

SuperStore Sales

Data Analysis Report

Report By

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Introduction

In today's dynamic business landscape, the ability to harness and analyze data has become an indispensable tool for informed decision-making and sustainable growth. This data analysis report delves into the sales performance of **SuperStore** over the past 4 years i.e. is from 2014 to 2017, aiming to provide a comprehensive understanding of its revenue trends, customer behavior, and key insights that can inform strategic actions.

As businesses navigate an increasingly competitive market, gaining insights into sales data has never been more critical. Accurate and timely analysis allows organizations to adapt to changing consumer preferences, optimize inventory management, enhance marketing strategies, and ultimately, drive profitability.

In this report, we employ a variety of analytical tools and techniques to dissect the sales data of **SuperStore**. By exploring historical sales patterns, identifying seasonal trends, and examining the impact of external factors, we aim to uncover hidden opportunities and challenges that can guide the store's future endeavors.

Purpose Of Analysis

The primary objective of this data analysis report is to provide a comprehensive and insightful examination of the sales performance of superstore during the specified time period. The analysis serves several key purposes:

1. **Performance Evaluation:** This analysis aims to assess the historical sales performance of SuperStore to gauge how well it has met its revenue targets and to identify any growth or contraction trends over time. By evaluating past performance, we can gain valuable insights into the store's financial health.
2. **Trend Identification:** The report will seek to identify and analyze sales trends within the data. By recognizing patterns in sales data, we can understand seasonal fluctuations, identify peak sales periods, and uncover any recurring buying behaviors exhibited by customers.
3. **Customer Behavior Analysis:** Understanding customer behavior is vital for a retail establishment. This analysis will delve into customer purchase patterns, demographics, and preferences to inform marketing strategies, inventory management, and customer engagement initiatives.
4. **Key Insights for Decision Making:** Our analysis will provide actionable insights that [Store Name] can use to make data-driven decisions. Whether it's optimizing product offerings, refining pricing strategies, or enhancing the customer experience, these insights aim to guide strategic actions that will ultimately improve sales.

Insights

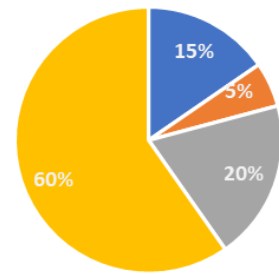
Ship Mode Distribution

In the pie chart included here -

- Majority of customers which is 60% choose **"Standard Class"** shipping mode due to its low cost of shipping suggesting that majority of our customers don't want to spend extra amount on the shipping
- Followed by the **"Second Class"** shipping mode which has **20%** of our customers interested in getting their products a bit early.
- **"Same Day"** ship mode has the lowest share of customers due to its high charges for shipping the package on the same day.

Ship Mode vs Orders

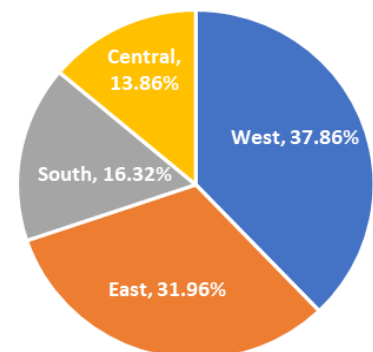
■ First Class ■ Same Day
■ Second Class ■ Standard Class



Region Wise Profit Distribution

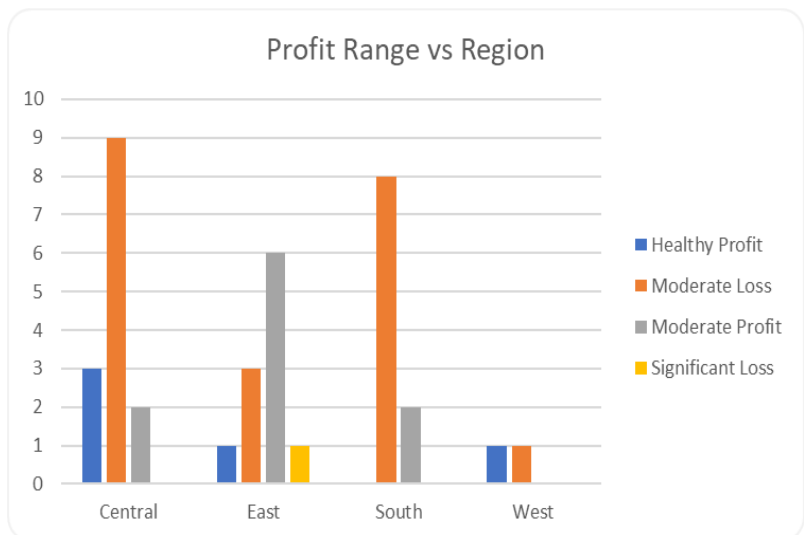
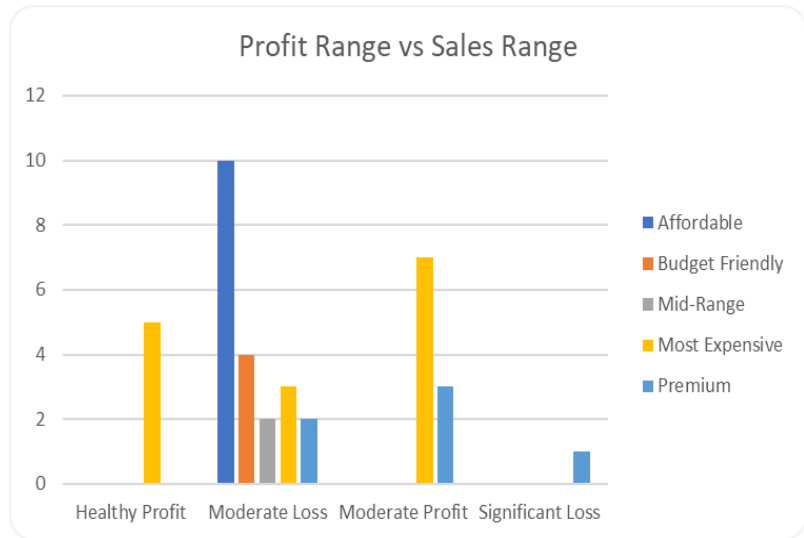
- In the distribution, we can see the two regions which are **"West"** & **"East"** are the best performing regions yielding **37.86%** & **31.96%** profit respectively.
- While the **"South"** region is yielding ~50% left profit of the **"West"** & **"East"**, **"Central"** region is the lowest performing region.

Regions vs Profit

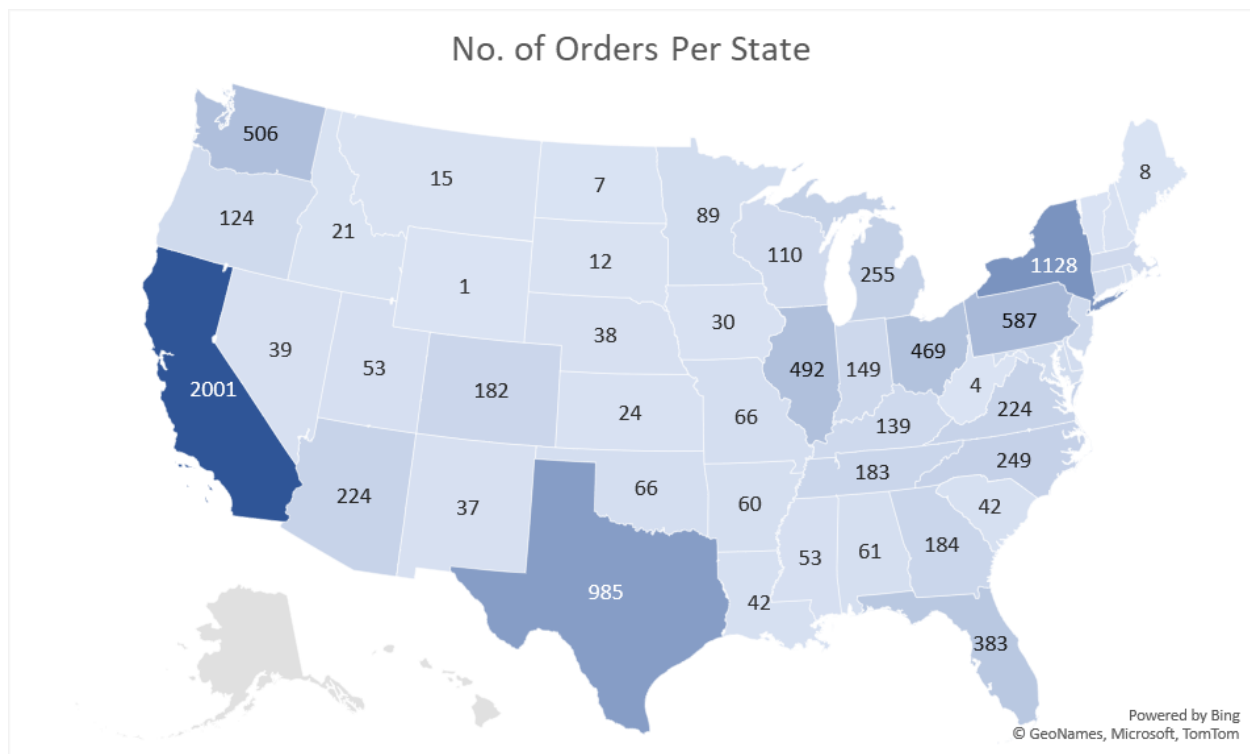


Comparison of Sales Range, Profit Range & Region

- In the chart **Profit Range vs Sales Range**, the first observation that we can make is that the products which fall under the **Affordable & Budget Friendly** range have contributed the most to the **Moderate Loss** range.
- While products which fall under the category of **Most Expensive** range have made the majority of the profit.
- Looking at the **Profit Range vs Region** graph, **Central & South** regions have yielded the maximum amount of orders falling in the **Moderate Loss** category.
- From the above point, we can understand why the Central & South regions have made less profit.
- Looking at the **West & East** region, the losses they have made were covered by the number of orders falling under **Healthy Profit & Moderate Profit** ranges.



State Wise Distribution of Orders



- In the above geographical distribution of number of orders, we can draw insights about the best performing states and states with least number of orders.
- **California, New York & Texas** being the top 3 states with the highest number of orders above 900 orders each.
- Meanwhile, states like **Pennsylvania, Washington, Illinois, Ohio, Florida, Michigan, North Carolina, Arizona** etc are performing somewhat well with the number of orders ranging between 200 to 600.
- We see the lowest number of orders from the states like **Wyoming, West Virginia, North Dakota, Maine, District of Columbia, Vermont, South Dakota** up to states like **Delaware, Minnesota, Connecticut, Oklahoma, Missouri** etc where the number of orders is ranging in between 1 to 100 orders only.

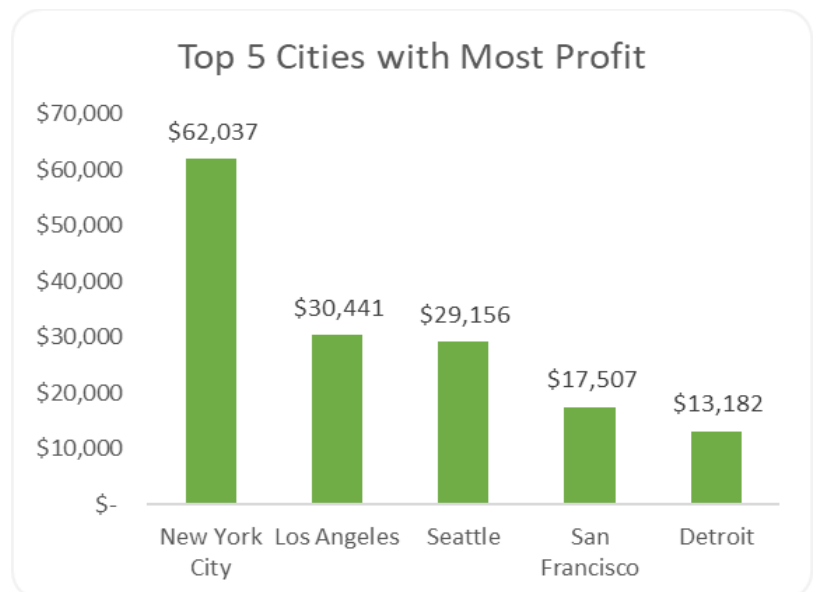
Top 5 Cities With Most Orders & Profit

- In the chart “**Top 5 Cities with Most Orders**”, New York City is leading all the order cities with a maximum number of orders of **915**.
- Remaining 4 states following New York City are **Los Angeles, Philadelphia, San Francisco & Seattle** with **747, 537, 510 & 428** number of orders respectively.



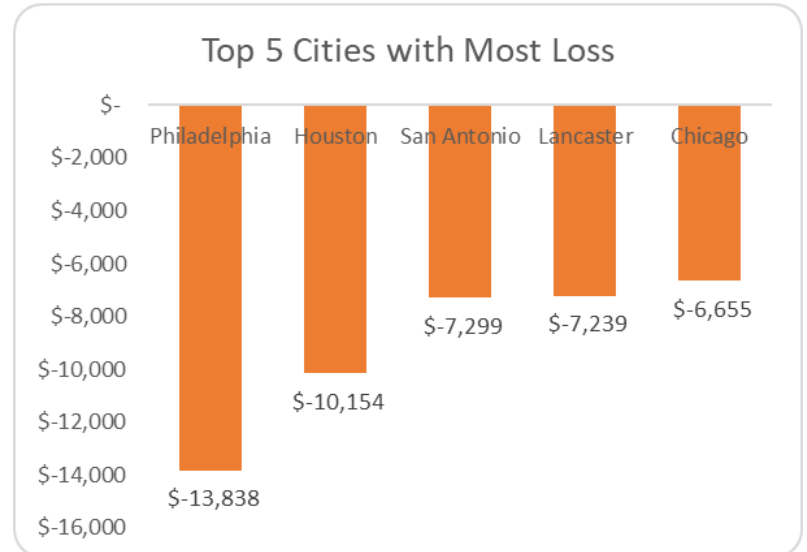
Top 5 Cities With Most Orders & Profit

- Based on the number of orders, **New York City** is the leading city making a total profit of **\$62,037**.
- **Los Angeles & Seattle** take the middle with the total profit value of **\$30,441 & \$29,156**.
- Last two cities yielding a good amount of profit are **San Francisco & Detroit**.

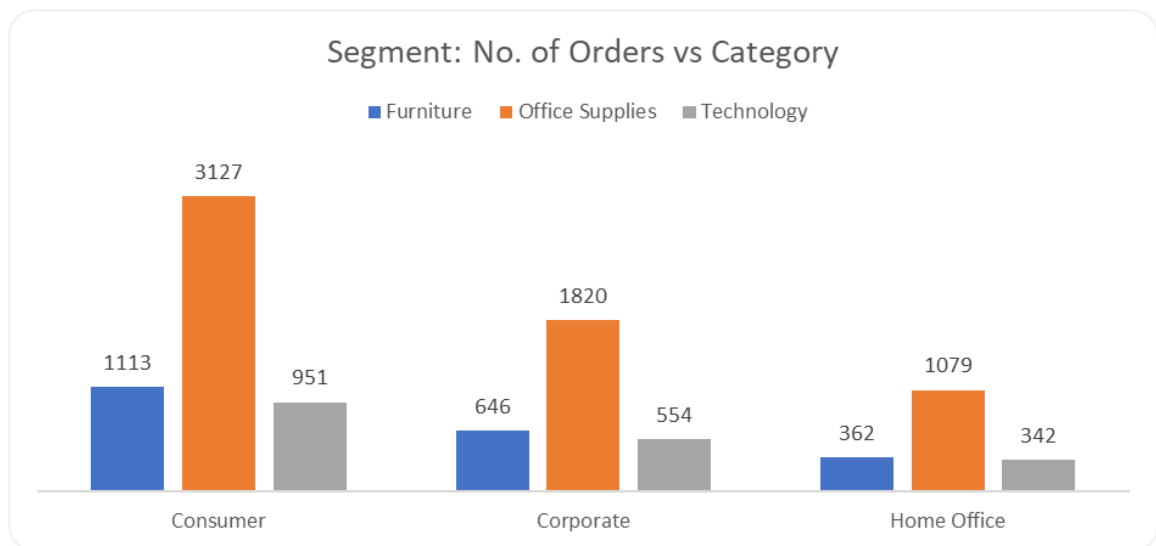


Top 5 Cities With Most Loss

- In this graph, we can see the 5 cities yielding most of the losses.
- Leading this chart is **Philadelphia** recording the most losses of **\$13,848 since 2014**.

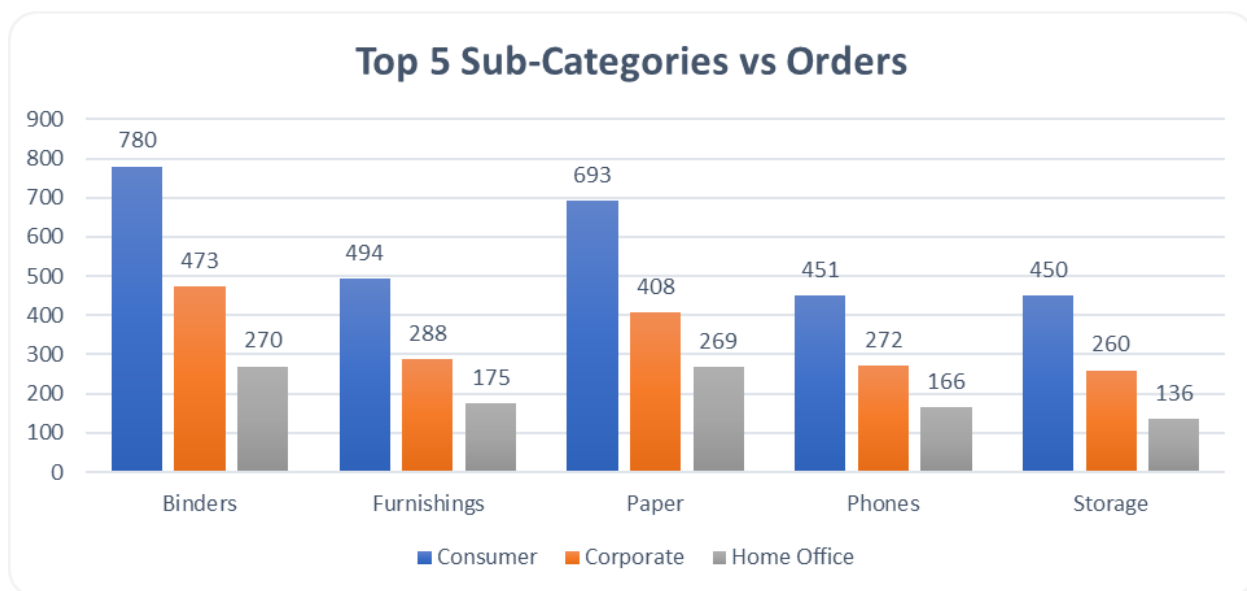


Segment: Distribution of Orders vs Category



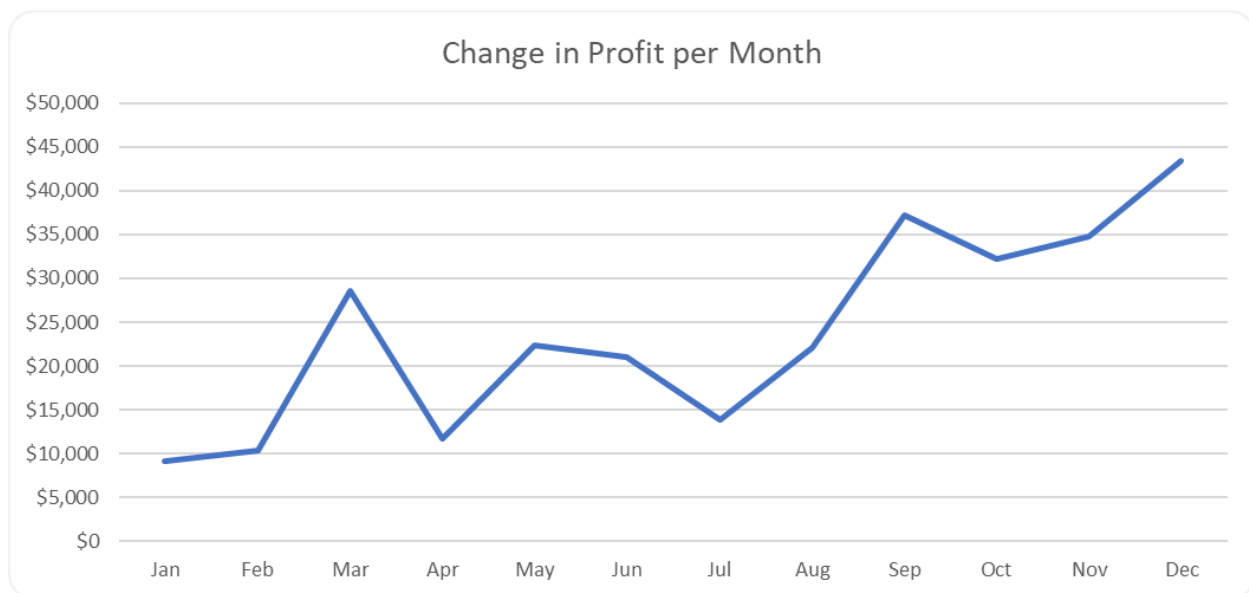
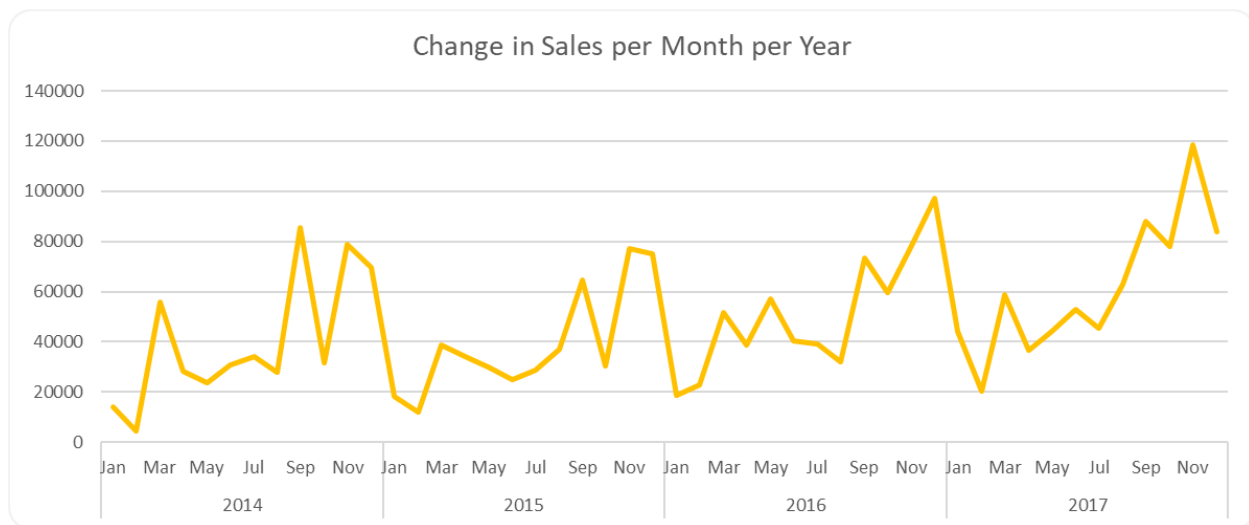
- In the above column chart, **“Office Supplies”** have received the highest number of orders from all the segments.
- We can see that highest number of orders have been places for **“Office Supplies”** by the **“Consumers”**
- While all the 3 segments were seen least interested in the **“Technology”** category.

Segment: Distribution of Orders vs Category



- Looking at the Sub-category, **"Binders"** received the most number of orders in the Consumer segment followed by **"Paper"**.
- We see the moderate number of orders from the **"Corporate"** segment for each sub-category.
- And then there is slight up & down in orders from the **"Home Office"** segment for each sub-category.

Seasonality In Profit & Sales



Seasonality In Sales

- Observing the start of each year, sales remains low in the month of **Jan & Feb**.
- Each year, we then observe a significant rise in sales in the month of **March**.
- Duration between **April - June** recorded the dip in the sales.
- In the period from **July - Nov**, the store sees the sales soar again until **December** where the sales drop again by the end of each year.

Seasonality In Profit

- As we observe the seasonality in the sales for each year, the cumulative profit for each year moves up with the seasonality in the sales. We see a good amount of profit in the starting from **mid-Feb to Mar** after which the profit takes a dip due to reduction in sales.
- Followed by **mid-April** where we see the sales rising and so our profit till **mid-May** and starts to decline again.
- For the rest of the months starting from **July to December**, we can see a significant increase in the cumulative profit because the sales for the same period kept touching the new highs almost each year.

Conclusion

1. From the **Ship Mode Distribution** chart, we can infer that **60%** of the orders are shipped through **Standard Class** due to its low cost which is paid by the customer. While ship mode **Same Day** has the least number of orders which is 5% of the total number of orders placed followed by **First Class** mode with **15%** of total number of orders.
2. Looking at the **Region Wise Profit Distribution**, orders from **West & East** regions have made the most profit of **37.86%** & **31.96%**. While the **Central** region has made the least profit with **13.86%**.
3. From **Comparison of Sales Range, Profit Range & Region**, most of orders were from **Affordable & Budget Friendly** range which have contributed the most to the **Moderate Loss**.
4. If we look at the **Profit Range vs Region** chart, it explains that **Central & South** regions have had the maximum number of orders falling in **Moderate Loss** which also explains that most of the **Affordable & Budget Friendly** range orders came from **Central & South** regions resulting in the reduced profit these regions made.
5. The store has received the most number of orders from **New York City, Los Angeles, Philadelphia, San Francisco & Seattle** also making them the cities making the highest profits except **Philadelphia** from where the store received **537** orders making it the city with maximum loss of **\$13838**.
6. **Philadelphia** is followed by **Houston, San Antonio, Lancaster & Chicago** in the list of **Top 5 Cities** making the most losses.
7. From the map **Number of Orders per State**, we can see that **California, New York, Texas, Pennsylvania & Washington** are the top 5 states from where the store has received the highest number of orders. Meanwhile **Wyoming, West Virginia, North Dakota, Maine & District of Columbia** are the bottom 5 states with the least number of orders.

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8. From the chart **Top 5 Sub-Categories With Most Sales** shows that **Phones, Chairs, Storage, Tables & Binders** are the top 5 product sub-categories with highest sales.
 9. Store received the highest number of orders for **Office Supplies** from the Consumer segment suggesting that there is high demand for Office **Supplies** in the **Consumer** segment. **Consumer** segment remains the first one for making the highest number of orders for **Furniture & Technology** categories as well and we can see the **Corporate** segment placing a moderate number of orders for all the 3 categories.
 10. Drilling down further, the top 5 sub-categories for which the store received the most number of orders from all the 3 segments are **Binders, Furnishings, Papers, Phones & Storage. Consumers** placing the highest number of orders in each sub-categories and **Corporate** with a moderate number of orders.
 11. Finally, looking at the seasonality in the cumulative profit for every month of each year & change in monthly sales every year, both the graphs suggest that periods around **March - May & July-November** have the maximum sales resulting in the maximum profit in the same duration. In the meanwhile, in the months **January, April, August & December**, the store sees a dip in sales and profit as well.

Recommendations

1. SuperStore needs to focus on the regions like **Central & South** contributing to a good amount of loss to the store. Store needs to control the factors like if the product was returned whose shipping cost had to be borne by the store and manage the shipping cost for the products which need to be shipped for longer distances.
2. SuperStore should consider taking feedback from the customers of the states with the least number of orders and analyze why the store is not able to create a good customer base in those states.
3. SuperStore should also consider understanding the need of the states with the least number of orders and try to make the products available more easily and in shorter duration with the customer or the store bearing any extra cost.
4. The Store should focus on the cities making the most loss which ultimately reduces the overall profit of the store. The store should focus on the category of the products being shipped to the loss making cities and should look for the number of products being returned and shipping cost which might be leading to the losses.
5. Looking at the trend of making the home setup look aesthetic and giving an office like look, the store should consider keeping and providing ergonomic furniture to increase the sales of **Furniture** category in all the 3 segments.
6. Any new business or company requires furniture, office supplies & pieces of technologies to set up the work space. The store should look for new businesses and companies opening and approach them with a good offer for providing products from all the 3 categories. The store should also look for businesses and companies acquiring new office spaces to and offer them a good deal for appropriate products.
7. New & trending products from all the sub-categories should be introduced to the existing and new customers in order to maintain a good number of orders in all the sub-categories.

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8. The store sees a fall in sales in the months of **April, August, December & January**.
The store should consider offering season specific products in these months and try to run discount offers during these months.