

Retail Business Performance & Profitability Analysis

1. Profitability by Product Category

- Technology products generated the highest profit margins, indicating strong demand and efficient pricing strategy.
- Furniture category showed lower profitability despite high sales volume, suggesting higher operational or logistics costs.
- Office Supplies maintained stable and consistent profit performance across regions.

2. Inventory Turnover Analysis

- Products with higher inventory holding days showed reduced profitability.
- Overstocked items increased storage and handling costs.
- Fast-moving products contributed significantly to overall revenue growth.

3. Seasonal Sales Behavior

- Sales increased noticeably during festive and year-end seasons.
- Certain product categories experienced seasonal demand spikes, indicating opportunities for seasonal inventory planning.
- Non-seasonal products maintained steady sales throughout the year.

4. Regional Performance Insights

- Western and Central regions recorded higher overall profits compared to other regions.
- Some regions generated high sales but lower profits, highlighting pricing or supply chain inefficiencies.

5. Correlation Findings (Python Analysis)

- Negative correlation observed between Inventory Days and Profitability.

- Efficient inventory management directly improves profit margins.
- Balanced stock levels reduce operational risks.

6. Dashboard Observations (Tableau)

- Interactive filters enabled quick identification of slow-moving products.
- Visualization highlighted profit-draining sub-categories requiring strategic intervention.
- Seasonal and regional comparisons supported data-driven decision making.

7. Strategic Business Recommendations

- Reduce stock levels for slow-moving furniture products.
- Focus marketing investment on high-margin technology items.
- Implement demand forecasting for seasonal products.
- Optimize pricing strategies in low-profit regions.