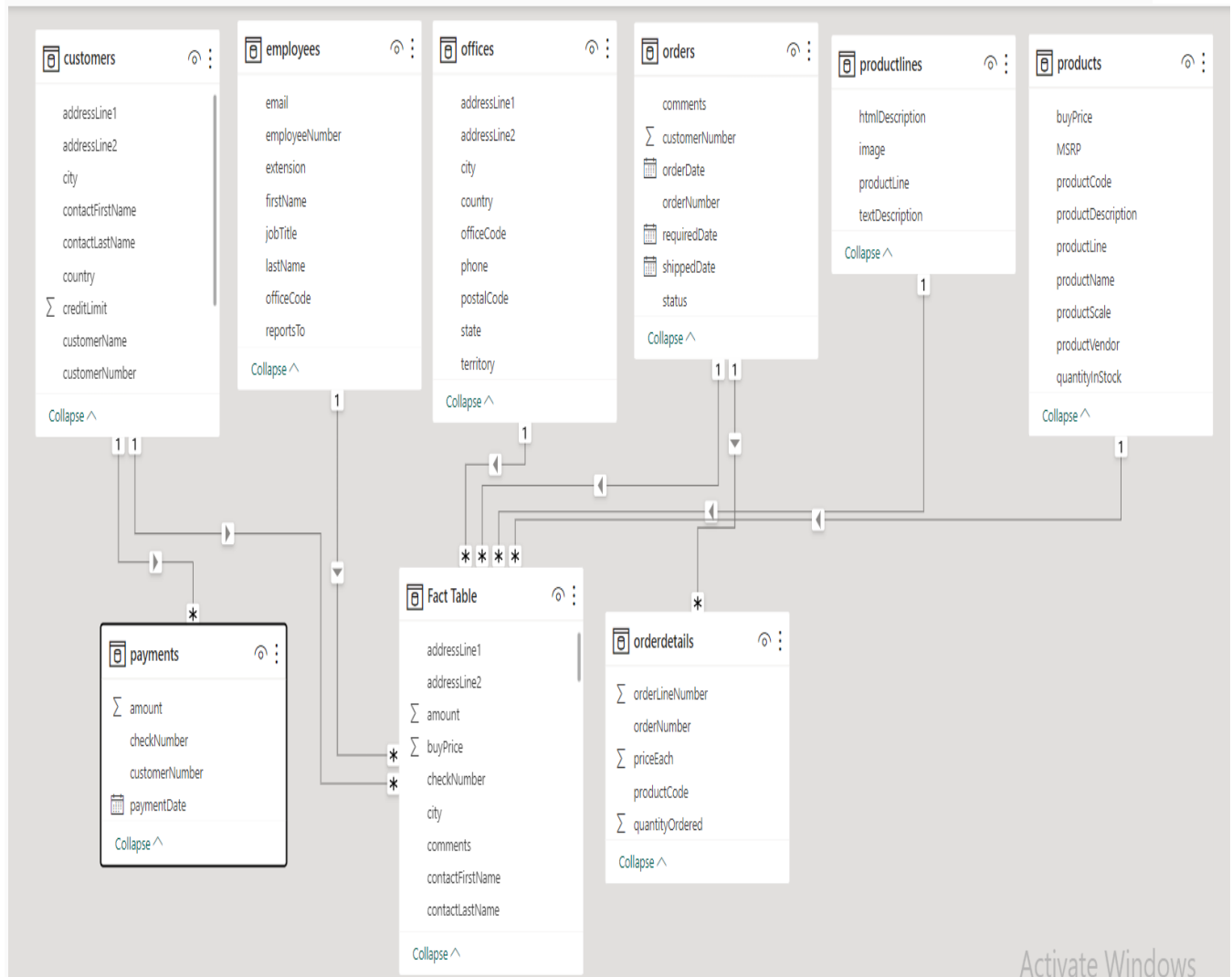
ER Diagram consists all the relationships between different tables of the data and good thing about ER Diagram is even a novice user can understand relations of data, because it will be in pictorial format.

When retailer gave me the data it was not in a structured way so, I transformed it to meaningful data and created relationships between them for my Data Analysis.

Connecting to Data

Here in this Phase of the Project we have go Data from different sources and we can use any format of data from **.CSV** File or **SQL** File.

Steps to connecting to Data.

1. First, we will have to create Git hub account.
2. We will receive a link to access a sample Data before we enter into our project
3. After you successfully access the link, you will find the following content
4. A data folder containing two subfolders:
5. A CSV folder containing all tables as CSV files
6. A SQL folder containing all tables as SQL scripts
7. I have used the CSV files to import the data into Power BI or Excel. However, we can explore if we want to explore more, you can also use the SQL scripts to import the data into Power BI or Excel.
8. After going through all the data, you can use your data.
9. After loading data into Power BI by using Get Data option and file format is .csv we need to do data manipulation step and create data models and tables and can start working on data.
10. For EDA as well we need to import data downloaded from Git hub and start data manipulation and start working on data.
    These are brief steps to connect to Data in Power BI and Excel.

Power BI Analysis

1. How does monthly revenue vary across different product categories?

This is the problem statement to analyze revenue generated monthly by different product categories and I have analyzed it by taking the data available in the data set. I had made sure that data is well sorted and cleaned.
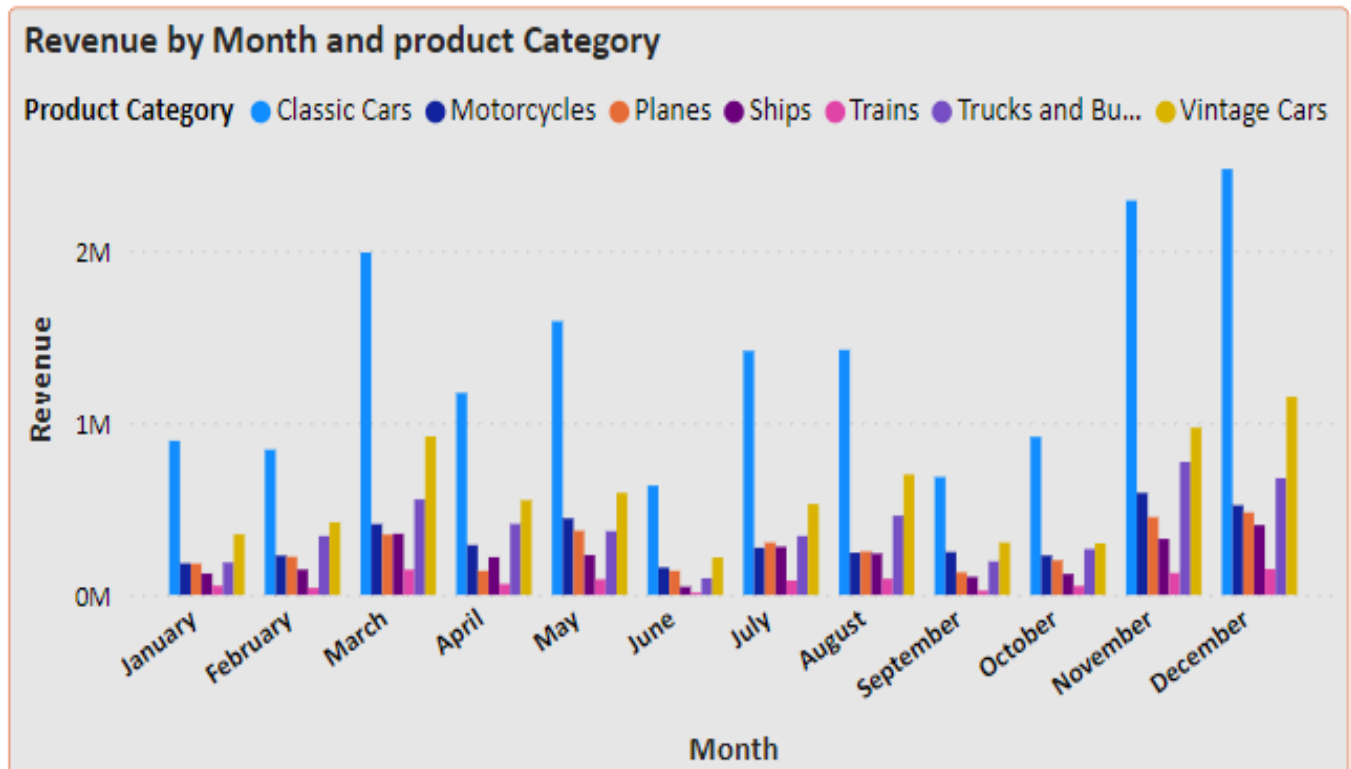

Here in this graph, I have solved the problem by taking variables like **Revenue** which I calculated through calculated column from given data and **Month** from Order Date because from our sales will be counted as done. And I have taken **Product category** from Product lines table. From all these variables we can solve Monthly Revenue of a Product Category.

Analysis: From this analysis I have noticed that revenue of different category varied in different months differently. We can see that category Classic cars have highest revenue across all the months in last year and category Trains have low revenue. And all other products have a decent performance according to revenue.

I will suggest to focus more on low performing Product category regarding marketing it to improve its sales and to look into reasons for its low performance and suggest solutions to change its marketing strategies and plans.

2. What is the trend in customer order volume over the past year?

In this statement we need to analyze the trend in orders of customers over the last year. So, we can't analyze the trend by day basis, so I analyzed it on monthly basis

QuantityOrdered by Month
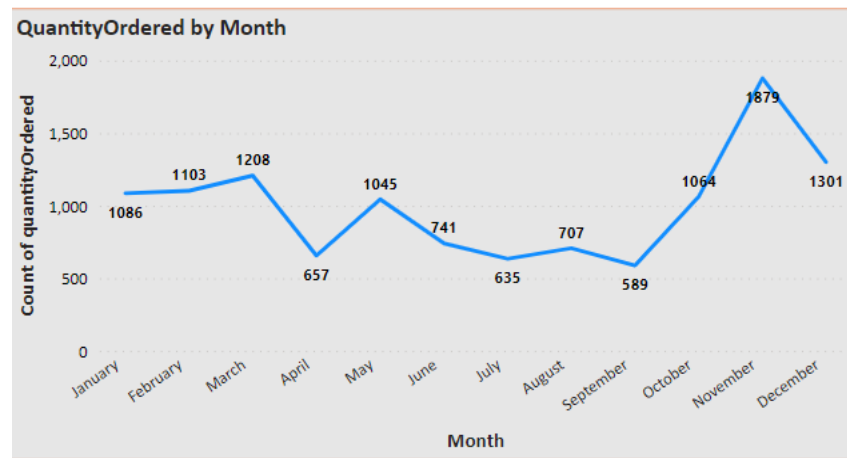
In the above graph I have taken variables like **Order Date-Month** from that we can analyze monthly order volume and **Quantity ordered** by customers and I have taken count of orders to know the trend in customer orders. We can represent trends best through line graph so, I took it to analyze.
Analysis: From the above trend we can know that maximum orders were placed in the month of November.

3.How does the sales performance of top customers compare to the rest?
Here from these Problem statement, we can understand that we need to analyze the Maximum sales vs other customers.

Top Customers Vs Others by Ave.sales
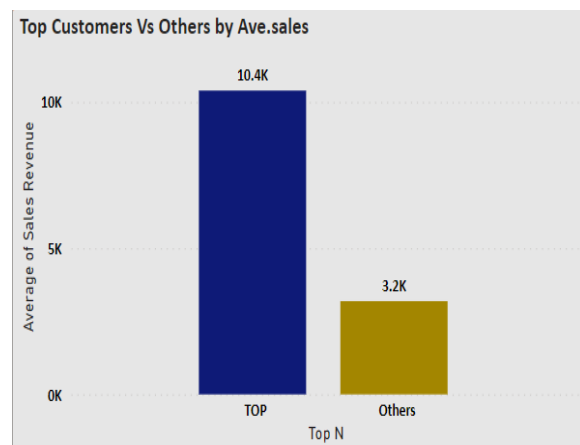
In the above graph I have taken variables like **Sales Revenue** and a **conditional column** that I have created based on a condition to know top sales customer and others, by putting a condition on sales revenue, where top and others are filtered.
In this problem while solving I took Avg.sales because we can't take count of sales while comparison.
Analysis: By the graph we can say Top customers have given good amount of sales revenue to the company compared to others.

4. **What is the distribution of product sales across different product lines?**

Here from this we need to analyze sales of different products in different product lines or Category.
I have seen data and I have taken fields like **Product line** and **Product Name** because we need to know product sales in different product lines.
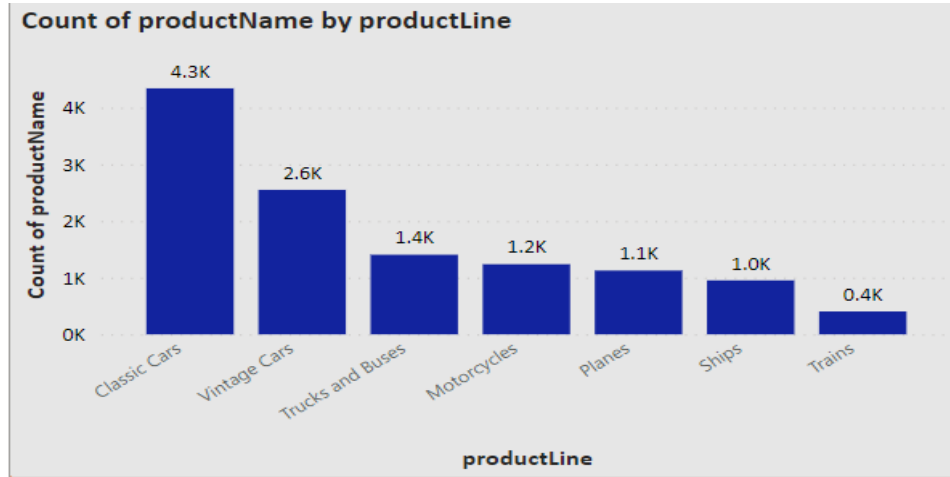

Analysis: In this graph I have analyzed number of products in different category, from this graph we can notice that classic cars have highest sales compared to all other product categories. We can also see that Vintage cars have 2nd spot in the sales.
Note: Here I have used count function to count no. of cars sold.

5. **How does the profitability of different products compare based on their quantity in stock?**

Here I have to analyze the profitability of different products based on quantity in stock.
In the process I took scatter plot graph because when we have two numerical variables to compare scatter plot is used.
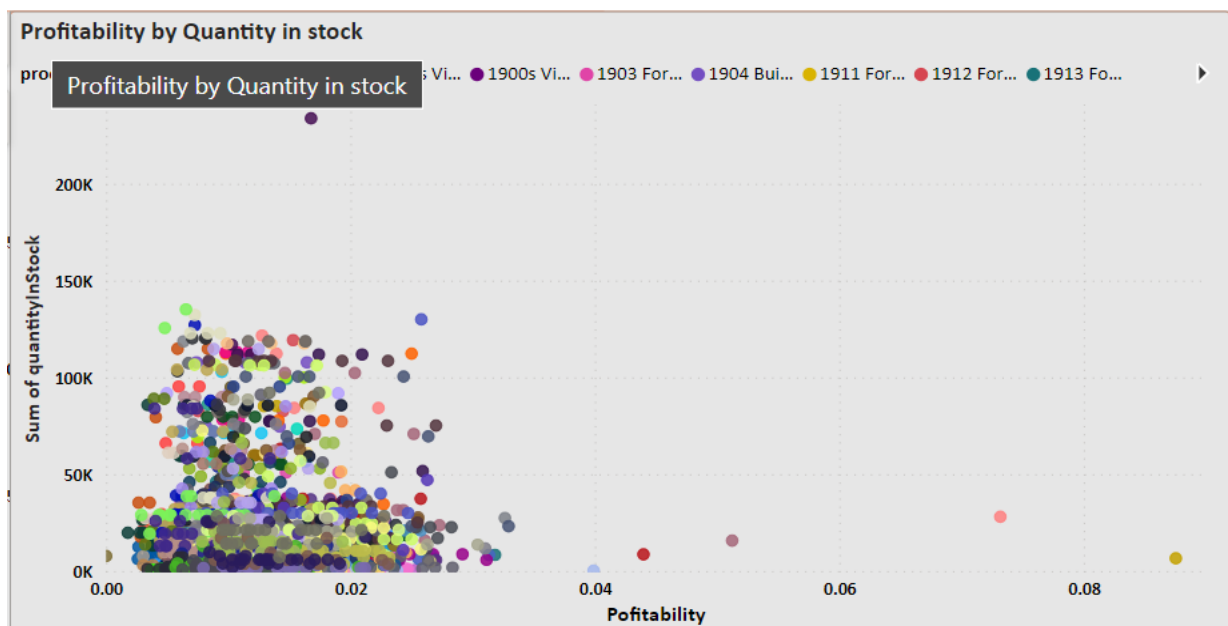
Analysis: In the above problem we need to know profitability for that we need Profit to calculate, which is also not given but we can calculate profit by Revenue and cost which we have already calculated.

So, **Profit= Revenue-Cost of Goods.**

After calculating Profit, we can calculate **Profitability** by formula **Profit/Revenue.**

After calculating we need to graph between Profitability and Quantity in stock.

From the above graph we can notice that Profitability for the quantity which is in stock is on the lower side only. So, can suggest to the company to clear the stock as soon possible because if we keep stock with low profitability it will depreciate with time. So can clear stock by giving discounts and focus more on other lines.

6. **How does product pricing impact sales volume?**

   In this problem we need to analyze impact of sales volume based on price increase and decrease.

   I took Product price and Quantity ordered which were already given, because from those two variables we know behavior of customer according to price change.

   QuantityOrdered by MSRP
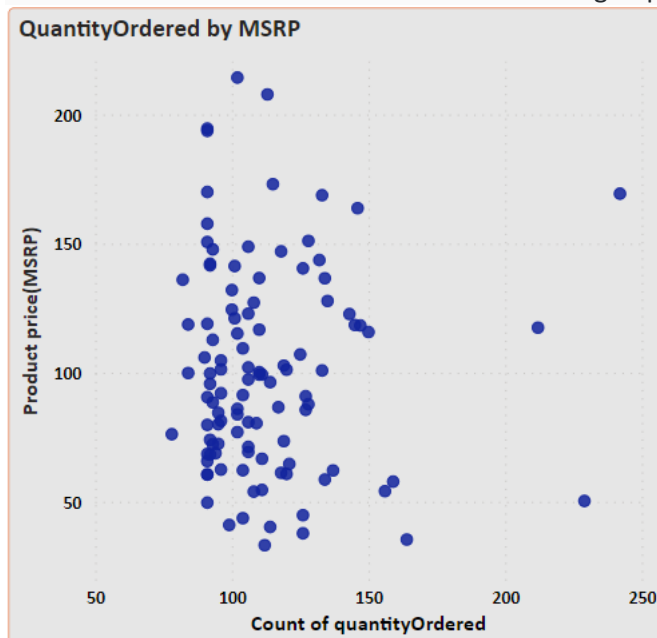
   In this above graph I tried to visualize the correlation between Quantity ordered by MSRP (Maximum suggested Retail Price).

   Analysis:

   I have done this because in Automobile data I am dealing the product will be sold at MSRP so, by taking relation between these two variables I can know the price impact on sales. Here after plotting the graph, I can analyze that price of the product impacted sales to some extent but not much, to be precise pricing has impact on sales of product.

   In the above graph I took order quantity as count to know no. of quantity ordered based on pricing.

7. **What is the distribution of customers across different demographic segments?**

Here in this question, we need to show the customers from different region. It is very simple analysis I have done by taking variables like country and Customer Number with count function.

Customers vs country
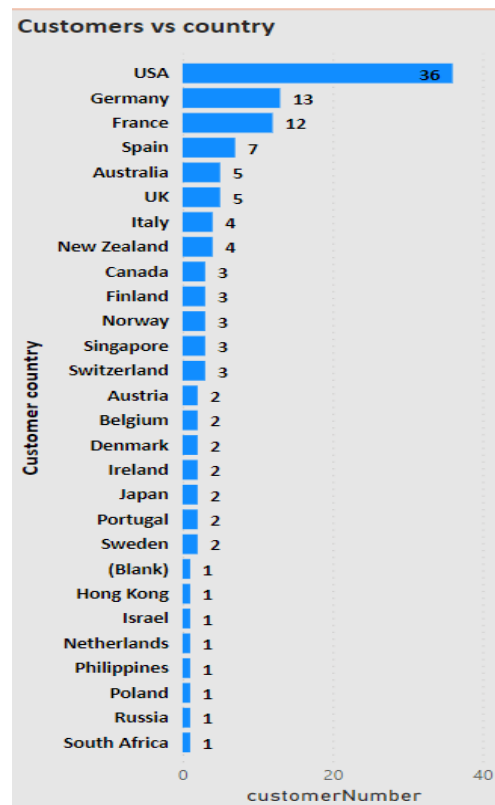
In this graph I took region as country of customer because in data we have two countries given one is customer country and other is employee. So, I took customer country and took Customer number as Distinct count function to know customer uniquely. From the above graph we can say most of the customers are from US followed by Germany, France.

8. **How does customer lifetime value vary for different customer acquisition channels?**

In this question the given problem statement is to know CLV in respect to customer acquisition channels. But after analyzing data it is found that the data need to solve this problem statement is not given.

For some problem statements the data can be derived from other data as well but for this we need Numerical and categorical data that is not there so we can't find relation between the two.

Customer life time value is the value that a company can generate from acquiring a customer through their marketing strategies and ad campaigns.

If the data is given, we can analyze the business value given by particular customer came through different customer acquisition channels and we could have analyzed different customer acquisition channel Revenue as well.

9. What is the correlation between customer age and purchase frequency?

Here from the above statement, we can understand that we need to find Customer age and their purchase behavior.
From the data given to us from the company we can't find Age or any data related to calculating age, so we can't calculate age of a customer from provided data.
Purchase frequency can be calculated from customer and their order quantity. It is nothing but how often customer bought an item.
So, by this we can say that we can find purchase frequency but not age due to this reason we cannot find correlation between them.
If that would have been given, we could have found different age groups and we could have done much more detailed analysis of data based on age like age group and region, Age and Category of products.

10. What are the top regions in terms of sales revenue?

Here in this problem statement, we need to analyze sales revenue in different region. I have done it by taking sales revenue and territory given in data.
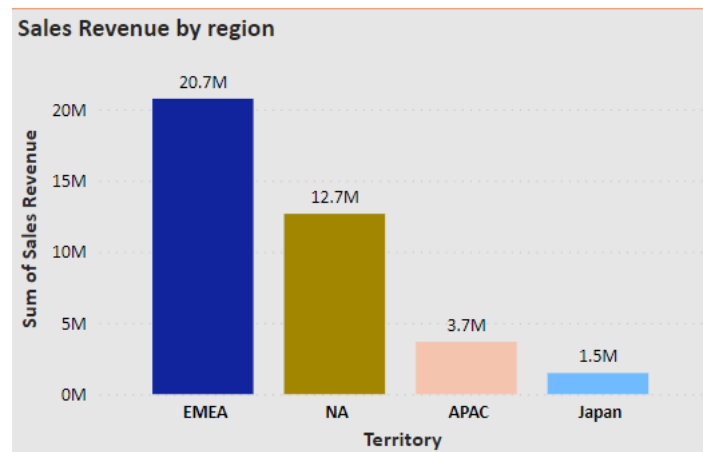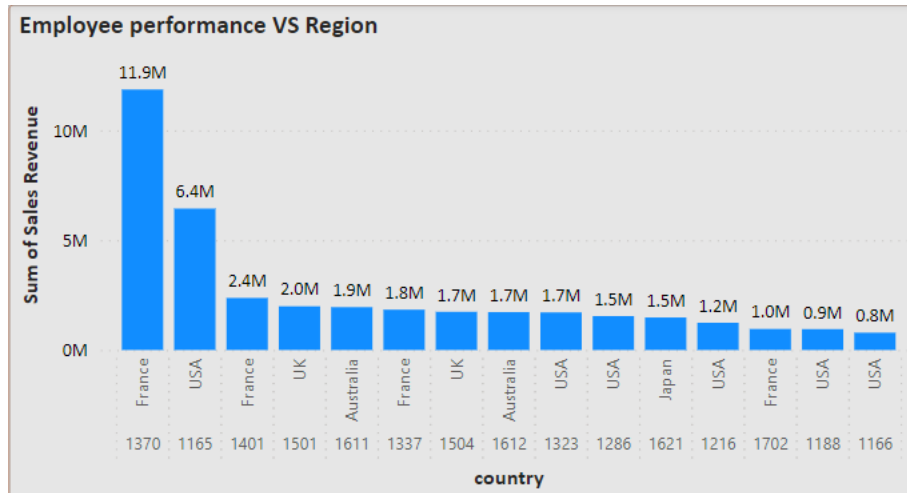

In the above graph I have analyzed Sales revenue in different region. In some problems I have taken country as region but in this I have taken territory as region because it will explain revenue of different regions in simple manner. Here territory is Asia pacific Region, North American Region, EMEA, Japan.
Analysis:
In the graph I have taken Sum of sales to know cumulative sales revenue in different region and from here we can say that European and Middle East countries have the highest sales revenue compared to others and we can suggest company to launch new models of vehicles in **EMEA** region because they have the high number of **Early Adaptors.**

11. How does the performance of sales employees vary across different regions?

In this problem statement we need to analyze employee performance which can be done by his sales achieved that too in a region. So, for that I need **Sales revenue, Employee Number and in different region.**


In the above graph I have taken variables like sales revenue to know the performance of that employee, and I have taken Region as country to elaborate the analysis in an extensive manner and I also have taken Employee Number to know which employee did more sales and from which region.

From the above visualization we can infer that Employee with **E. No 1370** from France followed by **Eno 1165** from **USA** did good number of sales. We can get insights like from above graph that employees from European region did good in sales than other regions.

12. What is the correlation between customer demographics and purchase frequency?

Here we need to show the relation between Customer demographics and frequency with which customer ordered the products in particular year from that we can know frequency of orders.
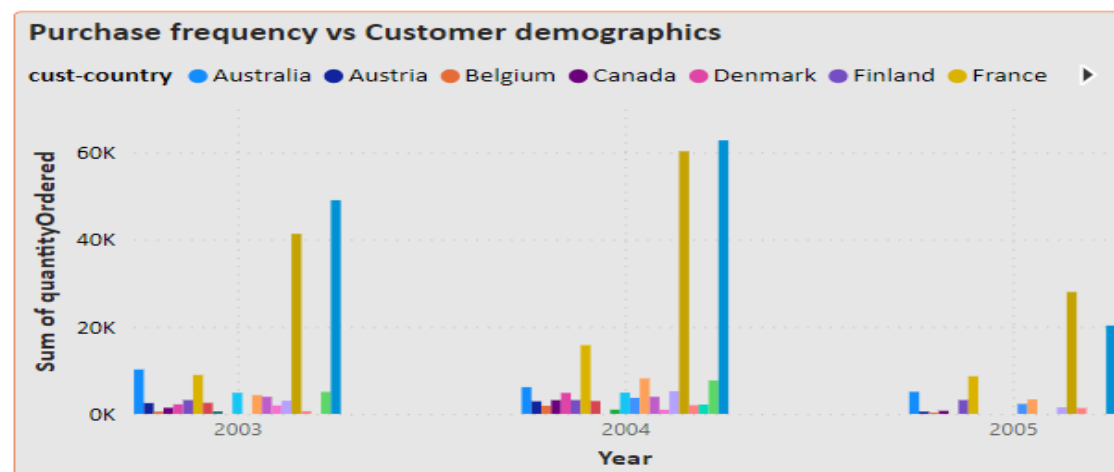
In the above problem statement, I have to take variables like **Order Quantity, Payment date and Country** of Customer.

Analysis: In data there are two countries given one is Employee country and other is Customer country, but we need to analyze Customer order frequency I took customer country. I have taken Payment year as Date that is when the order is done right after payment.

So, by taking all three variables Payment year, Quantity and Customer country I have analyzed the frequency of purchases made by different customers. From the above graph we can say that the purchase frequency of USA, Spain is more compared to other countries. We can suggest to company to focus on the other countries with low purchase frequency to improve their marketing strategies and ad campaigns and regarding pricing and discount provided to boost sales.

Dashboard

Till now we have analysed every problem statement separately, but to address a common problem individual will be difficult so I have grouped all the problem statements into different category to analyse them and present solutions of common problems at a time. It can be done by creating dashboards in Power BI.

Sales Analysis

In this sales dashboard retailers can look into performance of their company in terms of sales and can get idea ho to move forward with a problem.
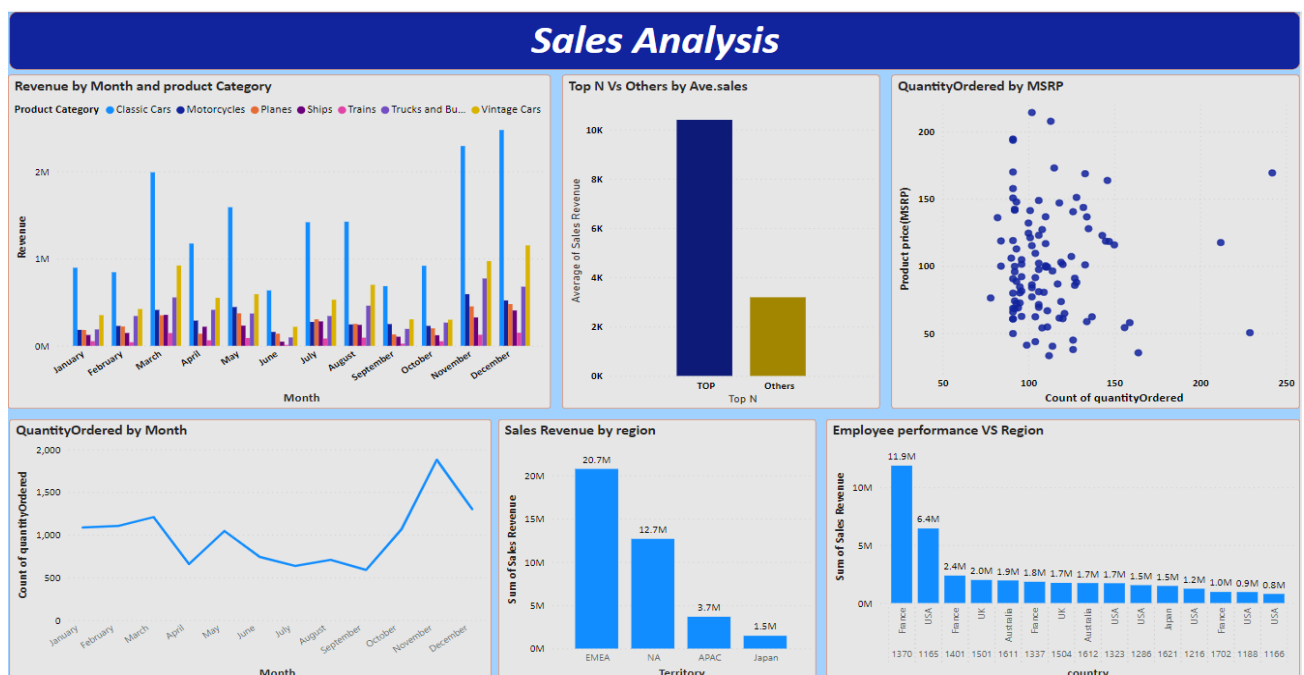

From the above dashboard a retailer can look and have an easy understanding into the data and will be able to implement correct marketing strategy to improve sales and can be able to manage his inventory by looking into quantity ordered, can have wholesome look into his sales performance.

Customer Analysis

Customer Analysis dashboard will give information retailer about his customers buying behaviour and preferences of them. He will also know about his customer demographics like Geography, Ordered value. Customer Analysis will give brief overview about customers from a region and their buying tastes.
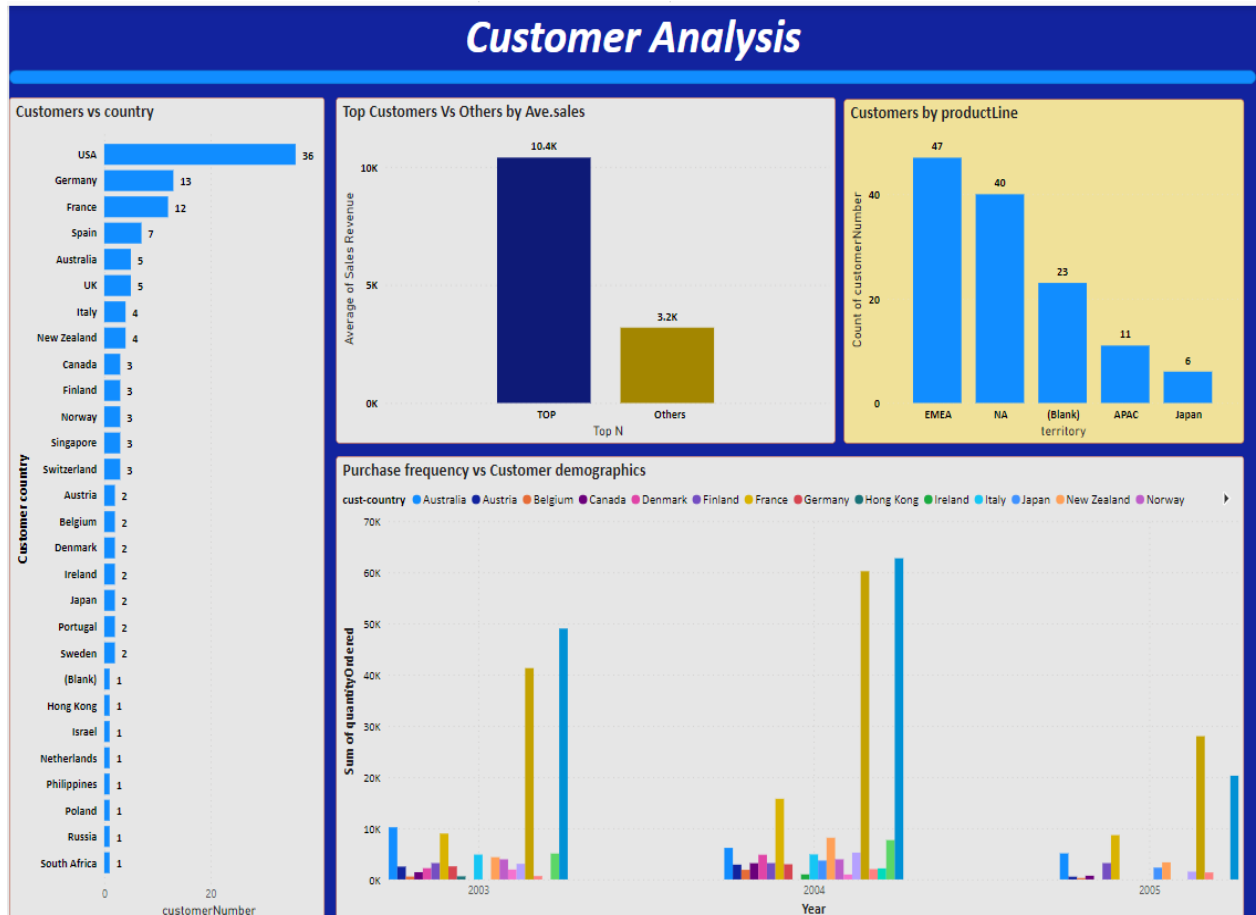

From this customer analysis retailer will be able to know which customers are loyal to his products and making repeated purchases. He can design his marketing strategy according to his customer buying behaviour.

Retailer will know about his customers location and who are the High Value Customers (HVC) based on sales. Which product is bought more by customers and their preferences. Based on all these analysis retailers can align their production and inventory.

Product Analysis

Product analysis will have all the information about products bought from particular retailer in a location and all the information about who bought and how much. Based on this data retailer can align his future products to launch or not. This dashboard will provide a holistic approach regarding products.
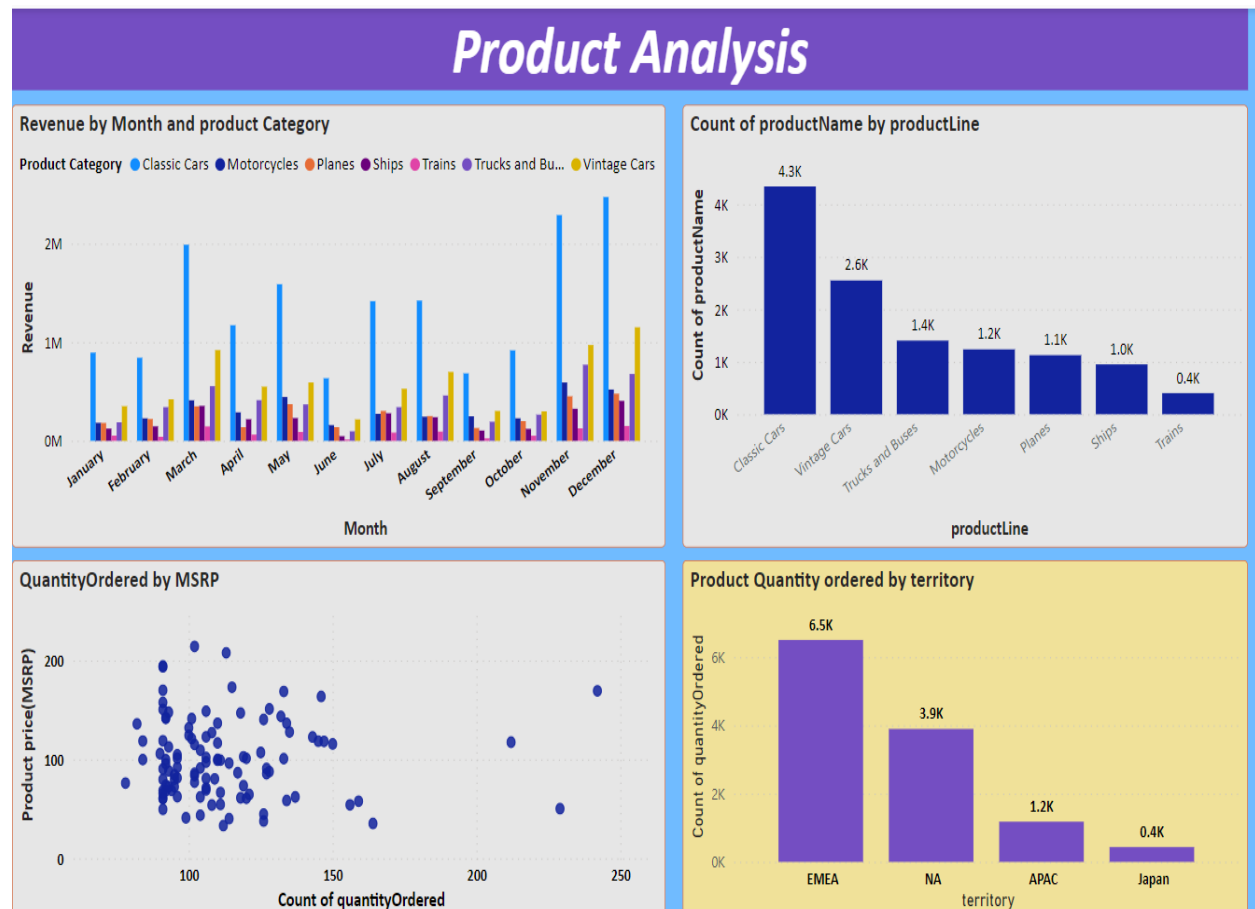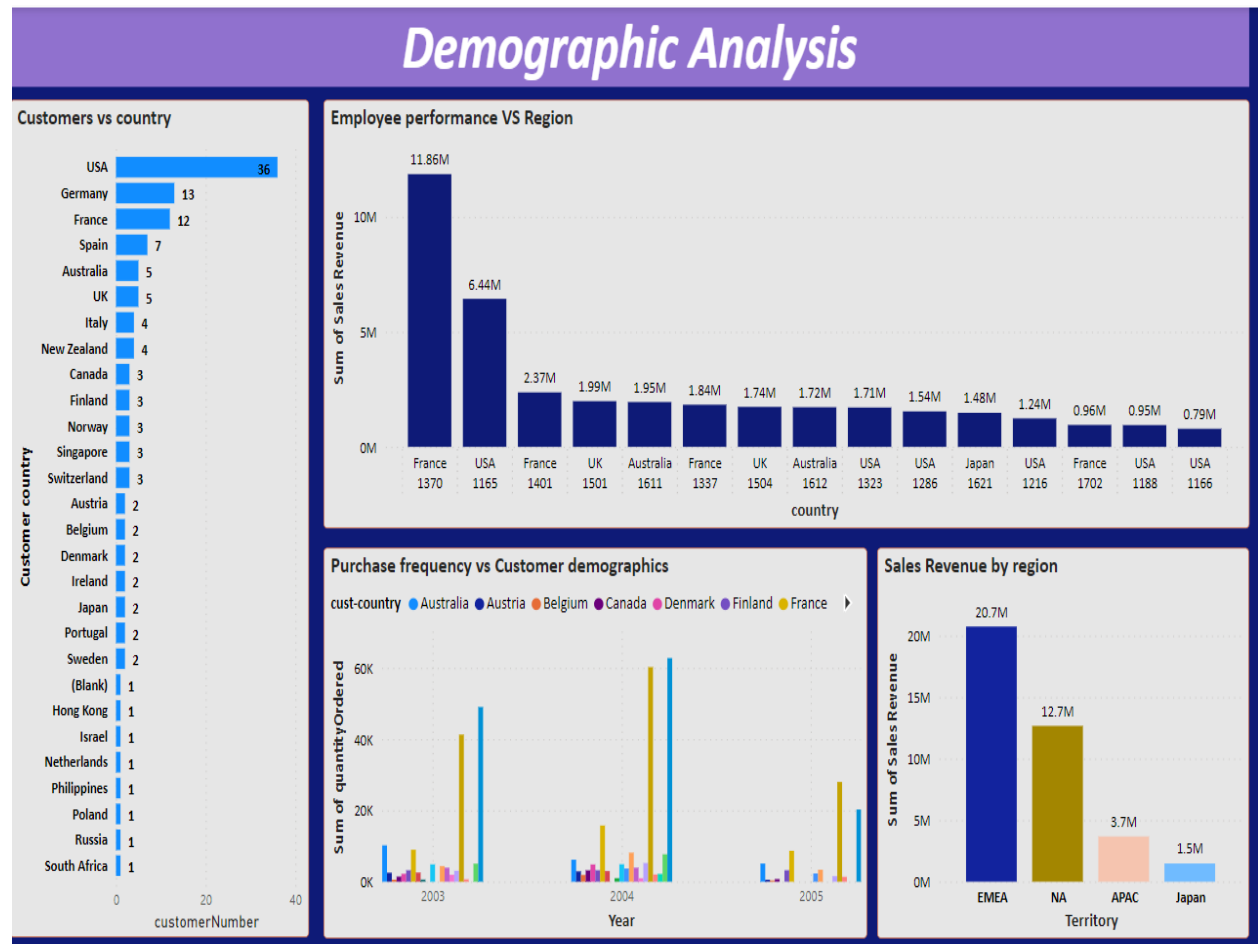

From this dashboard retailer can get idea about his product portfolio on a whole. I have analysed about revenue generated by each category by which retailer will decide weather to continue product or not and profitable or not.
It also provides insight into number of products in a product category, and their performance. This analysis will give details about number of products in a region which will define it stand in a region.

This dashboard will give insights into how price sensitive customers are by their product ordered based on price. Based on this customer can take data driven decision to increase or decrease the price of a product in market.

Demographic Analysis

In demographic Analysis I have done analysis on multiple factors like Customer location, Employee Location and his sales achieved in that location. I have also analysed customer purchase frequency in different locations in various years.

From this dashboard retailer can have the information regarding customer location their sales and employee and his sales achieved. He will also know the sales revenue generated by particular Region.

Retailer will get insight into the purchase pattern of customer in a particular year and location, from all this analysis he can take an informed decision regarding a location and his store and products to keep in that store.

From all the Dashboards above a Retailer will get all the information he needs to run the store and he can make some fruitful informed decisions.

Exploratory Data Analysis

1.Which factors contribute to the highest sales in a particular region?

I have analysed the factors that contribute to highest sales in a region like,

1.Number of customers in a region and financially well settled, because if he is financially strong, he can do more sales.

2. If a customer is fully satisfied by our product, he will give more sales and do word of mouth marketing.

3. The 4P's of marketing Price, Place, Product and Promotion are correctly planned it will give good sales in a region.

4. Quantity of stock will also affect sales in a region, if a product is not available in a store customer will buy from competitors.
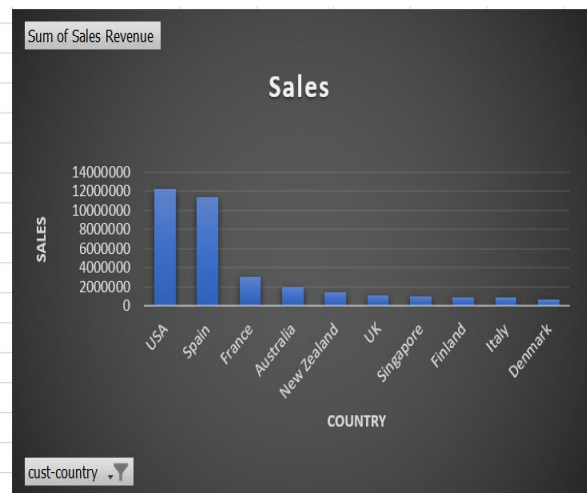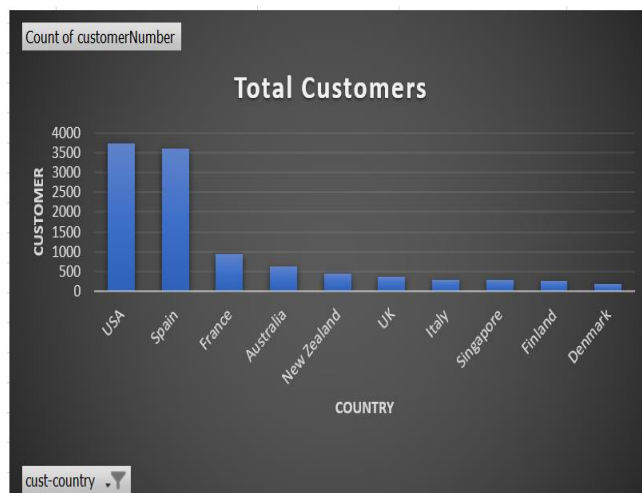

Explanation: In the problem statement we need to analyze growth factors of sales in a region.

I have gone through the data set given for analysis and have analyzed some factors based on available data. I have analyzed customer of a region because they are one of the factors for sales growth and also analyzed the sales done by them in that region. The data given is not sufficient to analyze all the remaining factors above like marketing, Promotion and Price.

Analysis:

From the analyzed data I will suggest to improve more sales in regions like **Singapore, Finland and Denmark** by launching marketing campaign and giving more offers to attract more customers, because if we see customers are also very less in these regions. So, by marketing and discounts we can improve customer base in a region who will become loyal customers.
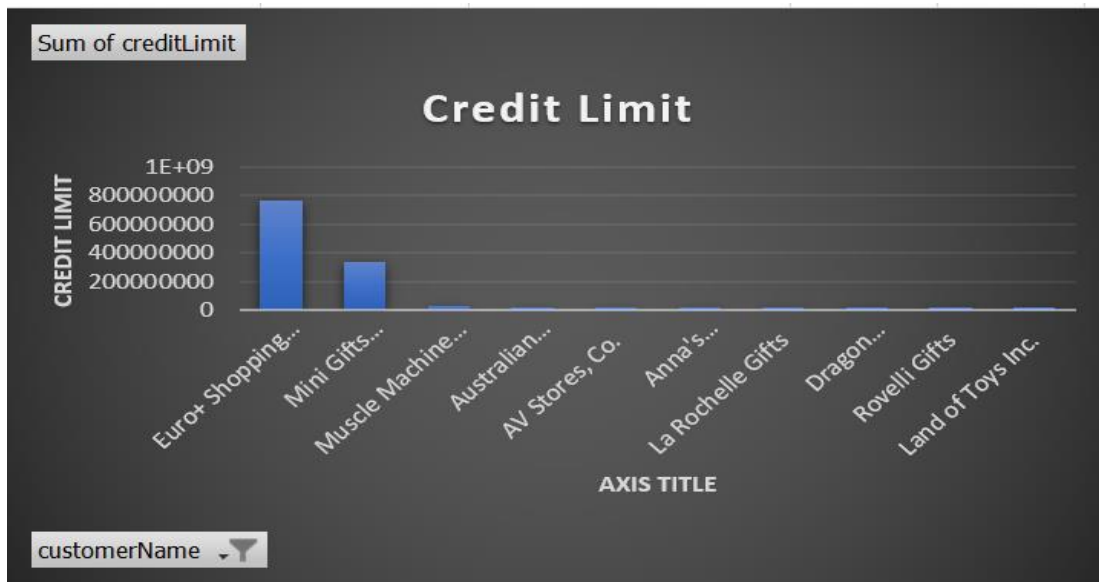
Here I have analyzed on credit limit also to know sales because it is one of the factors that influence sales growth and a customer can buy on credit which improves sales of a region.

Customers present in regions **like USA, Spain** are giving high sales for us and we can launch new products as well because customers from this region are **Early adaptors** for our company.

Early Adaptors are loyal customers who buys our product immediate launch of our product in to market.

2.How can customer purchasing patterns be influenced to increase average order value?

Explanation

Customer purchase patterns are trends of how a customer do shopping. Customer purchase patterns can be influenced by different marketing strategies in Retail industry like,

1**. Rewards and loyalty programs**: in this strategy retailer can give some reward points to regular or loyal customers. Loyalty programs are conducted to enhance customer shopping with loyalty gift cards and special access to their early sales.

2.**Free shipping on minimum order value** which will enhance customer purchase cycle.

3.**Discounts**: This one of the most used strategy of retailers in the world where some discounts are given on products, sales seasons, loyalty and on new launched product. It is one of the most used strategies to improve average order value.

Offers to new customers: Giving special offers to new customer will attract more business to a retail and will make them loyal. These are all the strategies to improve Average order value.
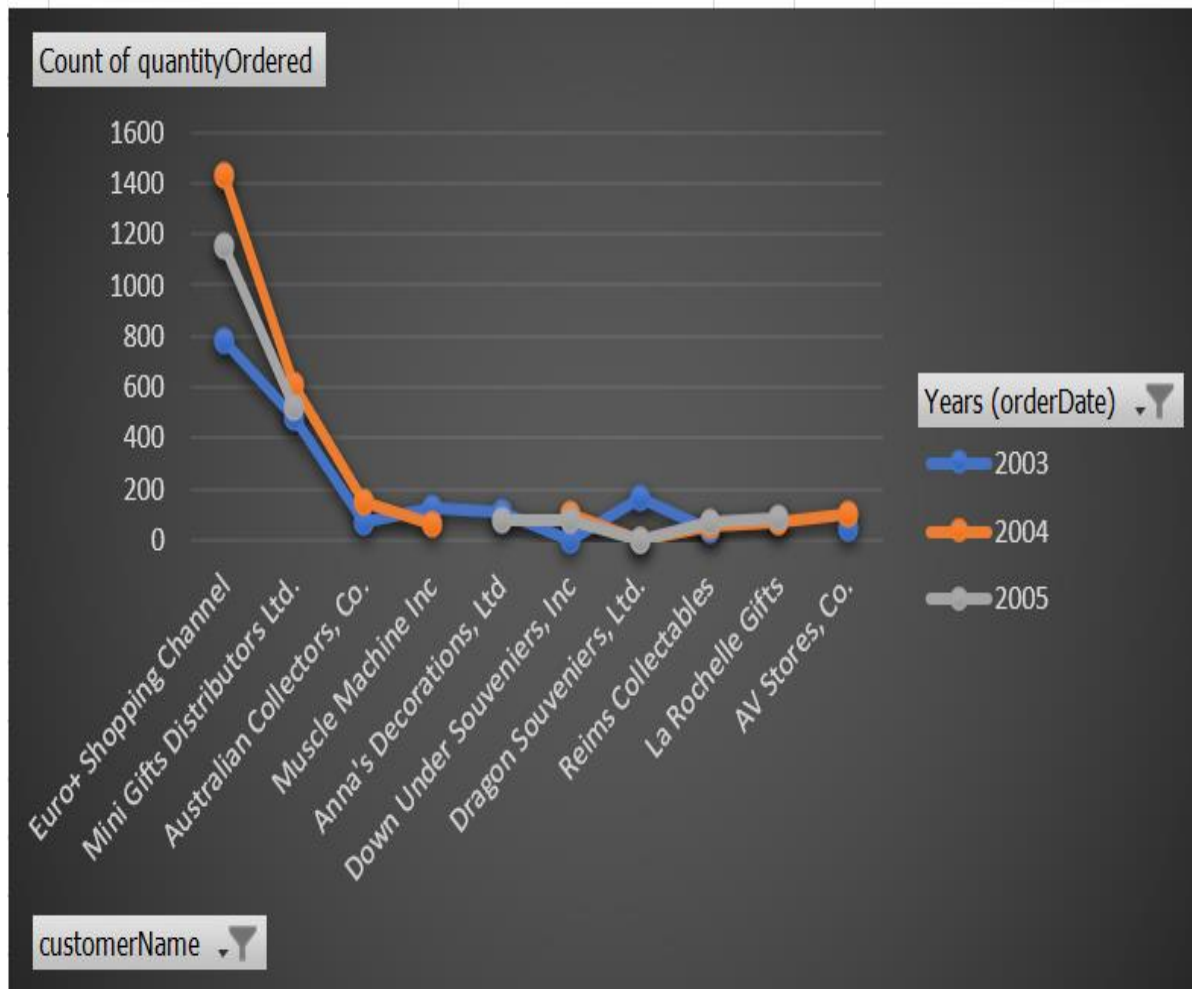
Analysis:

In the analysis I have done I have analyzed customer purchase pattern based on the quantity they ordered and in which year. So, from this analysis I can suggest **Euro+shopping channel** has maximum orders and is a loyal customer to retailer and above strategies can be implemented to make him do more shopping.

Customers like **Dragon Souvenir, Reim Collectables, La Rochelle Gifts and AV Stores.co** have very low order quantity I will suggest retailer to give more discount to them to increase their average order value.

3.What are the key drivers of sales growth, and how can they be leveraged for future success?

EXPLANATION:

Key drivers are leading factors affecting performance for a company or business. A key driver is something that has a big impact on whether the business does well.
The key drivers of sales are,

1.Customers: If customers are satisfied by the previous shopping experience in a retail, he will do more business to that retail and a loyal customer will do word of mouth marketing for a retail.

2.Financial stability: The financial stability of a customer will determine the sales of Retail in particular region, because if he is earning more, he can spend more on products. Let's take our retail as example the customer who has more earning like Euro+shopping is giving more sales to us.

3.Location: It is one of the most important key drivers of sales in a region, because a retail in an urban area will have more sales than that of same retail in some rural area. It is because in urban area population and income both are more compared to rural region.

4.Price: Price is also a key attribute which will determine the sales of a particular product, it is one the most influential factor of sales growth. Customers tend to buy more or less based on price of the product.

These are some of the key attributes of sales growth**.**

Analysis:

In the above analysis I have done research on sales of customers in different region of the retail present, from this I have known the sales based on customers and region.

Here in the given data set of retail the data is not sufficient, because I found only customer and location as key attributes of sales in data. The missing key attributes are like income, promotion.

I have done analysis on key attributes like Price, Customer and Location in the problem and I will suggest retailer to implement new marketing campaigns to create awareness in low sales areas to improve sales of different products.

In the above data I can say different customers have highest sales in different region, so different marketing strategies should be implemented.

4.Which product features or attributes are most appealing to customers?

Product features are noting but its physical size, shape, orientation and design to anlayse this problem we don't have enough data with us.

Explanation: After thorough understanding of the data, I have seen the Data provided is Insufficient to solve this problem statement.

To solve this problem, we need product features like size, design, quality and functionality none of them are given.

5.How can the product mix be optimized to cater to changing market demands?

Product Mix: Product mix is a term used to define the **Product Lines** and **Products** under that Product line (Product Category) offered by a company in a market.

Product Mix can be changed according to market situation, like if a product in particular Product Line is not doing good sales in that market it will be stopped in that market and vice-verse.
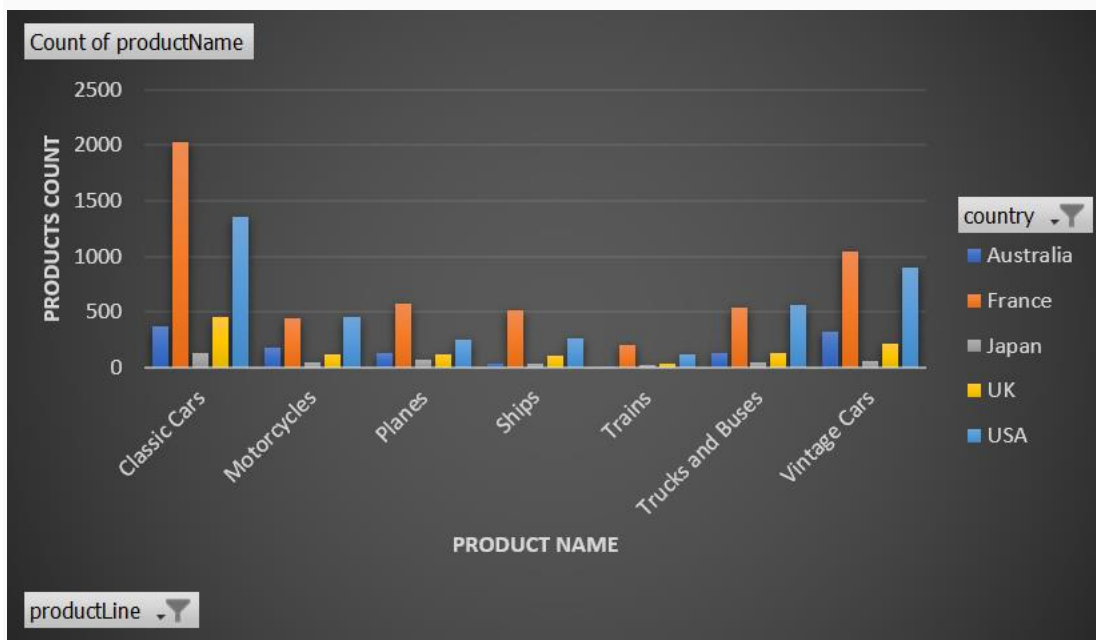
Analysis:

Here in the dataset Product line and products both are given in different markets to analyze Product mix optimization. I have analyzed product Lines and Products in different markets and have seen different product lines are performing differently in markets.

Classic Cars and Motor Cycles are more in **France and other markets except Japan.** So, to optimize Product mix I suggest retailers to discontinue Classic cars and Motor cycles in Japan.

Like this we can do in all markets to optimize the Product Mix.

6.Are there any specific market segments where a particular product is underperforming, and how can it be improved?

The underperforming product or asset is a product which is performing poor in sales in a company and should be improved to stabilize the company. Low performing products are defined by high marketing and low sales or High budget with low sales.

Improvement measures

1. To improve sales of a low performing product we need to do more marketing campaigns and launching ads to taking it to customers.

2. Promoting about it on media and social handles.

3. We can improve product sales by customer feedback on the product by that we know why customers are not buying it.

4.Giving special offers on the product will improve sales of low performing products.
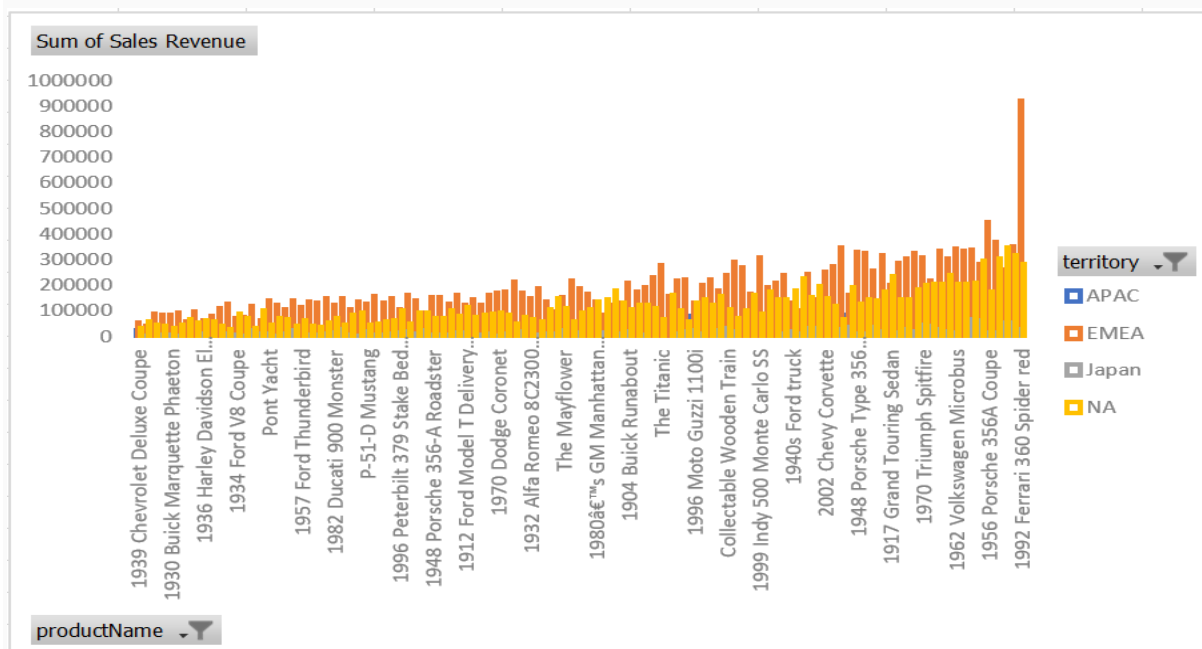
Analysis:
In the given data I have analyzed low performing products based on sales in different region and by that I have known different product is performing low in different region. I have taken sum of sales and analyzed different product low performance in different region. In APAC region **1962 City of Detroit Street car** is low performing product in terms of sales, followed by **1958 Chevy Corvette Limited Edition and 1982 Lamborghini Diablo.** In EMEA region **1936 Mercedes 500k Roadster and Chevorlette Deluxe Coupe** are the low performing products.
In Japan the low performing products are **1936 Mercedes Benz 500k Roadster and 1982 Ducati 996R.**
In North America low performing products are **Horch 930V Limousine and Vintage Bi-Plane** are the low performing products in terms of sales.
 By all this we can conclude that different region has different low sales products, so we can suggest different marketing strategies for different regions for their sales growth.

7.What are the main factors that influence customer loyalty and repeat purchases?

Customer Loyalty is a term used to describe customer trust on a product of a particular company.

If a customer buys a product and satisfied with it, he will do repeated purchases and his loyalty towards the company increases.

Factors of customer Loyalty are

1.Customer satisfaction.

2.Hazzle free buying and delivery.

3.Availibility of the product.

4.Special treatment from retailer when ever done shopping.

These are some of the factors that influence Loyalty.
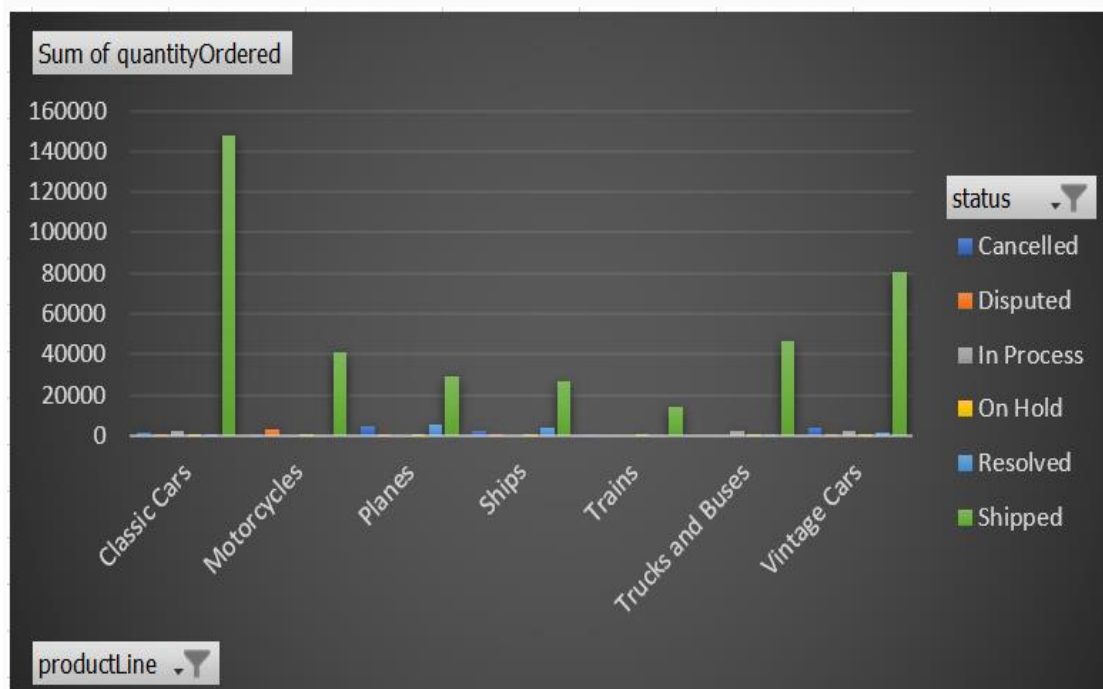
Analysis: To analyze the data we need all the above attributes, but I have only Order Status by which I have analyzed the customer satisfaction. If a customer is satisfied with the order, he will give more business to company.

After analysis I have known that **In-process, On-Hold, Resolved and Shipped** are having good numbers compared to **Cancelled and Disputed**. So, from analysis I can say there are more satisfied and loyal customer to give good sales numbers.

But I suggest retailer to look and resolve that cancelled and Disputed customers issues that they too become loyal customers.

8.How do customer preferences differ based on geographic location, and how can marketing campaigns be customized accordingly?
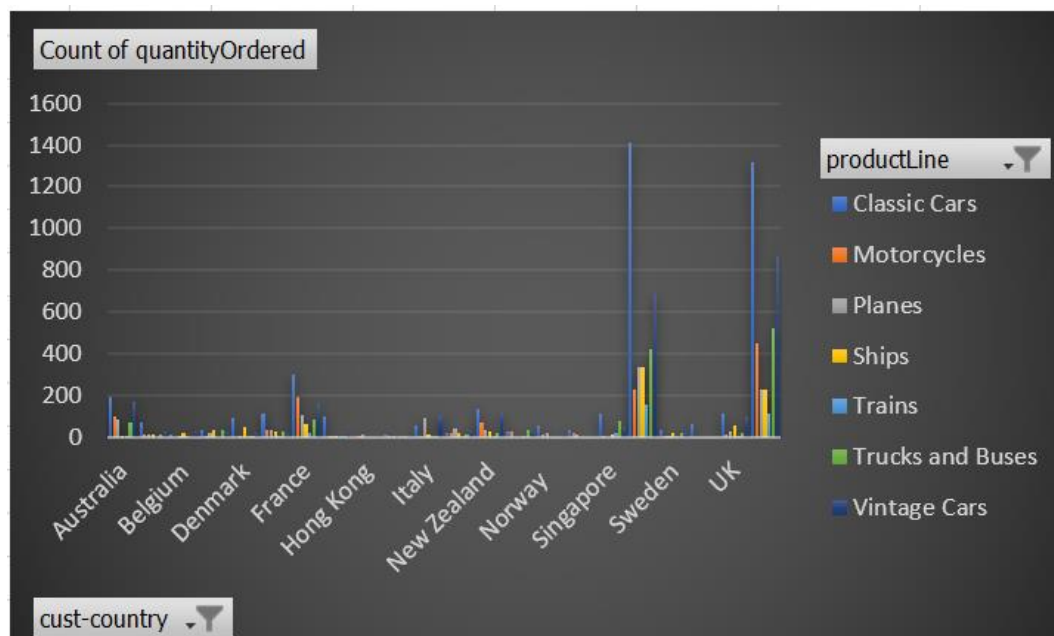
Customer preferences and buying behaviour changes based on his demographic factors like age, sex, income and location. Customer can buy different products based on his variable demographics.
Example: A customer who is in Switzerland will buy woolen clothes and customer in Dubai will buy more of cotton clothes.
So, customer buying behavior will change according to his demographics and will have to be targeted in different manner.
Based on the geographics we need to move forward with different marketing campaigns. By through research on customer geographics a company can design its marketing or Ad campaign based on customer preferences to attract more customers and increase in sales of the product.
By targeting customers of different demographics with different Ad campaign a company can leverage its sales value, by leveraging Ad campaign according to target customers.

Analysis: Here after going through the data set, I only found **one** demographic factor that is **Location.** I have analyzed customer preferences based on location in this problem statement. I have noticed different Location have different buying behavior after analysis.
Classic cars are more preferred in Spain followed by USA, France and Australia.
Motor cycles are more preferred in USA followed by Spain.
Planes are more preferred in Spain and USA.
Ships are more preferred in Spain and USA.
Trains are more preferred in Spain and USA.
Trucks are and Buses more preferred in USA and Spain.
and Vintage cars are more preferred in USA and Spain.
Based on the above demographic analysis I suggest Retailers to design separate marketing campaign for different Location.

9. What are the characteristics of high-value customers, and how can similar customers be targeted for acquisition?

High value Customers are those who rely on your product or services more than other customers and bring in more business in the long run. High-value customers are labeled differently depending on your business. For retail stores, this will be someone who purchases items or services regularly and at great volume.

They provide invaluable feedback, word-of-mouth marketing, and insights into your company's strengths and weaknesses by time. They are our loyal customer base who are also early adaptors of our products. In other words, High Value Customers are those who give more sales to our company.

Characteristics of High value Customers are

1.Customers who give more sales to us.

2.Customers who wait for our products to launch in market to purchase.

3.Customers who give us good feedback with repeated purchases.

4.Customers who do word of mouth about our company.

Similar customers who are about to become our HVC we can target them by providing them with different benefits like

1.Targetting by giving special discounts to them

2. By launching special campaigns to acquire them to our HVC Eco-system.

3. By giving invitation special new product launches and giving them to have hands on experience.

4.In our Retail data we can give customers our new auto products to Test drive and know their feedback

5.Providing free goodies along with our products purchased.

These are some of the ways to acquire similar customers like High Value Customers.
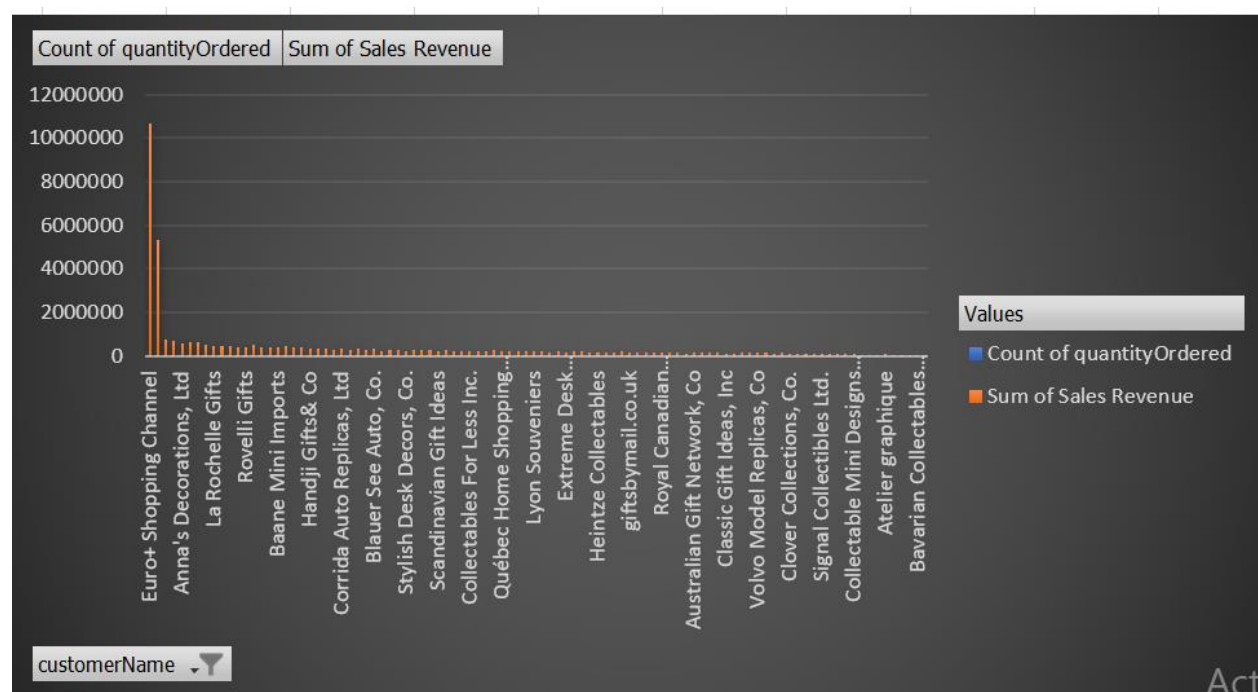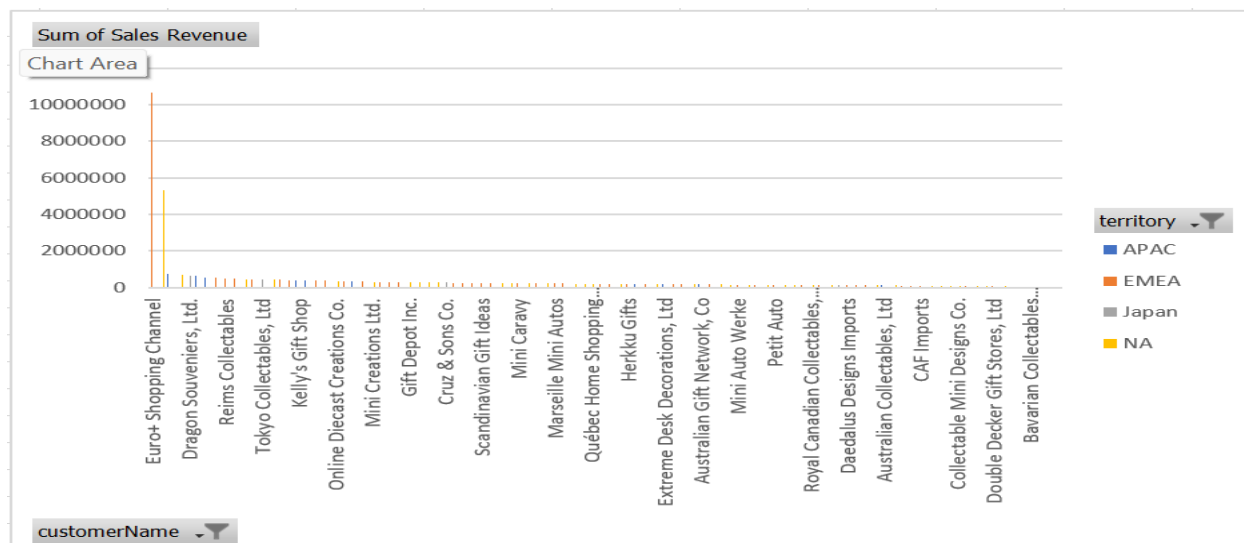
Analysis:

In this analysis of High value customer for our retail products I have taken Quantity Ordered and Sales Revenue to know High Value Customer for our retail products.

From the above analysis I have noticed that our High Value Customers are **Euro+shopping, Minigifts Distributions. Ltd, Australian collecter.co, Muscle Machine and Anna Decorations**. I have analyzed them based on sales revenue given by them.

And our similar customers like HVC who can be converted to HVC are Down Under soveniers, Dragon souvenirs, Reim collectables, which can be converted to High Value Customers by giving special discounts and Goodies along with our products. This is my suggestion to the retailers.

10.How can marketing strategies be tailored to target specific demographic segments in different regions?

Here in this problem statement, we need marketing strategies and demographic segments data which is not given in our data set. Only regions are given and no other analysis is possible with that data.

I have analyzed data of customers based on different location and their sales to know which strategy to apply for improving sales in that region.

Analysis:

 After analyzing the data thoroughly, I have seen that each market has different sales and should be targeted differently.

there is no much data other than country in this question to do. So, I analysed region wise sales and based on my analysis Euro shopping channel is top in sales in EMEA Region and Mini gifts is top in North America region so, different marketing strategies to be applied to different region for sales growth.

11.What are the potential untapped markets based on demographic indicators, and how can market penetration be increased?

Untapped Markets: Untapped markets are the markets where a particular company will be having no presence in market and market share. Untapped markets will have good potential to launch new products and to grab opportunity in new markets.

These Untapped markets have more potential customers as well as competitors for your products, so you need to study the market before entering it. We have to research about our target market and our products suitable and our competitors.

Market Penetration in to Untapped markets:

1.The market penetration can be increased by penetrative pricing (low pricing).

2.Providing special discounts on products on entry into market.

3. Launching existing product as new in new market with more benefits.
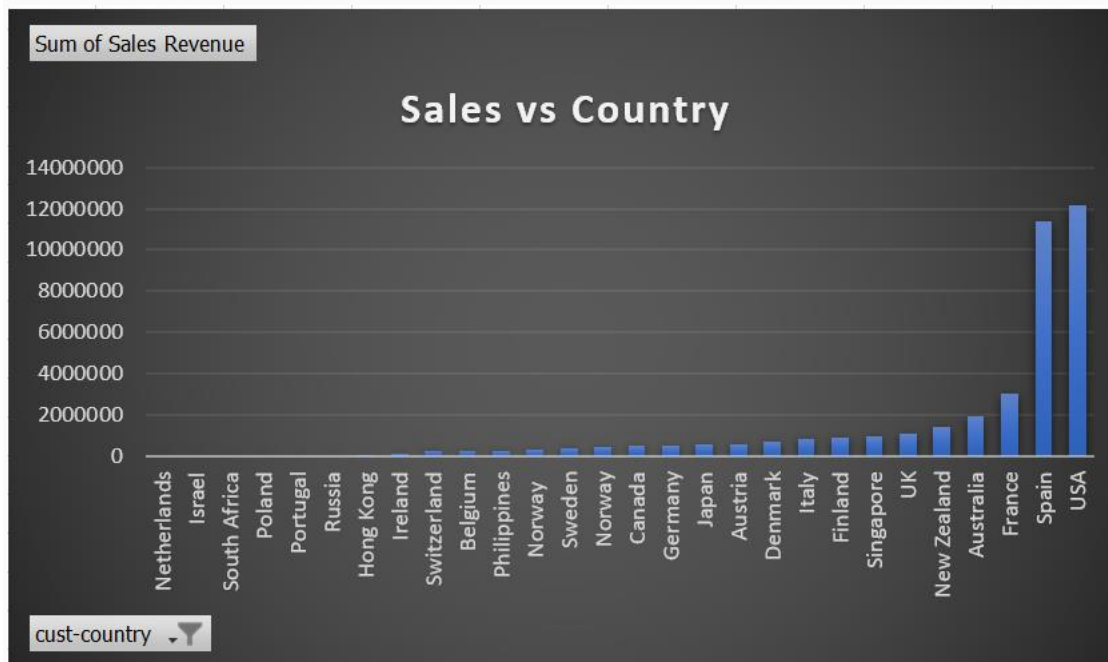
Analysis:

Here in this problem statement, we need to identify Untapped markets in that region and provide strategies to penetrate into them. So, I have taken Sales and country to analyze and found that there are Untapped markets in 6 different regions this I have known from sales value of that markets. They have zero sales.

The Untapped markets in the analysis are **Netherlands, Russia, Israel, Poland, Portugal, South Africa**

After the thorough analysis I suggest retailers to enter into these markets with penetrative pricing by providing product for Discount or for low pricing.
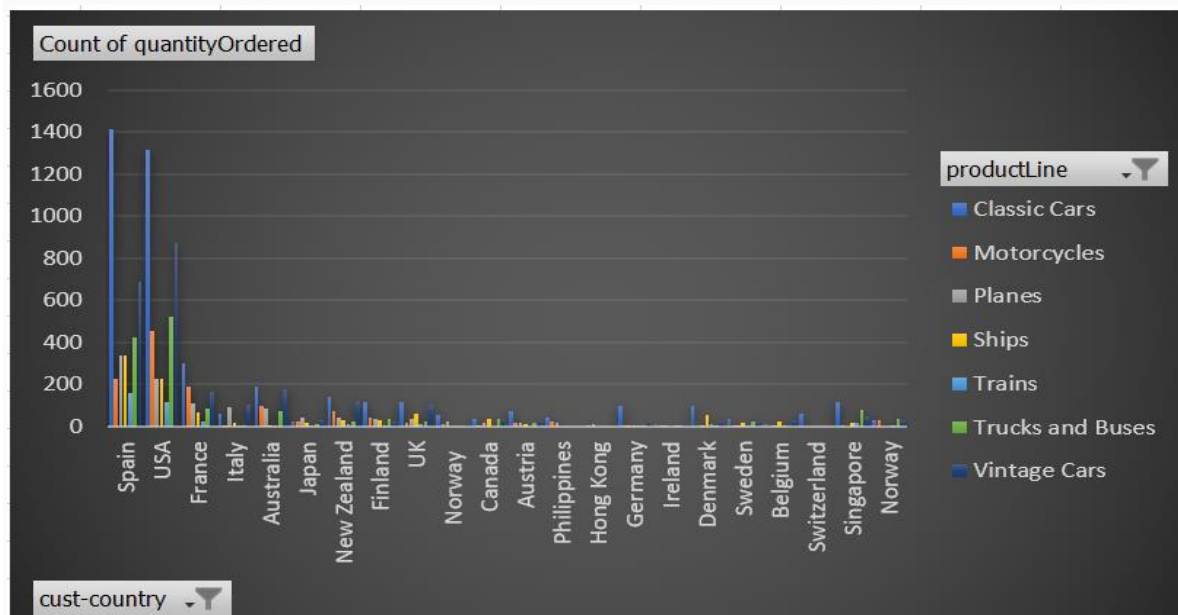
12.How do customer preferences and behavior differ based on demographic factors, and how can they be leveraged for personalized marketing campaigns?

Customer preferences and buying behaviour changes based on his demographic factors like age, sex, income and location. Customer can buy different products based on his variable demographics.

Example: A customer who is in Switzerland will buy woolen clothes and customer in Dubai will buy more of cotton clothes. So, customer buying behavior will change according to his demographics and will have to be targeted in different manner.

Based on the demographics we need to move forward with different marketing campaigns. By through research on customer demographics a company can design its marketing or Ad campaign based on customer preferences to attract more customers and increase in sales of the product.

By targeting customers of different demographics with different Ad campaign a company can leverage its sales value, by leveraging Ad campaign according to target customers.

Analysis: Here after going through the data set I only found one demographic factor that is Location. I have analyzed customer preferences based on location in this problem statement. I have noticed different Location have different buying behavior after analysis.

Classic cars are more preferred in Spain followed by USA, France and Australia.

Motor cycles are more preferred in USA followed by Spain.

Planes are more preferred in Spain and USA.

Ships are more preferred in Spain and USA.

Trains are more preferred in Spain and USA.

Trucks are and Buses more preferred in USA and Spain.

and Vintage cars are more preferred in USA and Spain.

Based on the above demographic analysis I suggest Retailers to design separate marketing campaign for different Location.

Conclusion

The Project for the Retail Analysis is a comprehensive and insightful analysis done to analyse various aspects of the retail business. While doing this project I have analysed different aspects of Retail business to give detailed insights to the Retailers. I have gone through lot of anomalies while doing the project and I have overcome them to give correct and meaningful and insightful data to retailers.

From the dashboards and presentation, I have created will give big picture about problems and the profitable solutions to them and how to implement them in their retail business. I have also created this report to give detailed overview of the Analysis I have done and steps followed to do that analysis.

This analysis will give a retailer information about the financial aspects of his store like Profit, Sales Revenue, Profitability and number of orders placed. It will also give him about the details of his loyal customers and their demographic segmentation like Country, Credit Limits and their purchasing behaviour.

The project objective is to give insightful information to Retailers regarding their performance and to take data driven decisions which were achieved.