

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

### Overview:

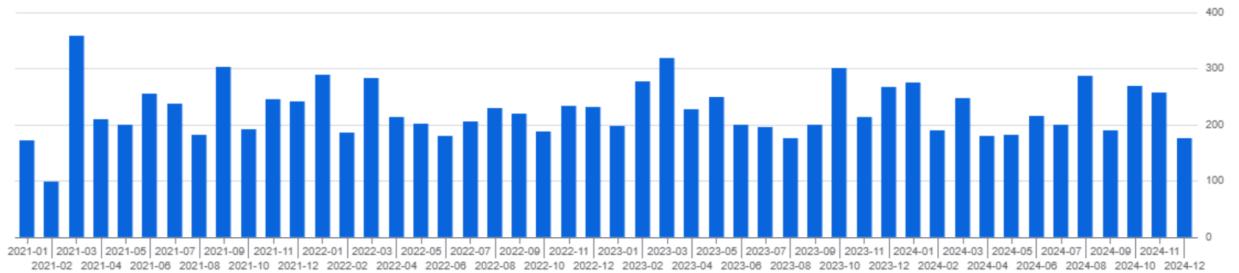
- This report analyzes 4 years of orders data, joined with Regional Manager and Returns data, to assess business health. The company is generating healthy top-line revenue of ~\$2.33M with a total profit of ~\$292.3K. However, deeper segmentation reveals significant disparities in manager performance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

### Key Findings

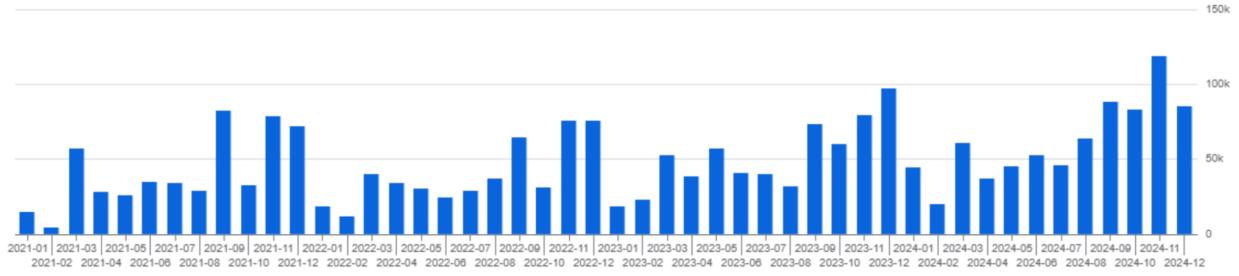
1. **Regional Dominance:** The West and East regions are the primary revenue drivers, significantly outperforming Central and South. The West Region Manager, in particular, achieves the highest profit efficiency.
2. **The "Furniture" Risk:** While Technology generates high sales, the Furniture category 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

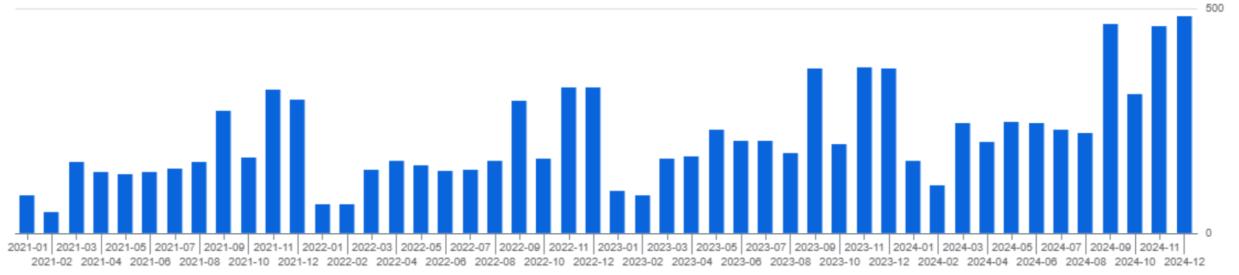
avg\_order\_value by month



monthly\_revenue by month

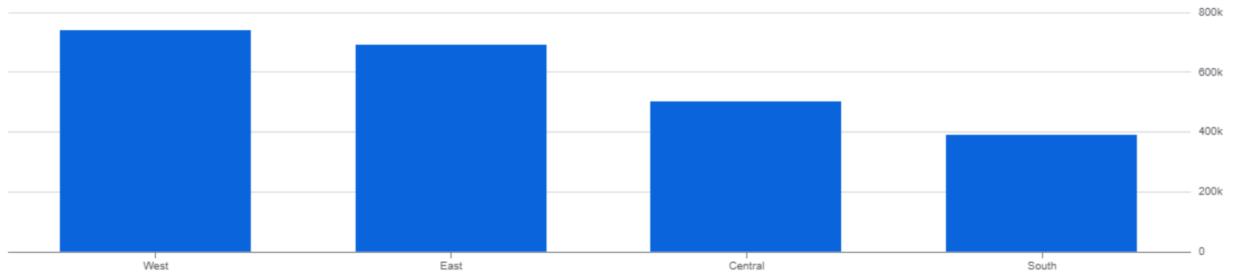


order\_count by month

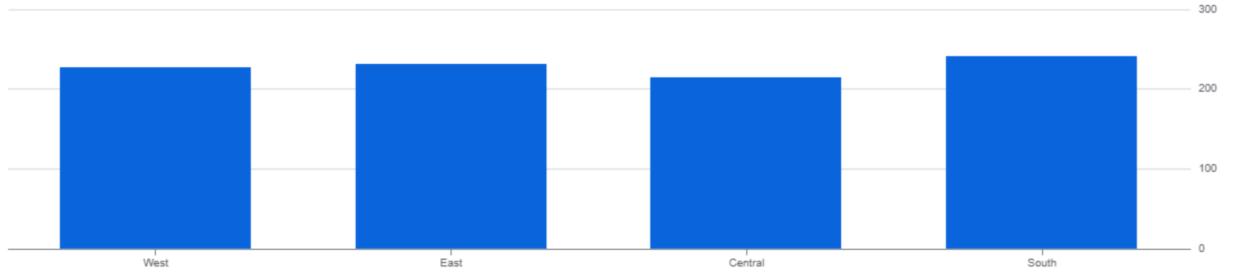


## 2. Total sales per region, and average order values per region

total\_sales by Region



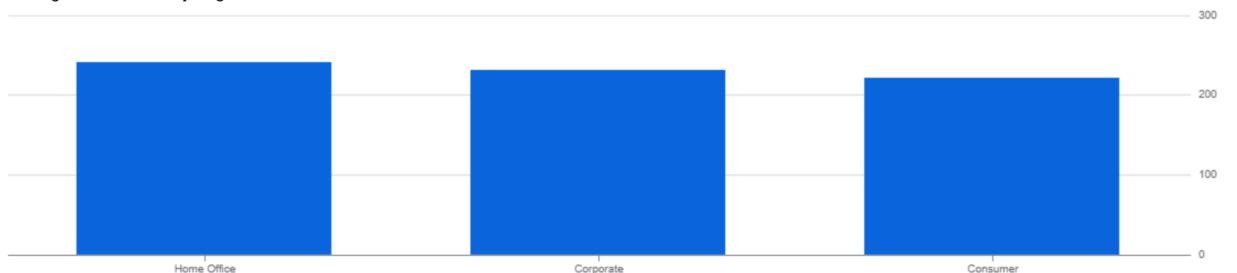
average\_order\_value by Region



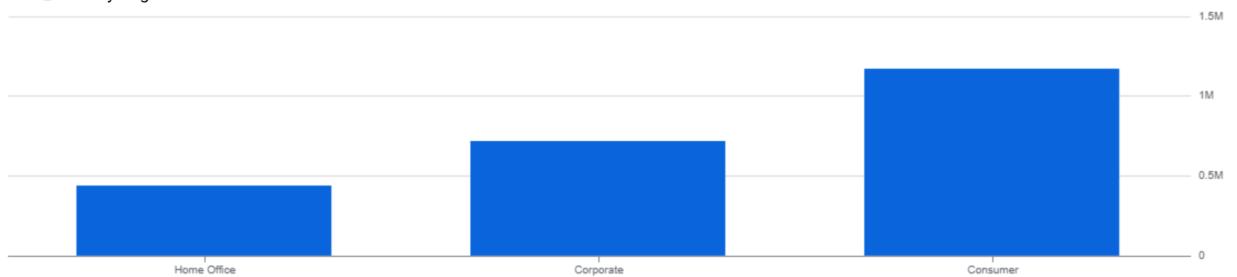
**Findings:** The **West** and **East** regions combined account for the majority of the company's revenue. The Central region lags behind, despite having a similar number of active orders, suggesting a lower Average Order Value (AOV) in that territory.

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

average\_order\_value by Segment



total\_sales by Segment



#### 4. Total sales, costs and profit

total\_sales, total\_profit, total\_costs



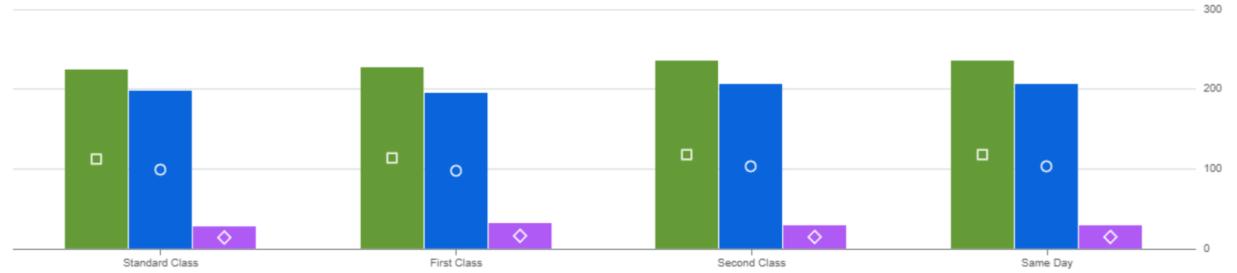
#### 5. Average costs, sales and profit per order

average\_sales, average\_profit, average\_costs



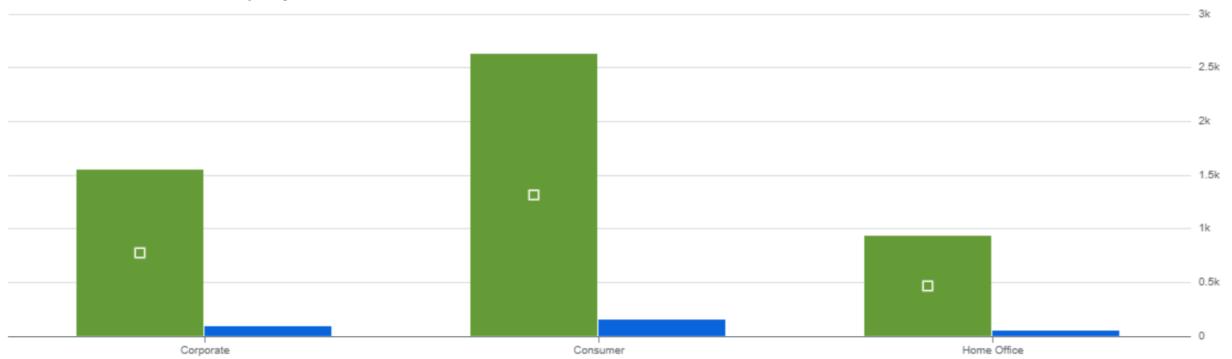
#### 6. Average order values, costs and profit per Ship mode

average\_order\_value, average\_costs\_per\_order, average\_profit\_per\_order by Ship\_Mode

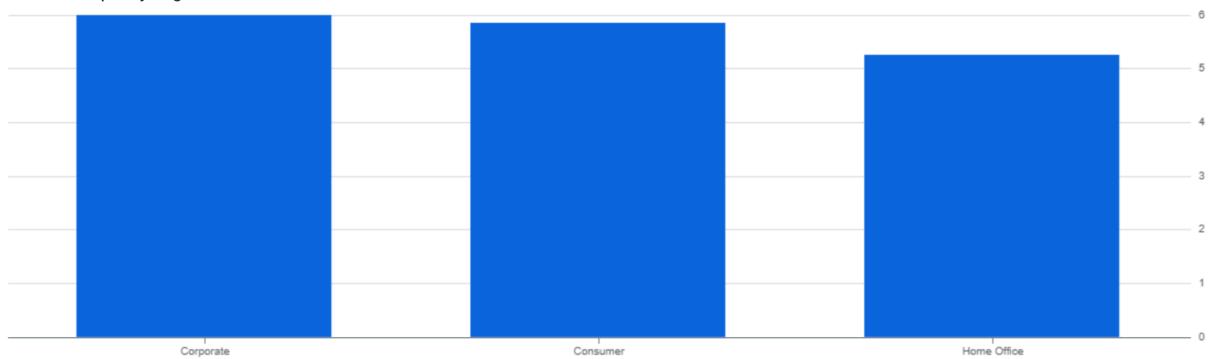


## 7. Segment Based Return Rate Analysis

total\_orders, returned\_orders by Segment

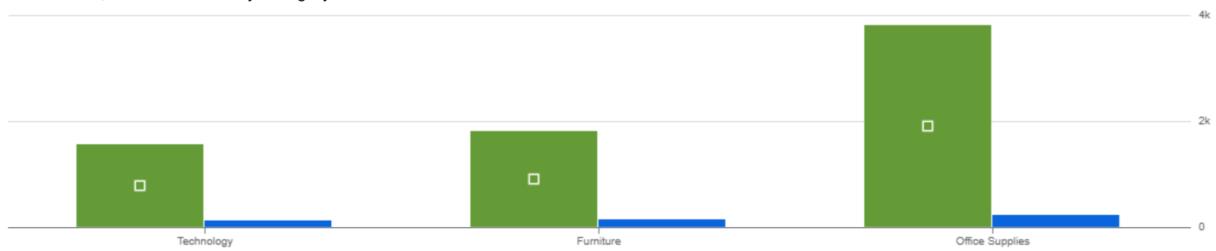


return\_rate\_pct by Segment

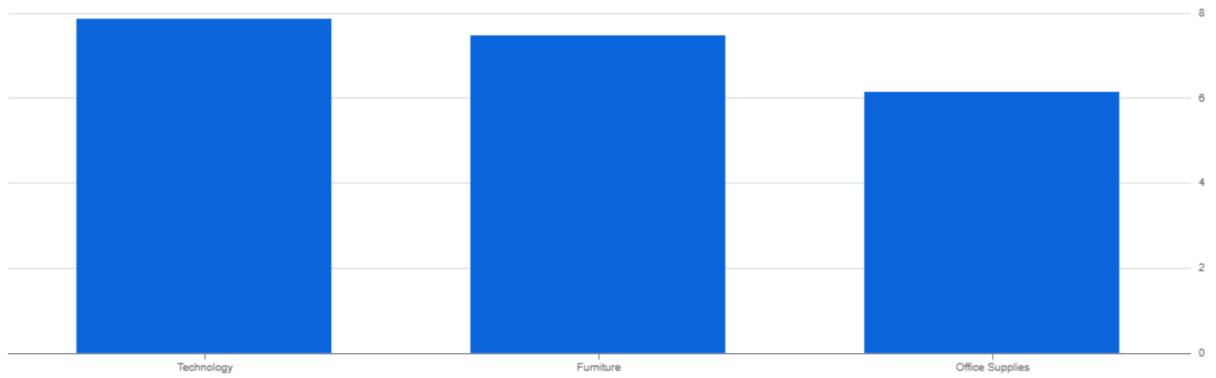


## 8. Product Category Based Return Rate Analysis

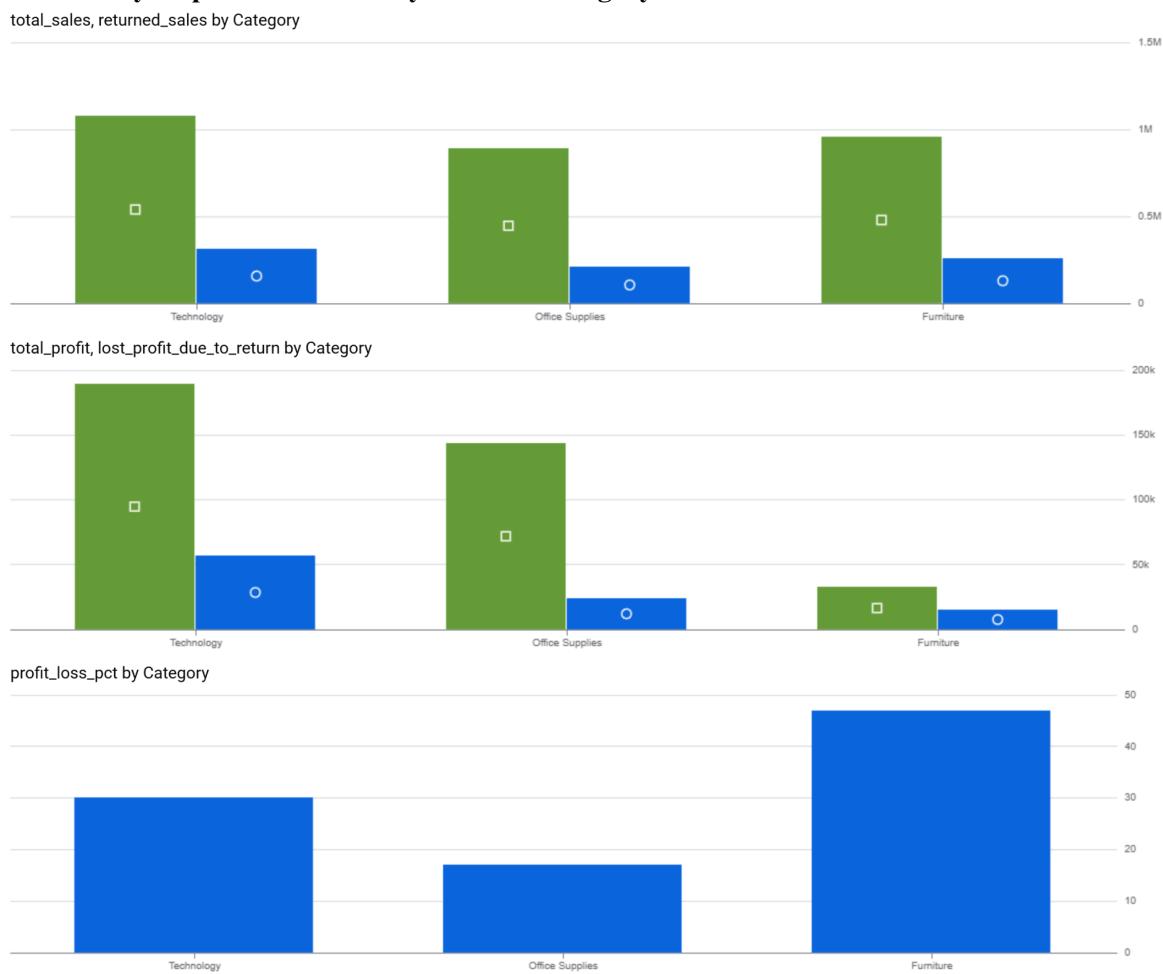
total\_orders, returned\_orders by Category



return\_rate\_pct by Category

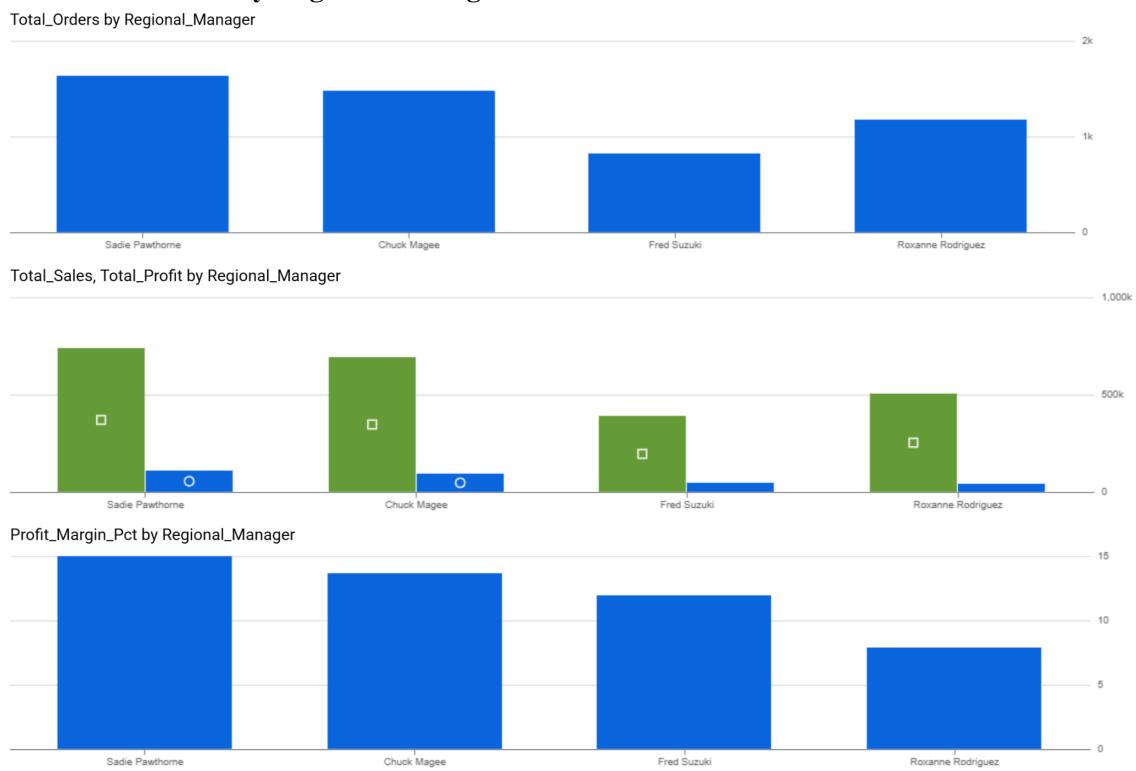


## 9. Profitability Impact of Returns by Product Category



**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



**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.