Superstore Analysis

Requirements:

I am hired as a consultant to review the superstore's operations and increase its profitability to avoid bankruptcy. This project analyzes sales and returns data from a superstore to identify major profit and loss analysis.

Data Source:

Superstore Data – The primary dataset is used for this analysis is "superstore.xls" where the data is contains about products, orders, shipping and returns.

Part 1: Profits & Losses

Identify the most profitable and unprofitable areas of the business.

What to find:

- Top 2 combinations of dimensions (e.g., *Sub-Category + Region*, *Product ID + Shipping Mode*) with highest and lowest total profits.

- Specific products that consistently result in losses and should be considered for discontinuation.

- 3 subcategories to **focus on** (high profit) and 3 to **avoid** (consistent losses).

Requirements:

- Grouped profit analysis by dimension pairs

- Visualizations (e.g., heatmaps, bar charts) to justify conclusions

Part 2: Advertising Strategy

Recommend where and when to advertise based on profitability and seasonality.

What to find:

- 3 best combinations of state + month with highest average profit.

- Visualize monthly average profit trends for those 3 states.

- Estimate recommended ad spend using ROAS (1/5 of monthly profit).

Requirements:

- Bar charts for top states

- ROI-based justification for ad spend allocation

Part 3: Returned Items

Analyze return patterns to assess product and customer reliability.

What to find:

- Products with the **highest return rates.**

- Customers with **frequent returns.**

- Relationship between **return rate and average profit** across a selected dimension (e.g., state, product type).

Requirements:

- LEFT JOIN between Orders and Returns tables

- Calculated return rate field (Yes = 1, Null = 0)

- Visualizations to compare return rates vs profitability

Tools Used

- Excel / Tableau

- Data: Superstore Orders & Returns dataset

Conclusions:

- Profits are highly concentrated in a few key combinations of product category and region.
- Losses are persistent in certain subcategories and products that should be reviewed or discontinued.
- Advertising in Q4 (especially October and November) across a few high-performing states yields better returns.
- Customer returns vary significantly by product and shipping mode, and not all high-return items are unprofitable.
- Subcategory-level performance shows clear winners and underperformers, enabling sharper inventory decisions.

Recommendations:

Profitability Actions

- Discontinue or re-evaluate products and subcategories showing consistent losses.

- Focus resources on high-margin, high-profit areas like Copiers and Phones.

Advertising Strategy

- Launch targeted advertising in **Indiana**, **Vermont**, and **Rhode Island** during Q4.

- Use a **20% of profit** threshold to set ad budgets based on average monthly profit.

Return Rate Management

- Reduce returns by improving shipping processes (e.g., evaluating "Same Day" shipping mode).

- Investigate and improve or eliminate high-return products with low profitability.

Business Strategy

- Encourage **positive reviews** and improved service to boost product ratings.

- Promote **high-rated items** more aggressively, as ratings have a positive correlation with sales.

- Tailor promotions for demographic groups like **students** who show higher engagement.