



RevoU Tech Academy

Data Analytics

Capstone Project

Presented by

Team 4 - Merauke

Date Presented

06 December 2024



Analysis Profit Fluctuations in US Furniture Sales

Presented by

Team 4 - Merauke



Our Team Leader



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Our Team

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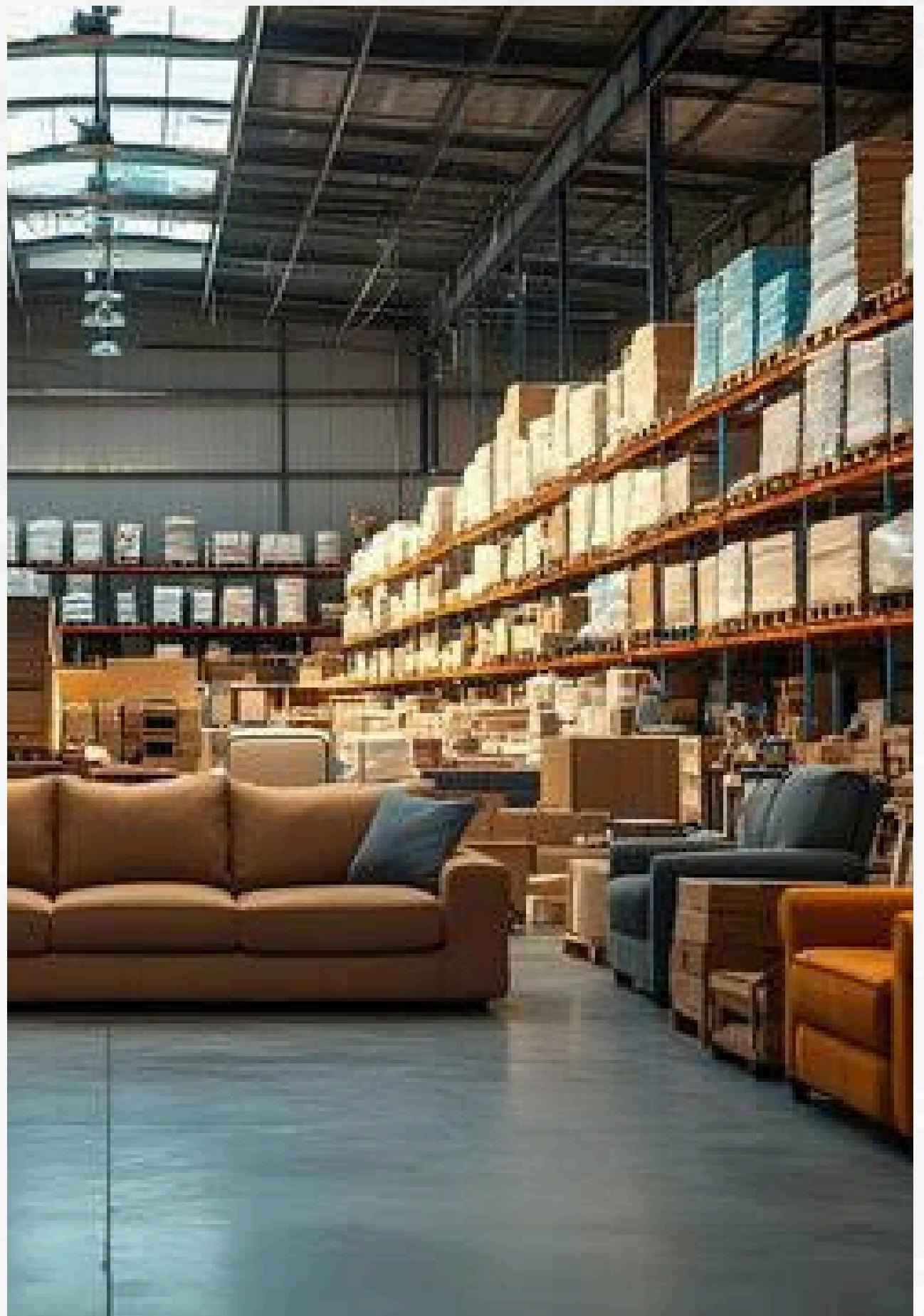
Yaasin Geovani

Communication



About Us

Since 2011, we have built a global market journey operating in four regions (US, APAC, EU, and LATAM) in **technology, furniture, and office supplies**. Our dedication to innovation and efficiency of leading products covering cutting-edge technology, ergonomic furniture, and office supplies **has made us a trusted partner for customers** in various countries to support human productivity.





Executive Summary

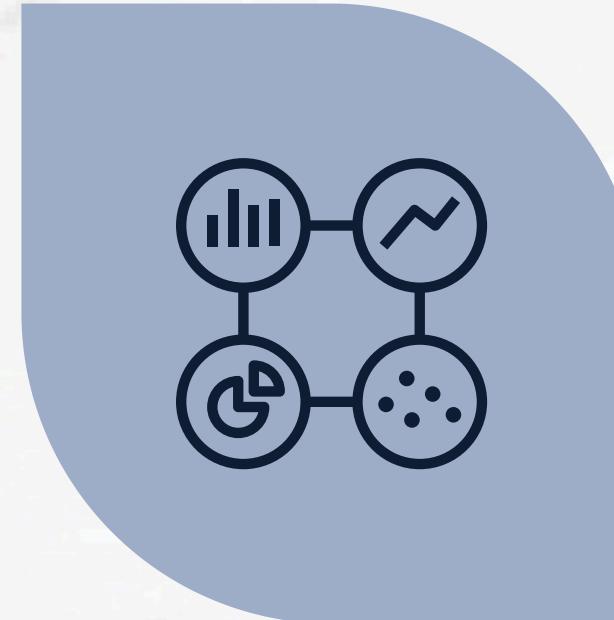
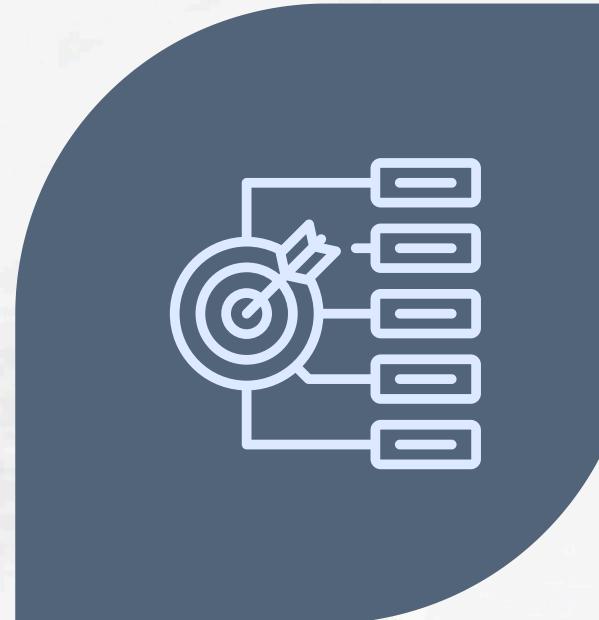
Problems

The US furniture market experienced **inconsistent profit growth**, with a 56.6% decline in profitability in 2014.



Objectives

To determine the right optimization strategy to **increase profitability** by 50% in the following year.



Findings

- Negative profit
- High shipping costs relative to sales.
- Inconsistent discounting strategy.
- Significant variation in performance.

Recommendation

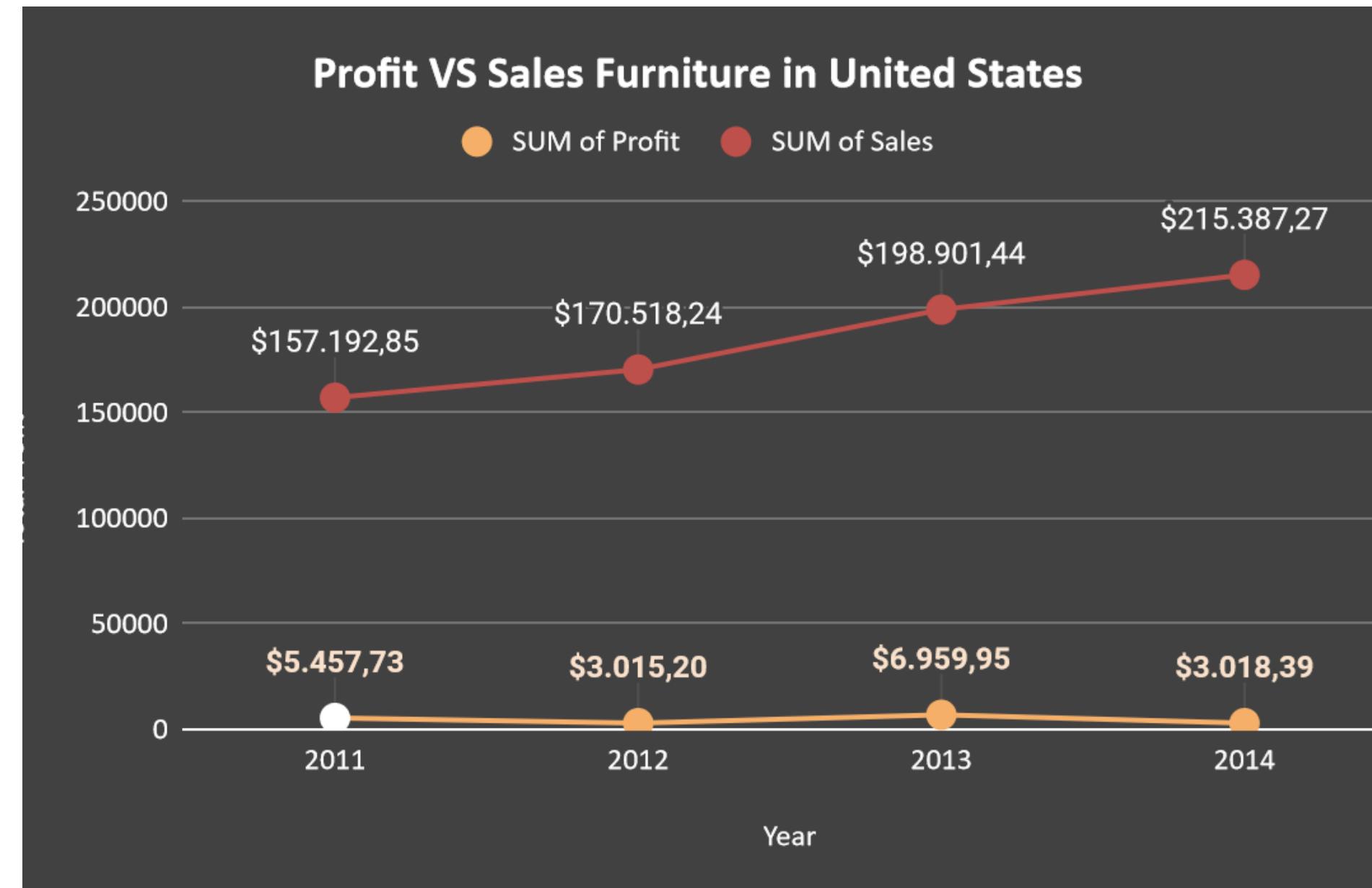
Optimize pricing, order profitability, and discount limits. **Increase** sales, **fix** negative income, and **refine** logistics. **Focus** on shipping and customer service.



Background of Project

The Chief Executive Officer (CEO) of Global Superstore furniture complained to the sales team, after finding **fluctuations in profitability in 2014 in the US.**

The **US market showed a decrease in profit from 2013 to 2014** (\$6,5959 - \$3,018) reaching 56% with increasing sales. This means inconsistent growth in profitability against increasing sales.





Project Goals

Objective

To determine **the right optimization strategy** to increase profitability by 50% in the following year.

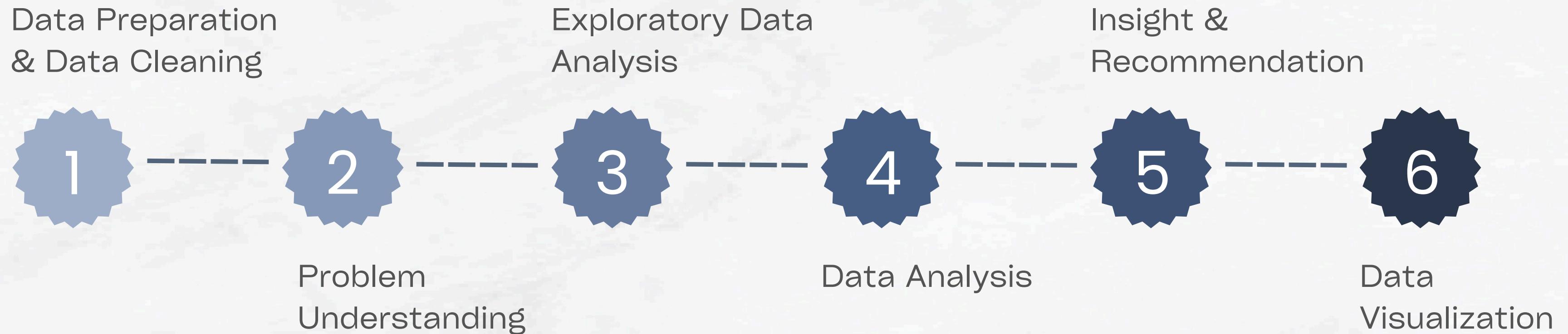


Scope

Data obtained: **all transaction records** in the US market for the **furniture category** conducted from January 1, 2011 to December 31, 2014.

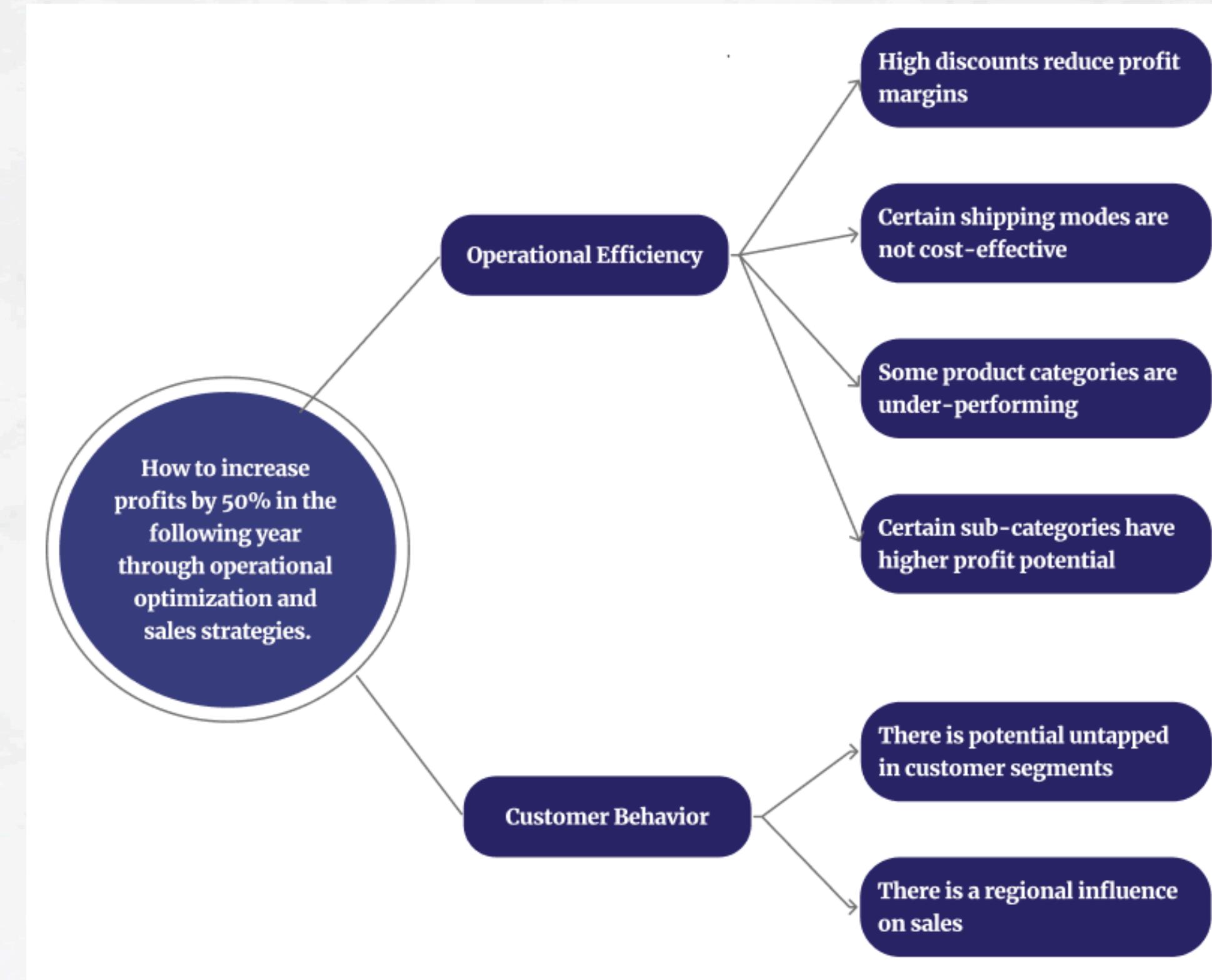


Methodology





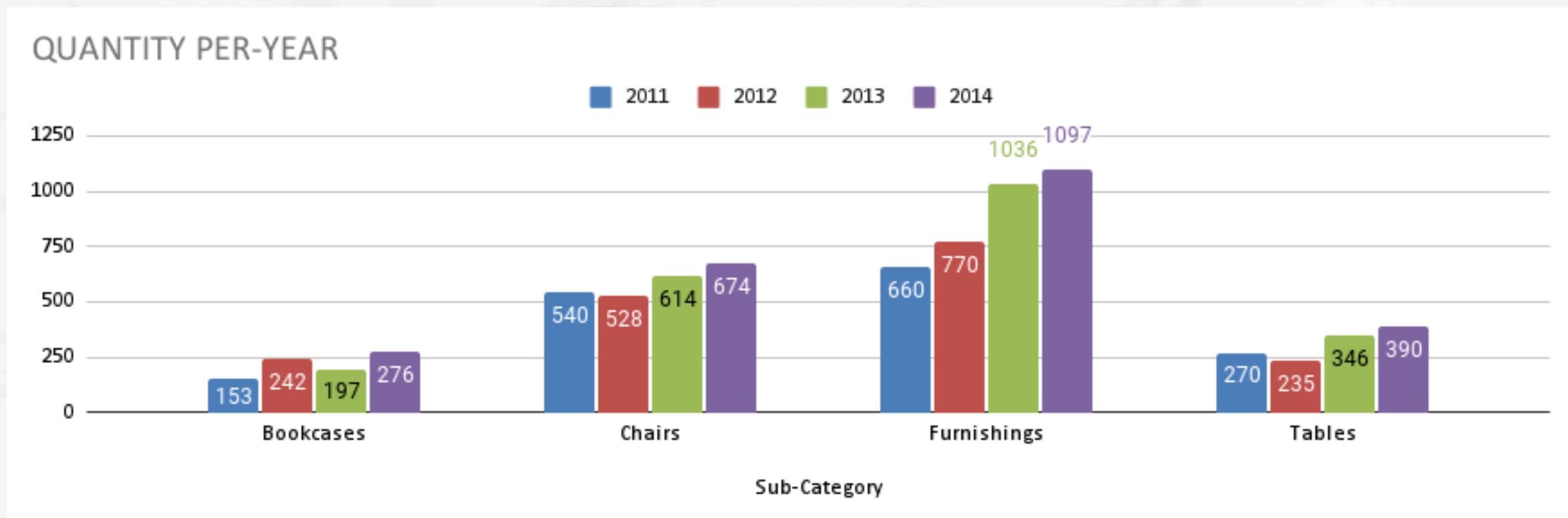
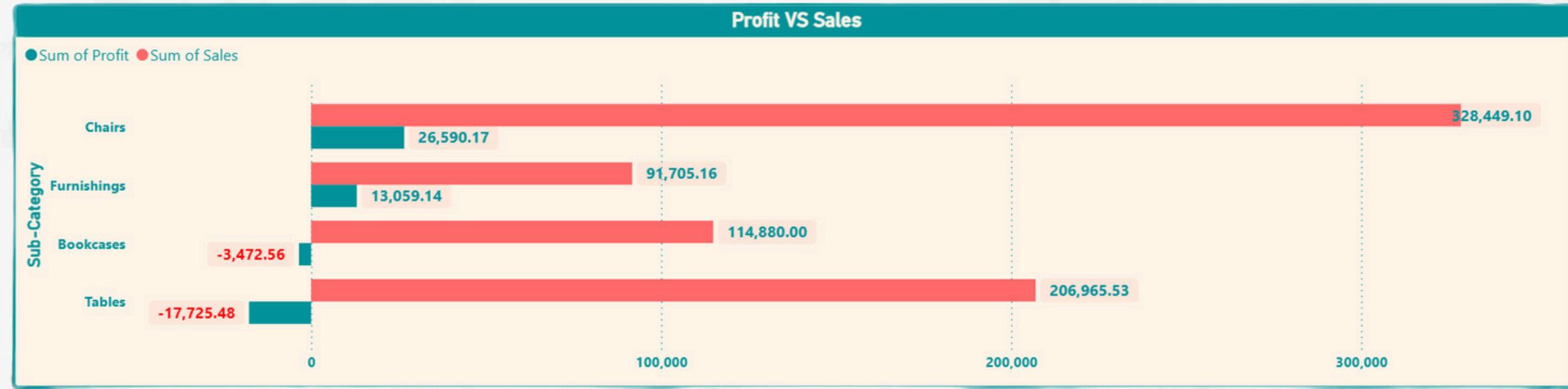
Root Cause





Analysis

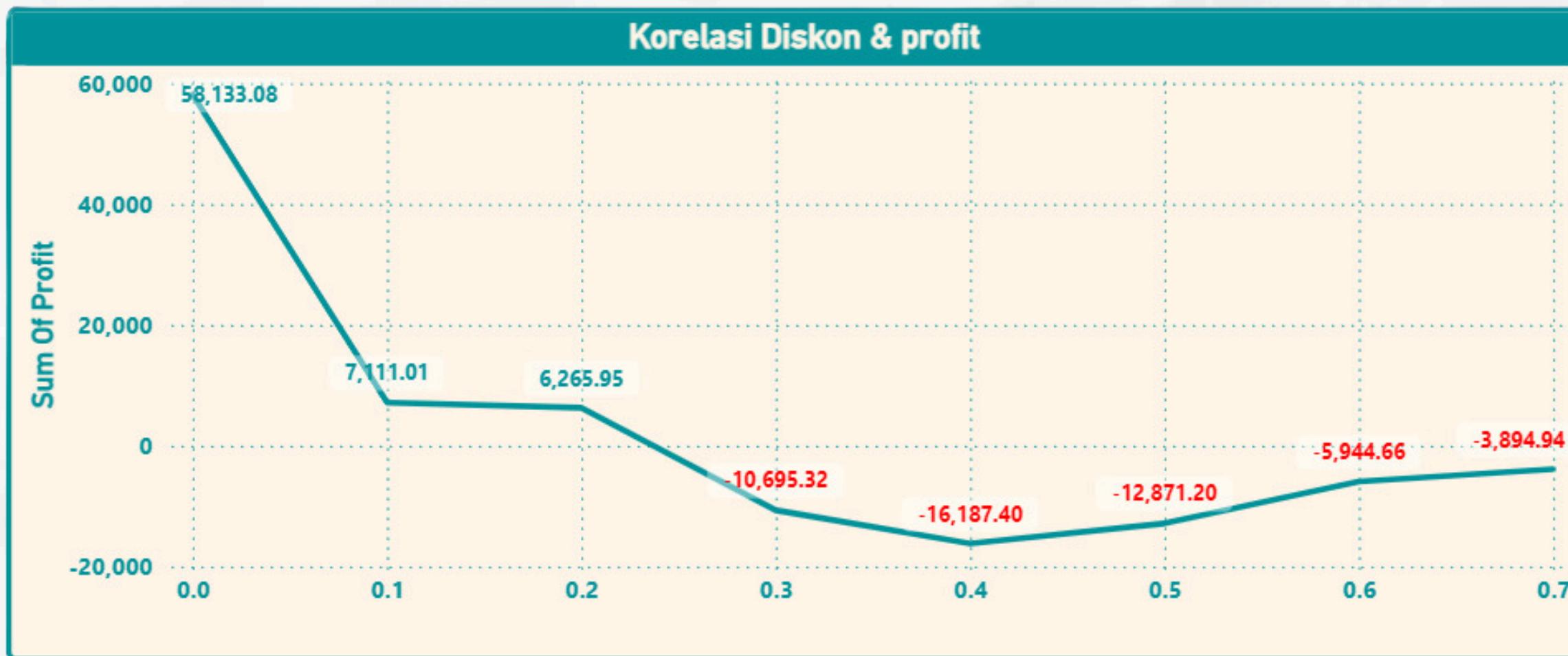
Product Performance



- Chairs received highest sales and profit.
- Tables received highest minus profit.
- Furnishing received highest quantity.

Analysis

Pricing & Discount

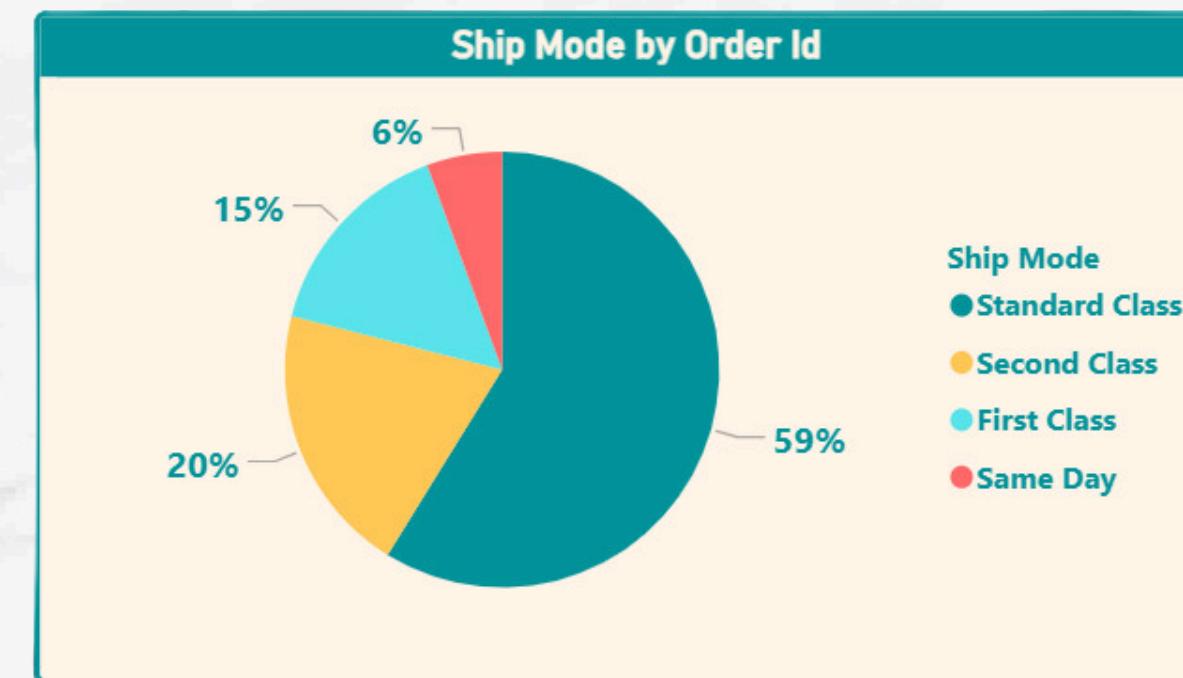


- If discount is increased to 20% profit will be minus.
- If given a discount, sales will be more than not use discounts.



Analysis

Shipping Cost

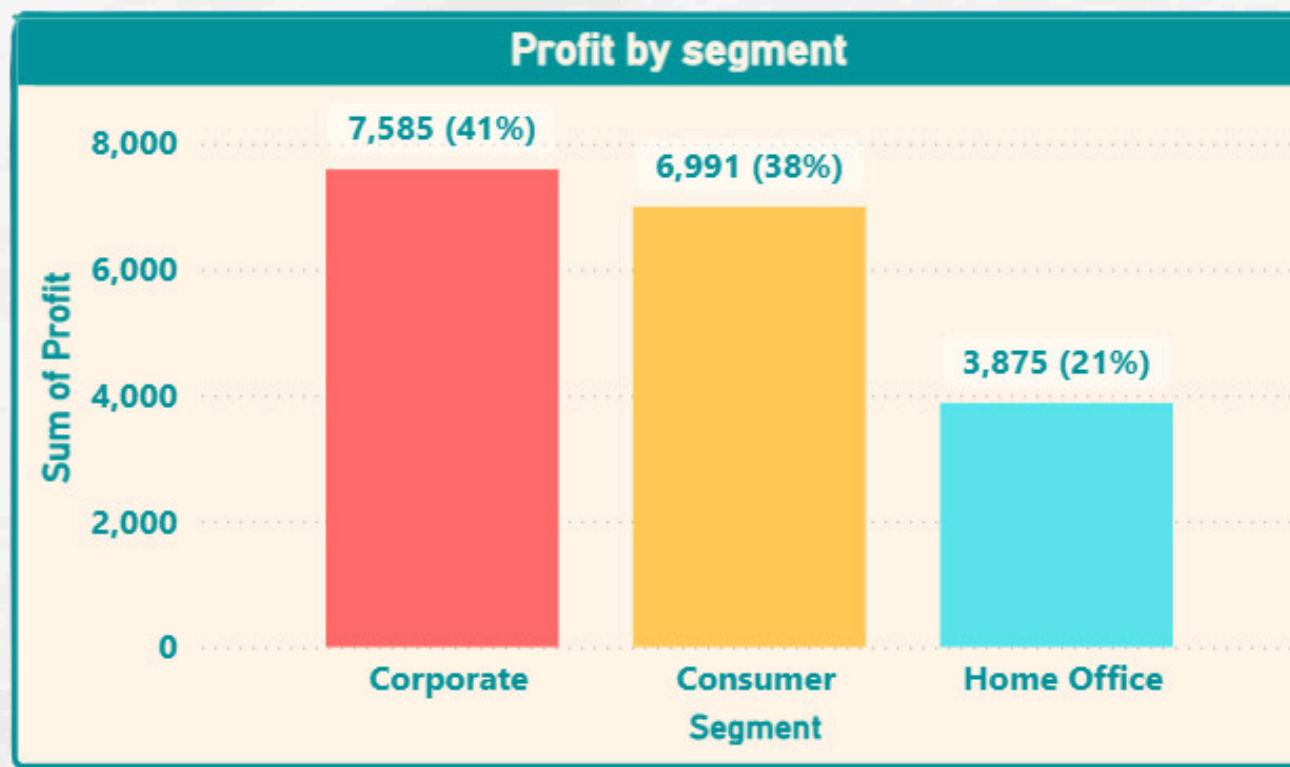
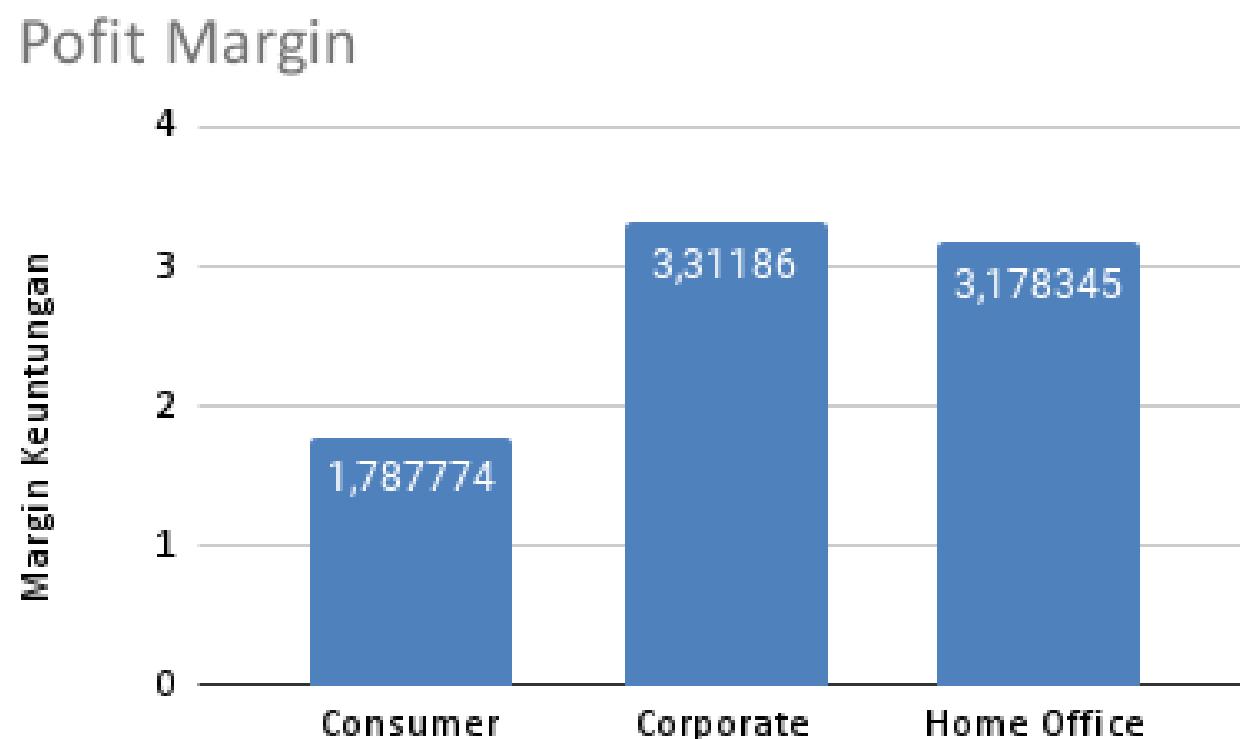


- The West region has the highest shipping costs.
- Standard Class dominates.
- The highest ratio of “Same Day” have a significant impact on revenue.



Analysis

Customer Segment

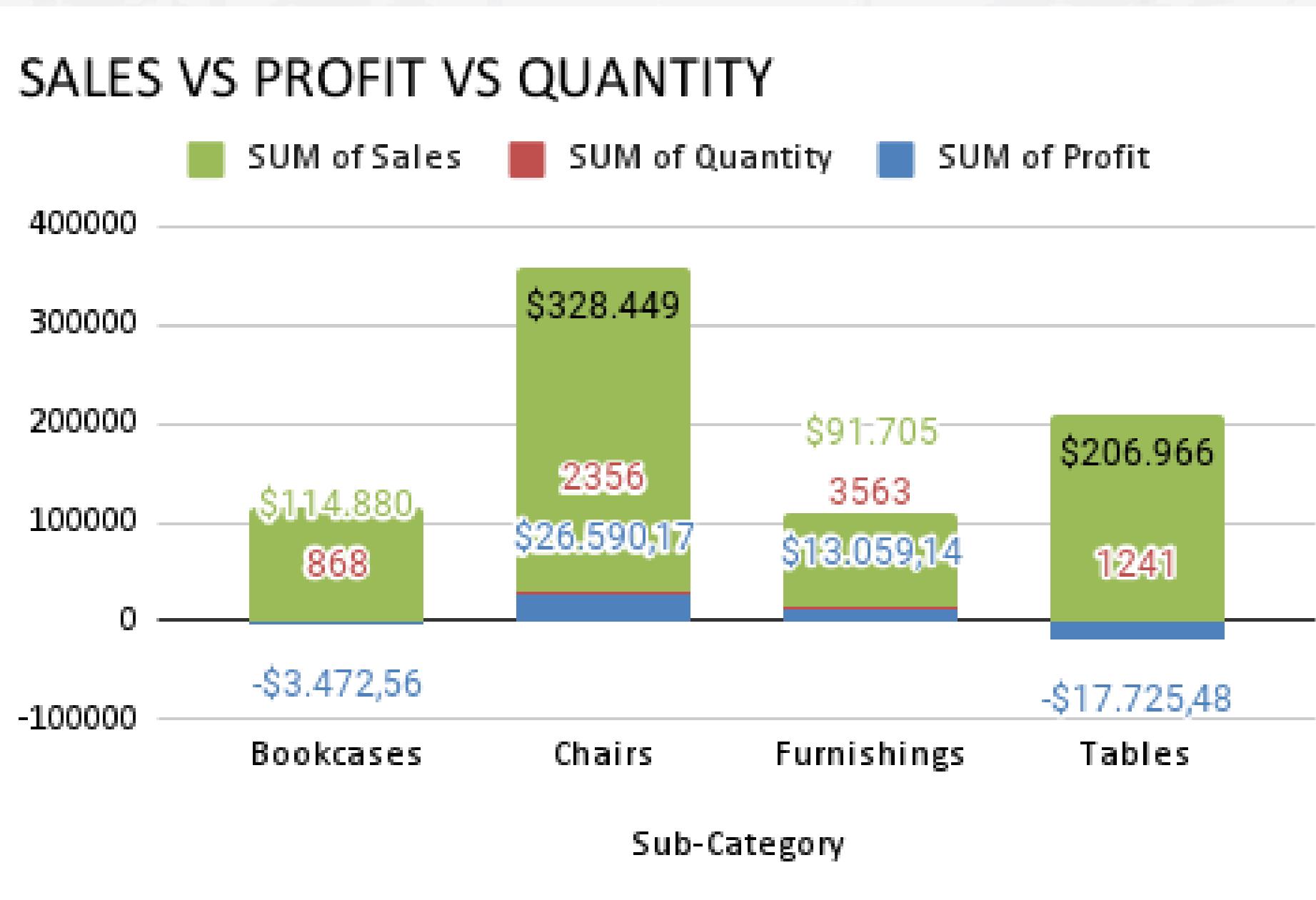


- The Corporate segment has the highest Profit Margin.
- From all segments that are above the average is 563 Customers.
- From all segments that are below the average is 144 customers.



Insight & Recommendations

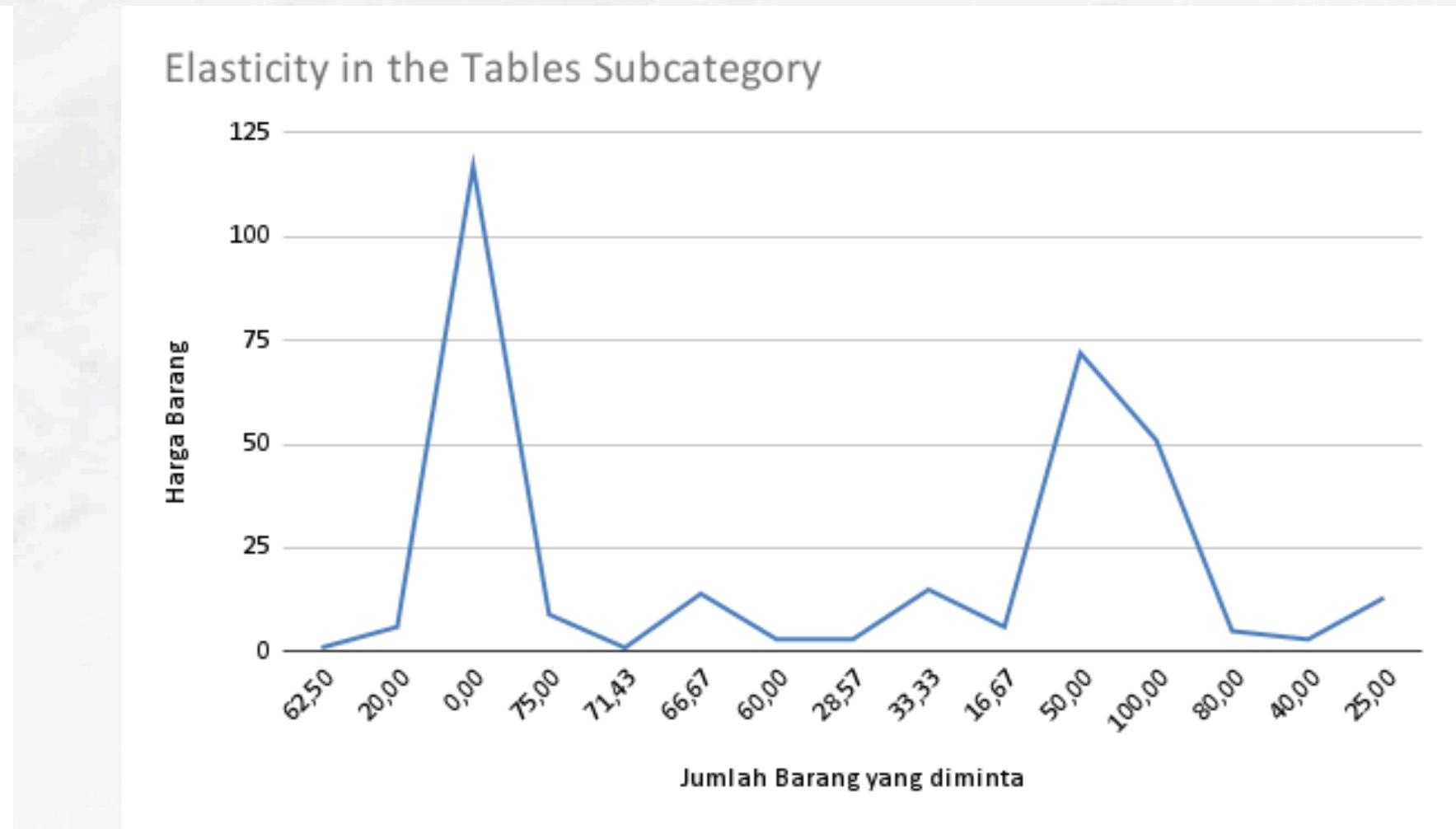
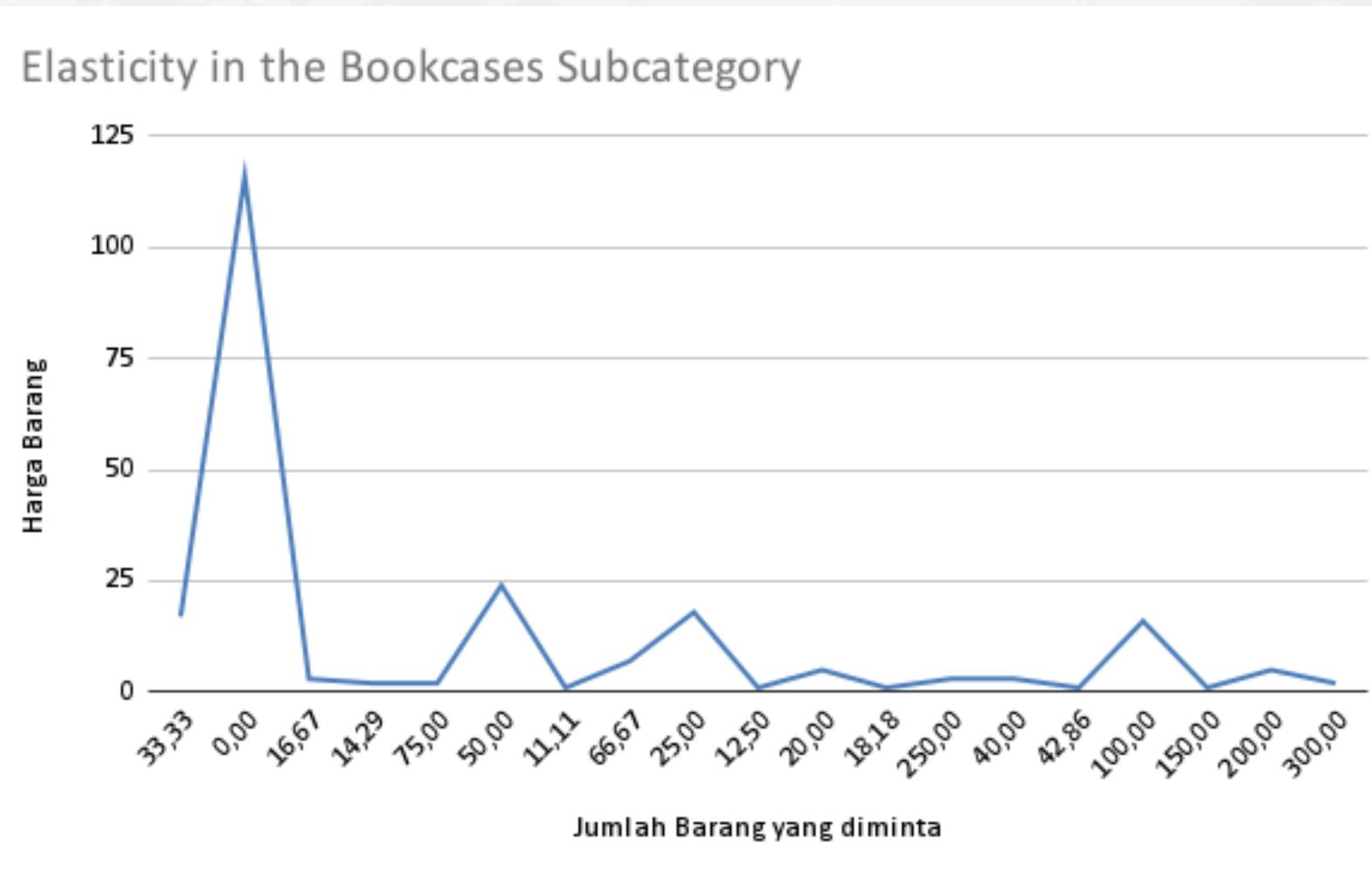
Product Performance



- Conduct unit price analysis in each sub-category.
- Conduct further analysis on why large quantities do not also generate high profits.
- Further investigate whether shipping cost and discounts affect total profit.

Insight & Recomendations

Pricing and Discount



- Determine the optimal discount limit for each category.
- Increase sales from the tables and bookcases subcategories.
- Apply optimal discounts to discounts that have negative income in each subcategory.



Insight & Recommendations

Shipping Cost

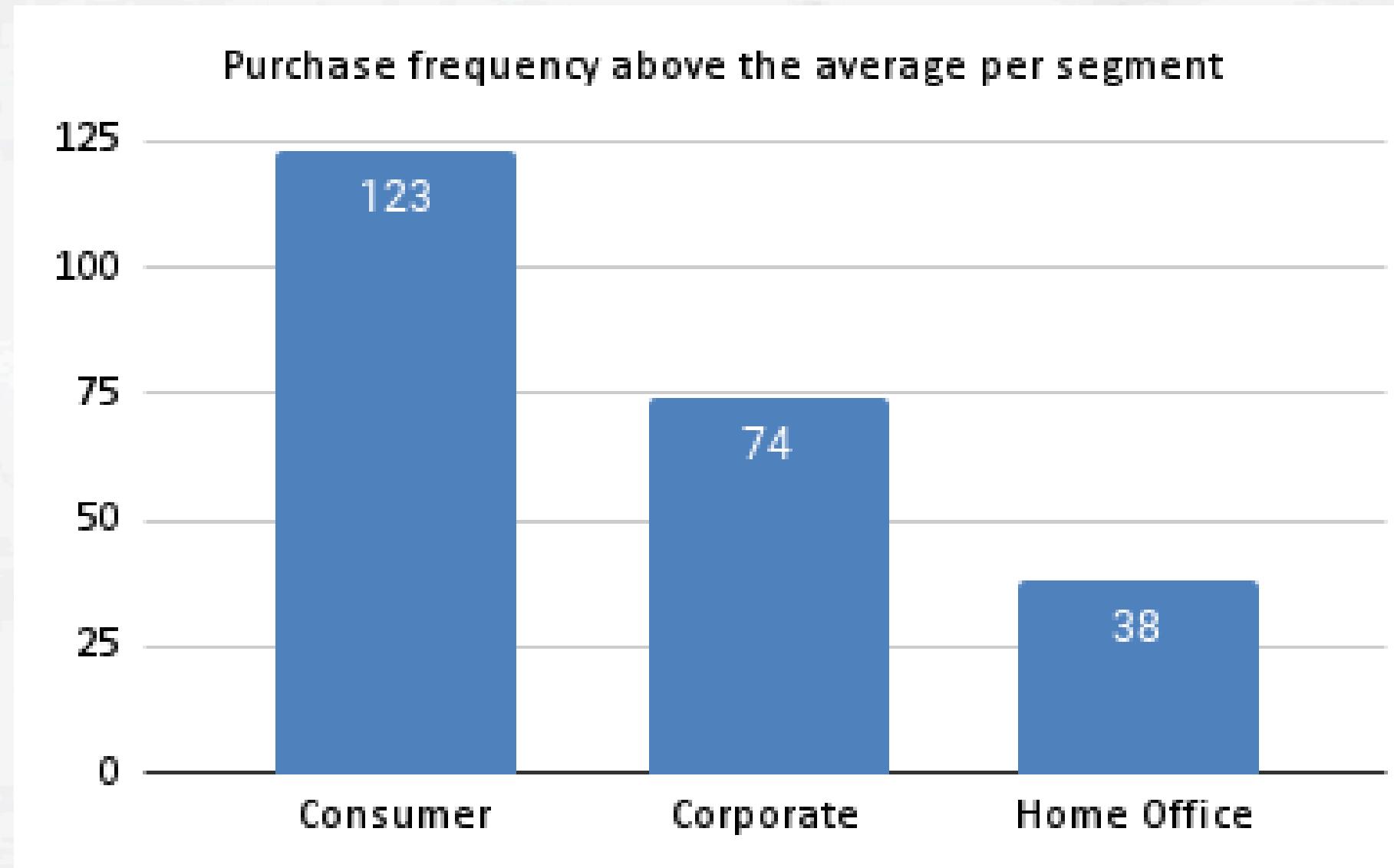


- Optimize logistics in the West region.
- Focus on Standard Class as the main mode.
- Review specific discount strategies.



Insight & Recommendations

Customer Segmentation

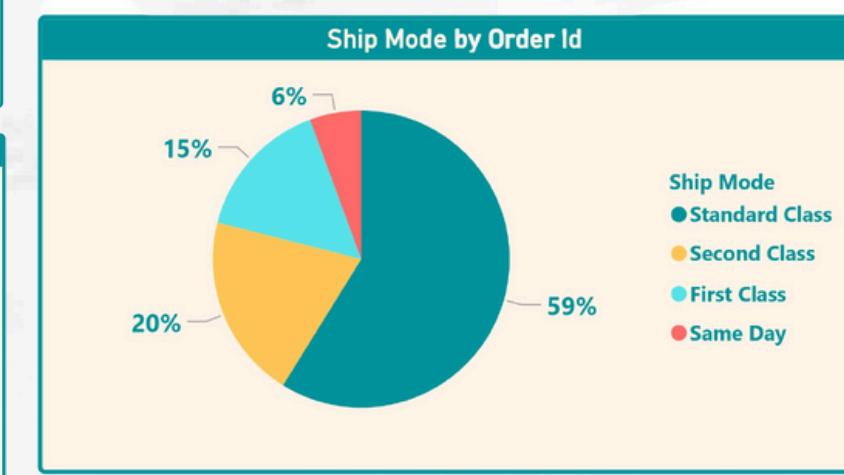
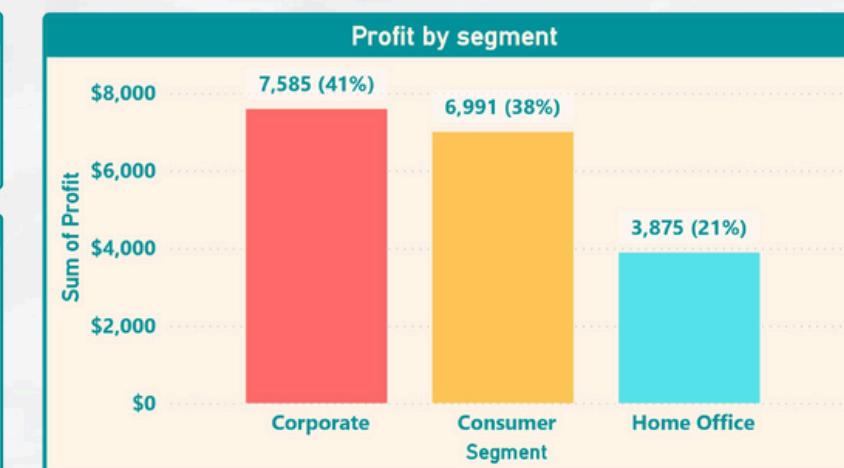
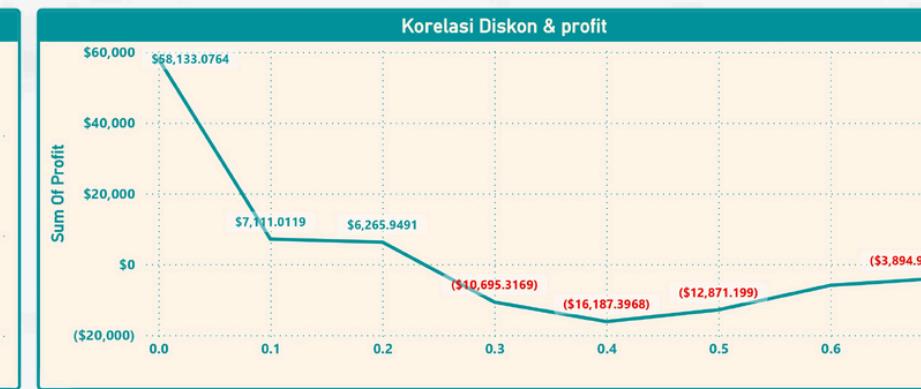
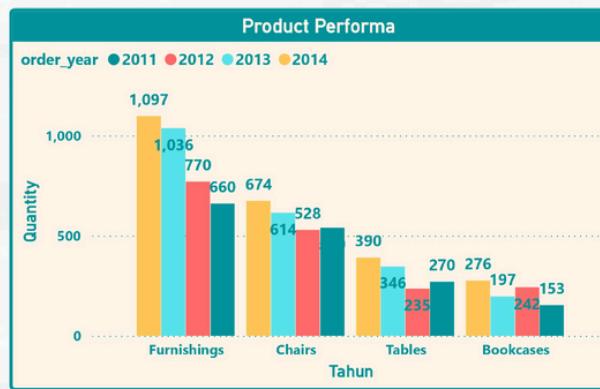
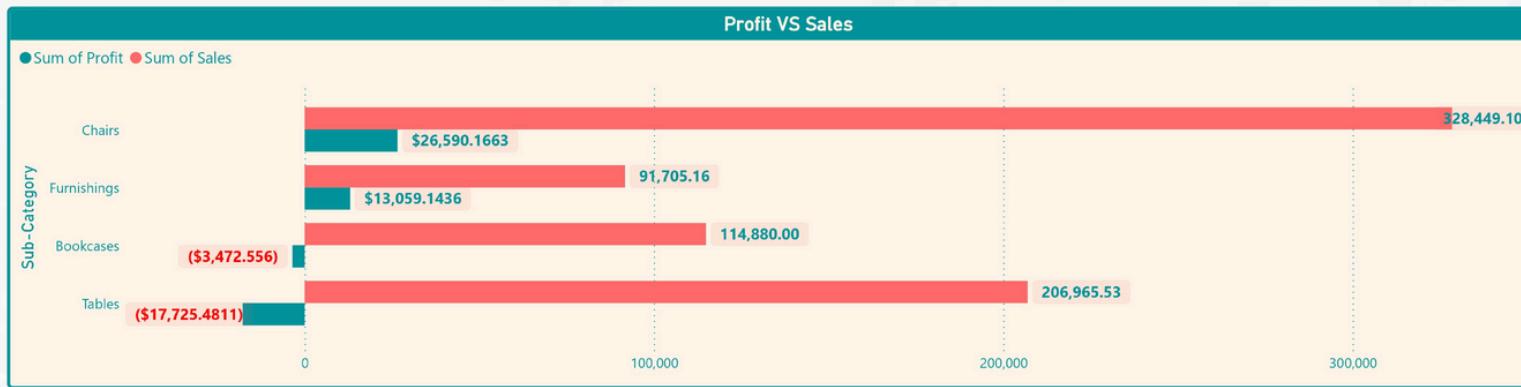


- For Loyal Customers, several things need to be done to increase sales such as Up-selling, Cross Selling and Loyalty Program.
- For Low-Value Customers, a good sales strategy to use is to provide discounts and bundling, so that they will buy more frequently.



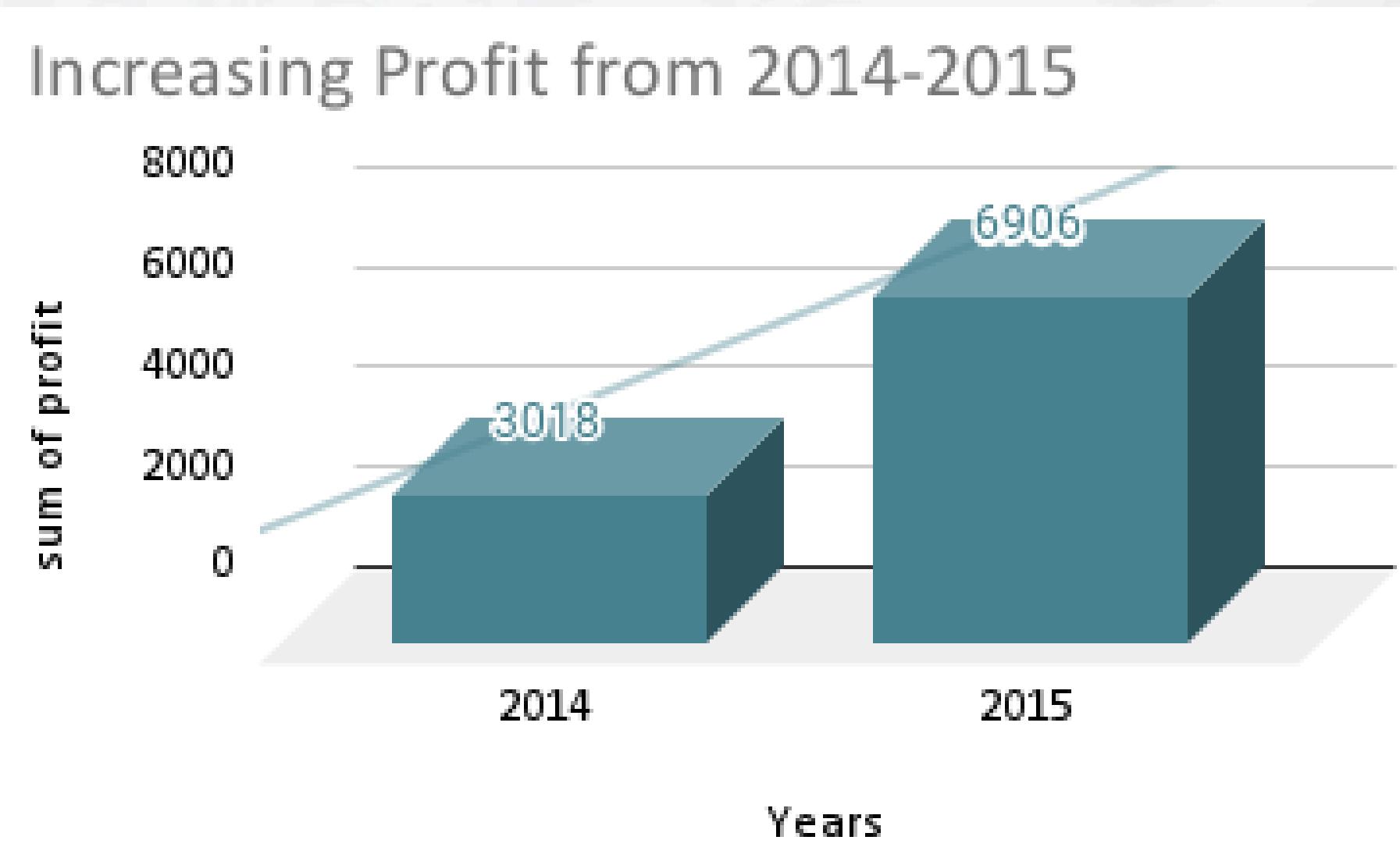
Dashboard

US FURNITURE SALES PERFORMANCE





Prediction



By **implementing optimal discounts** on the tables and bookcases subcategories, profits will **increase by 56.30%**



Conclusion

We recommend to **optimizing** discount limits, **addressing** negative income discounts, **enhancing** logistics, and **tailoring** strategies for different customer segments. For loyal customers, **up-selling** and loyalty programs are key, while **discounts and bundling** are effective for low-value customers.



Appendix

Analisys

Final Project-Dataset- Merauke -
Team 4 - US (Furniture)

Visualization

US FURNITURE SALES
PERFORMANCE ANALYSIS

Python

US_Furniture-
Profit_EDA.ipynb



Thank You

Team 4 - Merauke

