



Improving Sales Performance at Superstore

Maggie Rhee
Data Analytics Course
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Introduction

Superstore is a national retailer serving consumer, corporate and home office customers with office supplies, furniture and technology products.

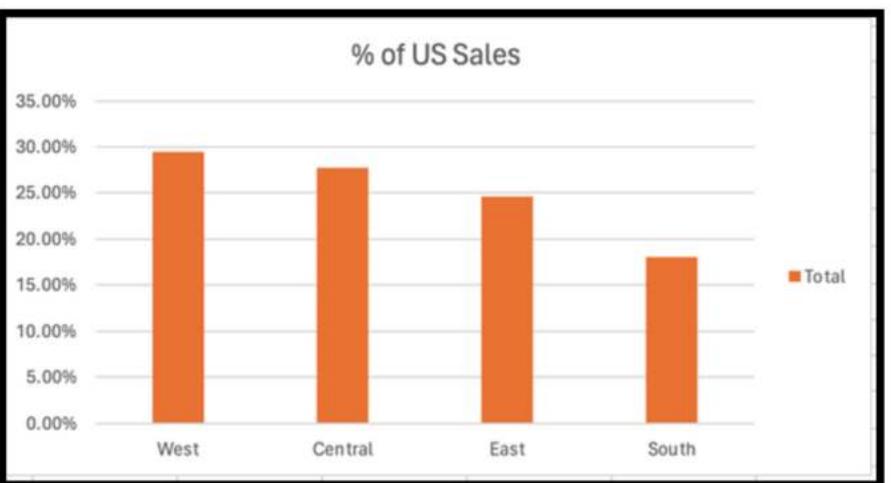
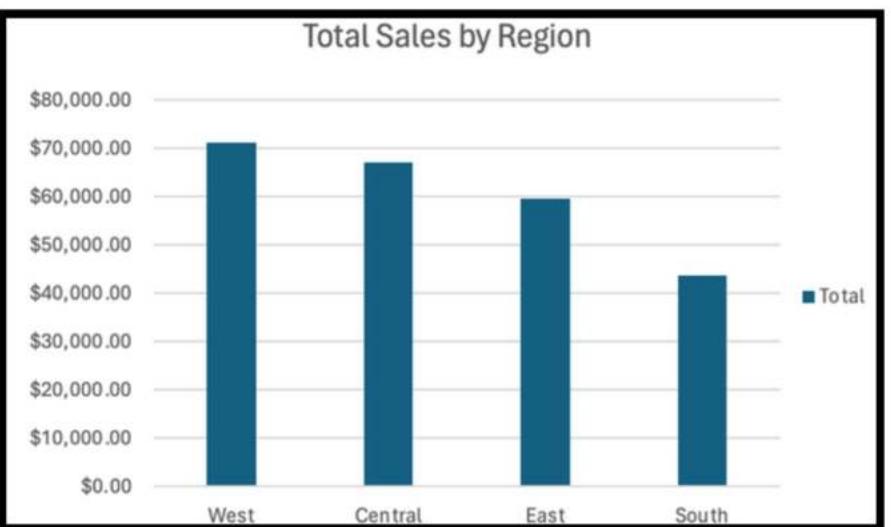
Objective:

This analysis aims to identify key trends and factors affecting Superstore's sales performance across various regions, product categories, and customer segments to optimize operations and enhance profitability.



2.1 Sales by Region

Region	Total Sales	Percent
West	\$71,065.32	29.47%
Central	\$67,009.85	27.79%
East	\$59,491.64	24.67%
South	\$43,563.96	18.07%
Grand Total	\$ 241,130.77	100.00%



Analysis:

The West accounts for the highest sales amongst all regions accounting for 30% of all company sales (\$70K); the South region at the lowest under 20% at \$43K.

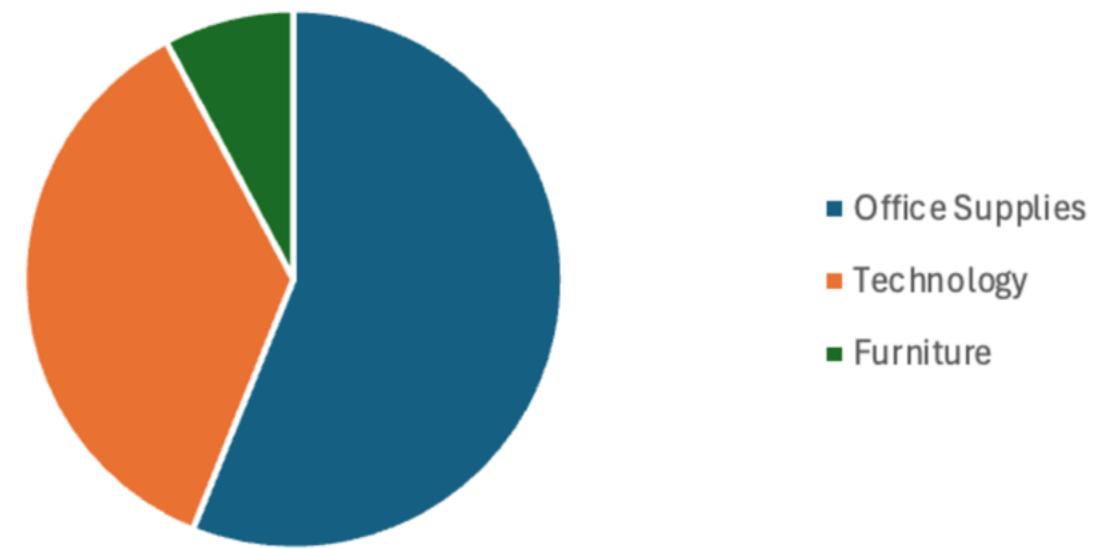
Strategic Recommendation:

Consider reallocating resources from the West into the South region.

2.2 Profit by Product Category

Product Category	Sum of Profit	Percentage
Office Supplies	\$ 12,470.73	66.52%
Technology	\$ 8,017.47	42.77%
Furniture	\$ (1,742.02)	-9.29%
Grand Total	\$ 18,746.18	100.00%

Total Profits by Category



Analysis:

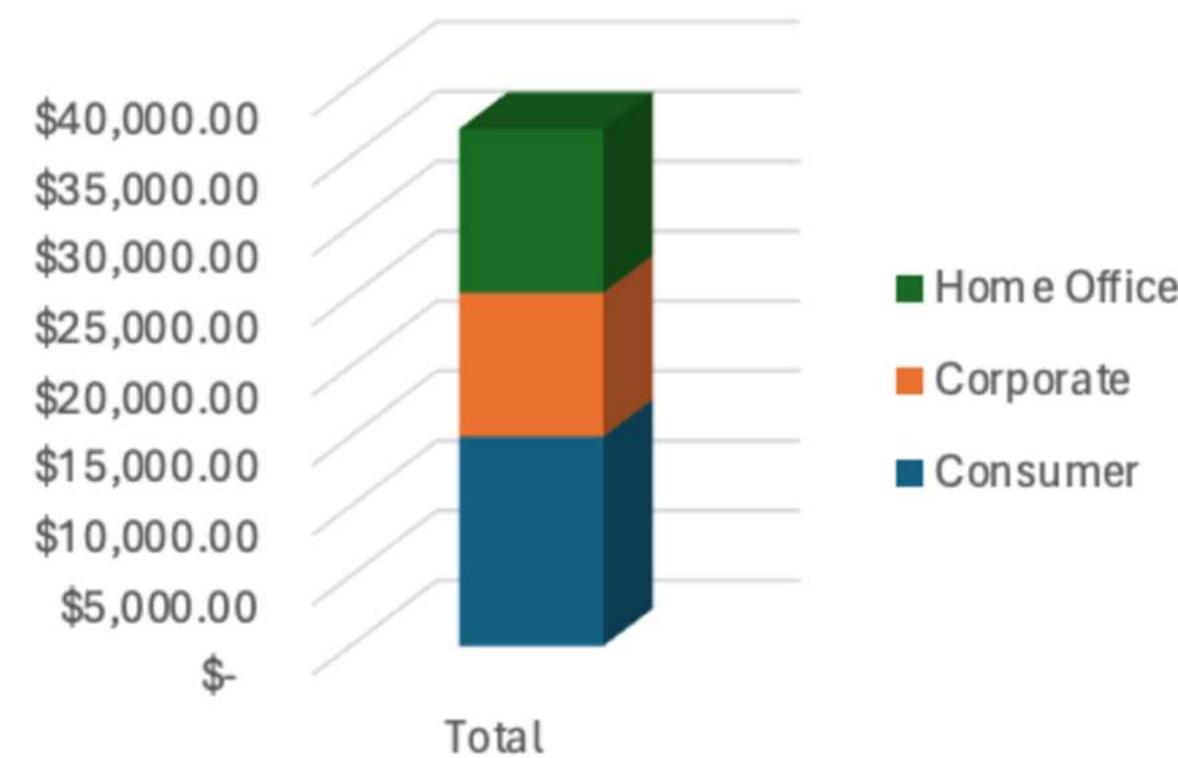
Office Supplies generates the greatest revenue amongst all the categories, representing 66% of total profits. Furniture is showing weakest results, losing profits of over \$1700.

Strategic Recommendation:

Further investigate whether the loss in Furniture is specific to one region or a category problem. This information can help direct refocusing on issues such as operations specific to that region or whether it's a category issue to focus on pricing, discount structure and marketing.

2.3 Sales Performance by Customer Segment

Customer Segment	Total Sales	Percentage
Consumer	\$ 118,554.30	49.17%
Corporate	\$ 70,821.30	29.37%
Home Office	\$ 51,755.16	21.46%
Grand Total	\$ 241,130.77	100.00%



Analysis:

Consumer segment accounts for nearly half of all sales for the company followed by corporate at 30% and home office at 21%.

Strategic Recommendation:

Focusing on marketing efforts specific to home office and corporate segments may help drive up more sales in these categories.

2.4 Top 10 Products by Sales

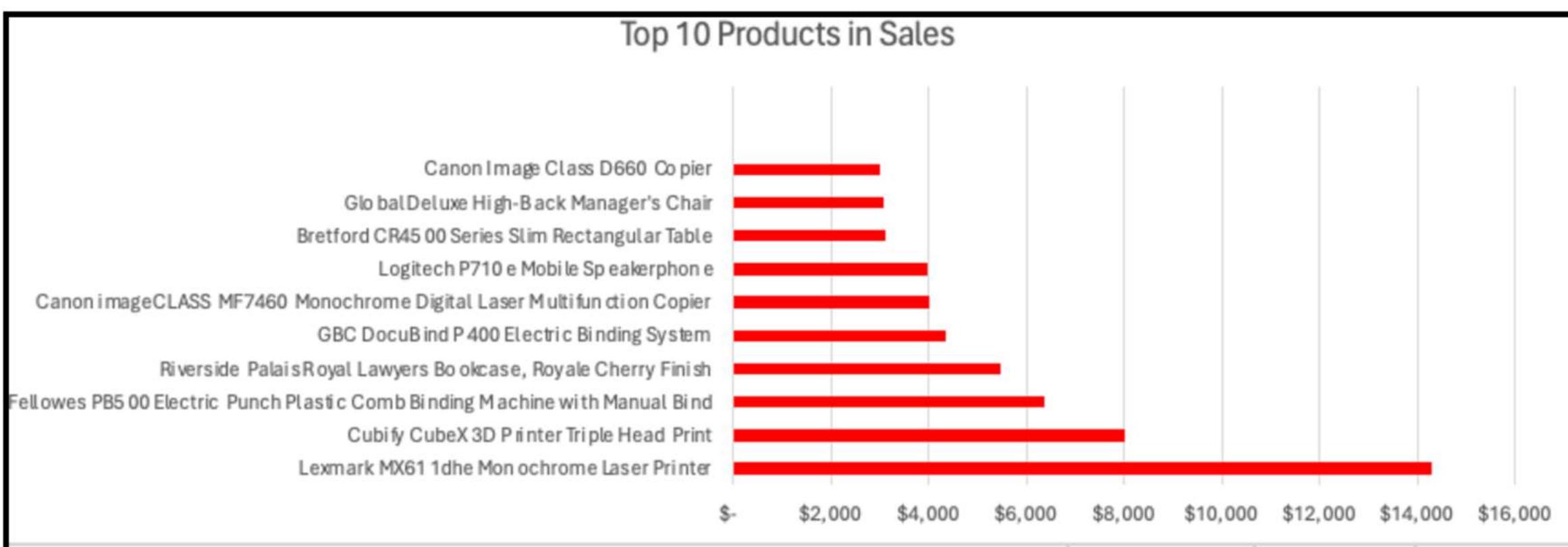
Product	Sales (\$)
Lexmark MX611dhe Monochrome Laser Printer	\$ 14,280
Cubify CubeX 3D Printer Triple Head Print	\$ 8,000
Fellowes PB500 Electric Punch Plastic Comb Binding Machine with Manual Bind	\$ 6,355
Riverside Palais Royal Lawyers Bookcase, Royale Cherry Finish	\$ 5,480
GBC DocuBind P400 Electric Binding System	\$ 4,355
Canon imageCLASS MF7460 Monochrome Digital Laser Multifunction Copier	\$ 3,992
Logitech P710e Mobile Speakerphone	\$ 3,965
Bretford CR4500 Series Slim Rectangular Table	\$ 3,116
Global Deluxe High-Back Manager's Chair	\$ 3,060
Canon Image Class D660 Copier	\$ 3,000

Analysis:

Lexmark Laser Printer is the top selling product @ \$14,280 for the company, followed by Cubify 3D printer @ \$8000.

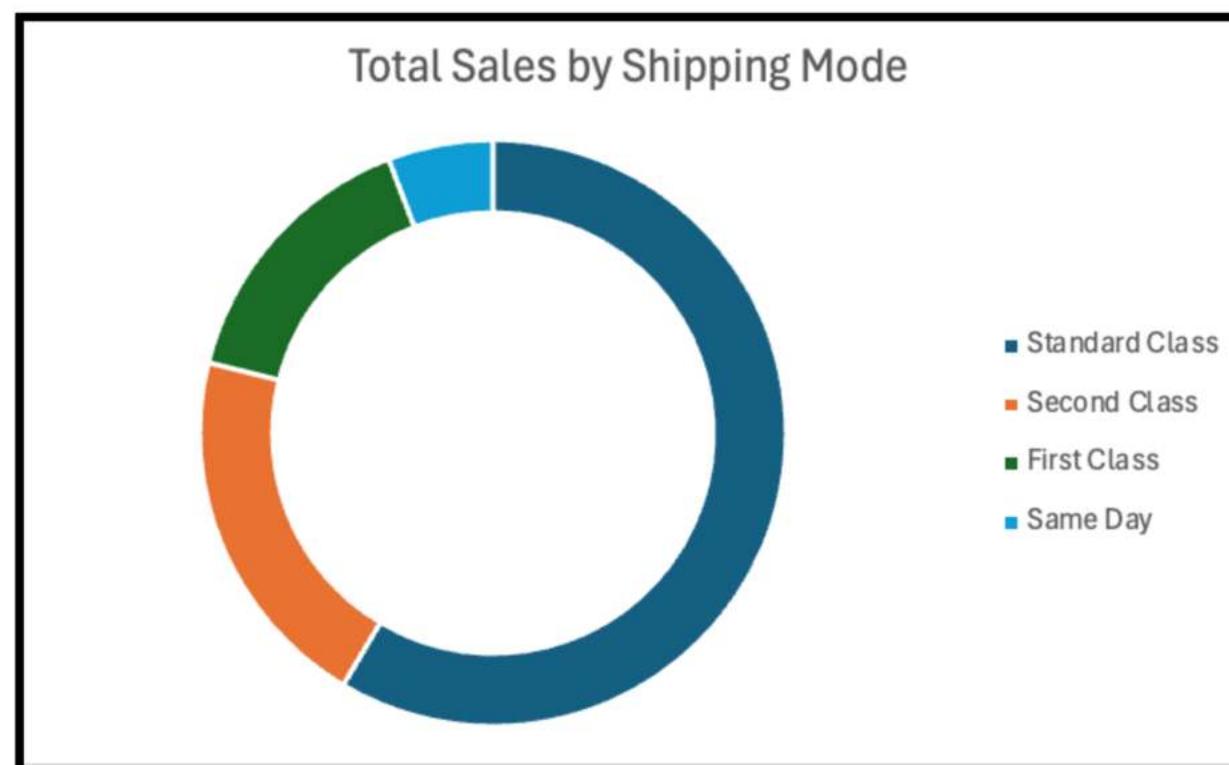
Strategic Recommendation:

Ensure that top selling products are well-stocked to maintain level of sales volume.



2.5 Sales by Shipping Mode

Shipping Mode	Total Sales	% Total Sales
Standard Class	\$141,145.03	58.53%
Second Class	\$49,014.09	20.33%
First Class	\$36,982.74	15.34%
Same Day	\$13,988.91	5.80%
Grand Total	\$241,130.77	100.00%



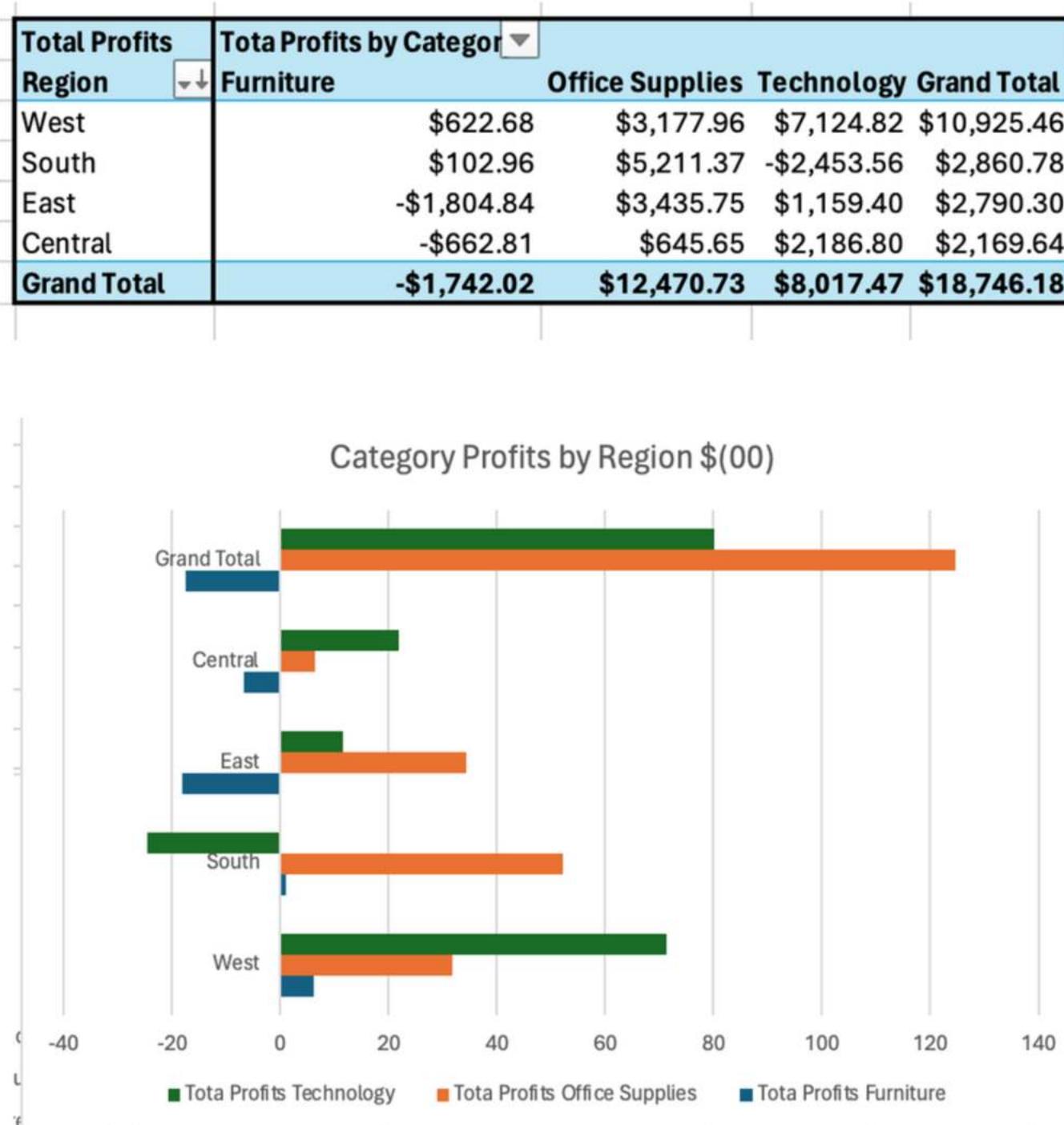
Analysis:

Nearly 60% of sales were delivered via standard shipping representing \$141K in revenue verses less than 6% @ \$14K by same day shipping.

Strategic Recommendations:

Consider offering free shipping for a minimum spend on all purchases. Work with finance in operations to determine a threshold to drive more spend by standard, second, and first class purchases.

2.6 Profit by Region and Category



Analysis:

West region is strongest regions in profits in all 3 categories. South had significant loss in profits in technology (-2K) and East in furniture (-1.8K) and Central also in furnish @ -\$662. Furniture category overall shows weakness in net profits.

Strategic Recommendation:

Further evaluate to understand why East and Central are losing profits in Furniture causing category to net out at a loss nationally. Understand variables that contribute to gains in West on Furniture and replicate those strategies in other regions.

2.7 Average Discount by Product Category

Category	Average of Discount
Furniture	17.86%
Office Supplies	16.38%
Technology	14.16%
Grand Total	16.27%



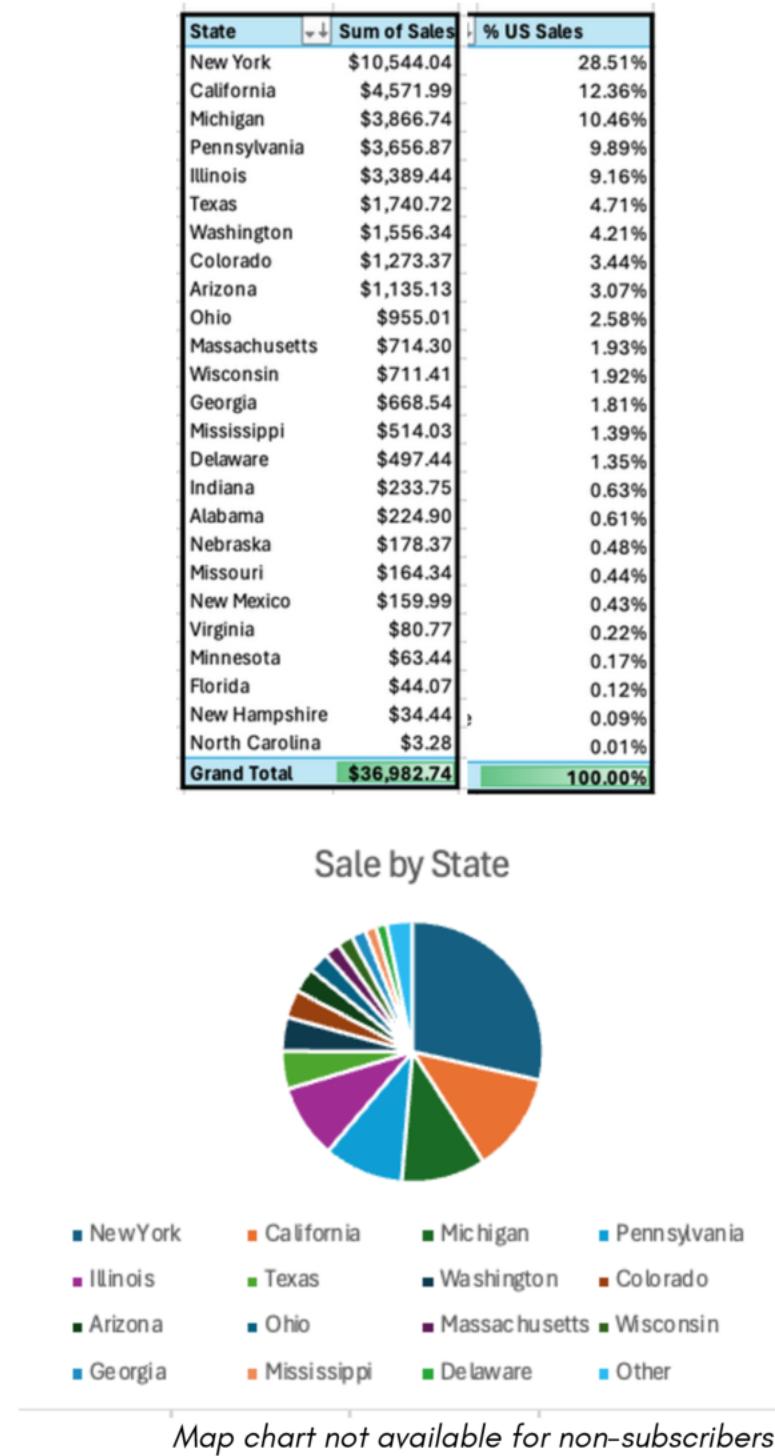
Analysis:

There are similar discount levels across all categories ranging from 14-18% with Furniture at the highest end.

Strategic Recommendation:

Since the furniture category is the sole contributor to the company's decline in profits (see 2.2), the financial operations team should evaluate and adjust the discount structure to restore profitability in this category.

2.8 Sales by State



Analysis:

New York ranks first in total sales, contributing nearly 30%, followed by California at 12% and Michigan at 10%. In contrast, ten states, including Florida, New Hampshire, and North Carolina, each contribute less than 1% to overall company sales, placing them at the bottom of the rankings.

Strategic Recommendation:

Conduct a deeper analysis of historical data for these states. Explore why California contributes only 12% to total sales, and examine the factors behind the low rankings of states like North Carolina and Florida, despite having strong DMAs such as Charlotte and Miami.

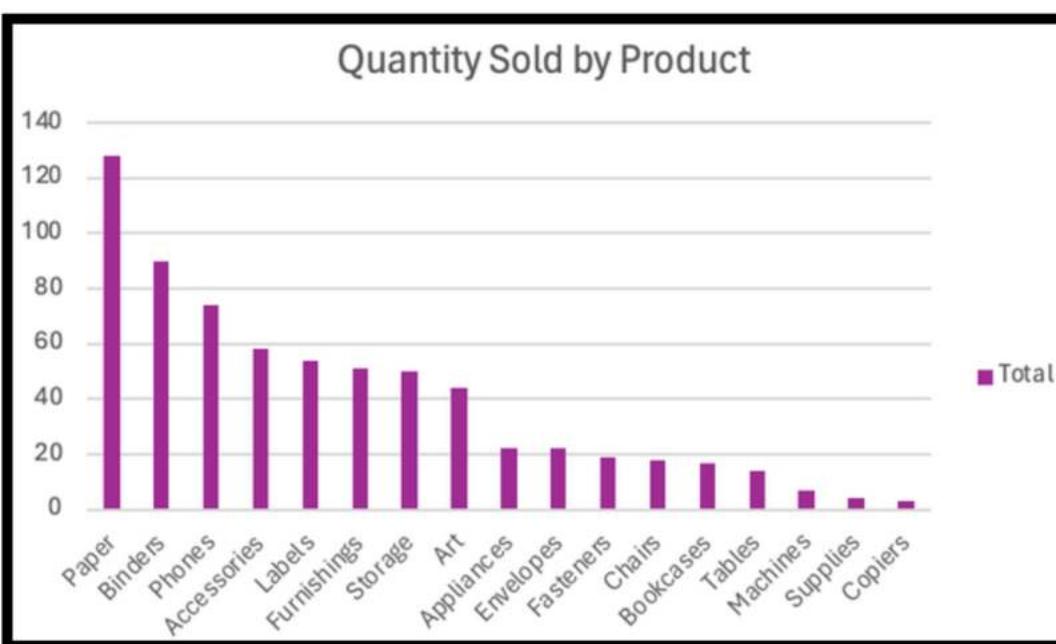
Additionally, investigate why states like Mississippi and Alabama rank higher than the lowest-performing states. Identify any insights or learnings that can be applied to improve performance in these underperforming regions.

2.9 Quantity Sold by Product Sub-Category

Products	Quantity	% of Total Quantity
Paper	128	18.96%
Binders	90	13.33%
Phones	74	10.96%
Accessories	58	8.59%
Labels	54	8.00%
Furnishings	51	7.56%
Storage	50	7.41%
Art	44	6.52%
Appliances	22	3.26%
Envelopes	22	3.26%
Fasteners	19	2.81%
Chairs	18	2.67%
Bookcases	17	2.52%
Tables	14	2.07%
Machines	7	1.04%
Supplies	4	0.59%
Copiers	3	0.44%
Grand Total	675	100.00%

Analysis:

Paper and other office supplies such as binders, phones, etc account for high volume of company sales, verses other products contributing to less than 3% of total sales such as chair bookcases, tables, etc.

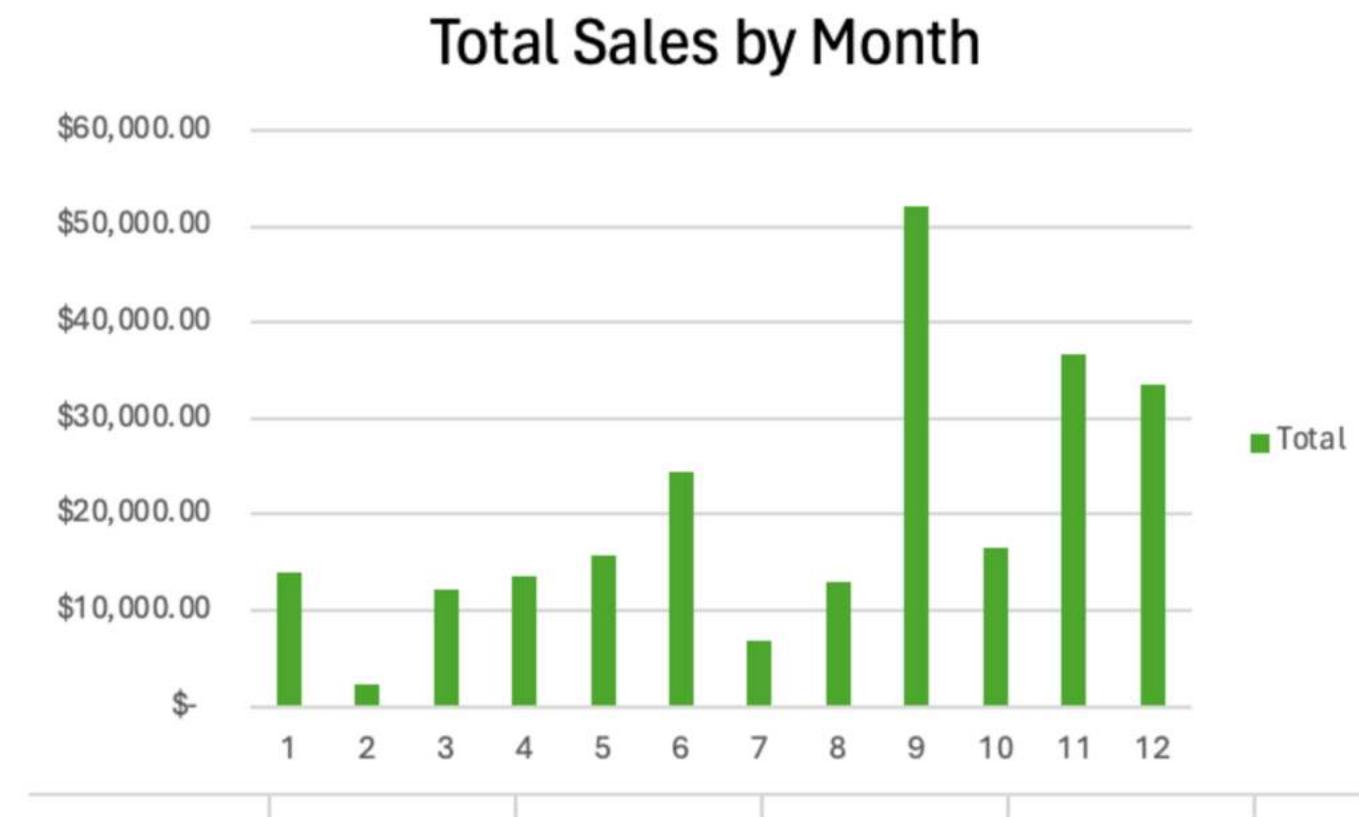


Strategic Recommendation:

Evaluate the factors contributing to the low sales volume of products. Is this due to distribution challenges or cost issues? Given that the furniture category is losing profits, gaining insights into these factors is crucial.

2.10 Sales by Month

Month	Sum of Sales
1	\$ 13,953.08
2	\$ 2,404.39
3	\$ 12,273.43
4	\$ 13,509.64
5	\$ 15,697.46
6	\$ 24,485.70
7	\$ 6,843.39
8	\$ 13,081.90
9	\$ 52,116.05
10	\$ 16,506.08
11	\$ 36,705.70
12	\$ 33,553.97
Grand Total	241130.7679



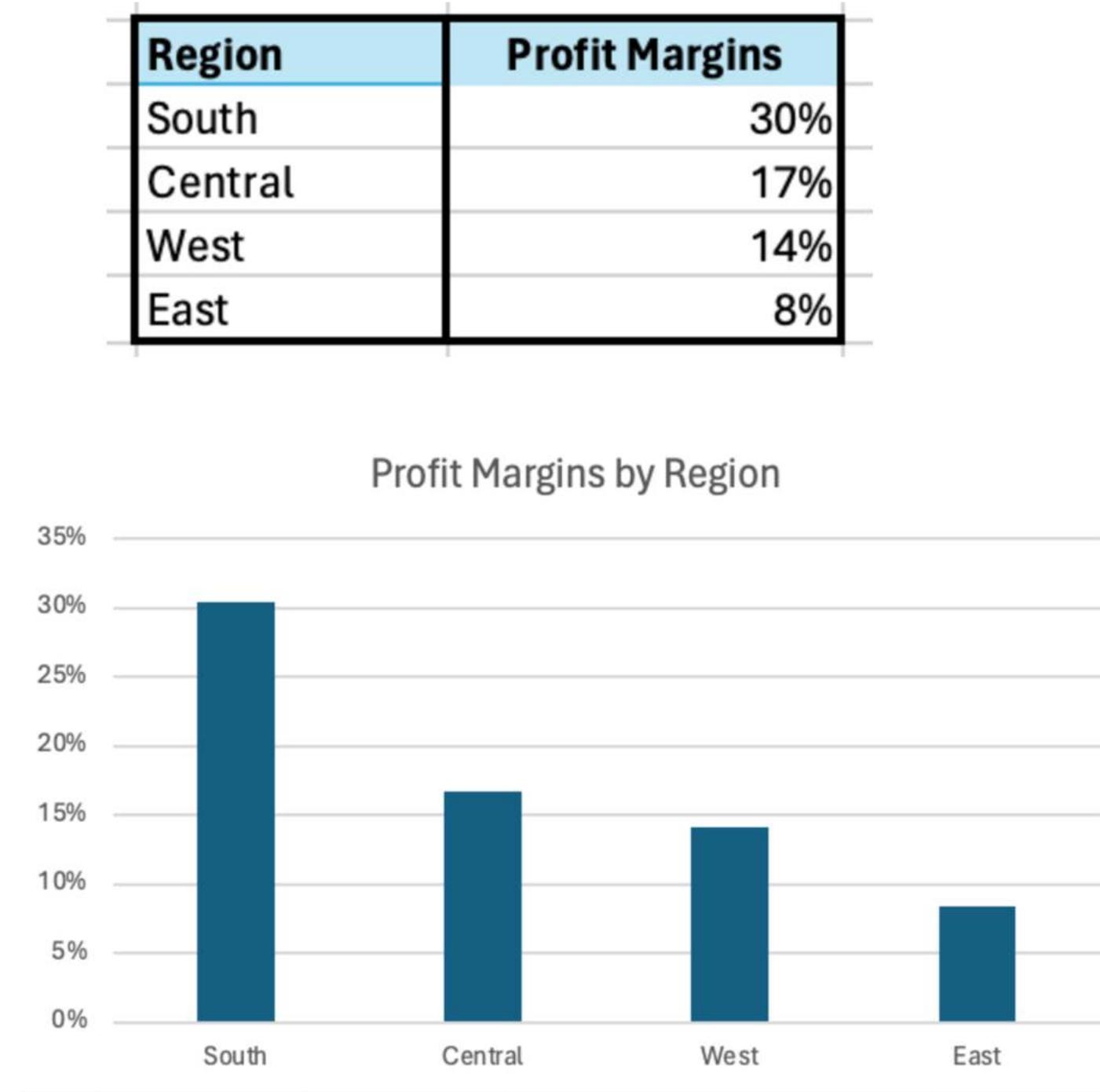
Analysis:

September was the strongest month, generating over \$52K in sales, while February and July were the weakest, with sales of \$3K and \$6K, respectively.

Strategic Recommendation:

For weaker months like February and July, consider implementing targeted promotions, discounts, or events to stimulate demand. You could introduce loyalty programs, referral incentives, or seasonal campaigns to attract more customers during these slow periods.

2.11 Profit Margin by Region



Analysis:

South region has the highest profit margins for the company at 30%, and the East the lowest at 8%.

Strategic Recommendation:

Further evaluate the factors contributing to the lowest profit margins in the East, despite strong overall sales in the region (2.1).

This analysis will help determine whether the issue lies in pricing and discount structures or in operational challenges related to the distribution and availability of higher-margin products.

2.12 Customer Lifetime Value (CLV)

Heavy Purchasers by Total Spend

Customer	LTV	# of Orders
Adam Bellavance	\$ 4,438.69	5.00
Bart Watters	\$ 3,111.82	2.00
Sue Ann Reed	\$ 2,735.95	1.00
Mark Packer	\$ 1,668.99	5.00
Zuschuss Carroll	\$ 1,549.77	4.00
Paul Knutson	\$ 1,422.25	2.00
Gene Hale	\$ 1,288.46	2.00
Patrick O'Brill	\$ 1,269.87	5.00
Yoseph Carroll	\$ 1,199.98	1.00
Emily Grady	\$ 1,165.33	5.00
David Philippe	\$ 1,050.60	3.00
Dave Brooks	\$ 1,038.28	2.00

Frequent Purchaser by Order #

Customer	LTV	# of Orders
Ted Butterfield	\$ 655.09	7.00
Jesus Ocampo	\$ 570.49	7.00
Bryan Spruell	\$ 760.80	6.00
Joni Blumstein	\$ 627.92	6.00
Mark Packer	\$ 1,668.99	5.00
Steven Cartwright	\$ 487.50	5.00
Patrick O'Brill	\$ 1,269.87	5.00
Emily Grady	\$ 1,165.33	5.00
Adam Bellavance	\$ 4,438.69	5.00
Kelly Lampkin	\$ 855.27	5.00
Eudokia Martin	\$ 90.40	4.00
Tracy Hopkins	\$ 619.86	4.00

Analysis:

There are valuable Superstore customers, namely Adam Bellavance, Bart Waters (table 1), being the highest spenders. Also in table 2 are customers who are ranked as the most frequent shoppers, Ted Butterfield, Jesus Ocampo, etc.

Strategic Recommendation:

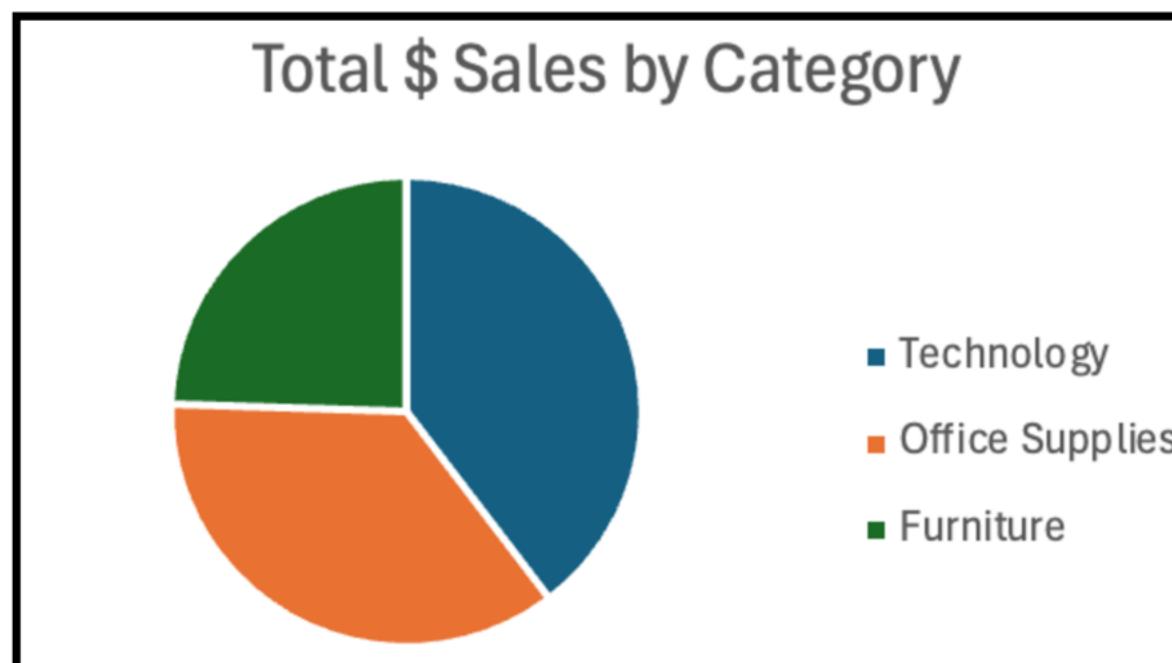
Develop a loyalty program for retention to increase spend and visits to store. Provide incentives and promotions, i.e discounts for the infrequent shopper to influence return visits.

2.13 Sales Contribution by Product Category

Category	Total Sales	% of Sales
Technology	\$ 14,655.32	39.63%
Office Supplies	\$ 13,266.43	35.87%
Furniture	\$ 9,060.98	24.50%
Grand Total	\$ 36,982.74	100.00%

Analysis:

Technology accounts for the largest percentage of the company's sales at \$14,655, followed by office supplies (\$13,266) and furniture (\$9,060).

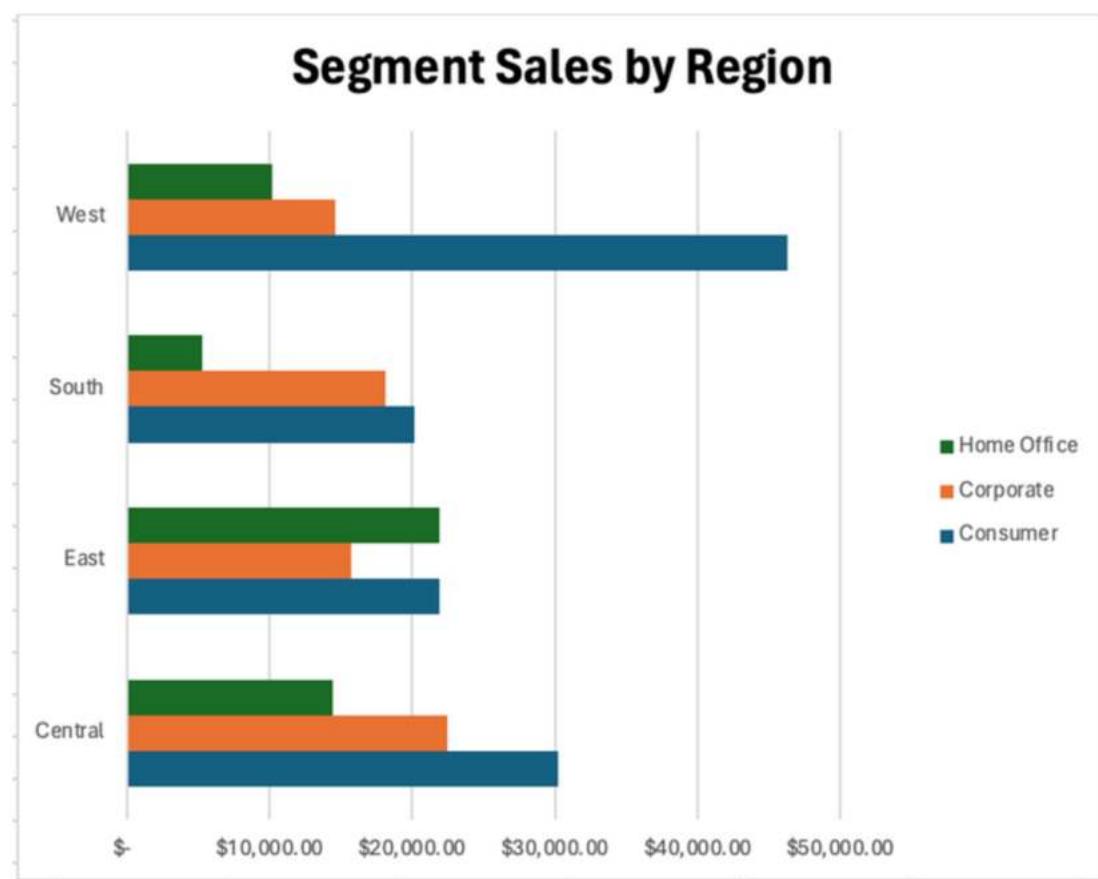


Strategic Recommendation:

Develop strategies to further grow sales in technology category which is the strongest for the company in revenue and profits.

2.14 Sales by Customer Segment and Region

Region	Consumer	Corporate	Home Office	Grand Total
Central	\$ 30,215.69	\$ 22,405.83	\$ 14,388.33	\$ 67,009.85
East	\$ 21,877.08	\$ 15,727.45	\$ 21,887.12	\$ 59,491.64
South	\$ 20,184.87	\$ 18,077.76	\$ 5,301.33	\$ 43,563.96
West	\$ 46,276.67	\$ 14,610.26	\$ 10,178.38	\$ 71,065.32
Grand Total	\$ 118,554.30	\$ 70,821.30	\$ 51,755.16	\$ 241,130.77



Analysis:

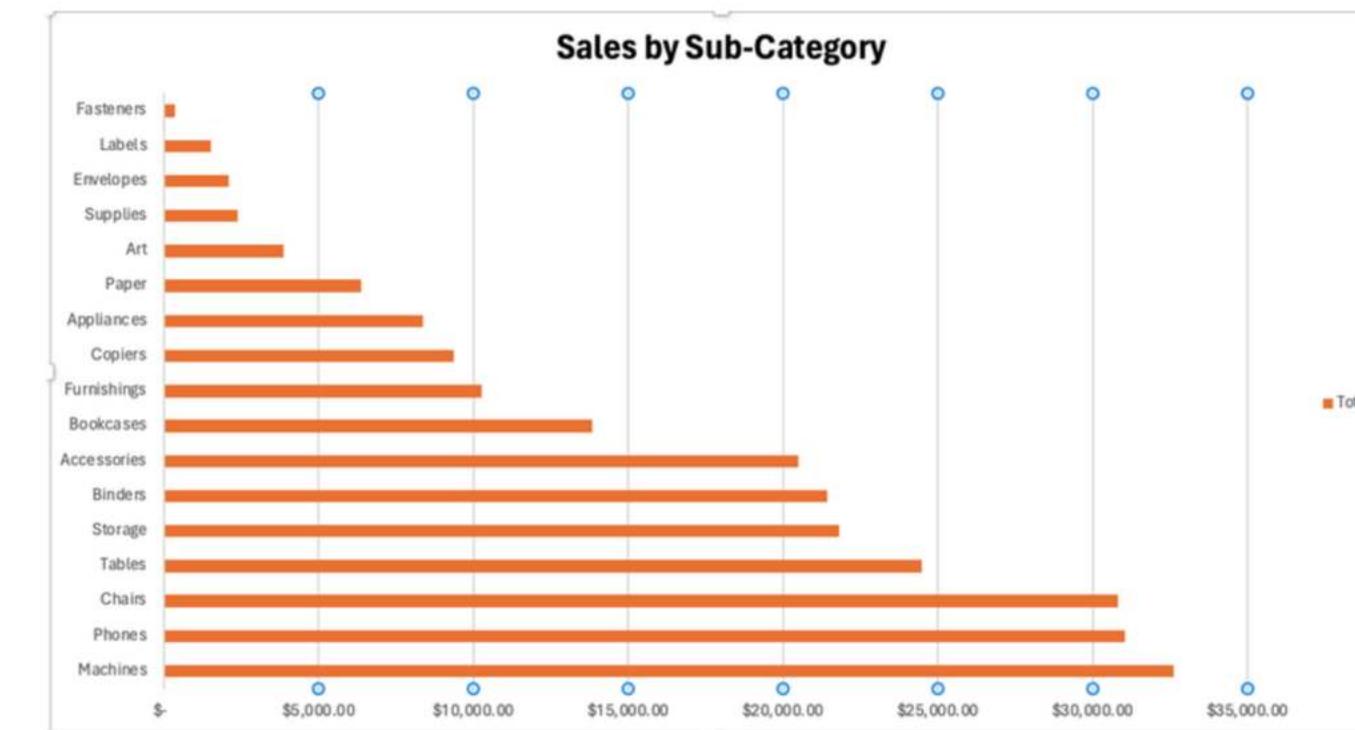
- The Consumer segment in the West shows the strongest performance with over \$46K in sales, followed by the Consumer segment in the Central region at \$30K.
- The weakest performance is in the Home Office segment in the South, with sales of \$5K.

Strategic Recommendation:

- With the Consumer segment performing strongly in both the West and Central regions, analyze what is driving their success, i.e. customer demos, marketing strategies and apply these insights to boost sales in the other regions.
- Further investigate the reasons behind the low sales in the South for Home Office, i.e market demand, distribution challenges, pricing, etc. Consider targeted marketing campaigns, promotions, or product adjustments to better align with the needs of this region.

2.15 Sales by Product Sub-Category

Sub-Products	Sum of Sales	Sum of Sales
Machines	\$ 32,622.12	13.53%
Phones	\$ 31,036.50	12.87%
Chairs	\$ 30,809.09	12.78%
Tables	\$ 24,476.61	10.15%
Storage	\$ 21,809.64	9.04%
Binders	\$ 21,412.53	8.88%
Accessories	\$ 20,481.39	8.49%
Bookcases	\$ 13,834.99	5.74%
Furnishings	\$ 10,256.89	4.25%
Copiers	\$ 9,359.83	3.88%
Appliances	\$ 8,369.88	3.47%
Paper	\$ 6,386.24	2.65%
Art	\$ 3,858.08	1.60%
Supplies	\$ 2,391.65	0.99%
Envelopes	\$ 2,109.33	0.87%
Labels	\$ 1,534.34	0.64%
Fasteners	\$ 381.66	0.16%
Grand Total	\$ 241,130.77	100%



Analysis:

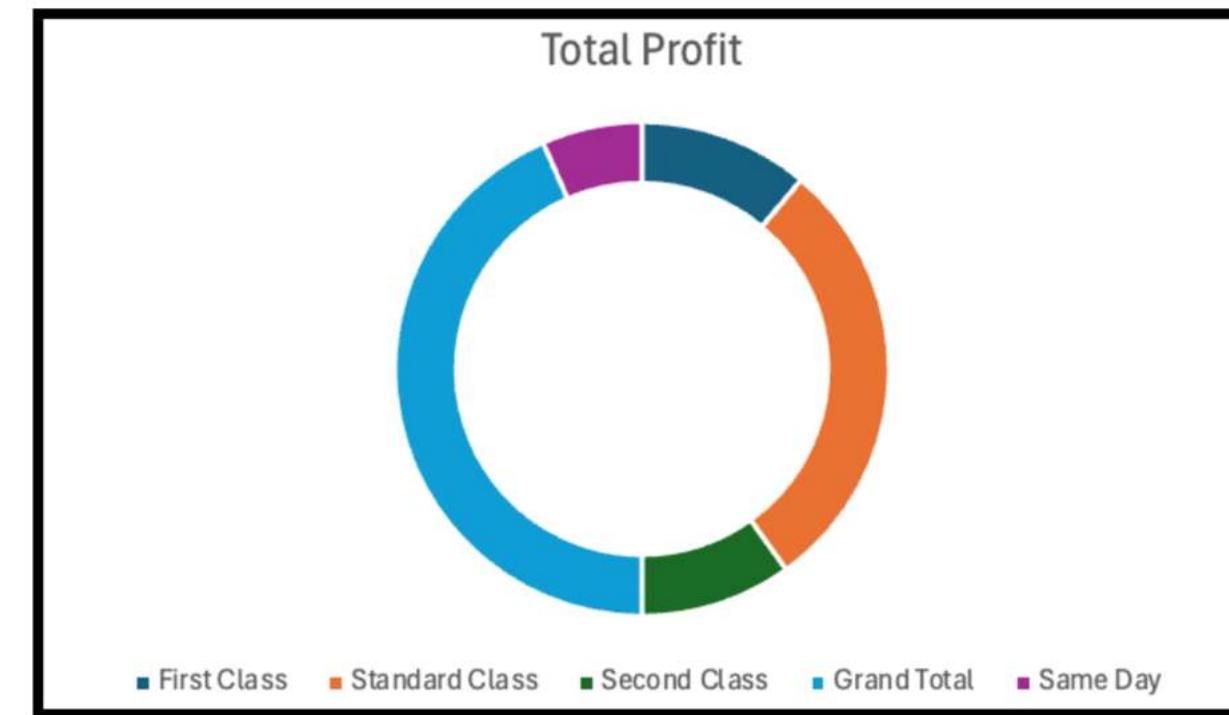
Machines, Phones and Chairs had the strongest sales amongst all sub-categories each generating over \$30K. Fasteners were the weakest at \$380K in sales.

Strategic Recommendation:

Investigate further into the sales of specific products within the Fastener sub-category and invest in promotions or realign other strategies, ie. pricing structure, distribution issues to bring up more sales.

2.16 Profit by Ship Mode

Ship Mode	Total Profit	Total Sales
Standard Class	\$ 12,495.65	\$ 141,145.03
First Class	\$ 4,804.98	\$ 36,982.74
Second Class	\$ 4,278.34	\$ 49,014.09
Same Day	\$ (2,832.79)	\$ 13,988.91



Ship Mode	Profit Margin
First Class	13%
Standard Class	9%
Second Class	9%
Same Day	-20%

Analysis:

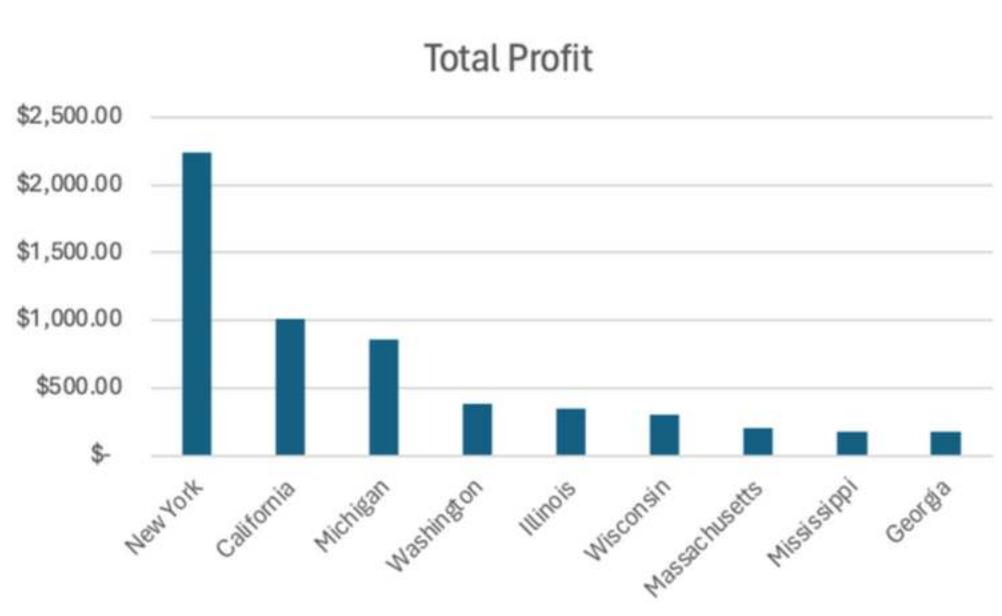
First Class shipping yields the highest profit margins amongst all sales, although a low volume of overall revenue. Standard class yields the largest profits with strong profit margins.

Strategic Recommendation:

Promote First Class shipping on orders or standard class for its high profit margins.

2.17 Top 10 States by Profit

State	Total Profit	% of US Profit
New York	\$ 2,236.24	47%
California	\$ 1,008.18	21%
Michigan	\$ 854.58	18%
Washington	\$ 380.69	8%
Illinois	\$ 344.27	7%
Wisconsin	\$ 306.50	6%
Massachusetts	\$ 207.15	4%
Mississippi	\$ 179.39	4%
Georgia	\$ 178.37	4%



Analysis:

New York leads in total profits representing nearly half of all company profits, followed by California, then Michigan.

Strategic Recommendation:

Given that the East region has the lowest profit margins (see 2.11), focus on strategies to promote the sales of higher-margin products in this area.

Similarly, with the South and Central regions having the highest profit margins for the company, prioritize promotions in these states to drive increased revenue and further enhance profitability.

2.18 Average Sales per Order by Segment

Segment	Avg \$ Per Order
Consumer	\$ 524.58
Corporate	\$ 524.60
Home Office	\$ 728.95



Analysis:

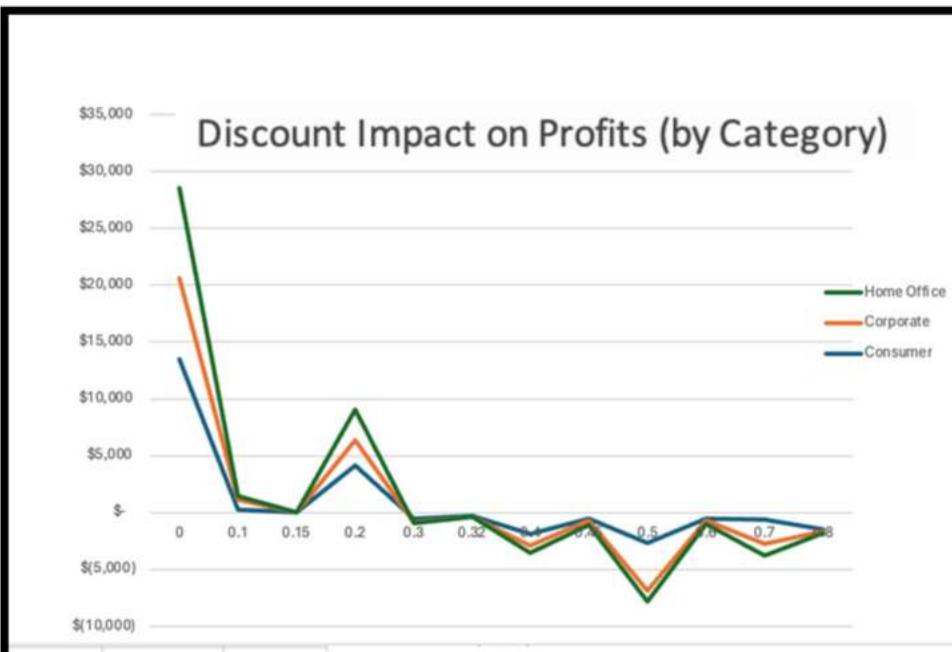
The Home Office segment is the strongest, with sales averaging \$728.95 per order. The Consumer and Corporate segments also perform well, with similar averages of \$524 per order.

Strategic Recommendation:

Despite having the highest average sales per order, the Home Office segment has the lowest overall sales revenue (see 2.3). To boost sales volume in this segment, focus on acquiring new customers for home office products. Implement targeted promotions to attract new customers, as well as loyalty programs to encourage repeat purchases from existing customers.

2.19 Discount Impact on Profit by Category

Sum of Profit	Column Labels	Consumer	Corporate	Home Office
Discount				
0.00%	\$	13,503	\$ 7,139	\$ 7,894
10.00%	\$	290	\$ 861	\$ 287
15.00%	\$	42	\$ (30)	
20.00%	\$	4,135	\$ 2,245	\$ 2,695
30.00%	\$	(510)	\$ (373)	\$ (46)
32.00%	\$	(329)	\$ (36)	\$ (47)
40.00%	\$	(1,893)	\$ (1,014)	\$ (622)
45.00%	\$	(540)	\$ (167)	\$ (350)
50.00%	\$	(2,707)	\$ (4,196)	\$ (935)
60.00%	\$	(510)	\$ (162)	\$ (326)
70.00%	\$	(637)	\$ (2,130)	\$ (978)
80.00%	\$	(1,476)	\$ (190)	\$ (140)



Analysis:

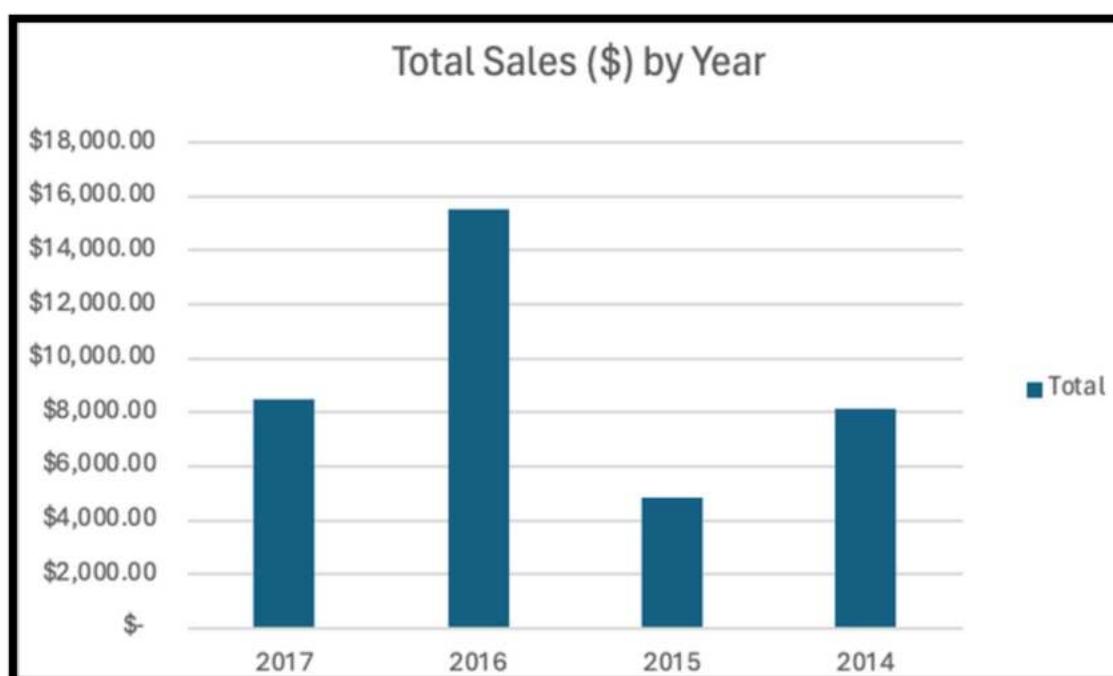
Technology category yielded the greatest loss in profits discounting at 9% and also the highest in profits

Strategic Recommendation:

Promote First Class shipping on orders or standard class for its high profit margins with discounts around 1-4%.

2.20 Sales Growth YOY

Year	Sum of Sales	YOY % Growth
2017	\$ 8,493.51	-45%
2016	\$ 15,515.77	221%
2015	\$ 4,836.18	-41%
2014	\$ 8,137.28	N/A



Analysis:

Sales in 2017 had a 45% dip from year prior 2016 which was a record year at \$15,515 a 220% from year prior. Company sales revenue increases one year followed by decline the following.

Strategic Recommendation:

To have more consistency YOY in sales, focus on diversifying revenue streams in specific markets to reduce dependency on single categories, sub-categories or profits for income. This could involve expanding product lines, entering new markets, or targeting different customer segments.

Conclusion:

Superstore should consider revising its pricing models and marketing plans to widen overall profit margins. The company may also explore expanding revenue streams, such as offering more products in the consumer category or opening retail locations in the South.

To refine strategies, the company should analyze month-to-month and week-to-week activities and adopt a predictive model. This will help develop more targeted strategies for each category and region.

Additionally, Superstore should focus on long-term, sustainable growth initiatives rather than short-term spikes. This could include implementing customer retention programs, loyalty schemes, and long-term marketing plans.

To mitigate risks, the company should establish a financial buffer during strong years to cushion the impact of weaker sales periods. Investing in initiatives like research and development, marketing, or process improvements during high-revenue years will support long-term growth.

These recommendations aim to reduce volatility and ensure more stable and predictable revenue growth.

Questions:

For questions, feel free to reach me directly on Discord, @Maggie.

