

Analysis Report of Datasets (Orders.csv, People.csv and Returns.csv)

Overview:

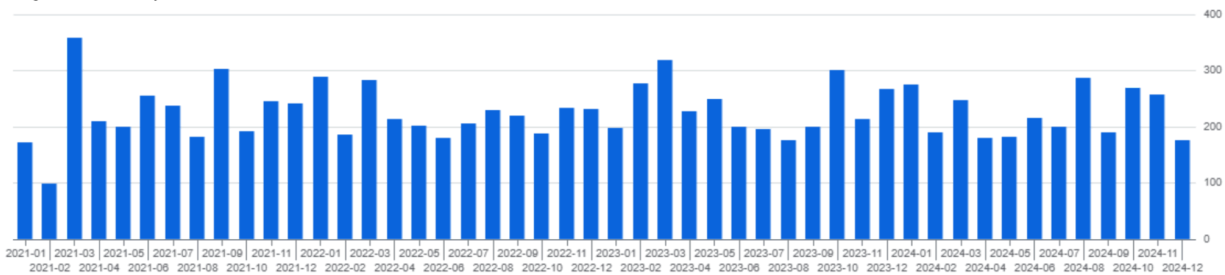
- This report analyzes 4 years of orders data, joined with Regional Manager and Returns data, to assess business health. The company is generating healthy top-line revenue of ~\$2.33M with a total profit of ~\$292.3K. However, deeper segmentation reveals significant disparities in manager performance and hidden profitability risks within the Furniture category.

Key Findings

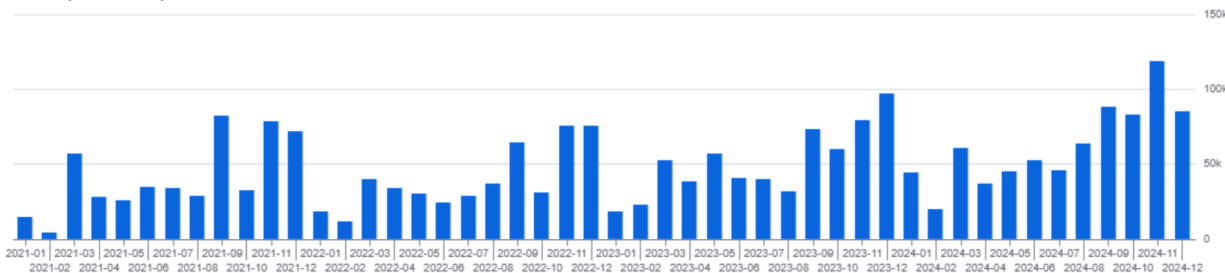
1. **Regional Dominance:** The West and East regions are the primary revenue drivers, significantly outperforming Central and South. The West Region Manager, in particular, achieves the highest profit efficiency.
2. **The "Furniture" Risk:** While Technology generates high sales, the Furniture category suffers from a disproportionately high profit loss due to returns. This suggests a potential issue with product quality or shipping damage for bulky items.
3. **Segment Stability:** Return rates are consistent across Consumer, Corporate, and Home Office segments, indicating that return issues are product-driven rather than customer-driven.

1. Total orders, total revenue and average order value per month

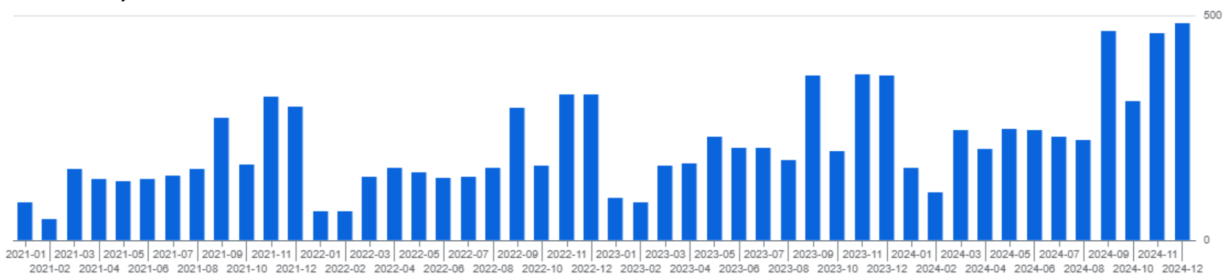
avg_order_value by month



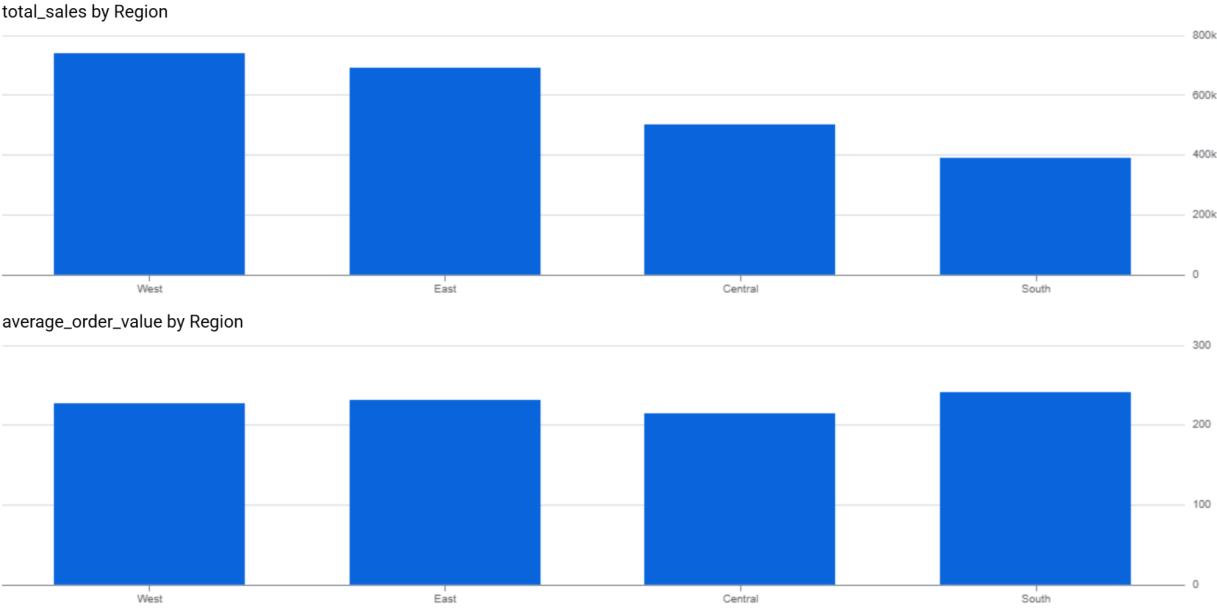
monthly_revenue by month



order_count by month

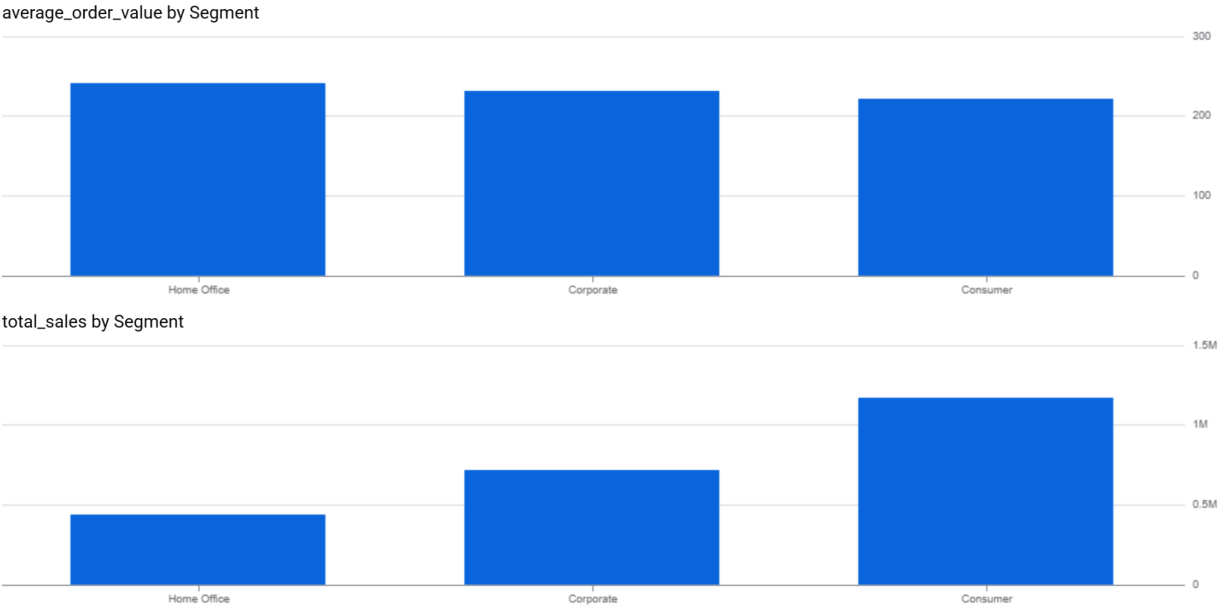


2. Total sales per region, and average order values per region

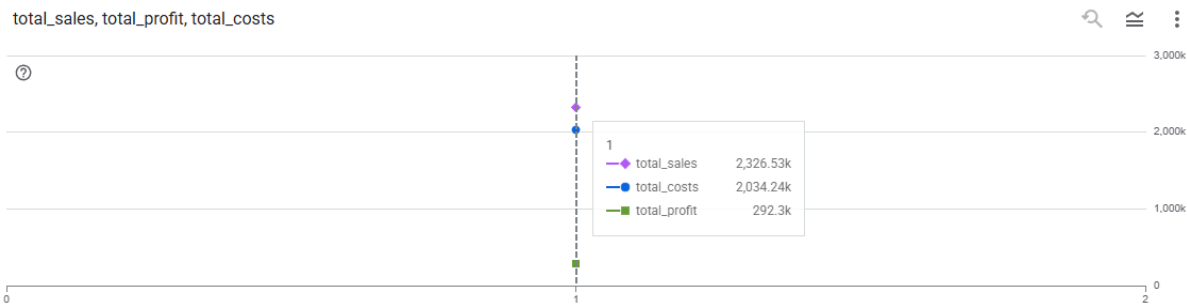


Findings: The **West** and **East** regions combined account for the majority of the company's revenue. The Central region lags behind, despite having a similar number of active orders, suggesting a lower Average Order Value (AOV) in that territory.

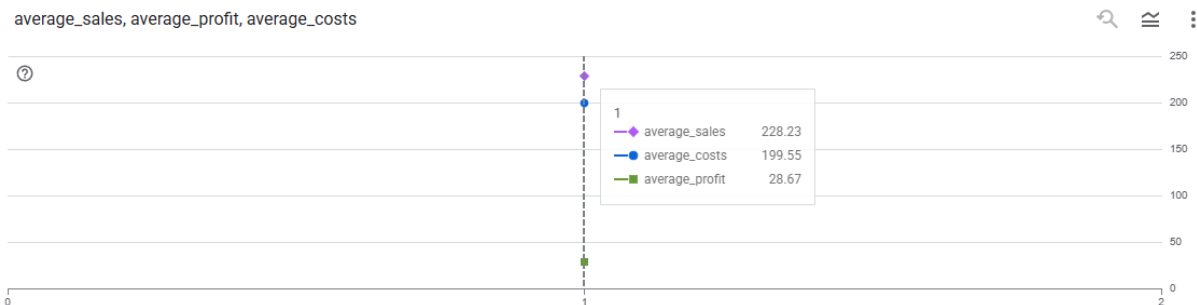
3. Total sales per segment and average order values per segment



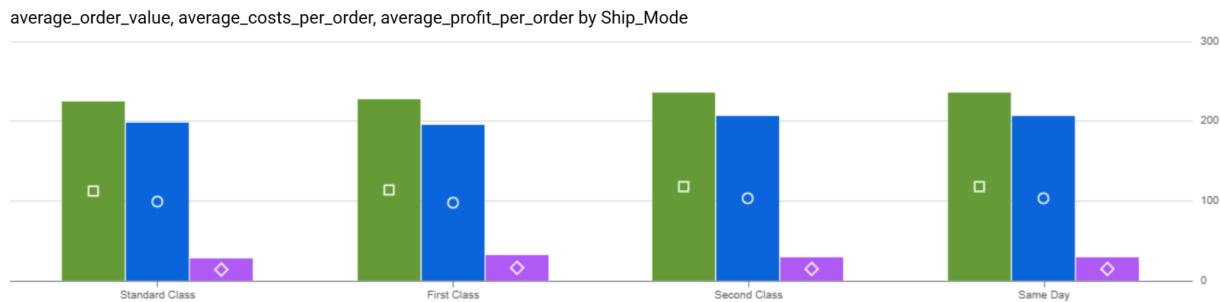
4. Total sales, costs and profit



5. Average costs, sales and profit per order

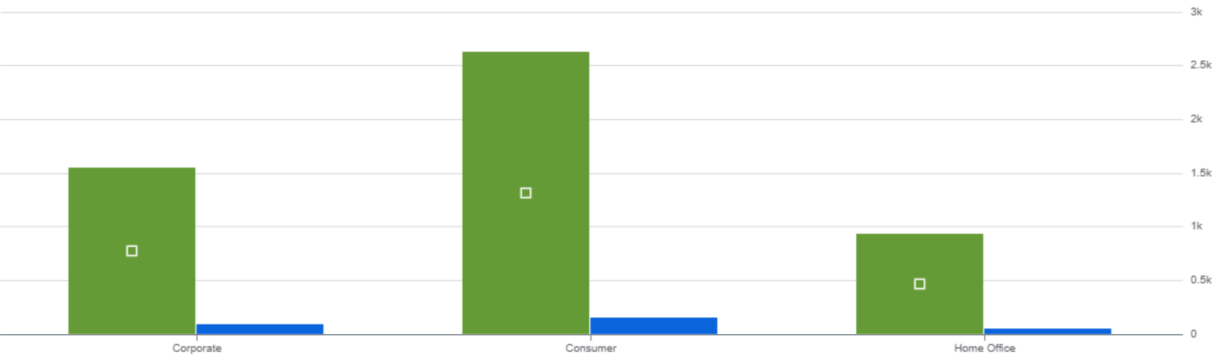


6. Average order values, costs and profit per Ship mode

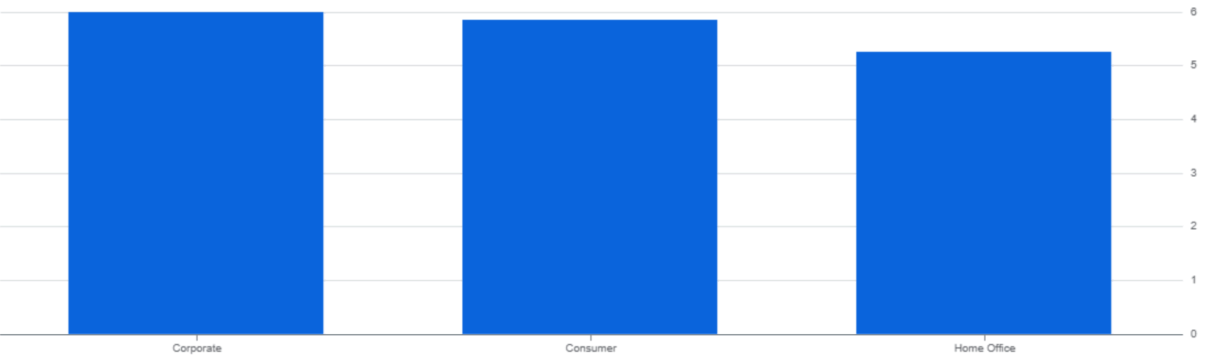


7. Segment Based Return Rate Analysis

total_orders, returned_orders by Segment



return_rate_pct by Segment

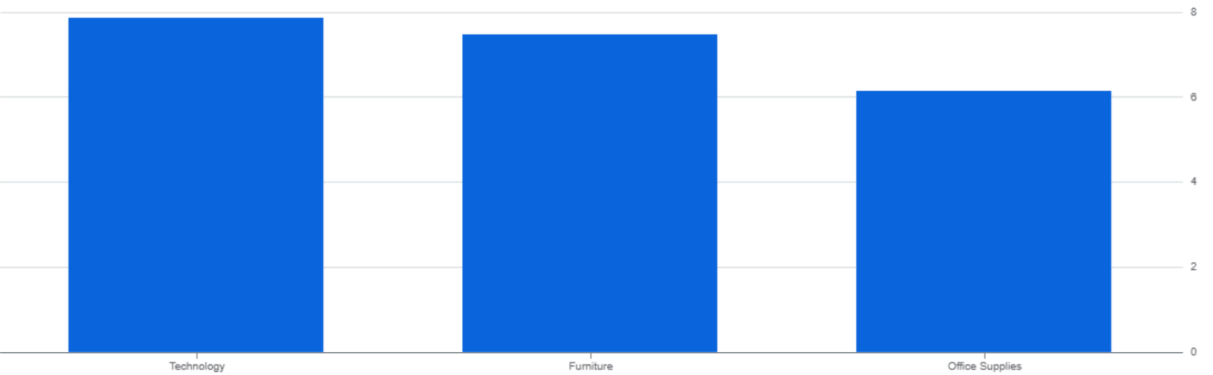


8. Product Category Based Return Rate Analysis

total_orders, returned_orders by Category

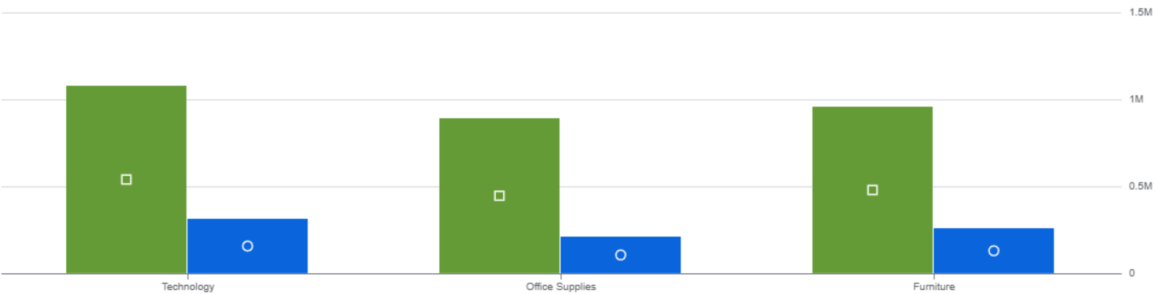


return_rate_pct by Category

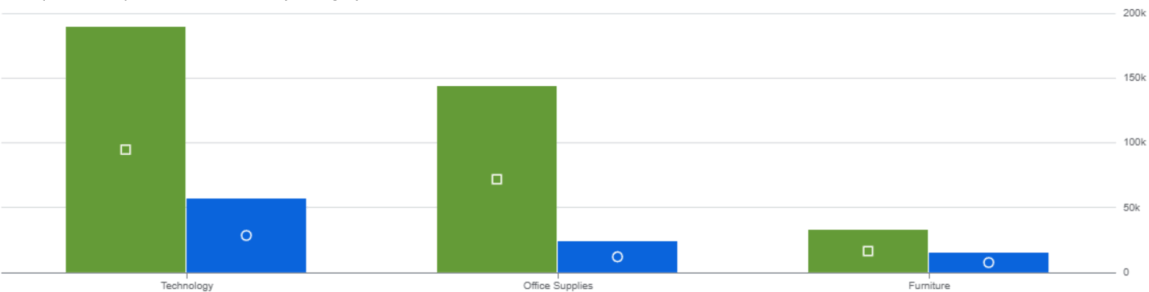


9. Profitability Impact of Returns by Product Category

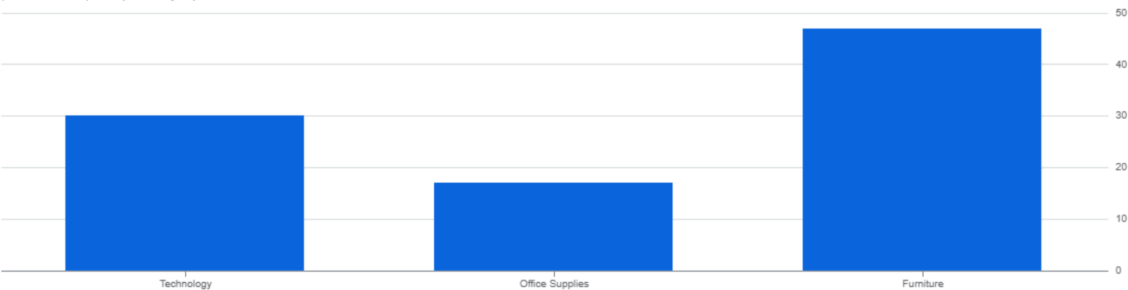
total_sales, returned_sales by Category



total_profit, lost_profit_due_to_return by Category



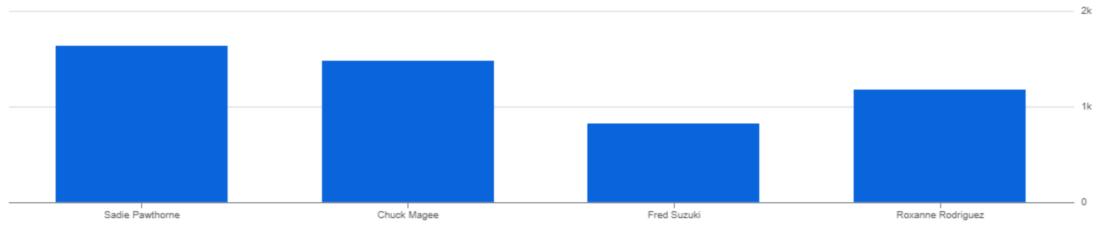
profit_loss_pct by Category



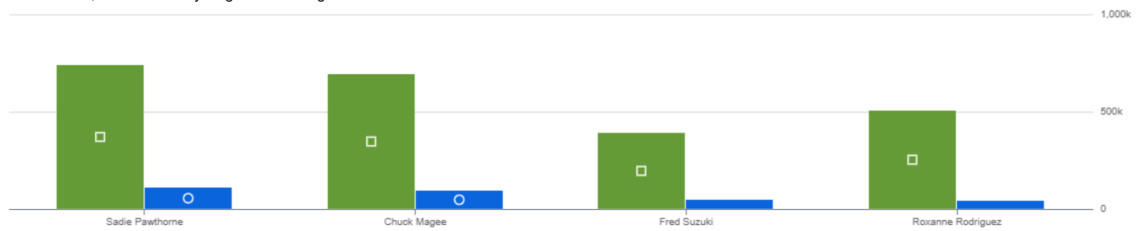
Findings: While all categories experience returns, the Furniture category shows the most impact on profitability. The "Profit Loss Percentage" for Furniture is significantly higher than Technology or Office Supplies, meaning returns are eating a larger chunk of this category's margins.

10. Sales Performance by Regional Manager

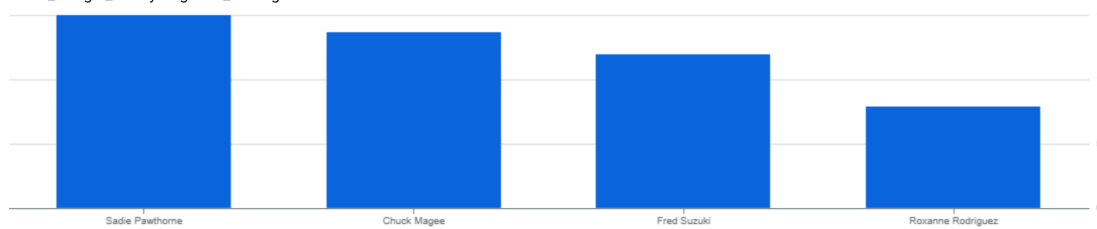
Total_Orders by Regional_Manager



Total_Sales, Total_Profit by Regional_Manager



Profit_Margin_Pct by Regional_Manager



Findings: The analysis confirms a clear leaderboard in regional management. The manager for the West Region (first bar) is not only driving the highest Total Sales but is doing so with superior efficiency compared to the peers.