

Technical Report

Superstore Sales Analysis



Introduction

This report analyzes SuperStore sales on all levels (Regions, States, Segments, Categories, etc) to explore the weak areas and all business problems.

Overview

The dataset contains sales and profit, so I will also create a cost column to help me in the analysis

SQL Query:

```
alter table superstore
add cost decimal(18,2)
```

```
update superstore
set cost = sales - profit
```

Regional Level:

I will do the financial analysis at the regional level:

SQL Query

```
select region , sum(sales) as total_sales
from superstore
group by region
order by 2 desc
```

Region	Total Sales
West	725 K
East	678 K
Central	501 K
South	391 K

- The South region has the lowest sales by **391 K\$**.
- The West region has the highest sales of **725 K\$**.

Profitable region:

SQL query:

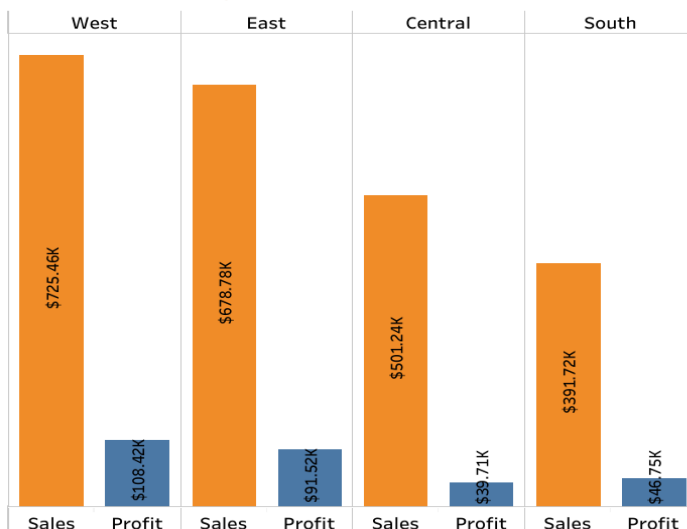
```
select region , sum(profit) as total_profit , Round(((sum(profit)/sum(sales))*100),2)
as profit_margin
from superstore
group by region
order by 2 desc
```

Region	Total Profit	Profit Margin
West	108 K\$	14.94 %
East	91 K\$	13.48 %
South	46 K\$	11.93 %
Central	39 K\$	7.92 %

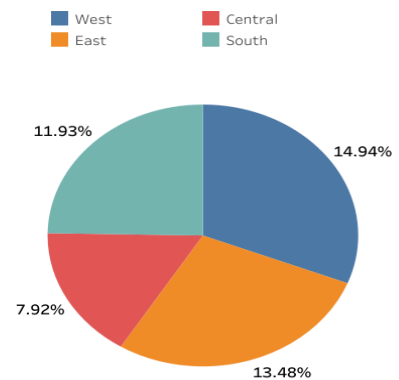
Despite **the South region** having the lowest sales, but has a higher profit than **the Central region**

- **The West region** is the highest profit region with a **14.94 % profit margin**
- **The Central region** has the lowest profit margin, so this weak area is more than the **South**.

Sales And Profit by Regions



Profit Margin for Regions



City Overview:

I will conduct a city-level financial analysis to determine which cities are driving performance and which areas require improvement. :

- The leading five cities in terms of sales performance are:

SQL Query

```
SELECT city, region,
       SUM(sales) AS city_sales,
       ROUND(SUM(sales) * 100.0 / SUM(SUM(sales)) OVER (PARTITION BY region), 2) AS
city_sales_pct
FROM superstore
GROUP BY city, region
ORDER BY city_sales_pct DESC
LIMIT 5;
```

Region	Region	Total Sales	% of Region Sales
New York City	East	256 K\$	37.77 %
Los Angeles	West	175 K\$	24.24 %
Seattle	West	119 K\$	16.48 %
San Francisco	West	112 K\$	15.53 %
Philadelphia	East	109 K\$	16.07 %

- **New York City** has the highest sales by **256 K\$** and belongs to the **East region** (*the second region in total sales*) with **37.77 % of its sales**
- **New York City and Philadelphia** have nearly **50% of the East region sales.**
- **Los Angeles, Seattle, and San Francisco** have **50% of the West region sales**

- **The bottom five cities with the least sales figures are:**

SQL Query

```
SELECT city, region,
       SUM(sales) AS city_sales,
       ROUND(SUM(sales) * 100.0 / SUM(SUM(sales)) OVER (PARTITION BY region), 5) AS city_sales_pct
FROM superstore
GROUP BY city, region
ORDER BY city_sales asc
LIMIT 5;
```

Region	Region	Total Sales	% of Region Sales
Abilene	Central	1.39 \$	0.00028 %
Elyria	East	1.82 \$	0.00027 %
Jupiter	South	2.06 \$	0.00053 %
Pensacola	South	2.21 \$	0.00056 %
Ormond Beach	South	2.81 \$	0.00072 %

- The table shows the bottom five countries in sales. Maybe we have to close this or downsize the business there.



Segment Overview:

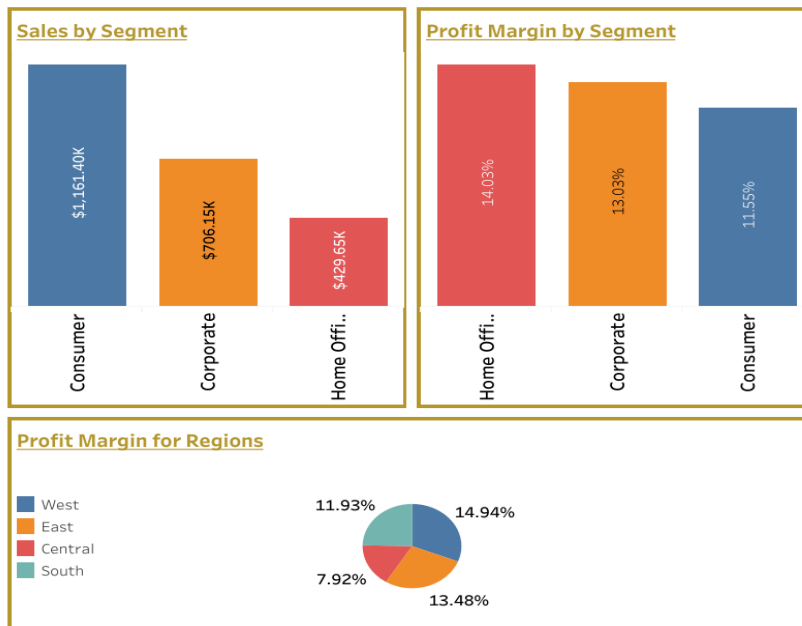
A financial analysis will be performed at the segment level to determine which segments are contributing most to performance and which need enhancement.

```
select segment , sum(sales) as total_sales
      ,sum(profit) as total_profit
      ,Round(((sum(profit)*100)/(sum(sales))),2) as profit_margin
from superstore
group by 1
order by 2 desc
```

Segment	Total Sales	Total Profit	Profit Margin
Consumer	1.16 M\$	134 K\$	11.55 %
Corporate	706 K\$	92 K\$	13.03 %
Home Office	429 K\$	60 K\$	14.03 %

- The Consumer Segment is the highest total sales by **1.16 M\$**, but with the lowest Profit margin by 11.55%
- The Home office segment has the lowest sales by **429 K\$**, but has the highest profit margin, more than the others by 14.03

By improving the services provided to the Home Office segment, we can boost its sales and drive greater profitability.



Categories Overview:

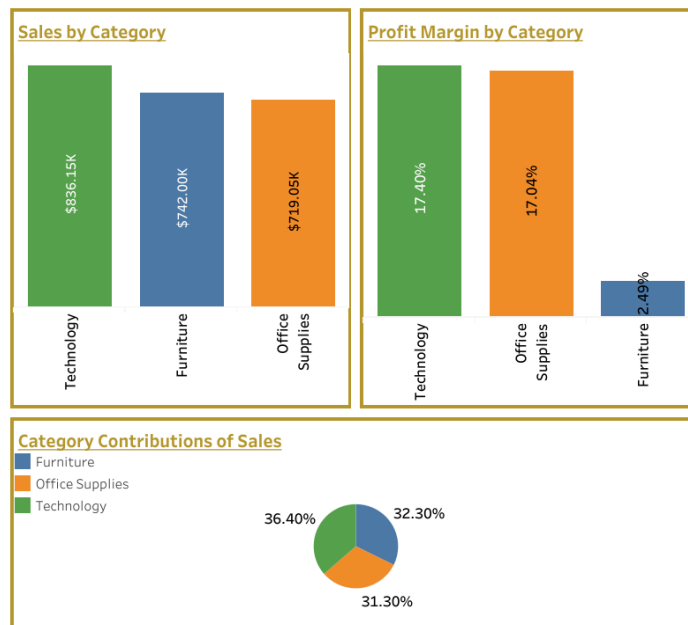
A financial analysis will be performed at the category level to determine which categories are contributing most to performance and which need enhancement.

```
SELECT category,
       SUM(sales) AS total_sales,
       ROUND(SUM(sales) * 100.0 / SUM(SUM(sales)) OVER (), 2) AS contribution_sales
, sum(profit) as total_profit
, Round(((sum(profit)*100)/(sum(sales))),2) as profit_margin
FROM superstore
GROUP BY category
ORDER BY total_sales DESC;
```

Category	Total Sales	Contribution of Sales	Total Profit	Profit Margin
Technology	836 K\$	36.40 %	145 K\$	17.40 %
Furniture	742 K\$	32.30 %	18 K\$	2.49 %
Office Supplies	719 K\$	31.30 %	122 K\$	17.04 %

- The **Technology** category is the highest total sales by **836 K\$**, with the highest Profit Margin by 17.4%
- The **Office Supplies** category has the lowest sales by **719 K\$**, but has a higher profit margin than the Furniture category by 15 %

To enhance overall performance, cost reduction strategies should be applied to **the Furniture category** to increase profitability, and marketing initiatives should be strengthened for **the Office Supplies category** to drive higher sales.



Sub-Category Overview:

A financial analysis will be performed at the sub-category level to determine which sub-categories are contributing most to performance and which need enhancement.

This table shows the top five sub-categories by sales:

- **Phones** are the highest total sales by **330 K\$**, *with a Profit Margin of 13.49%*
- Despite **Tables** having high sales by **206 K\$**, *with a loss in profit margin of -8.56%, these sales are not effective; it is very lose for the store*

```
SELECT sub_category,
       SUM(sales) AS total_sales,
       ROUND(SUM(sales) * 100.0 / SUM(SUM(sales)) OVER (), 2) AS contribution_sales
, sum(profit) as total_profit
, Round(((sum(profit)*100)/(sum(sales))),2) as profit_margin
FROM superstore
GROUP BY sub_category
ORDER BY total_sales DESC
limit 5
```

Sub-Category	Total Sales	Contribution of Sales	Total Profit	Profit Margin
Phones	330 K\$	14.37 %	44.50 K\$	13.49 %
Chairs	328 K\$	14.30 %	26.59 K\$	8.10 %
Storage	223 K\$	9.74 %	21.27 K\$	9.51 %
Tables	206 K\$	9.01 %	-17.72 K\$	- 8.56 %
Binders	203 K\$	8.85 %	30.22 K\$	14.86 %

This table shows the Loss Profit with sub-categories:

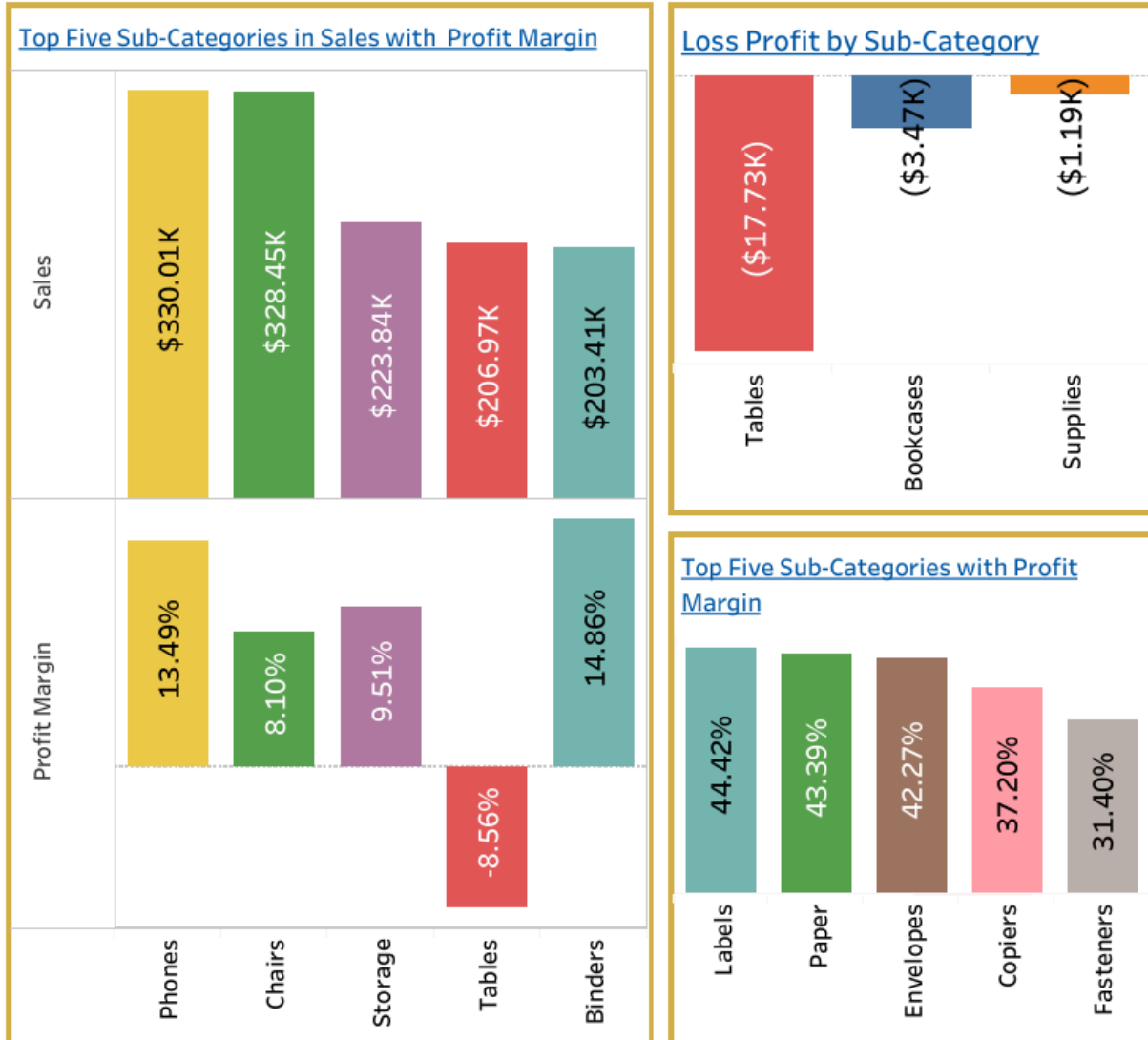
- **Tables** have the highest loss Profit by **-17.72 K\$**
- An increase in sales of these sub-categories results in a decrease in overall profit

```
select sub_category,category, sum(profit) as loss_profit
from superstore
group by sub_category,category
having sum(profit)<0
order by 3 asc
```

Sub-Category	Loss Profit
Tables	-17.72 K\$
Bookcases	-3.47 K\$
Supplies	-1.19 K\$

Loss Profit by Sub-Category





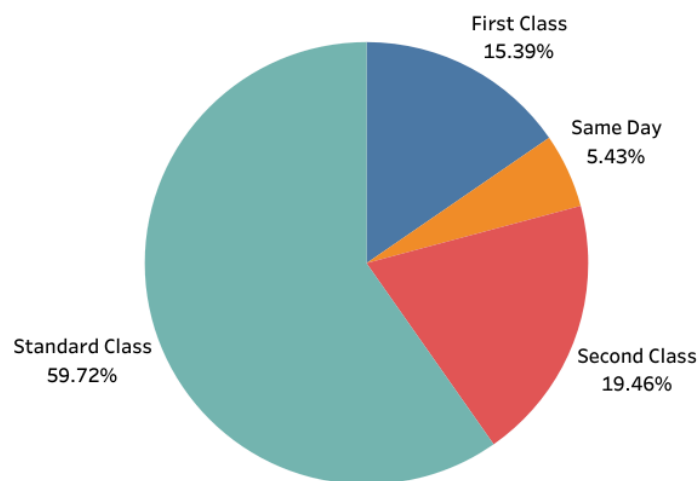
The Top profitable sub-categories are (Labels, Paper, Envelopes, Copier, and Fasteners) so it's important to focus on marketing methods for these sub-categories

Ship mode Overview:

A financial analysis will be performed at the ship mode level to determine which ship mode is most used and its sales and profit, and which needs enhancement.

```
select ship_mode,count(ship_mode) number_usage
      ,ROUND(count(ship_mode) * 100.0 / SUM(count(ship_mode)) OVER (), 2) AS Percentage_mode
      ,Round(((sum(profit)*100)/(sum(sales))),2) as profit_margin
from superstore
group by 1
order by 2 desc
```

Ship Mode	No.Usage	Contribution of shipping	Profit Margin
Standard Class	5968	59.72 %	12.08 %
Second Class	1945	19.46 %	12.51 %
First Class	1538	15.39 %	13.93 %
Same Day	543	5.43 %	12.38 %



The **Standard class** of ship mode has the most usage, and all modes may have the same percentage of Profit margin, but **Same Day** is the lowest one in usage

Summary:

This analysis of SuperStore sales across various dimensions (region, city, segment, category, sub-category, and shipping mode) reveals key insights into business performance and highlights areas for improvement.

- **Strengths**

- West Region leads in both sales (725 K\$) and profit margin (14.94%), making it the strongest region overall.
- Technology and Office Supplies categories deliver high profit margins (17.4% and 17.04%, respectively).
- Phones and Binders are top-performing sub-categories in both sales and profitability.
- Standard Class shipping mode is the most used (59.72%) and maintains a solid profit margin.

- **Weaknesses**

- The Central Region has the lowest profit margin (7.92%), despite having higher sales than the South.
- Furniture Category has significant sales (742 K\$) but a very poor profit margin (2.49%) and includes Tables, a sub-category with high sales (206 K\$) but the largest loss in profit (-17.72 K\$).
- Consumer Segment, while generating the highest revenue (1.16 M\$), has the lowest profit margin (11.55%).
- Cities like Abilene, Elyria, and Jupiter show extremely low sales, indicating potential areas for downscaling or market reevaluation.
- Same-day shipping is underutilized, representing only 5.43% of usage.

- **Recommendations**

- Cost Reduction Strategies should be applied to the Furniture category, especially sub-categories like Tables and Bookcases that yield losses.
- Marketing Focus should shift toward profitable but underperforming segments like Home Office, and profitable sub-categories such as Labels, Copier, and Fasteners.
- Improve Services and Customer Engagement for the Home Office segment to increase its sales while leveraging its high profit margin (14.03%).
- Reevaluate Cities with Poor Sales for potential downsizing or strategy shifts.
- Explore Expansion in shipping options, especially increasing awareness and usage of Same Day delivery if profitable.