

Strategic Product Placement Analysis: Unveiling Sales Impact with Tableau Visualization

1. Introduction

Strategic product placement in retail environments significantly influences consumer purchasing behavior. This report demonstrates how Tableau can be used to analyze sales impact based on product placement strategies.

2. Business Problem Statement

How does product placement (e.g., eye-level shelves, checkout counters, end caps) impact sales revenue, unit sales, and customer conversion rates?

3. Dataset Structure

Typical dataset fields required: - Product_ID - Product_Name - Category - Placement_Type - Store_Location - Units_Sold - Revenue - Date - Promotion_Flag

4. Data Preparation (Python Example)

Below is sample Python code for preparing the dataset before importing into Tableau:

```
import pandas as pd

# Load dataset
df = pd.read_csv("product_sales.csv")

# Calculate revenue per unit
df["Revenue_per_Unit"] = df["Revenue"] / df["Units_Sold"]

# Aggregate placement performance
placement_summary = df.groupby("Placement_Type").agg({
    "Revenue": "sum",
    "Units_Sold": "sum"
}).reset_index()

print(placement_summary)
```

5. Key Tableau Calculated Fields

1. Sales Growth:

$$(\text{SUM}([\text{Revenue}]) - \text{LOOKUP}(\text{SUM}([\text{Revenue}]), -1)) / \text{ABS}(\text{LOOKUP}(\text{SUM}([\text{Revenue}]), -1))$$
2. Placement Effectiveness Index:

$$\text{SUM}([\text{Revenue}]) / \text{SUM}([\text{Units_Sold}])$$
3. Promotion Impact:

$$\text{IF } [\text{Promotion_Flag}] = 1 \text{ THEN } \text{SUM}([\text{Revenue}]) \text{ END}$$

6. Recommended Tableau Visualizations

- Bar Chart: Revenue by Placement Type
- Heatmap: Store Location vs Placement Performance
- Line Chart: Sales Trend Over Time by Placement
- KPI Dashboard: Revenue, Units Sold, Effectiveness Index

7. Insights & Strategic Recommendations

- Eye-level placements typically generate higher revenue per unit.
- End-cap displays significantly boost promotional sales.
- Checkout placements drive impulse purchases.
- Retailers should allocate premium shelf space to high-margin products and rotate promotional items strategically to maximize exposure.

End of Report