

Superstore Sales Dashboard

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Project Objective

The goal of this project is to create a dashboard that explores sales and profit trends in the Superstore dataset, identify differences in sales and profits by region, and visualize key business metrics using Tableau.

Data Description

The dataset contains sales, profit, and order information of a fictional retail company. It includes 9994 orders between 2015 and 2018.

Questions to Investigate

The following questions will be investigated using the dashboard:

- What regions are most profitable?
- How do monthly sales trends change across regions?
- Which subcategories of products have the most sales?
- Are discount levels affecting profit?
- What regions are underperforming?

Dashboard

The Superstore Sales Dashboard is an interactive dashboard that analyzes sales and profit for a fictional superstore by region and categories. The Superstore Sales Dashboard is located in the Appendix. The dashboard contains KPIs such as Total Sales, Total Profits, Average Discount, and Total Quantity. There is a dropdown filter that filters each chart and KPI by region. The sales chart contains total sales per month. The profit bar chart shows the total profit by region. The total sales by category are shown for each sub-category and a state map is also included to show what each region covers. Also, each chart can be filtered by state and sub-category.

Data Analysis

Question 1: What regions are most profitable?

The following table shows the total profit for each region.

Table 1: Region and Total Profit

Region	Total Profit
Central	\$39,706
East	\$91,523
South	\$46,749
West	\$108,418

The most profitable region is the West followed by the East coast. The Central and South region have a lower profit compared to the West and East coasts.

Question 2: How do monthly sales trends change across regions?

The monthly sales chart for the Central region is shown in Figure 1. Sales peaked in September 2014 at \$34,408.69. Total sales are \$0.5M.

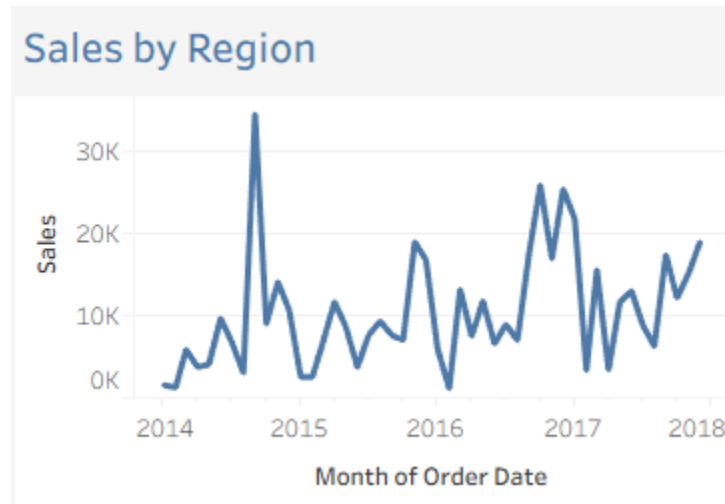


Figure 1: Sales by Region (Central)

The monthly sales chart for the East region is shown in Figure 2. Sales peaked in November 2018 at \$45,633.64. Sales rose from 2014 to 2018. Total sales are \$0.68M.

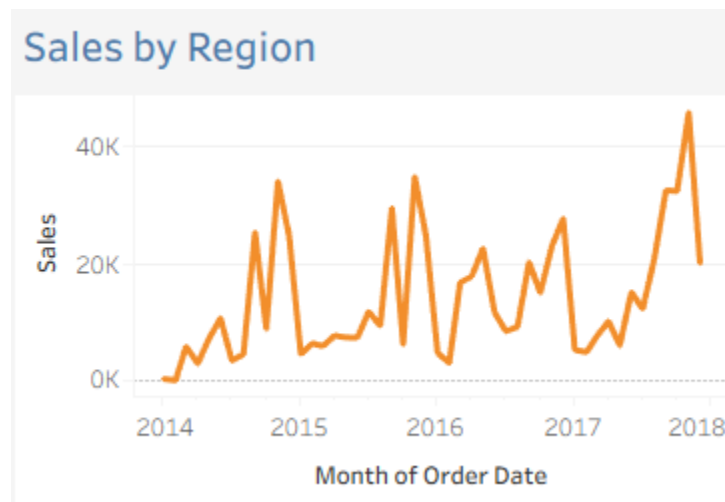


Figure 2: Sales by Region (East)

The monthly sales chart for the South region is shown in Figure 3. Sales peaked in March 2014 at \$32,911.12. Sales were high in March 2014 but decreased significantly. There is an upward trend in sales in 2018. Total sales are \$0.39M.

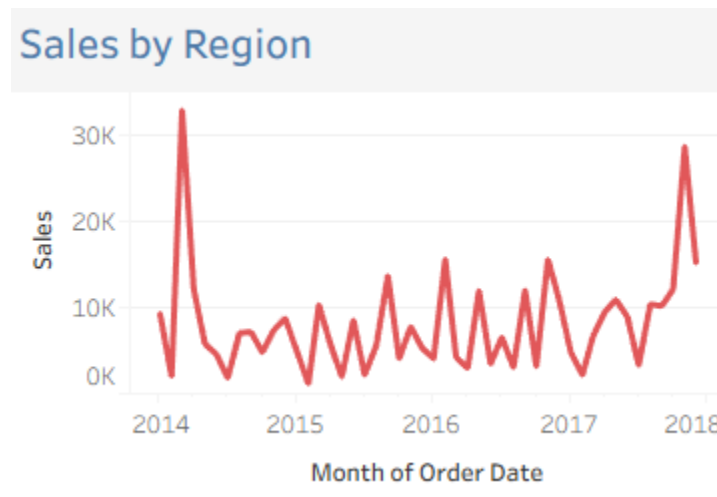


Figure 3: Sales by Region (South)

The monthly sales chart for the West region is shown in Figure 4. Sales peaked in December 2016 at \$33,121.50. Sales rose steadily between 2014 and 2018. Total sales are \$0.73M.

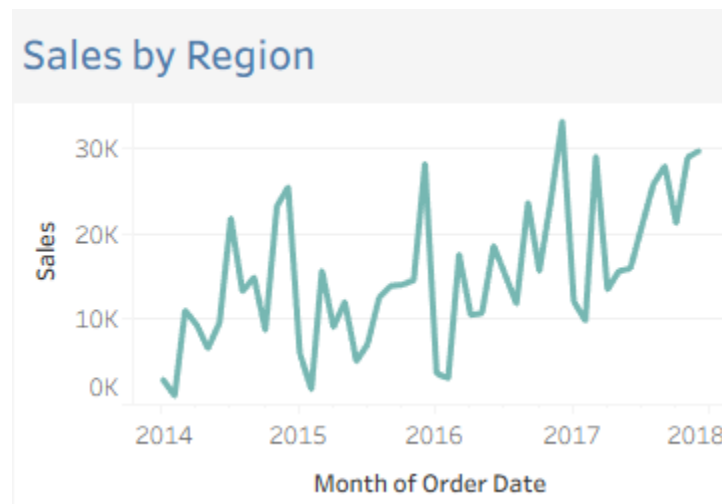


Figure 4: Sales by Region (West)

Question 3: Which sub-categories of products have the most sales?

There are three categories: furniture, office supplies, and technology. Consistently, across all regions, the top selling sub-categories are chairs, storage, and phones. The total sales are \$101,781, \$70,533, and \$98,684, respectively. Some sub-categories have a negative

return. The following table shows the total sales, total profits, and average discount for each sub-category.

Table 2: Total Sales, Total Profit, and Average Discount of Each Sub-Category

Sub-Category	Total Sales	Total Profit	Average Discount
Bookcases	\$114.9K	(\$3K)	21.11%
Chairs	\$328.4K	\$27K	17.02%
Furnishings	\$91.7K	\$13K	13.83%
Tables	\$207K	(\$18K)	26.13%
Appliances	\$107.5K	\$18K	16.65%
Art	\$27.1K	\$7K	7.49%
Binders	\$203.4K	\$30K	37.23%
Envelopes	\$16.5K	\$7K	8.03%
Fasteners	\$3K	\$1K	8.20%
Labels	\$12.5K	\$6K	6.87%
Paper	\$78.5K	\$34K	7.49%
Storage	\$223.8K	\$21K	7.47%
Supplies	\$46.7K	(\$1K)	7.68%
Accessories	\$167.4K	\$42K	7.85%
Copiers	\$149.5K	\$56K	16.18%
Machines	\$189.2K	\$3K	30.61%
Phones	\$330K	\$45K	15.46%

Most sub-categories have a positive return except bookcases, tables, and supplies.

Question 4: Are discount levels affecting profit?

Table 2 shows that discount levels don't affect total profits for each category.

Table 3 shows each region, total profit, and discount level.

Table 3: Average Discount and Total Profit for Each Region

Region	Total Profit	Discount
Central	\$39,706	24.04%
East	\$91,523	14.54%
South	\$46,749	14.73%
West	\$108,418	10.93%

As shown in the table, at a high discount rate, the total profit was lowest and at a low discount rate, the total profit was highest. At a discount rate close to 14-15%, there seems to be no relationship between profit and discount for East and South regions.

Question 5: What regions are underperforming?

The regions that are underperforming are the Central and South regions. Both regions have low sales and profits. The Central region has \$0.5M in total sales with about \$39,706 in total profit. The South region has \$0.39M in total sales with about \$46,749 in total profit. In particular, the Central region also has a high discount rate.

Conclusion

The key insights are listed below.

- West Region is the most profitable with total sales of \$0.73M and total profits of \$108K.
- The Central and South regions are underperforming
- Central region has low profits, but a high discount rate
- South region has low sales, but trending upward in 2018
- Tables and Bookcases have negative profit despite large sales

The Central and South regions underperform in comparison to East and West regions. For the Central region, the discount rate should be lowered to increase profits. The South region has the lowest sales, so sales need to improve for a higher profit. In 2018, sales are improving for the South region, indicating growth in sales and profit.

For sub-categories, tables and bookcases have a large number of sales, but there is a loss in return. The pricing strategy and discount rate should be adjusted to make a profit. This would boost profit for all regions.

Appendix

