



Sales Product Insights Business Analysis

By Tsen-Yun Hung
tsenyun2000@gmail.com

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01

Data and Project Overview

Dataset Description



Source

Kaggle.com (Anuva Goyal): SALES STORE PRODUCT DETAILS



Summary

Original dataset consists 730 rows and 13 columns



Content

Order_ID, Order_Priority, Order_Quantity, Sales, Ship_Mode, Profit, Customer_Name, Region, Customer_Segment, Product_Category, Product_Sub-Category, Product_Name, Product_Container

Project Objectives



Data Cleaning



Data Analysis



**Statistical
Analysis**



**Discovering
Insights**



**Graphic
Representation**

02

Data Cleaning Process

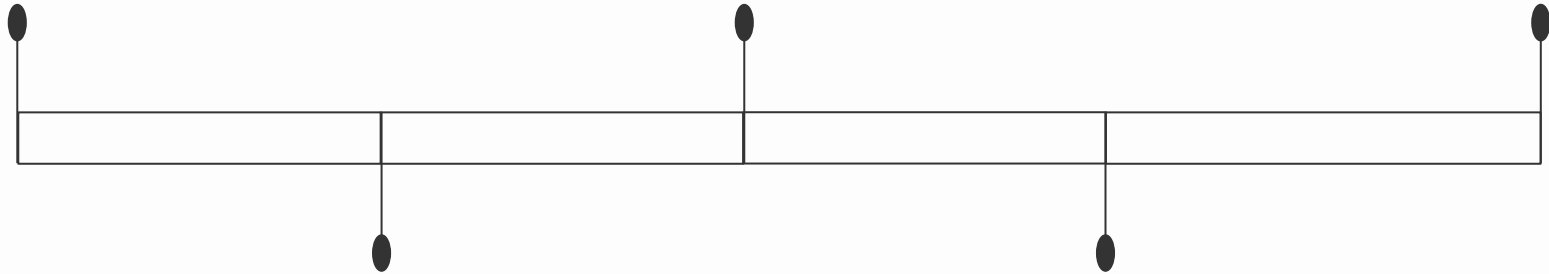
Data Cleaning

(Utilized Power Query in Power BI)

Checking data for
problems and
inconsistencies.

Replacing and Dropping
null values in columns.

Verification of results.



Checking and Changing
data formats where
necessary.

Replacing incorrect
values.

03

Graphic Representation of Insights

03

Graphic Representation of Insights

Exploratory Data Analysis (EDA)

Exploratory Data Analysis (EDA)

Profit

151.46K

Sum

207.48

Average

8.42K

Max

-4.44K

Min

0.04

Median

878.03

Standard deviation

- **Variability:**
 - Profit ranges from -4.44k to 8.42k, indicating significant variability influenced by factors like sales, costs, market conditions, and operations.
- **Average vs. Median Profit:**
 - Average profit is 207.48k, suggesting overall profitability.
 - Median profit at 0.04k indicates potential skewness, with extreme values affecting the average. This suggests intermittent periods of lower profitability or losses.
- **Standard Deviation:**
 - A high standard deviation (878.03) implies considerable volatility in profitability over time, reflecting fluctuating business performance.
- **Overall Performance:**
 - Despite average profitability, the presence of negative profits and a low median profit suggests inconsistent profitability.
 - Analyzing the factors contributing to both high and low-profit periods can provide insights into areas for improvement and strategic decision-making.

Exploratory Data Analysis (EDA)

Sales

1.10M

Sum

1.50K

Average

27.66K

Max

8.60

Min

438.70

Median

2.89K

Standard deviation

- **Sales Distribution:**
 - The median sales value of 438.70 is significantly lower than the average, indicating potential skewness in the sales distribution. High-value transactions may be influencing the average sales amount.
- **Sales Variability:**
 - The standard deviation of 2.89k suggests moderate variability in sales values around the mean. Fluctuations in sales volumes could be influenced by factors like seasonality, market demand, promotional activities, or customer behavior.
- **Extreme Sales Values:**
 - Sales range from a minimum of 8.60 to a maximum of 27.66k, showcasing a wide range of transaction sizes. Some transactions generate substantial revenue, while others are relatively low.
- **Opportunity:**
 - Understanding the factors driving sales fluctuations and analyzing the distribution of sales values can provide insights into customer behavior, market trends, and opportunities for revenue growth and optimization.

Exploratory Data Analysis (EDA)

Profit Margin

-9192.47%

Sum

-12.59%

Average

62.67%

Max

-880.26%

Min

0.01%

Median

- **Overall Profit Margin:**
 - The sum of profit margins of -9192.47% underscores the challenges the business is facing in achieving sustainable profitability.
- **Average Profit Margin:**
 - Implies expenses exceed revenues on average, resulting in losses.
- **Profit Margin Range:**
 - Wide variation in profitability across periods or segments, with extreme values particularly the negative minimum, indicating significant issues.
- **Median Profit Margin:**
 - Indicates breakeven or close to breakeven in half of the periods or segments analyzed.
- **Summary:**
 - The data reveals significant challenges in maintaining positive profitability. Understanding factors contributing to negative profit margins, such as high expenses, low revenues, or inefficiencies, is crucial for implementing corrective measures and improving financial performance.

Exploratory Data Analysis (EDA)

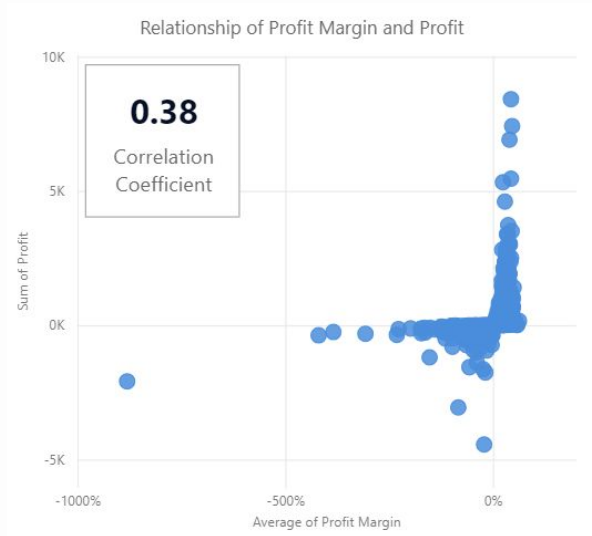


Relationship of Sales and Profit

- **Moderately strong positive correlation:**
The strength of this correlation indicates that changes in sales are closely associated with changes in profit, suggesting that sales performance significantly influences profitability.
- **Interpret with caution:**
While sales and profit are correlated, correlation doesn't imply causation. Other factors may also affect profitability alongside sales.
- **Implications for strategy:**
Focusing on strategies to boost sales, such as marketing initiatives, expanding distribution channels, improving product offerings, or entering new markets may positively impact overall profitability.

Exploratory Data Analysis (EDA)

Relationship of Profit Margin and Profit



- **Weak positive correlation(0.38):**
As profit margin increases, profit tends to increase, and vice versa, but the correlation is relatively weak.
- **Interpretation:**
 - Other factors besides sales likely play a significant role in determining profit margin, such as cost management, pricing strategies, operational efficiency, and market conditions.
 - Correlation doesn't imply causation. Changes in profit margin may not directly cause changes in profit. Other variables could be at play simultaneously.
- **Complex business environment:**
In complex business environments, multiple factors impact profitability. A correlation coefficient of 0.38 indicates that profit margin alone doesn't fully explain profitability.

Exploratory Data Analysis (EDA)

Relationship of Profit Margin and Sales



- **Weak positive correlation(0.24):**
As sales increase, there is a tendency for profit margin to increase as well, and vice versa, but the relationship is not very pronounced.
- **Interpretation:**
Other factors besides sales likely play a significant role in determining profit margin, such as cost management, pricing strategies, operational efficiency, and market conditions.
- **Consideration of context:**
Correlation coefficients should be interpreted in the context of industry, business model, and market dynamics. While 0.24 may seem weak, it could be meaningful in certain contexts. Further analysis is needed to understand the full picture of profit margin drivers in your business.

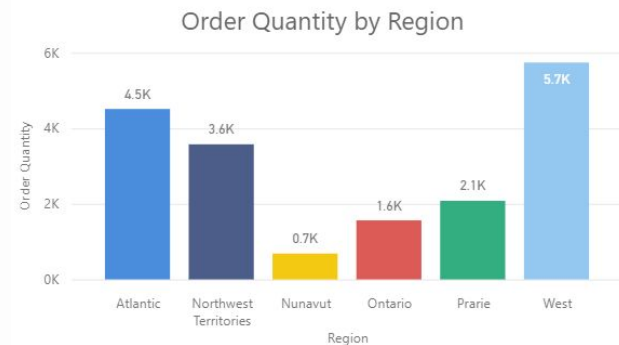
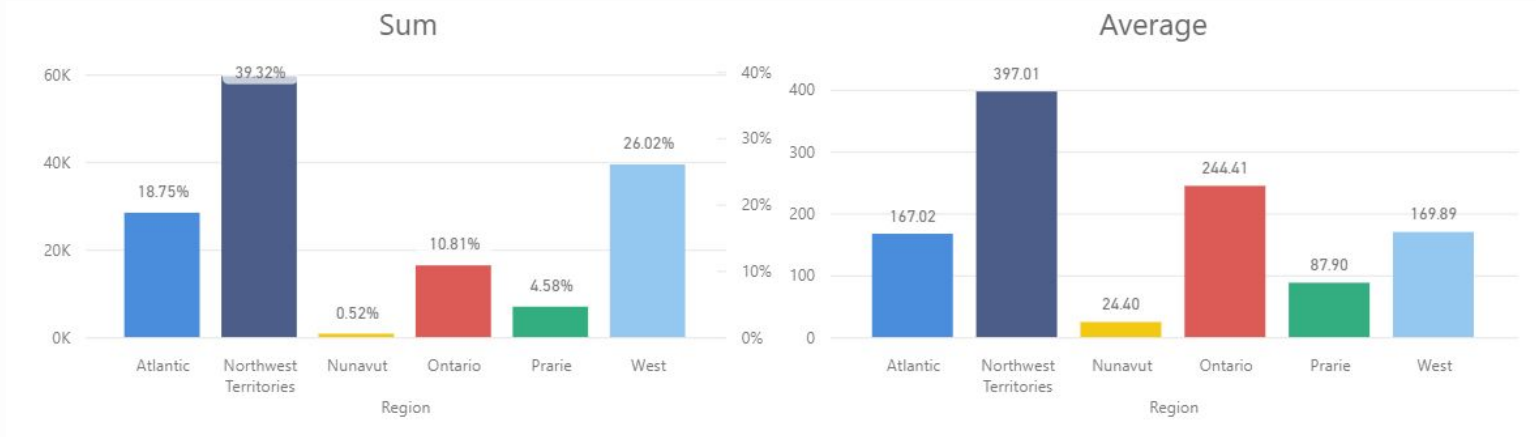
03

Graphic Representation of Insights

Profitability Analysis – Profit

Profitability Analysis

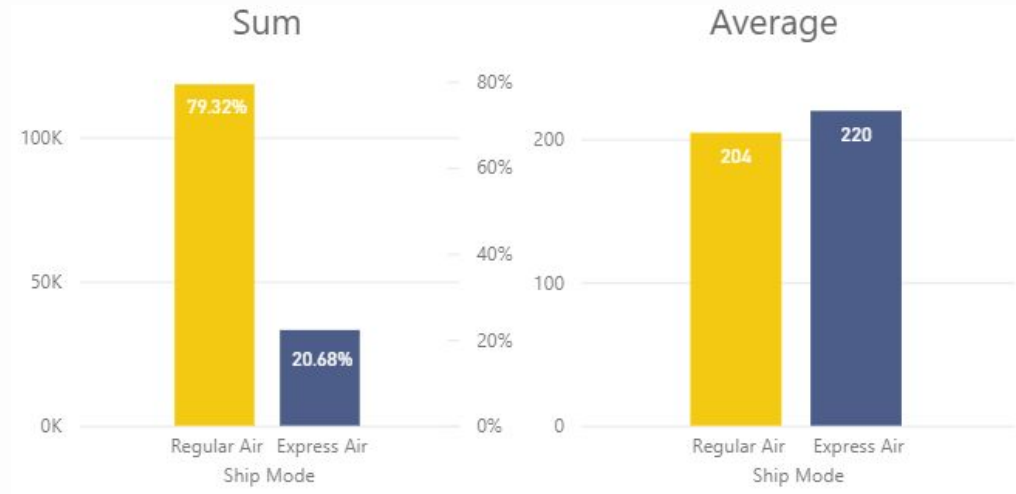
Which Region Have Highest Profit?



Surprisingly, while the Northwest Territories ranks third in order quantity, it dominates both in total and average profit, surpassing even the West, which leads in terms of order quantity. This indicates the Northwest Territories' remarkable profitability per order and potential for further growth.

Profitability Analysis

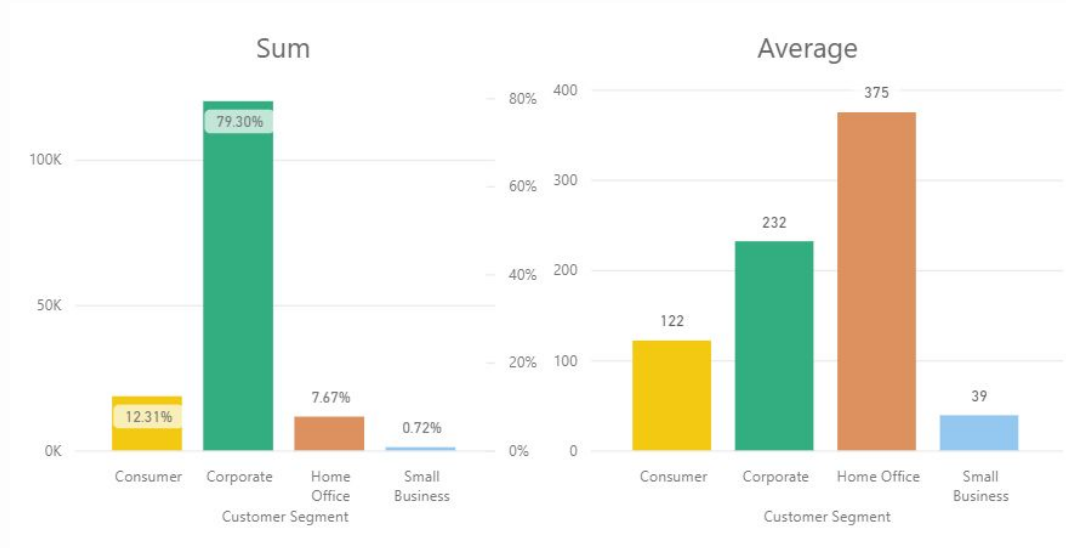
Which Ship Mode Have Highest Profit?



While regular air shipping yields higher total profit, it's important to note that this method is more commonly used by customers. Conversely, express air, although used less frequently, generates higher average profits. This aligns with the expectation that express services entail higher costs.

Profitability Analysis

Which Customer Segment Have Highest Profit?



It's worth noting that while Corporate has the highest total profit, Home Office actually boasts a higher average profit. This discrepancy can be attributed in many factors: (in next 2 pages)

Profitability Analysis

Which Customer Segment Have Highest Profit?



1. Distinct shipping preferences:
Home Office exclusively opts for Express Air, known for its higher profitability, whereas the majority of Corporate transactions are fulfilled using Regular Air.

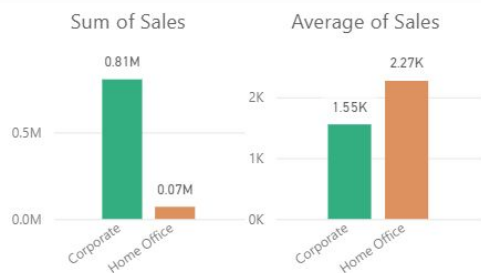
2. Order Quantity:
Corporate(13k) handles a significantly larger volume of orders than Home Office(1k).

Average Order Size:

Home Office tends to have larger transactions(27 vs 25 Corporate), with a higher number of items per order, despite processing fewer orders overall.

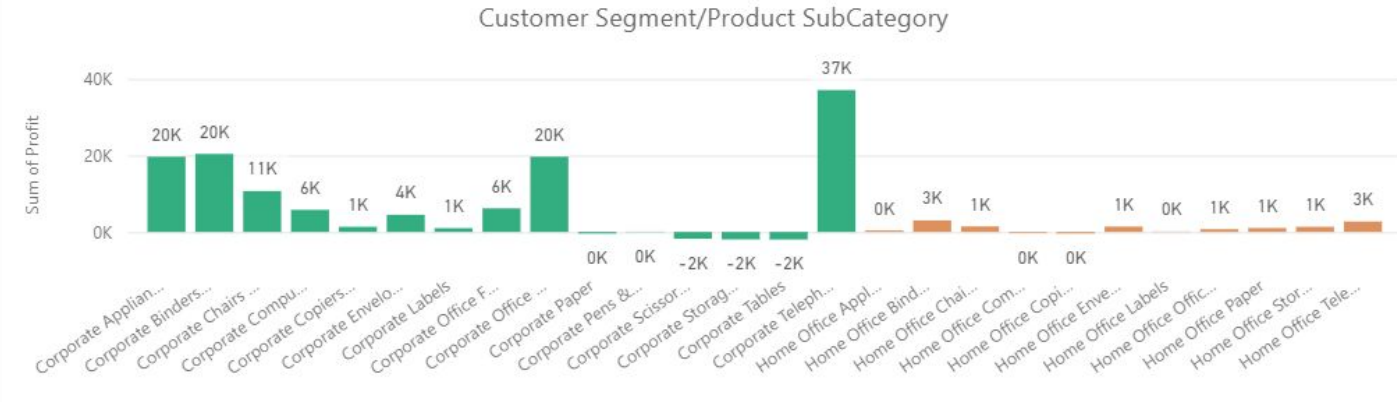


3. Transaction Values:
Despite Corporate having a higher total sum of sales (\$0.81 million compared to \$0.07 million for Home Office), the average sales per transaction are higher for Home Office (\$2.27k compared to \$1.55k for Corporate).



Profitability Analysis

Which Customer Segment Have Highest Profit?

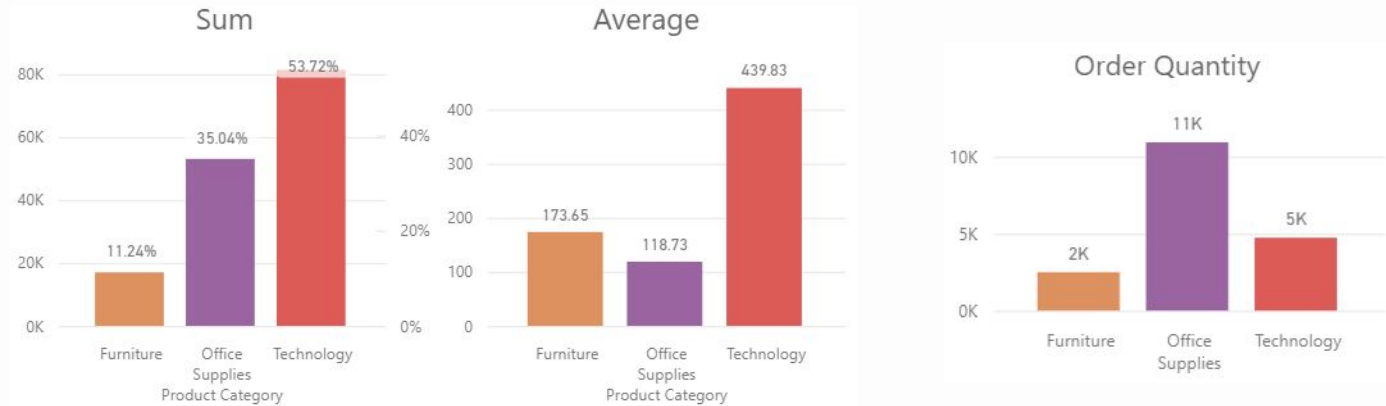


4. Price Difference:

- We conducted a deeper analysis of product subcategories to understand if Corporate tends to purchase lower-margin products compared to the Home Office segment. Surprisingly, we found that some subcategories within Corporate's orders are resulting in negative profit, indicating losses, whereas the vast majority of Home Office orders are generating profit.
- This discrepancy suggests potential differences in pricing strategy, such as discounts or promotions exclusively offered to Corporate clients, which may be impacting overall profitability.

Profitability Analysis

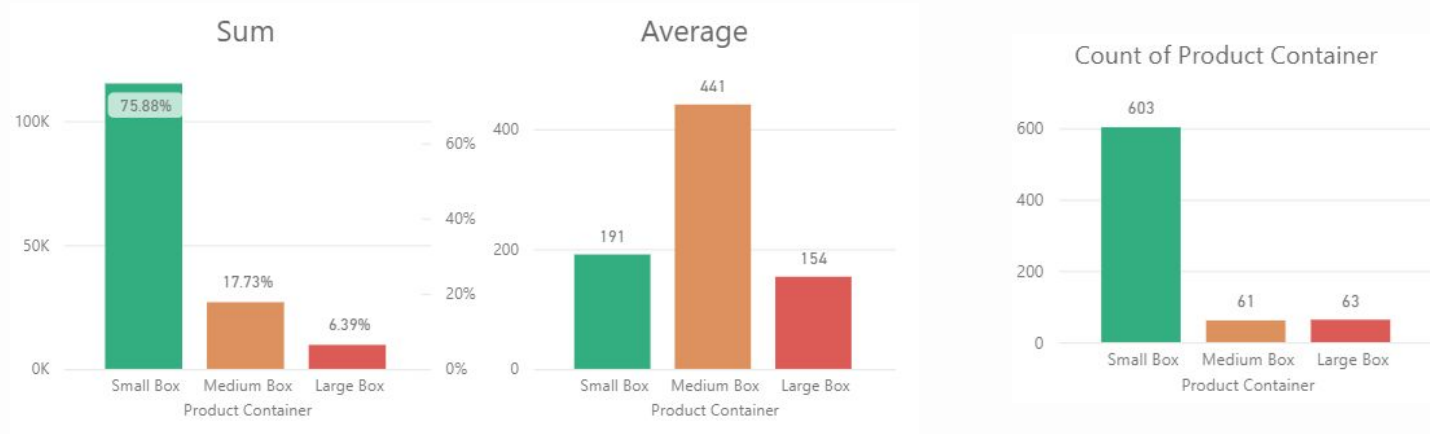
Which Product Category Have Highest Profit?



- Technology products yield the highest profit both individually and on average
- Office supplies contribute significantly to total profit, but their average profit per product is lower compared to Furniture and Technology due to higher order quantities.
- These insights can inform strategic decisions regarding resource allocation, pricing strategies, and product development efforts to optimize profitability across different product categories.

Profitability Analysis

Which Product Container Have Highest Profit?



Although small boxes contribute more to the total profit due to their higher volume, the profitability per product is higher in medium boxes.

(Possible Reasons & Strategic Implications in next 2 pages)

Profitability Analysis

Which Product Container Have Highest Profit?

- Possible Reasons for Data Patterns:
 - Small box products may represent lower-priced items with higher sales volume but lower average profitability.
 - Medium box products could cater to niche markets with higher-priced items or specialized products, resulting in higher average profitability despite lower sales volume.
 - Large box products might incur higher production and distribution costs due to their size and weight, affecting overall profitability.
- Customer Preferences and Demand:
 - Small box products may have higher demand and broader market appeal compared to medium and large box products.
 - Medium box products might target specific customer segments willing to pay premium prices, leading to higher average profitability.
 - Large box products may appeal to customers seeking bulk items or specialized products, resulting in lower sales volume but potentially higher margins.

Profitability Analysis

Which Product Container Have Highest Profit?

- Strategic Implications:
 - Optimize Pricing and Marketing Strategies:
 - Tailor pricing and marketing strategies to maximize profitability across diverse product container sizes, aligning with customer preferences and market dynamics.
 - Invest in Product Development and Innovation:
 - Allocate resources towards product development and innovation initiatives aimed at enhancing the value proposition of medium and large box products, fostering differentiation and customer appeal.
 - Cost Optimization and Margin Improvement:
 - Conduct a comprehensive evaluation of production and distribution costs to uncover opportunities for optimization, thereby improving margins and operational efficiency.

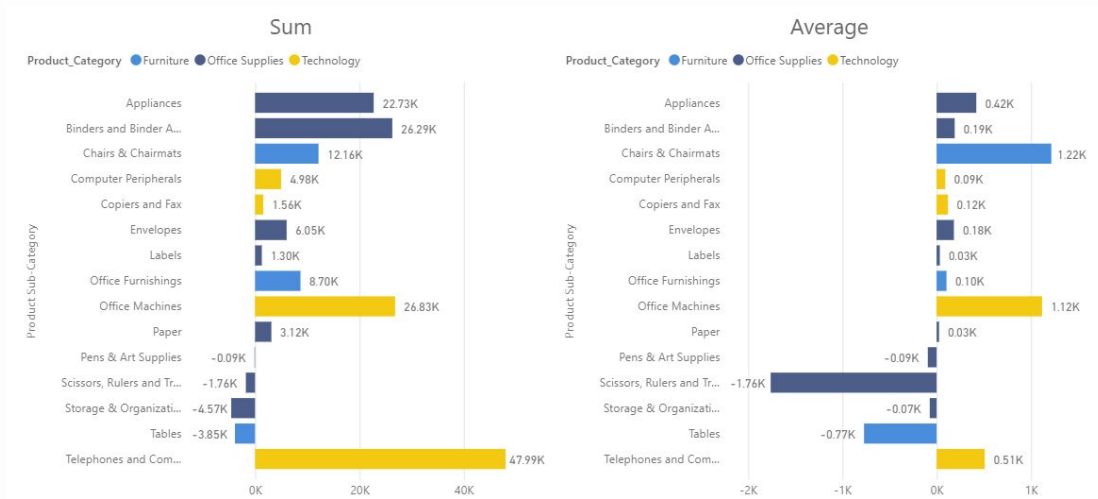
Profitability Analysis

Which Product Container Have Highest Profit?

- Maximize Small Box Product Potential:
 - Leverage the high volume and profit contribution of small box products while exploring strategies to increase profitability per product, such as upselling or introducing complementary offerings.
- Leverage Medium Box Profitability:
 - Capitalize on the higher average profitability of medium box products through targeted marketing campaigns and margin optimization efforts, aiming to amplify returns from this segment.
- Enhance Large Box Product Performance:
 - Evaluate the performance of large box products to identify areas for improvement or adjustments in the product mix, ensuring alignment with market demand and optimizing profitability.

Profitability Analysis

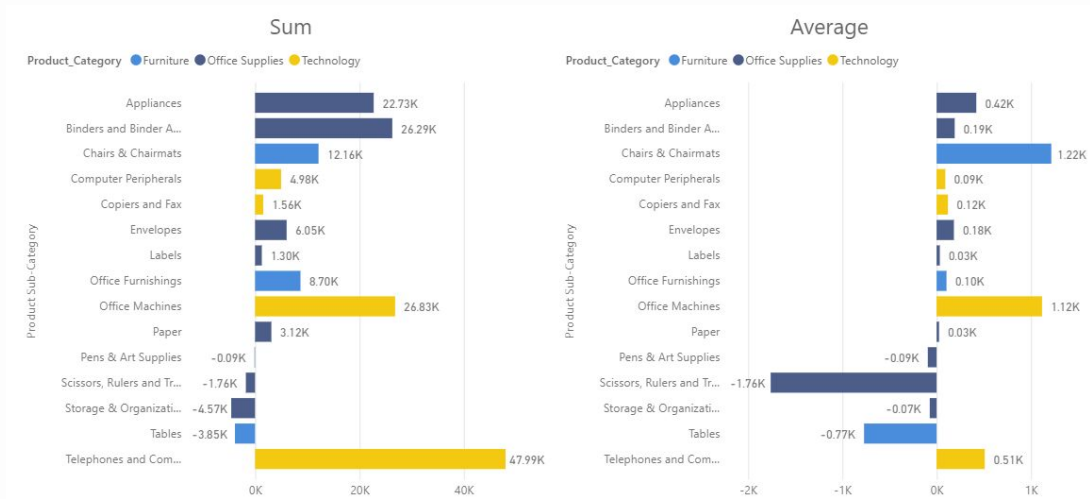
Which Product SubCategory Have Highest Profit?



- Office Supplies Category:
 - Office supplies such as Binders, Envelopes, and Paper contribute positively to profit, albeit with varying sums and averages.
 - Some items like Pens & Art Supplies, Scissors & Rulers, and Storage & Organization show negative profits, indicating potential areas for improvement or cost reduction measures.

Profitability Analysis

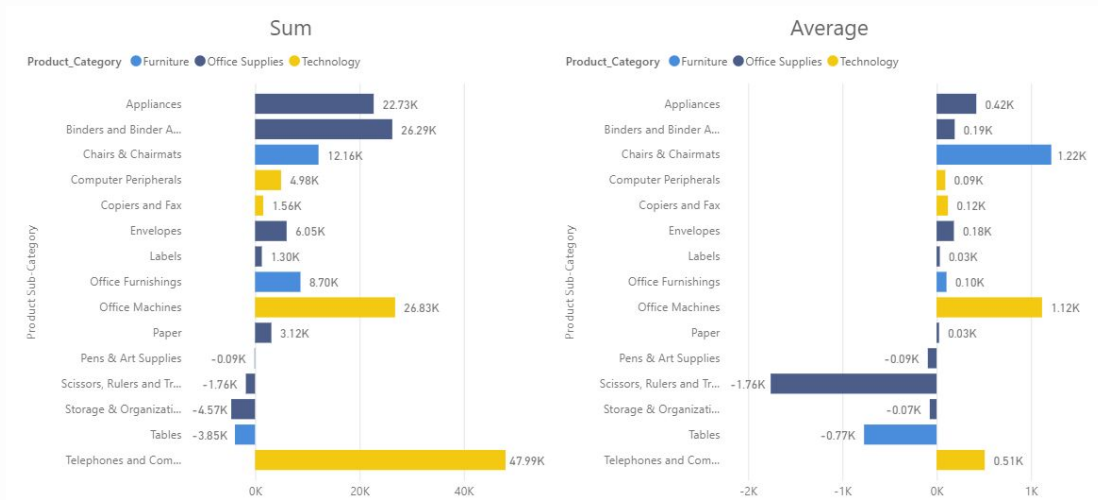
Which Product SubCategory Have Highest Profit?



- Furniture Category:
 - Chairs and Office Furnishings contribute positively to profit, with Chairs having a higher average profit per product.
 - Tables show a negative sum and average profit, suggesting a need for strategic adjustments in pricing, production, or marketing strategies.

Profitability Analysis

Which Product SubCategory Have Highest Profit?



- Technology Category:
 - Computer Peripherals, Copier & Fax, and Office Machines contribute positively to profit within the Technology category.
 - Telephones and Communication devices contribute significantly to profit, with a high sum and average profit per product.

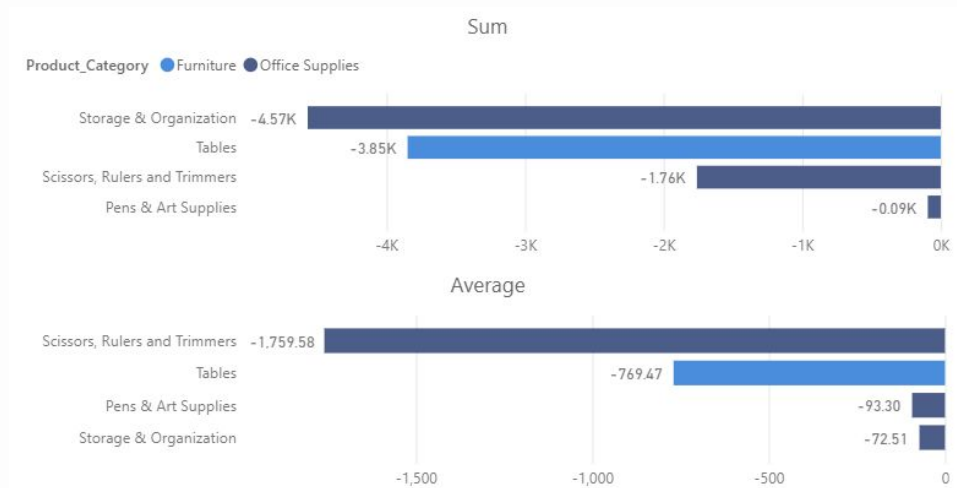
Profitability Analysis

Which Product SubCategory Have Highest Profit?

- Comparison Across Categories:
 - The Furniture category shows a mix of positive and negative profit contributions, with Chairs being the most profitable product.
 - The Technology category exhibits a generally positive profit trend, with Telephones and Communication devices being the highest profit contributors.
 - The Office Supplies category shows a mix of positive and negative profit contributions, with some items demonstrating potential for optimization or cost management.
- Strategic Implications:
 - Focus on optimizing the profitability of individual products within each category, leveraging strengths and addressing weaknesses.
 - Consider reallocating resources towards products with higher profitability potential and exploring opportunities for cost reduction in less profitable items.
 - Continuously monitor market trends, customer preferences, and competitive dynamics to refine product offerings and pricing strategies for sustained profitability growth.

Profitability Analysis

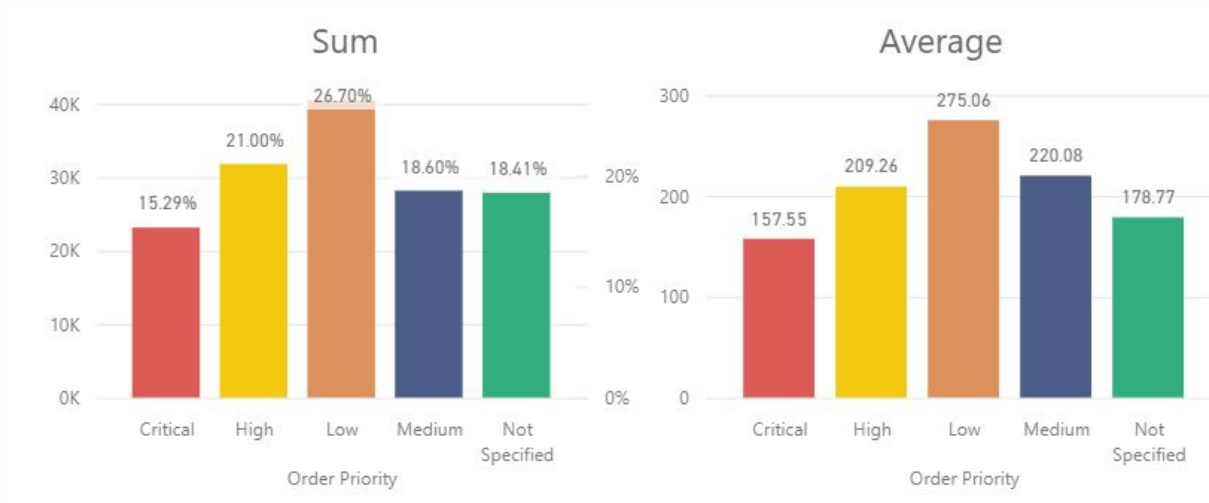
Which Product SubCategory Have Highest Loss?



- The Office Supplies category seems to have several products with negative profitability, suggesting a need for careful analysis and strategic adjustments.
- The Furniture category also faces challenges, particularly with tables, indicating potential areas for improvement or restructuring.
- Businesses should conduct thorough analyses of product performance, market demand, and cost structures to identify opportunities for optimization and profitability enhancement.

Profitability Analysis

Which Order Priority Have Highest Profit?



- Despite "Low" priority orders contributing the highest sum of profit, "Low" priority orders have the highest average profit per order at \$275.06, indicating that individual orders in this category tend to be highly profitable.
- "Critical" priority orders have the lowest average profit at \$157.55, suggesting that while they may require immediate attention, they may not always result in the highest profitability per order.

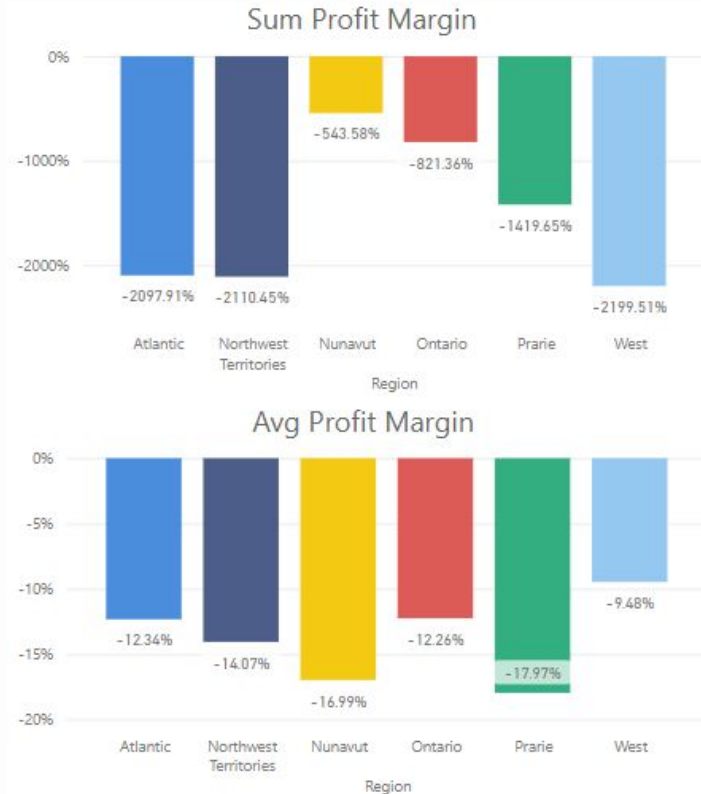
03

Graphic Representation of Insights

Profitability Analysis – Profit Margin

Profitability Analysis

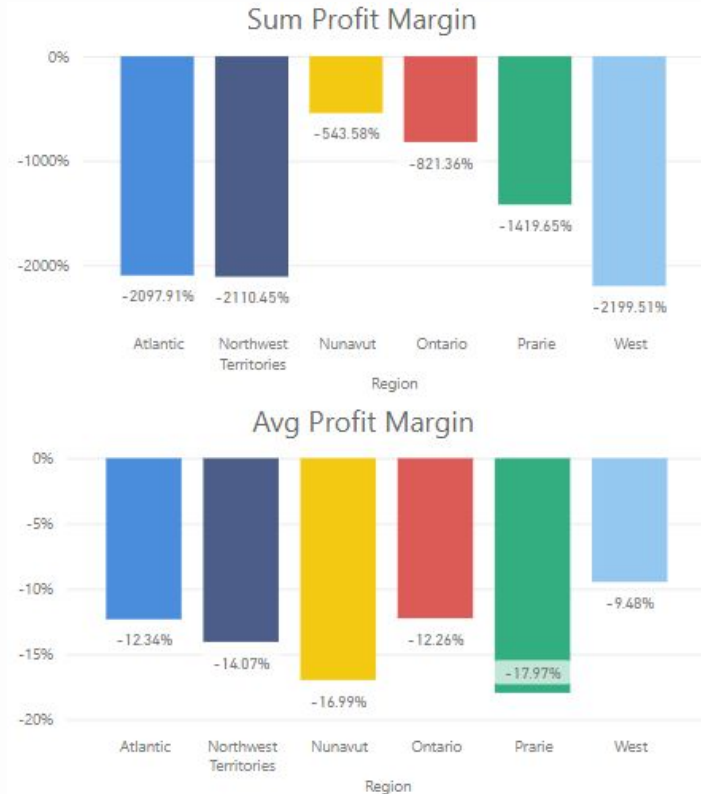
Region vs Profit Margin?



- **Operational Efficiency:**
High total losses in the West, Northwest Territories, and Atlantic regions indicate significant inefficiencies or cost management issues. Nunavut's lower total losses suggest better cost control despite poor average margins.
- **Market Demand and Pricing Strategy:**
Variations in average profit margins indicate differing levels of market demand and pricing effectiveness. West's lowest average loss suggests better pricing alignment or cost control.
- **Cost Structure Analysis:**
Significant total losses across all regions highlight the need to examine cost structures, especially in Prairie and Nunavut, with the highest per-transaction losses.

Profitability Analysis

Region vs Profit Margin?

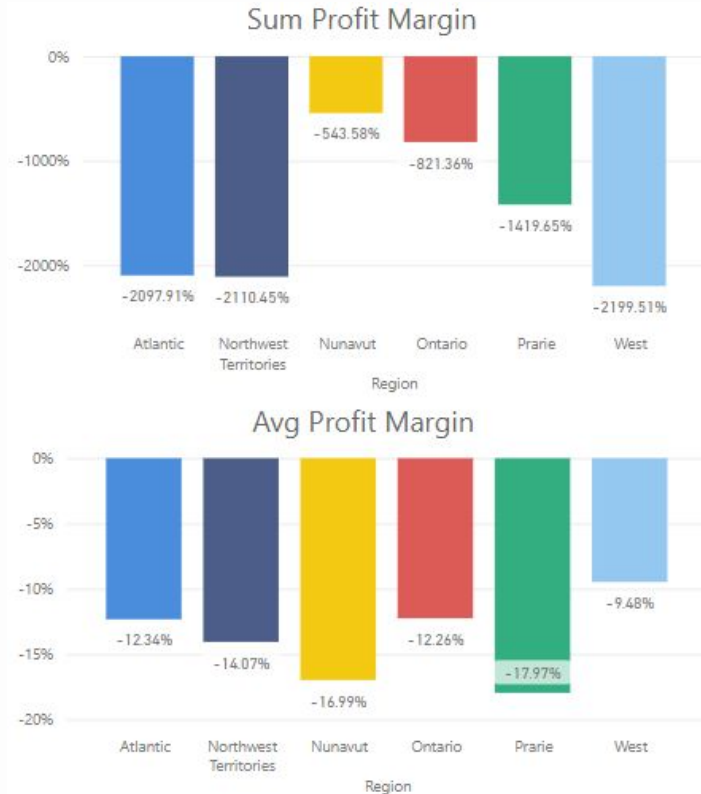


Recommendations

- **Cost Analysis:**
Identify high expenses in each region, focusing on West, Northwest Territories, and Atlantic.
- **Pricing Strategy Review:**
Reevaluate pricing in Prairie and Nunavut to better cover costs and align with market demand.
- **Operational Improvements:**
Optimize operations in regions with significant losses by streamlining logistics, renegotiating contracts, and investing in efficient technologies.

Profitability Analysis

Region vs Profit Margin?

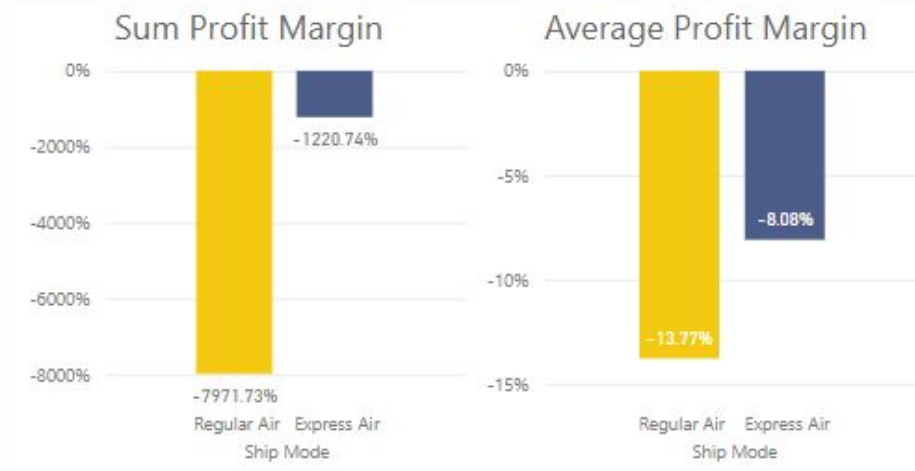


Recommendations

- Focus on Less Unprofitable Regions: Improve efficiency and profitability in West, exploring ways to increase volume while controlling costs.
- Risk Mitigation: Implement loss thresholds and corrective actions for regions with the highest losses.

Profitability Analysis

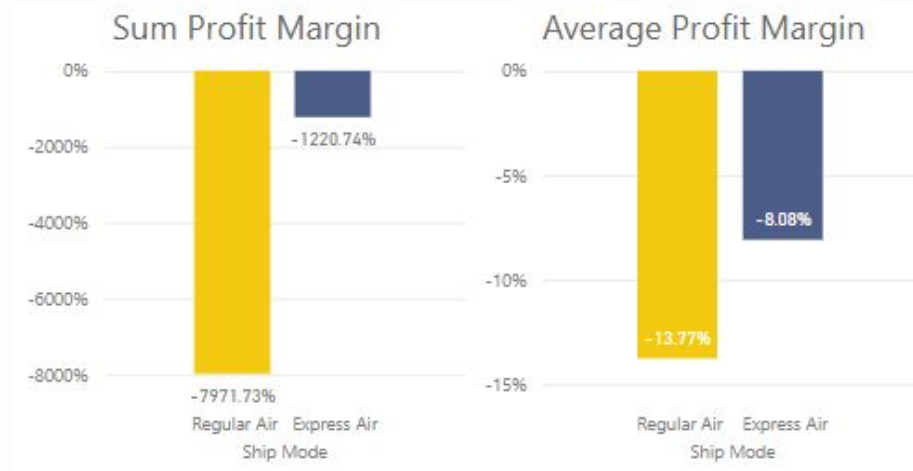
Ship Mode vs Profit Margin?



- **Operational Efficiency:**
Regular Air's poor performance in both total and average profit margins suggests inefficiencies or poor cost management.
- **Market Demand and Pricing Strategy:**
Express Air's relatively better average profit margin indicates differences in market demand and pricing strategies. Express Air may align better with customer expectations.
- **Cost Structure Analysis:**
The significant total losses for Regular Air imply a more burdensome cost structure, potentially due to higher fixed costs, inefficient logistics, or escalating variable costs.

Profitability Analysis

Ship Mode vs Profit Margin?

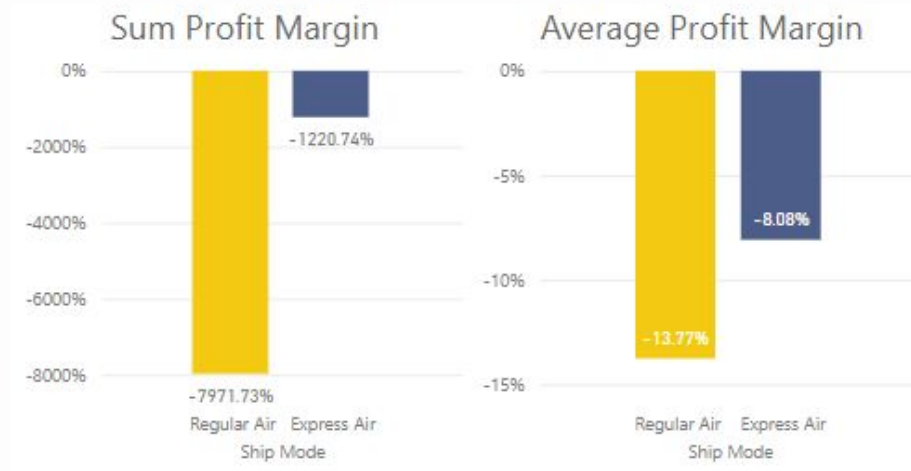


Recommendations

- **Cost Analysis:**
Identify specific areas where Regular Air incurs higher costs by examining fixed and variable costs and operational inefficiencies.
- **Pricing Strategy:**
Reevaluate Regular Air's pricing to better cover costs, potentially through market research and competitive analysis.
- **Operational Improvements:**
Optimize Regular Air's processes, routes, and supplier contracts, and invest in more efficient technology.

Profitability Analysis

Ship Mode vs Profit Margin?

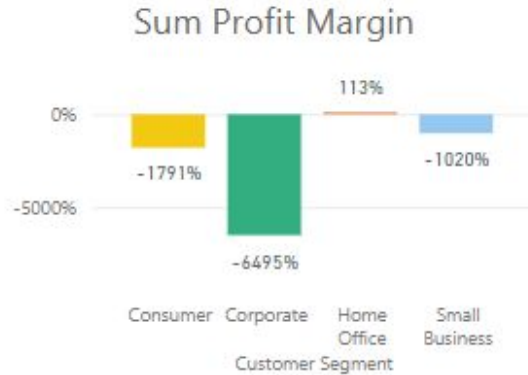


Recommendations

- Enhance Express Air:
Boost Express Air's performance through targeted marketing, improved customer service, and premium options for better margins.
- Risk Mitigation:
Create a plan to address Regular Air's losses by setting acceptable loss thresholds and implementing corrective actions.

Profitability Analysis

Customer Segment vs Profit Margin?

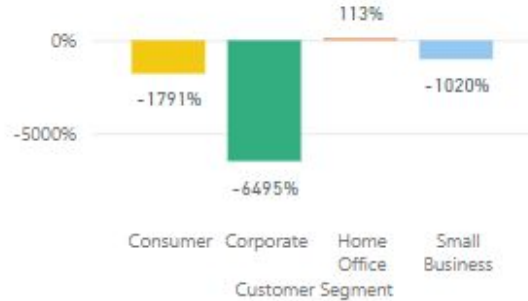


- **Operational Efficiency:**
High total losses in Corporate and Consumer segments indicate inefficiencies or poor cost management. The Home Office segment shows effective cost control and pricing strategies.
- **Market Demand and Pricing Strategy:**
Variations in average profit margins suggest differing market demand and pricing effectiveness. Home Office's positive margins indicate a well-aligned pricing strategy.
- **Cost Structure Analysis:**
Significant losses, especially in Corporate and Small Business, necessitate a detailed examination of cost structures and areas for cost reduction.

Profitability Analysis

Customer Segment vs Profit Margin?

Sum Profit Margin



Avg Profit Margin



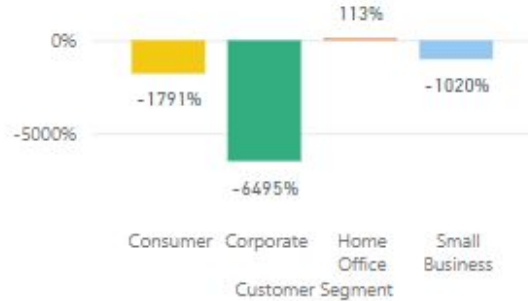
Recommendations

- **Cost Analysis:**
Identify high expenses and areas for cost reduction in Corporate and Consumer segments.
- **Pricing Strategy Review:**
Reevaluate pricing in the Small Business segment to better cover costs and align with market demand.
- **Operational Improvements:**
Optimize operations in Corporate and Small Business segments by streamlining logistics, renegotiating contracts, and investing in efficient technologies.

Profitability Analysis

Customer Segment vs Profit Margin?

Sum Profit Margin



Avg Profit Margin

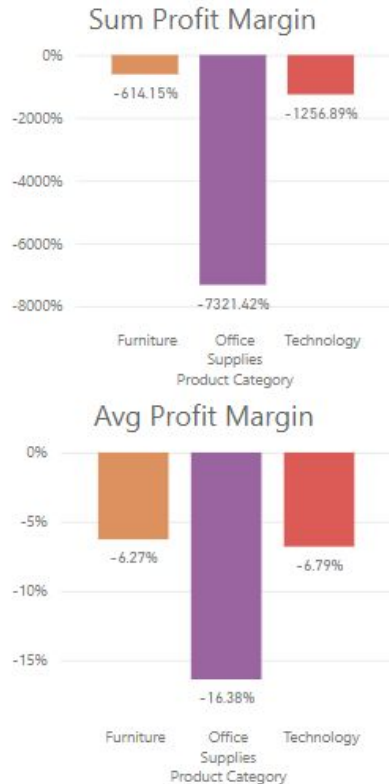


Recommendations

- **Leverage Profitable Segments:**
Enhance the Home Office segment by increasing volume and applying best practices to other segments.
- **Risk Mitigation:**
Develop and implement a risk mitigation plan for Corporate and Small Business segments, setting loss thresholds and corrective actions.

Profitability Analysis

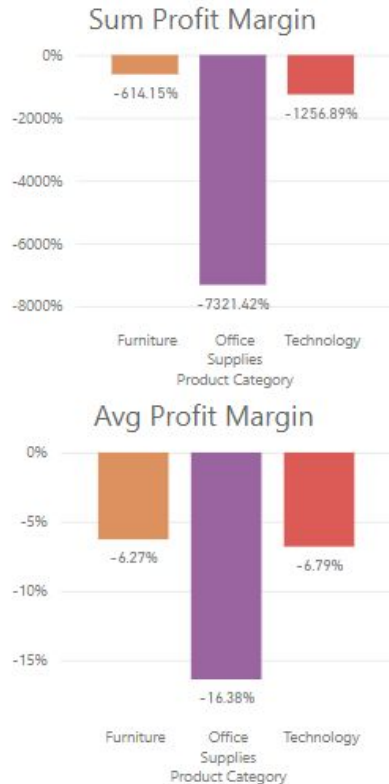
Product Category vs Profit Margin?



- **Operational Efficiency:**
High total losses in Office Supplies suggest inefficiencies or cost management issues. Furniture demonstrates better cost control despite negative margins.
- **Market Demand and Pricing Strategy:**
Variation in average profit margins reflects varying market demand and pricing effectiveness. Severe losses in Office Supplies indicate a need for improved pricing strategies and cost control.
- **Cost Structure Analysis:**
Significant total losses across all categories, especially in Office Supplies, underscore the importance of analyzing cost structures and identifying areas for cost reduction.

Profitability Analysis

Product Category vs Profit Margin

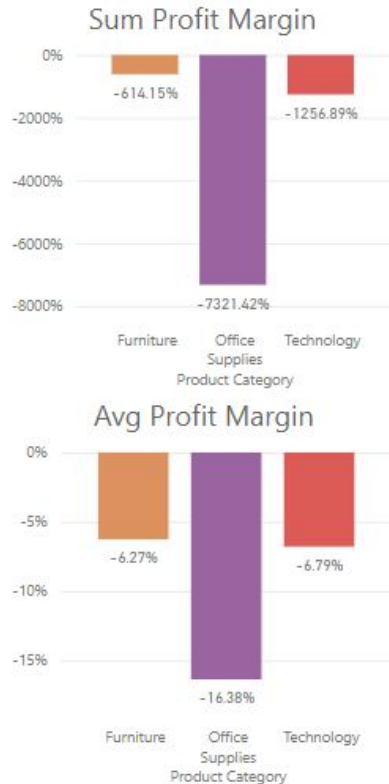


Recommendations

- **Cost Analysis:**
Conduct a detailed cost analysis in Office Supplies to identify expenses and areas for cost reduction, examining fixed and variable costs, operational inefficiencies, and improvement opportunities.
- **Pricing Strategy Review:**
Reevaluate Office Supplies pricing to better align with costs and market demand. Consider market research to gauge customer price sensitivity and competitive pricing strategies.
- **Operational Improvements:**
Optimize Office Supplies operations by streamlining logistics, renegotiating contracts, and investing in efficient technologies. Apply similar improvements to Furniture and Technology for enhanced profitability.

Profitability Analysis

Product Category vs Profit Margin?

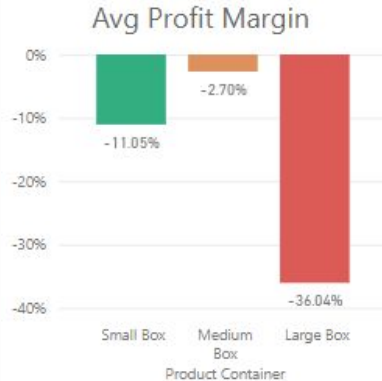
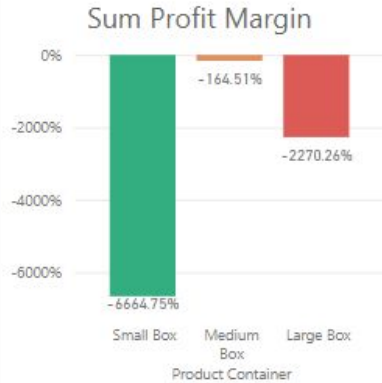


Recommendations

- **Focus on Profitability:**
Enhance Furniture sales by increasing volume while controlling costs. Transfer successful strategies from Furniture to other segments where applicable.
- **Risk Mitigation:**
Develop a risk mitigation plan for Office Supplies, including setting loss thresholds and implementing corrective actions when breaches occur.

Profitability Analysis

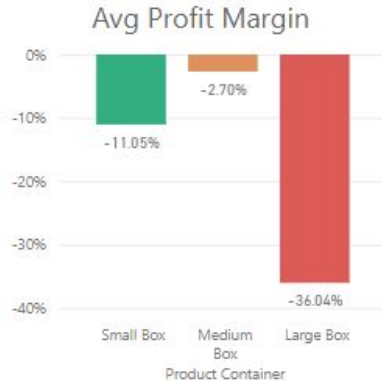
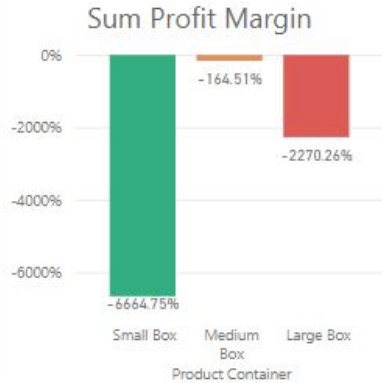
Product Container vs Profit Margin?



- **Operational Efficiency:**
High total losses in Small Box indicate significant cost management issues specific to this category. Medium Box shows comparatively better cost control per transaction.
- **Market Demand and Pricing Strategy:**
Variation in average profit margins suggests differing market demand and pricing effectiveness across box sizes. Large Box's substantial losses highlight potential pricing and cost structure mismatches.
- **Cost Structure Analysis:**
Substantial total losses across all categories underscore the need for detailed cost structure analysis, particularly focusing on Small Box and Large Box to identify crucial areas for cost reduction.

Profitability Analysis

Product Container vs Profit Margin?

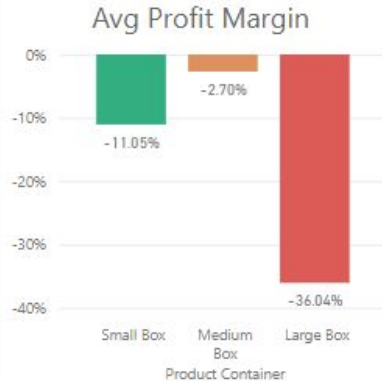
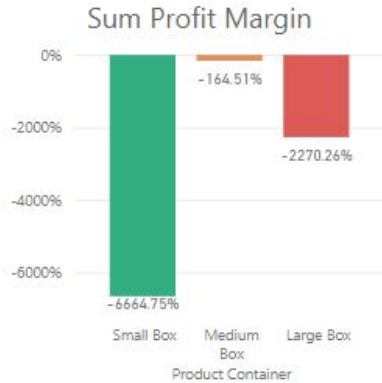


Recommendations

- **Cost Analysis:**
Conduct a detailed cost analysis for Small Box and Large Box to pinpoint high expenses and opportunities for cost reduction, examining both fixed and variable costs.
- **Pricing Strategy Review:**
Reevaluate Large Box pricing strategies to better align with costs and market demand. Perform market research to gauge customer price sensitivity and competitor pricing strategies.
- **Operational Improvements:**
Optimize operational processes for Small Box and Large Box by improving logistics, renegotiating contracts, and investing in efficient technologies.

Profitability Analysis

Product Container vs Profit Margin?

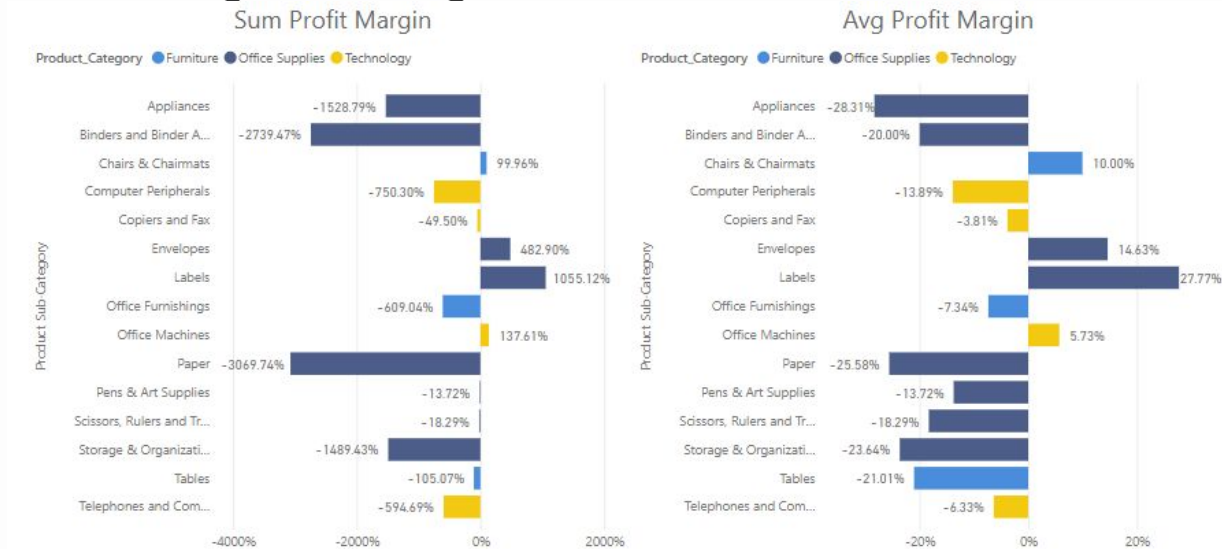


Recommendations

- **Focus on Medium Box:**
Enhance Medium Box profitability through rigorous cost control practices. Consider applying successful strategies from Medium Box to enhance operations across other categories.
- **Risk Mitigation:**
Develop a risk mitigation plan for Small Box and Large Box to effectively manage and reduce losses. Implement loss thresholds and corrective actions to address significant negative profit margins.

Profitability Analysis

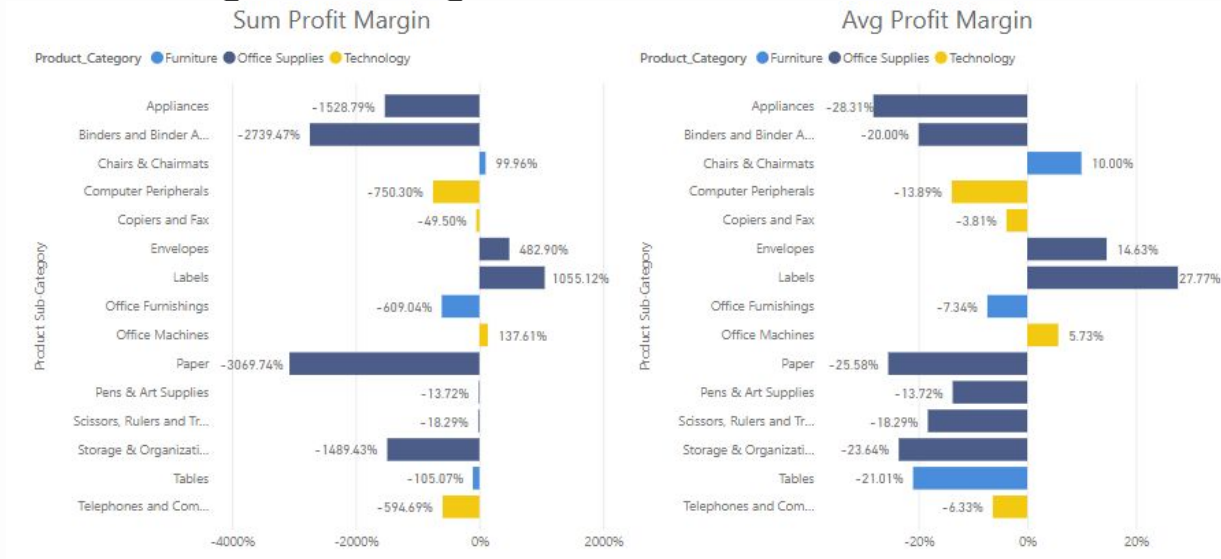
Product Sub-Category vs Profit Margin?



- Profitability Variance:
 - Positive performers like Chairs and Office Machines highlight potential strengths in product lines and pricing strategies.
 - Categories with severe losses such as Paper, Appliances, and Binders require immediate attention to mitigate losses.

Profitability Analysis

Product Sub-Category vs Profit Margin?



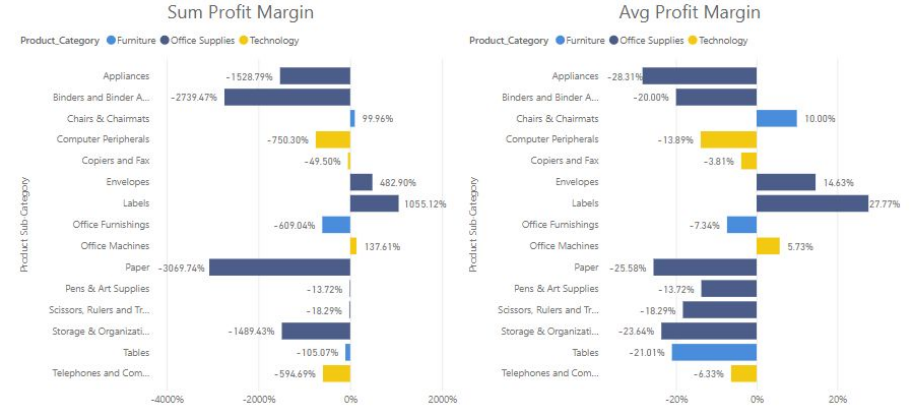
- Market Dynamics:
 - The wide variation in profit margins across Office Supplies categories suggests opportunities for pricing adjustments and cost management improvements.
 - Furniture and Technology categories show potential for enhancing profitability through targeted operational and pricing strategies.

Profitability Analysis

Product Sub-Category vs Profit Margin?

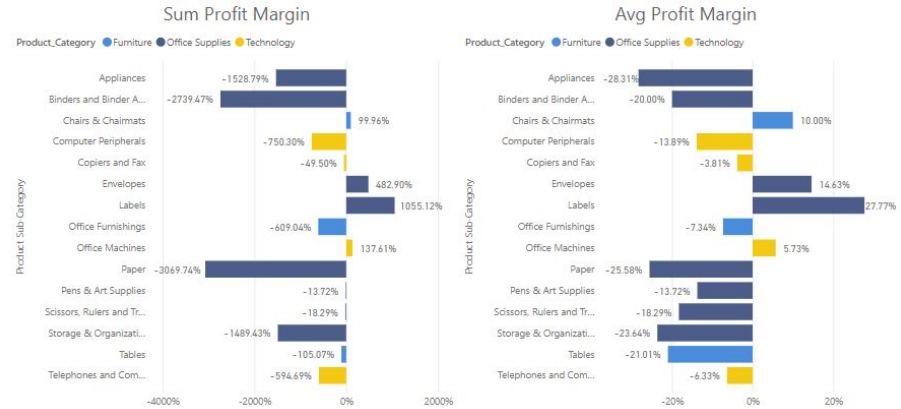
Recommendations

- Cost and Operational Analysis:**
 Conduct detailed cost analyses for Paper, Appliances, Binders, and Storage & Organization to identify cost drivers and efficiency improvement areas.
- Pricing Strategy Review:**
 Reevaluate pricing strategies in Office Supplies categories, especially for Paper and Storage & Organization, to better align with costs and market demand.
- Operational Optimization:**
 Optimize operations in Chairs, Office Machines, and Technology categories to sustain or improve profitability levels.



Profitability Analysis

Product Sub-Category vs Profit Margin?



Recommendations

- Focus on Profitable Categories:**
 Enhance profitability in Chairs and Office Machines by expanding successful strategies and exploring growth opportunities.
- Risk Mitigation:**
 Develop risk mitigation plans for Paper and Appliances to reduce losses, focusing on enhancing cost control and operational efficiencies.

03

Graphic Representation of Insights

Sales Performance Analysis

Sales Performance Analysis

Sales Analysis of Product Category

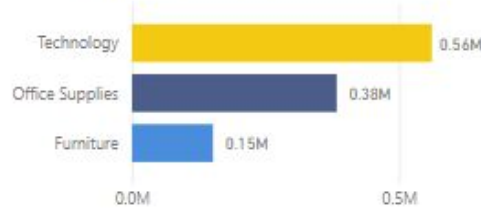


- **Revenue Contribution:**
 - Technology leads in total revenue, highlighting strong sales performance.
 - Office Supplies ranks second in revenue generation.
 - Furniture, while contributing less to total sales, still holds significant revenue share.
- **Transaction Size:**
 - Technology and Furniture boast higher average transaction values, suggesting potential for greater profitability.
 - Office Supplies indicates lower average transaction values, implying a focus on higher volume or lower-priced items.

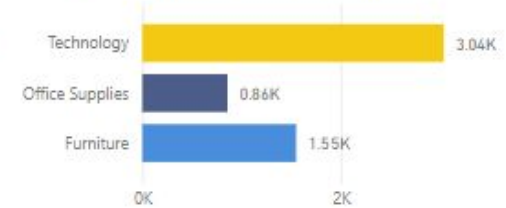
Sales Performance Analysis

Sales Analysis of Product Category

Sum of Sales by Product Category



Average of Sales by Product Category

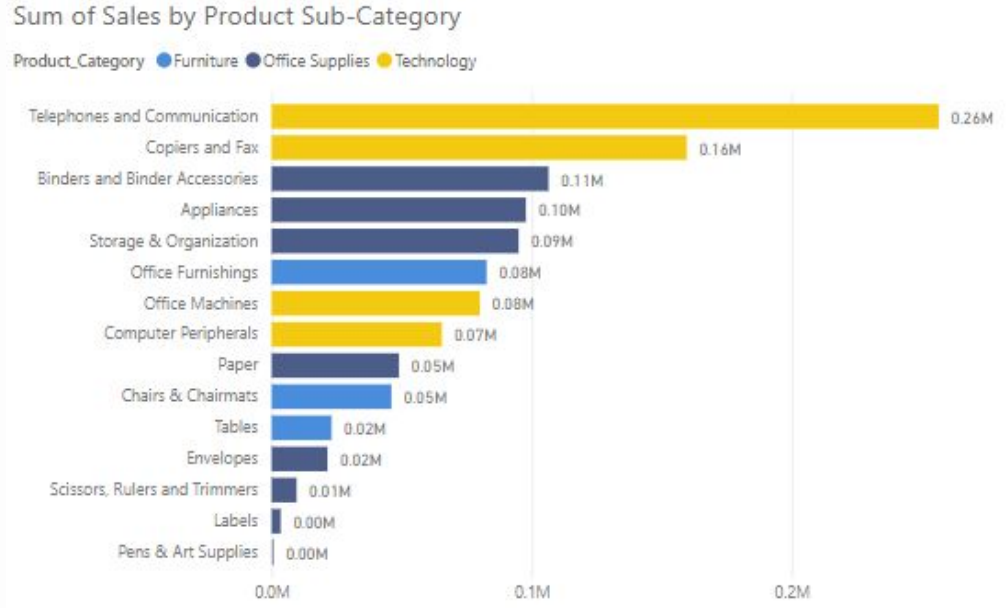


Recommendations

- Segment-Specific Strategies:
 - Technology: Continue leveraging high-value transactions and explore product line expansion or premium market targeting.
 - Office Supplies: Increase transaction sizes or focus on niche markets to boost profitability per transaction.
 - Furniture: Enhance marketing and diversify offerings to attract higher-value transactions.
- Market Expansion:
 - Evaluate growth opportunities in Technology and Furniture through innovation and targeted marketing.
 - Explore niche markets or premium segments within Office Supplies to increase average transaction values.

Sales Performance Analysis

The Product Sub-Category
Generated the Most Revenue



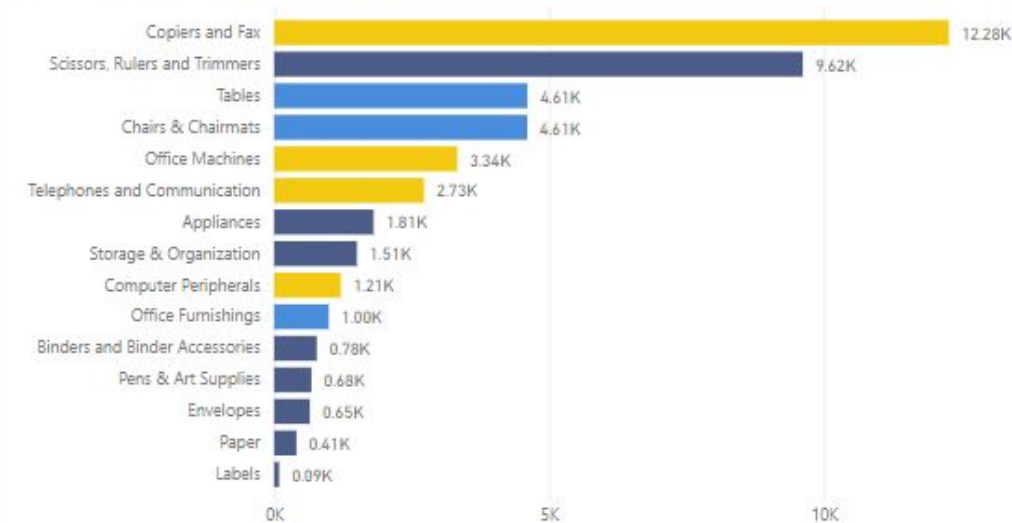
Telecommunication devices led in revenue generation, followed by Copiers and Fax, both categorized under Technology. In contrast, Pens and Art Supplies, along with Labels, recorded the lowest revenue figures.

Sales Performance Analysis

The Product Sub-Category
Generated the Most Revenue Per Transaction

Avg of Sales by Product Sub-Category

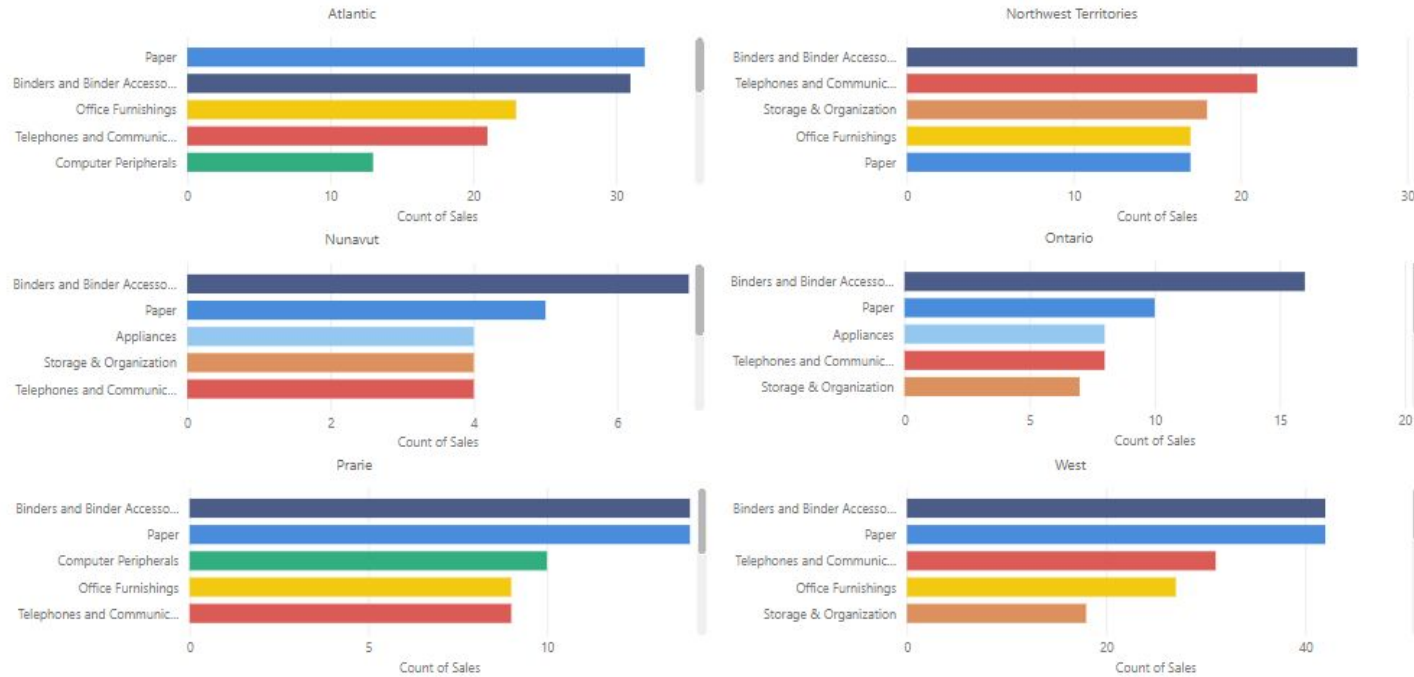
Product_Category ● Furniture ● Office Supplies ● Technology



While Telephones and Communication generated the highest total revenue, Copiers and Fax led in revenue per transaction. Surprisingly, Scissors, Rulers, and Trimmers, despite not topping the total sales list, also showed strong performance in revenue per transaction.

Sales Performance Analysis

The Most Purchased Product Sub-Category In Each Region

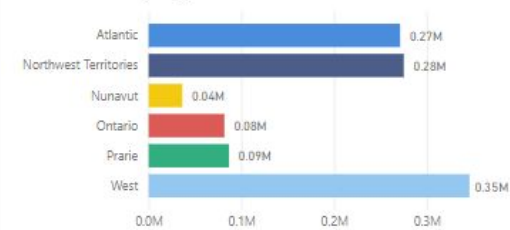


Based on the visualization, we consistently observe that the top-performing products across all regions are Paper, Binders, and Telecommunication devices.

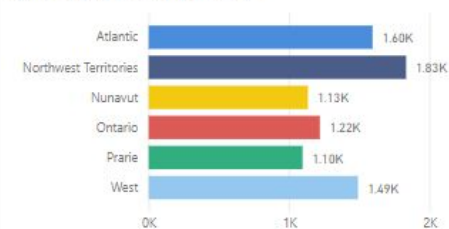
Sales Performance Analysis

Sales Analysis of Each Region

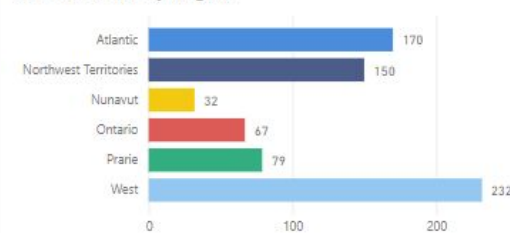
Sum of Sales by Region



Average of Sales by Region



Count of Sales by Region

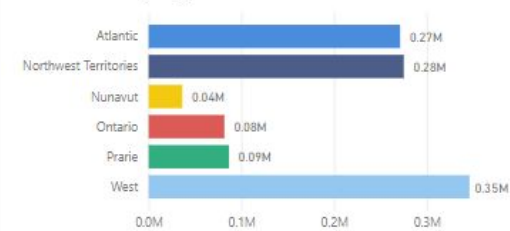


- **Revenue Generation:**
The West leads in total sales, followed closely by Northwest Territories and Atlantic. Nunavut is significantly behind, which may require targeted interventions to boost sales.
- **Average Transaction Size:**
 - Northwest Territories has the highest average transaction value, suggesting successful high-value sales strategies that could be replicated in other regions.
 - Prarie has the lowest average transaction value, highlighting a need for strategies to increase transaction sizes.
- **Sales Volume:**
The high number of transactions in the West suggests effective customer engagement strategies, which could serve as a model for other regions, especially Nunavut and Ontario.

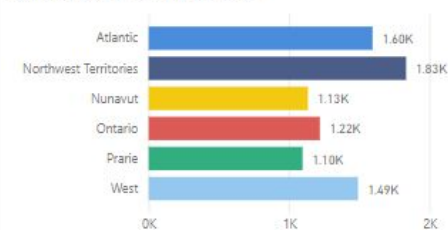
Sales Performance Analysis

Sales Analysis of Each Region

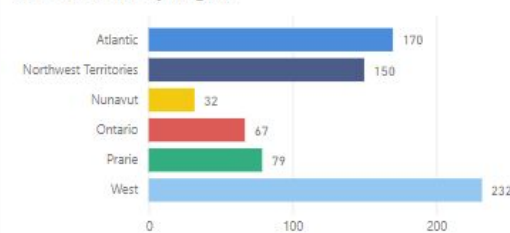
Sum of Sales by Region



Average of Sales by Region



Count of Sales by Region



Recommendations

- Focus on Low-Performing Regions:
 - Nunavut: Boost marketing efforts and improve sales strategies.
 - Ontario: Increase sales volume and average transaction size.
- Leverage High-Performing Strategies:
Apply successful strategies from the West and Northwest Territories to other regions, focusing on customer engagement and high-value sales.
- Enhance Average Transaction Size:
Implement upselling and cross-selling strategies in Prairie and Ontario.
- Monitor and Optimize:
Regularly review performance metrics and adjust strategies to maximize sales performance and revenue.

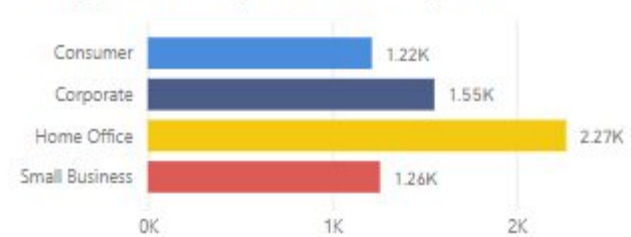
Sales Performance Analysis

Sales Analysis of Each Customer Segment

Sum of Sales by Customer Segment



Average of Sales by Customer Segment



- Revenue Contribution:
 - Corporate dominates in total revenue, highlighting its significant impact on overall sales.
 - Consumer contributes a notable portion but is lower in comparison to Corporate.
- Transaction Size:
 - Home Office stands out with the highest average transaction value, indicating potential high-value purchases.
 - Corporate shows strong average transaction values, aligning with its substantial total sales figure.

Sales Performance Analysis

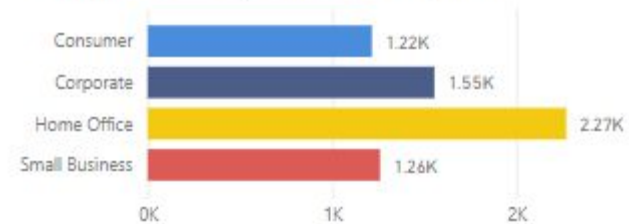
Sales Analysis of Each Customer Segment

Recommendations

Sum of Sales by Customer Segment



Average of Sales by Customer Segment



- **Segment-Specific Strategies:**
 - Corporate: Maintain high transaction values and nurture existing high-revenue relationships.
 - Home Office: Capitalize on high-value transactions and consider expanding product offerings.
 - Consumer and Small Business: Increase transaction volumes while optimizing average transaction values.
- **Market Expansion:**

Evaluate growth opportunities in Consumer and Small Business segments through targeted marketing and product diversification.
- **Performance Monitoring:**

Regularly monitor sales metrics across all segments to identify trends, adjust strategies, and maximize revenue.

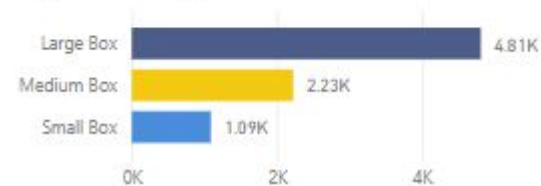
Sales Performance Analysis

Sales Analysis of Product Containers

Sum of Sales by Product Container



Avg of Sales by Product Container



- Revenue Contribution:
 - Small Box dominates in total revenue, reflecting its strong performance in generating sales.
 - Large Box follows as the second highest revenue generator.
 - Medium Box, while contributing less in total sales, still holds a notable revenue share.
- Transaction Size:
 - Large Box and Medium Box demonstrate higher average transaction values, suggesting potential for higher profitability per transaction.
 - Small Box indicates lower average transaction values, implying a focus on higher volume or lower-priced items.

Sales Performance Analysis

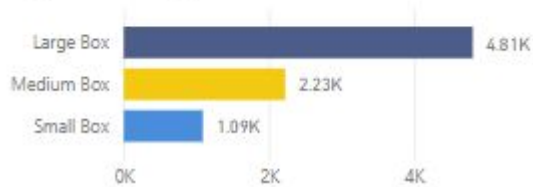
Sales Analysis of Product Containers

Recommendations

Sum of Sales by Product Container



Avg of Sales by Product Container



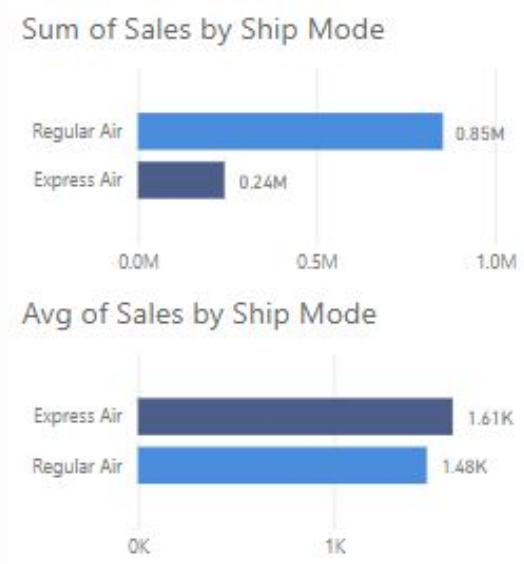
- Segment-Specific Strategies:
 - Small Box: Focus on increasing average transaction values while leveraging high-volume sales.
 - Large Box: Continue targeting high-value transactions and explore premium market opportunities.
 - Medium Box: Implement strategies to expand transaction sizes and explore niche market segments.
- Market Expansion:

Evaluate growth opportunities in Large Box and Medium Box through targeted marketing and innovation. Consider diversifying or enhancing Small Box offerings to boost profitability.
- Performance Monitoring:

Regularly monitor sales metrics across all containers to identify trends, adjust strategies promptly, and maximize revenue potential.

Sales Performance Analysis

Sales Analysis of Ship Mode



- Revenue Contribution:
 - Regular Air dominates in total revenue, indicating stronger performance in generating sales revenue.
 - Express Air contributes less to total revenue but still holds a significant share.
- Transaction Size:
 - Regular Air shows higher average transaction values per shipment.
 - Express Air maintains competitive average transaction values but slightly lower than Regular Air.

Sales Performance Analysis

Sales Analysis of Ship Mode

Recommendations

- Segment-Specific Strategies:
 - Regular Air: Continue to capitalize on higher transaction values and explore opportunities to further increase average transaction sizes.
 - Express Air: Implement strategies to maintain competitive average transaction values and explore methods to increase transaction sizes.
- Market Expansion:

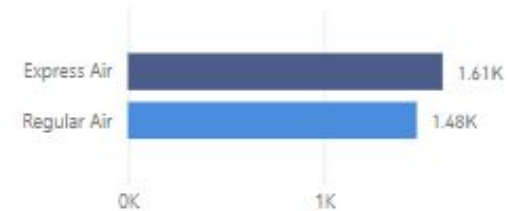
Evaluate opportunities to enhance market share and profitability within both Regular Air and Express Air through targeted marketing and service enhancements.
- Performance Monitoring:

Regularly monitor sales metrics for both shipping methods to identify trends, adjust strategies promptly, and maximize revenue potential.

Sum of Sales by Ship Mode



Avg of Sales by Ship Mode



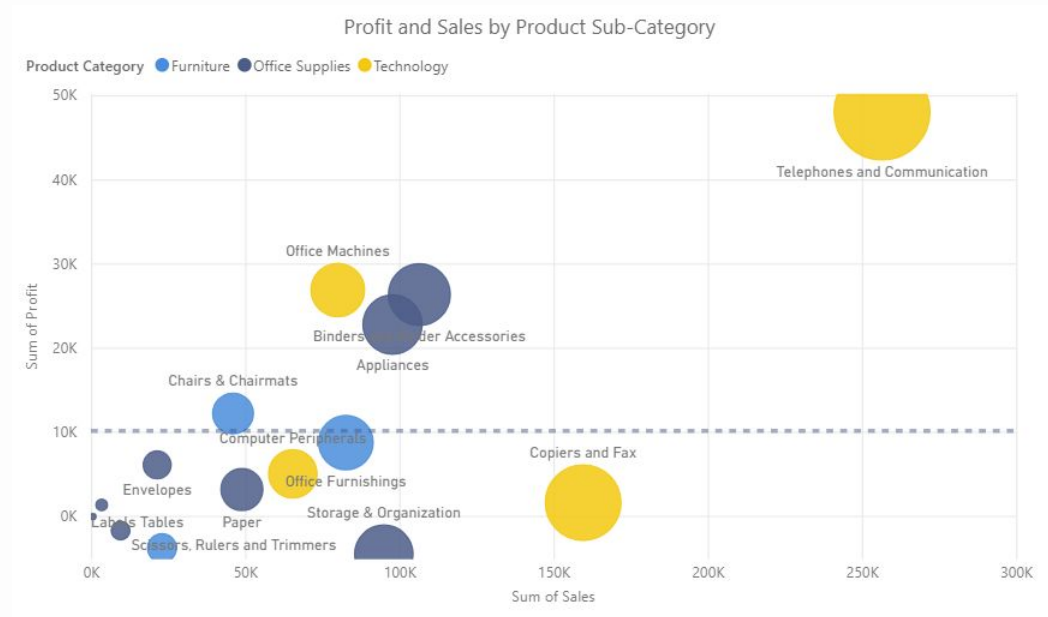
03

Graphic Representation of Insights

Correlation Analysis

Correlation Analysis

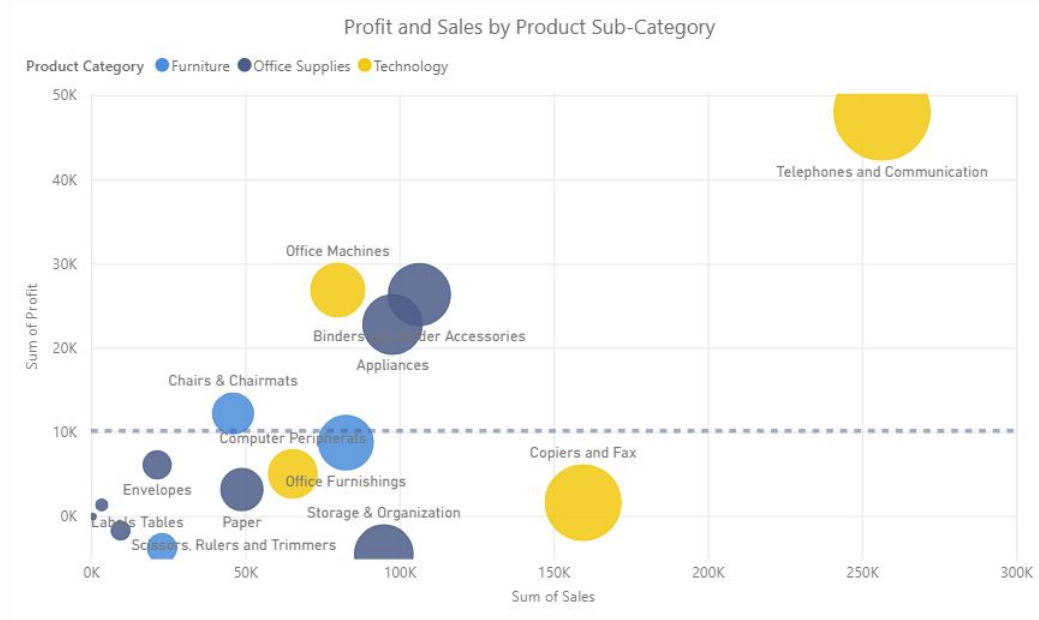
Profit and Sales vs Product Sub-Category



- **Telephones and Communication:**
Leading in Profit and Sales:
Outperforms others in both metrics, showing strong demand and effective pricing.
- **Copiers and Fax:**
High Sales, Low Profit: Despite being second in sales, total profit is below average, indicating cost or pricing issues.

Correlation Analysis

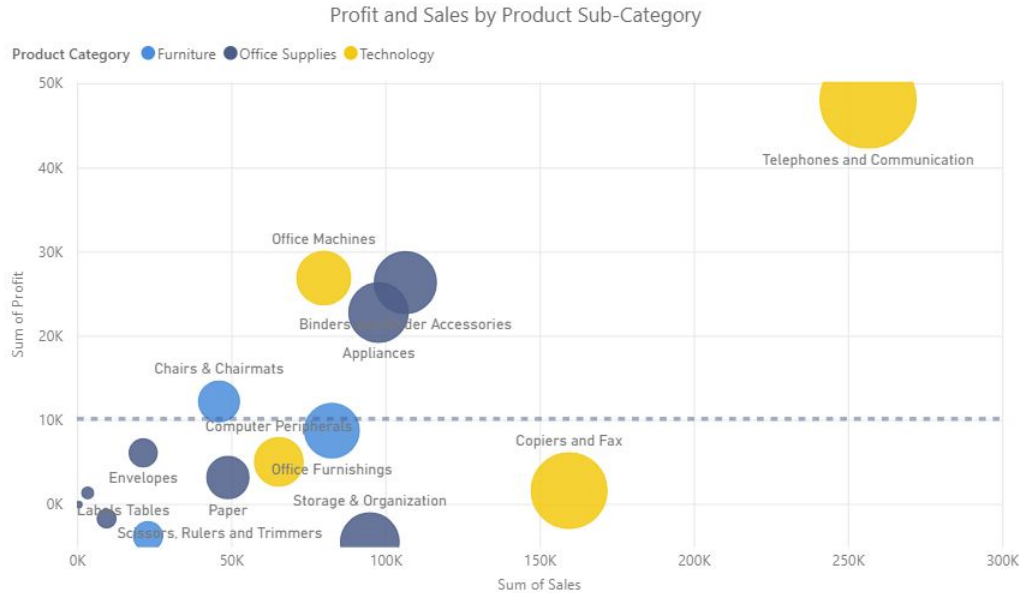
Profit and Sales vs Product Sub-Category



- Above Average Sum Profit:
 - Categories: Office Machines, Binders, Appliances, Chairs & Chairmats.
 - Performance: These subcategories have profits around \$10K, indicating good profitability.
- Low Sales and Profit:
Other Subcategories: Struggle with low sales and profits, needing improvements in market strategy or cost control.

Correlation Analysis

Profit and Sales vs Product Sub-Category

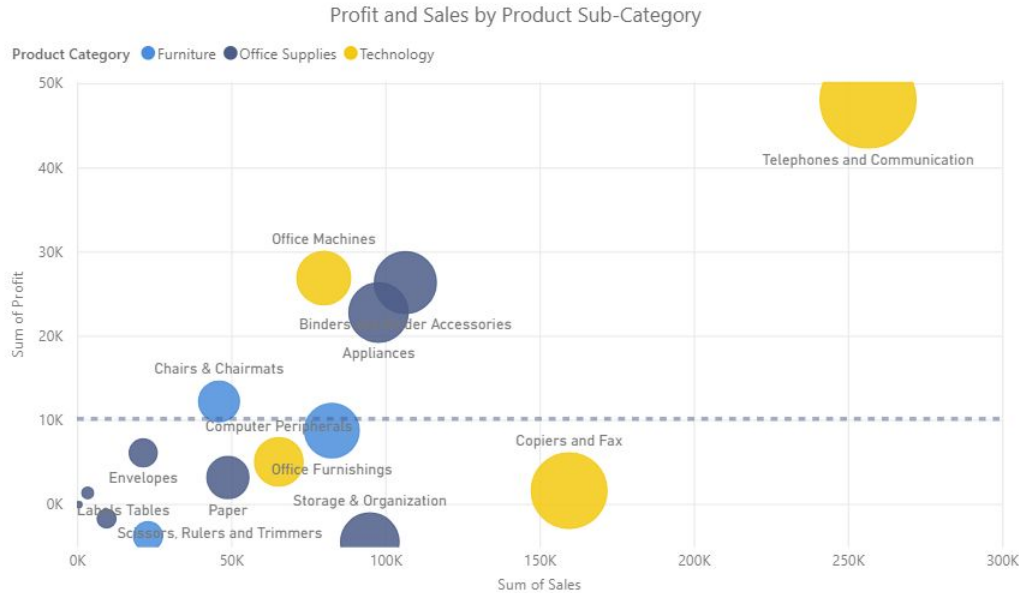


Recommendations

- Focus on High Performers:
 - Telephones and Communication: Leverage strong performance; explore product expansion and premium pricing.
 - Office Machines, Binders, Appliances, Chairs & Chairmats: Maintain and enhance profitability with targeted marketing and product extensions.

Correlation Analysis

Profit and Sales vs Product Sub-Category

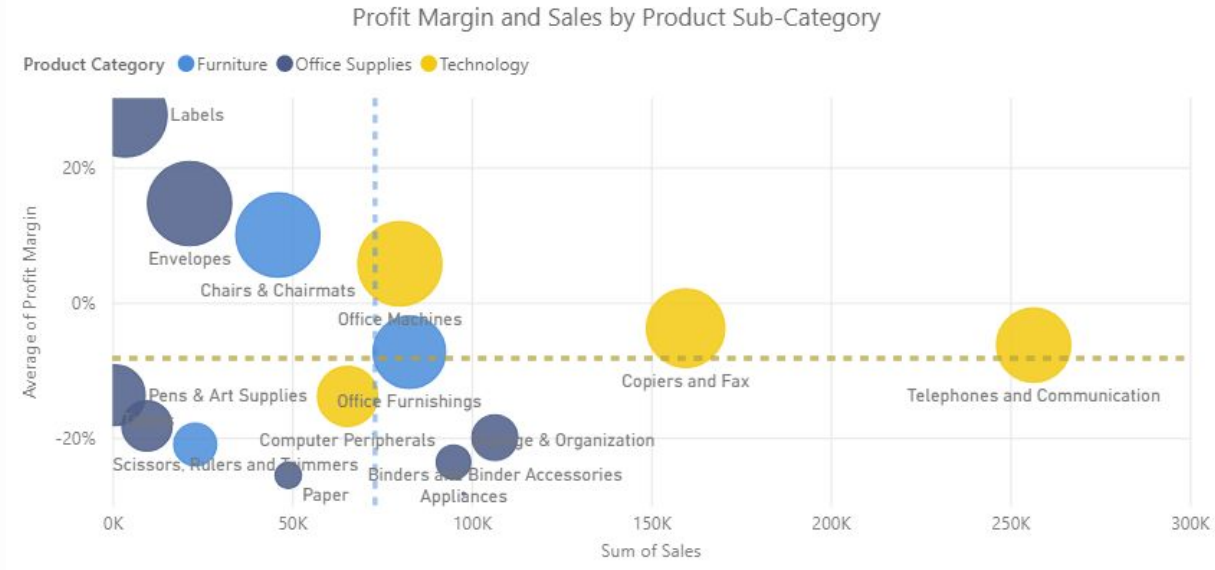


Recommendations

- Address Low Profitability:
Copiers and Fax: Conduct cost analysis and reevaluate pricing to improve profit margins.
- Improve Low Performers:
Underperforming Subcategories: Investigate low sales and profits; revise marketing, improve product quality, or reduce costs.

Correlation Analysis

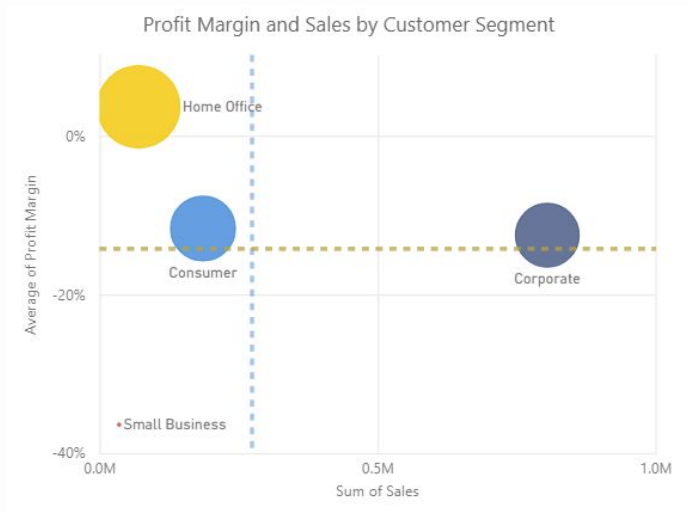
Profit Margin and Sales vs Product Sub-Category



- Negative Average Profit Margins:
 - Observation: Over half of the subcategories are experiencing negative average profit margins.
 - Implication: This widespread issue highlights the need for comprehensive cost control and pricing strategy improvements across multiple areas.

Correlation Analysis

Profit Margin and Sales vs Customer Segment



- Strategic Focus Areas:
 - Home Office: Explore ways to increase sales volume while maintaining positive profit margins.
 - Corporate and Small Business: Conduct detailed cost analyses to identify inefficiencies and adjust pricing strategies to improve profit margins.
 - Consumer: Implement strategies to boost sales volume while improving profit margins.
- Overall Profitability Challenge:** The average profit margin across all four segments is negative, indicating a need for comprehensive cost management and pricing strategy review.

05

Conclusions



Overall Profitability Challenge:

The analysis reveals a significant overall profitability challenge, with the average profit margin across multiple segments and categories being substantially negative. This underscores the urgent need for a comprehensive review of cost management practices and pricing strategies to identify and rectify inefficiencies.

Strategic Focus on High Performers:

Despite the overall negative profitability, certain segments and categories have shown resilience and relative strength. Focusing on these performers can provide valuable insights and strategies that can be applied more broadly.

Recommendations:

- **Cost Management:**

- Conduct detailed cost analyses across all segments to identify high-cost areas.
- Implement measures to eliminate inefficiencies and reduce expenses.

- **Pricing Strategy Review:**

- Reevaluate pricing strategies to ensure alignment with market demand and cost structures.
- Consider dynamic pricing models to optimize revenue.

- **Operational Improvements:**

- Streamline operational processes in underperforming segments.
- Invest in technologies and practices that enhance efficiency,

Recommendations:

- **Market Expansion and Diversification:**
 - Explore growth opportunities within high-performing segments through targeted marketing and product diversification.
 - Identify and tap into niche markets to drive higher sales volumes and profitability.
- **Performance Monitoring:**
 - Establish a robust performance monitoring system to track key sales and profit metrics regularly.
 - Use data-driven insights to make timely strategic adjustments.



Thank You!

For more information, please contact:

Tsen-Yun Hung

Business Analyst

Email: Tsenyun2000@gmail.com

Phone: (+886) 968 979 989

LinkedIn: [linkedin.com/in/tsen-yun-hung](https://www.linkedin.com/in/tsen-yun-hung)

Website/Portfolio: <https://tsenyun2000.wixsite.com/portfolio>