

Project Title

Sales performance analysis using Excel

Objectives

To analyze sales data for the year 2018 to identify trends, monitor performance metrics, and provide actionable insights and/or recommendations.

Dataset Description

Source: Practice sales dataset for January to December, 2018, from Tech Command Academy.

Size: 1549 rows and 11 columns

Key columns

- Order ID – Unique identity number assigned to the order
- Customer name – Name of the customer that made the purchase/order
- Cookies Shipped – The number/quantity of cookies shipped
- Revenue – Amount realized from the sale made
- Cost – Amount spend on the product
- Profit – Gain amount realized from the sales after cost deduction
- Order Date – The date the customer made the order
- Ship Date – The date the product was shipped
- Order Status – This refers to whether the order has been shipped or waiting to be shipped (pending).

Initial observations

Missing values in the ‘Order ID’ and ‘Customer Name’ columns for 18 rows

Tools used

Microsoft Excel

- Data cleaning (handling missing values, removing duplicates with power query)
- Pivot tables for summarization
- Charts for quick visualizations
- Interactive dashboards.
- Calculated measures for deeper insights
- Advanced data visualization (e.g., slicers, filters and timeline)

Methodology

Data cleaning and preparation

- Removed 18 rows with missing ‘Order ID’ and ‘Customer Name’ values.
- Corrected 6 outliers in the ‘Revenue’ column by cross-checking source data.
- Used Excel function to return the actual day of the week the order was made from the order date column.

Exploratory Data Analysis (EDA)

- Used pivot tables in Excel to summarize Revenue by 'customer' and 'month', and Profit by day of the week.
- Detected the average number of days it takes to ship a product is four (4) days.
- Detected customer's performance by quantity purchased and Revenue generated

Visualization and insights

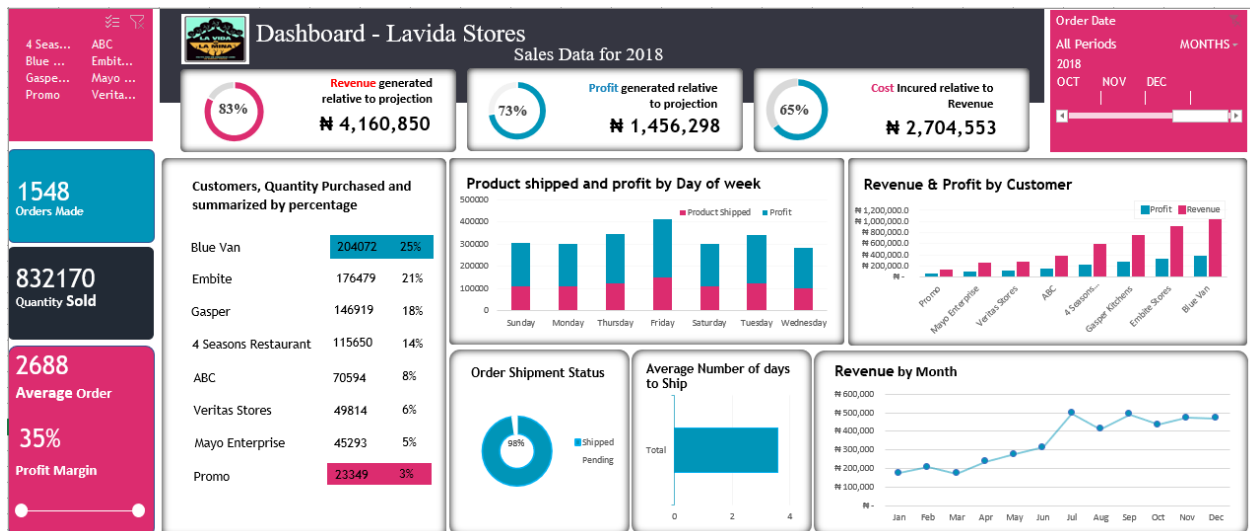
Created an Excel dashboard with the following visuals

- Revenue and Profit by Customer (Column/Bar Chart)
- Product shipped and profit by day of the week (Stacked Column/Bar chart)
- Monthly Sales Trend (Line Chart)
- Customers, Quantity Purchased and summarized by percentage (Table)
- Order shipment status (Pie Chart)

Recommendation

- Faster shipment - Exploit some other faster shipping means in order to further reduce the number of days it takes to ship products down to customers and serve them better.
- Channel more effort on high performing customers to further increase revenue.
- Engage low/under-performing customers to identify what they are lacking and exploit possible ways to improve their sales and increase revenue.
- Stock-up products ahead of peak sales season.

Results and Insights



Sales Performance:

- Overall sales increased by 32% compared to the previous year
- The revenue generated relative to revenue projected was 83%, and profit generated relative to the projection was 73% while, cost incurred relative to revenue was 65%.

Customers Performance:

- The customer “Blue Van” is the highest performing customer contributing about 25% of the total revenue.
- Mayo Enterprise recorded the lowest quantity purchased contributing only 5% of the total revenue. This is because, Mayo enterprise just started purchasing the products recently, and with a growing customer base, her customers are still trying to get accustomed with the new products.

Seasonal Trends:

- Sales increased in the middle of the year with peak sales in July, driven by holidays and promotions.
- Lowest sales observed in January through March, which is explainable as businesses try to stabilize during this period after holiday seasons.

Conclusion

The analysis identified that Blue Van is the most profitable customer with strong a customer base. Sales trends indicate the importance of holidays and promotions. The analysis further revealed that an extra 10% of the revenue generated went into cost and about 2.81% of the total revenue generated was used for promo. It is recommended to focus marketing and inventory planning efforts towards peak sales seasons and high performing customers to increase revenue and sustain growth, exploit ways to further reduce the number of days it takes to ship products down to customers.