

‘Superstore’ Sales Analysis

An exploration into the Superstore dataset

Data acquired from Tableau via Kaggle ([link](#))
Python analysis conducted by Alyssa Yapyuco in 2025

Background and Goals

About the Dataset

This deck utilises imaginary data from a 'Superstore' in the USA which sells various kinds of products (furniture, tech goods, etc) to different customer segments (consumer, corporate, home office).

The data details separate customer orders, including products ordered, profit, discount applied, and customer geography.

Goals of this Analysis

In this analysis, we will assume our target audience is the key stakeholders of the business (e.g., management, operations, finance).

To help them understand how the business is performing for the latest data year (2017), we will present **high level KPI figures** (e.g., Profit), and then further **break down those figures into different segments** (e.g., Profit by Product Sub-Category).

This will help guide business decisions around **which areas are most and least profitable**, and if current strategies need to be re-examined.

Table of Contents

1. KPI Overview & YoY Growth
2. Sales by Customer Segments
3. Sales by Product Sub-Category
4. Sales by Customer Geography
5. Proposed Next Steps

YoY Growth at a Glance

Revenue for this year

\$733k

\$609k
Previous year

+20% YoY

Net profit for this year

\$93k

\$81k
Previous year

+14% YoY

This year sees a promising increase in revenue compared to the previous year (+20% YoY) thanks to November's successful marketing campaign.

Despite a 28% increase in customer orders, only a 14% increase in profits is observed.

Order Count

1687

1315 Previous year

+28% YoY

Discounted
Order Share

58%

59% Previous year

-0.02% YoY

Overall Profit
Margin

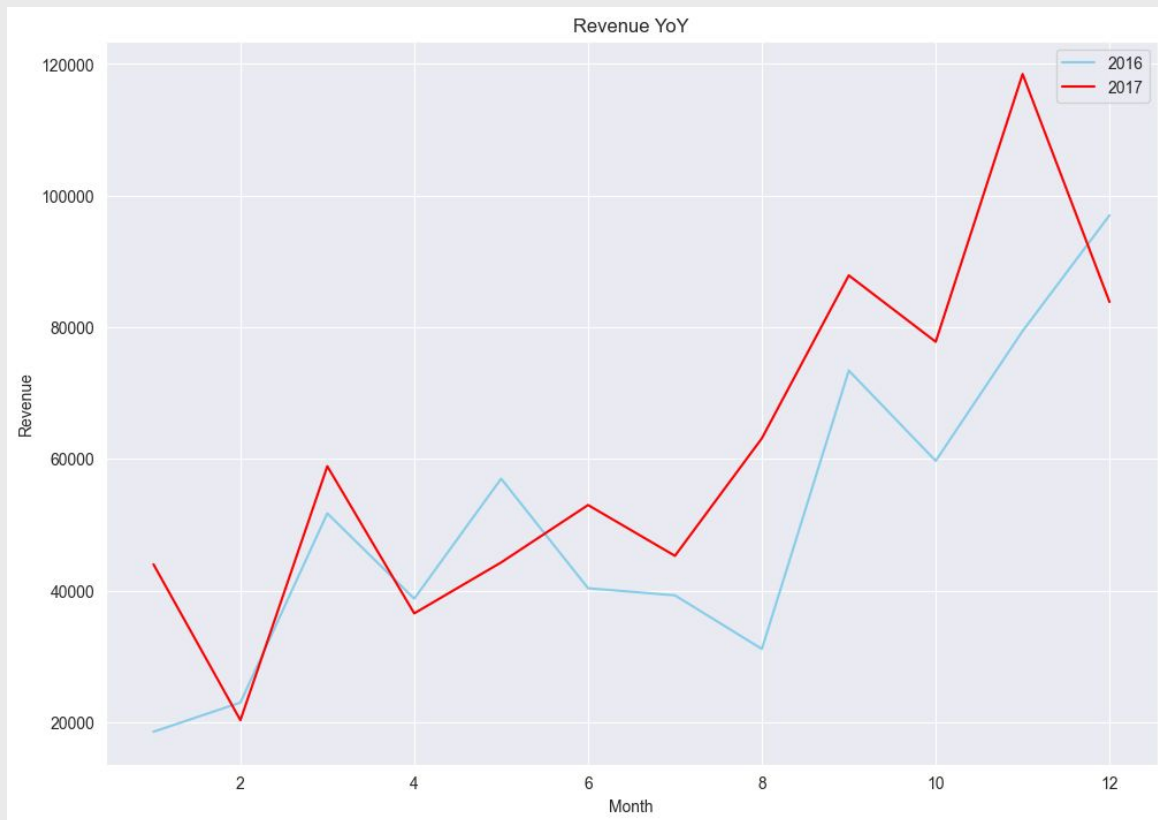
12.7%

13.43% Previous year

-5.08% YoY

With more than half of orders availing discounts and overall margin decreasing YoY, an investigation into our product pricing and discounting strategy is warranted.

YoY Growth - Revenue

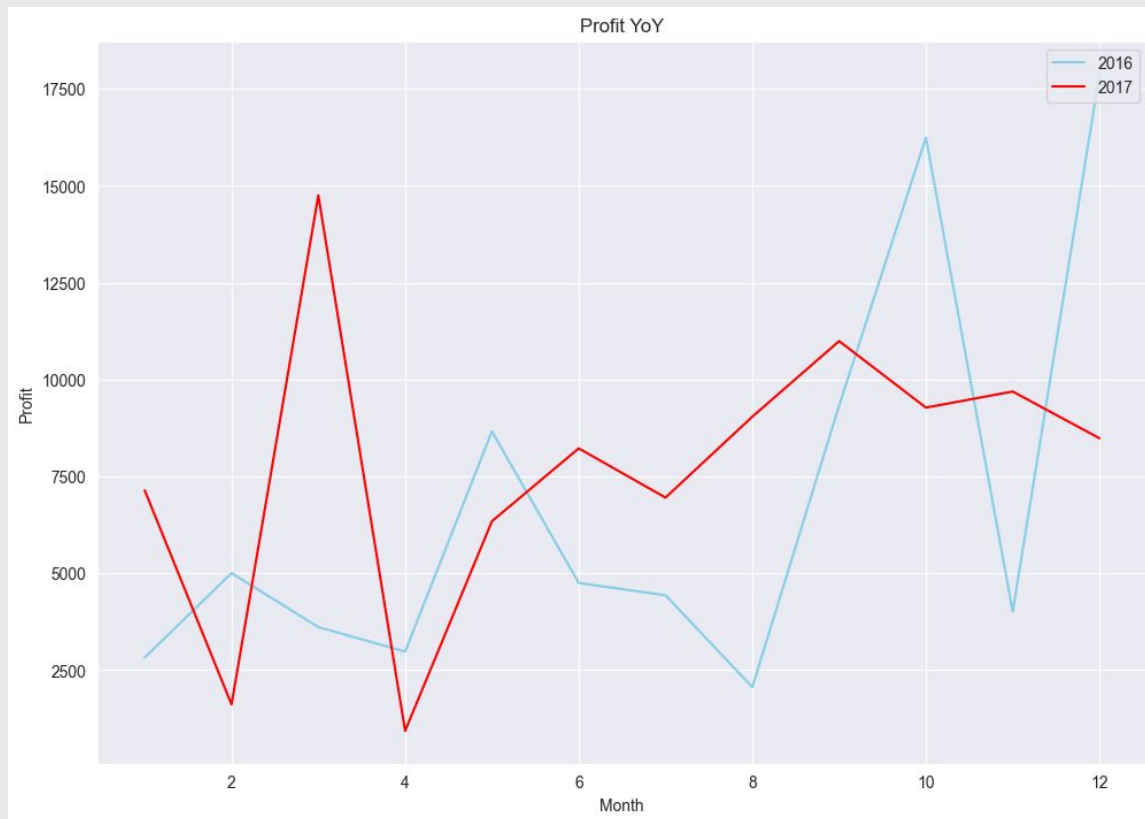


Revenue increased 20% YoY due to successful marketing campaign*

- Revenue over the year remains on trend, with end of year sales being the largest likely due to holidays
- H2 2017 performed better YoY, with the **highest spike in revenue occurring in November, coinciding our End of Fall campaign***

** For the sake of a mock presentation, let's say that a marketing push occurred in November*

YoY Growth - Profit



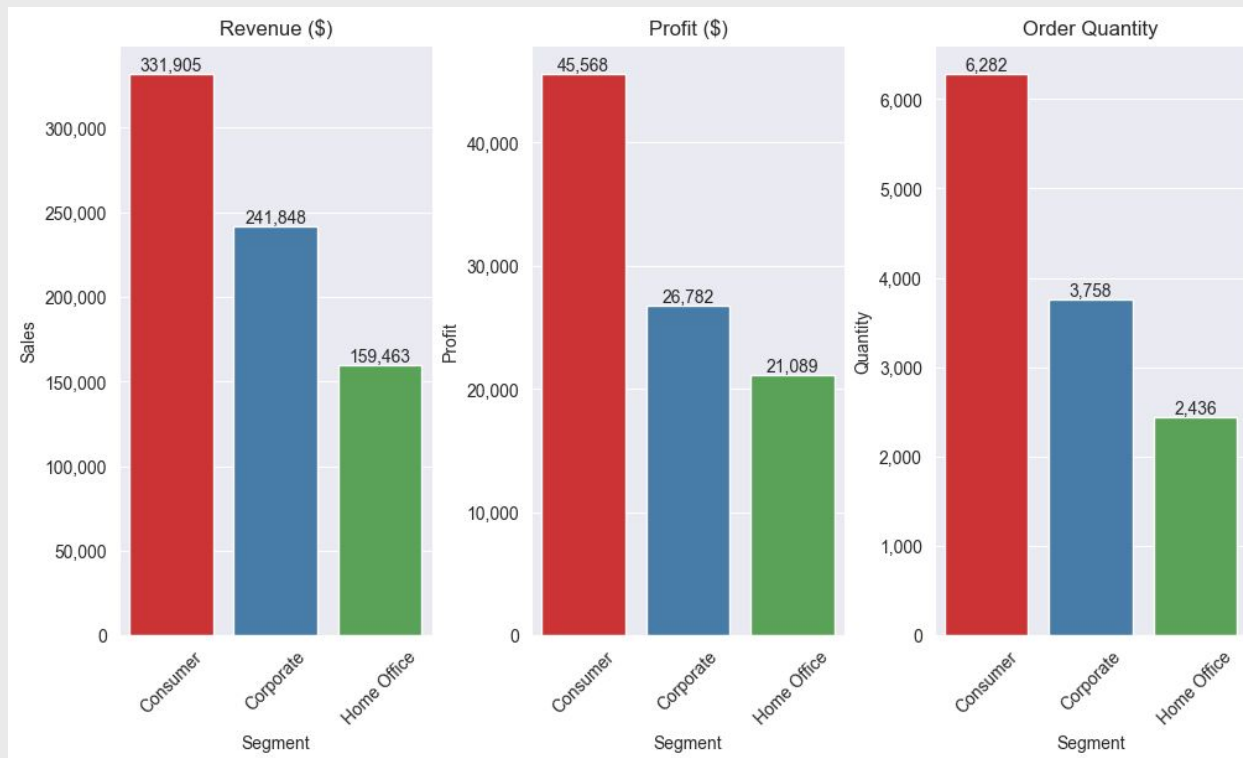
**Profit increased 14% YoY,
6ppt below target***

- Despite a 20% increase in revenue and a 28% increase in orders YoY, profit has only increased 14%
- Profit spikes do not coincide with revenue, indicating that **either heavy discounting or uneven product pricing is affecting profit potential**

** Again, just a mock value*

Sales by Customer Segments

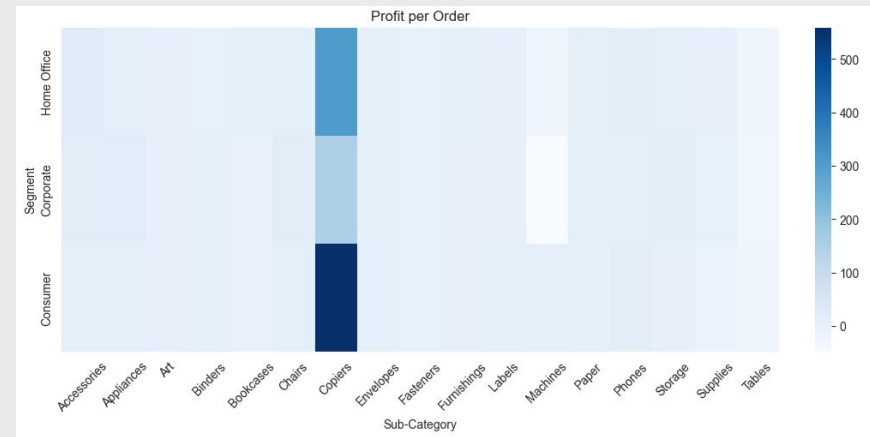
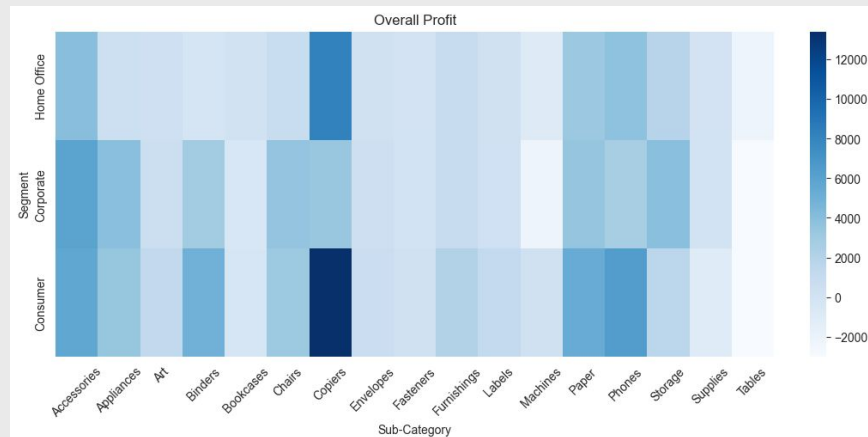
Sales by Customer Segment



The Consumer segment contributed nearly half of the year's profits

- The Consumer segment leads overall sales in revenue, profit, and order quantity
- Despite contributing least to the year's overall profit, the **Home Office segment saw the highest profit per order**
 - Consumer: \$7.25
 - Corporate: \$7.13
 - Home Office: \$8.66

Product Profit by Customer Segment

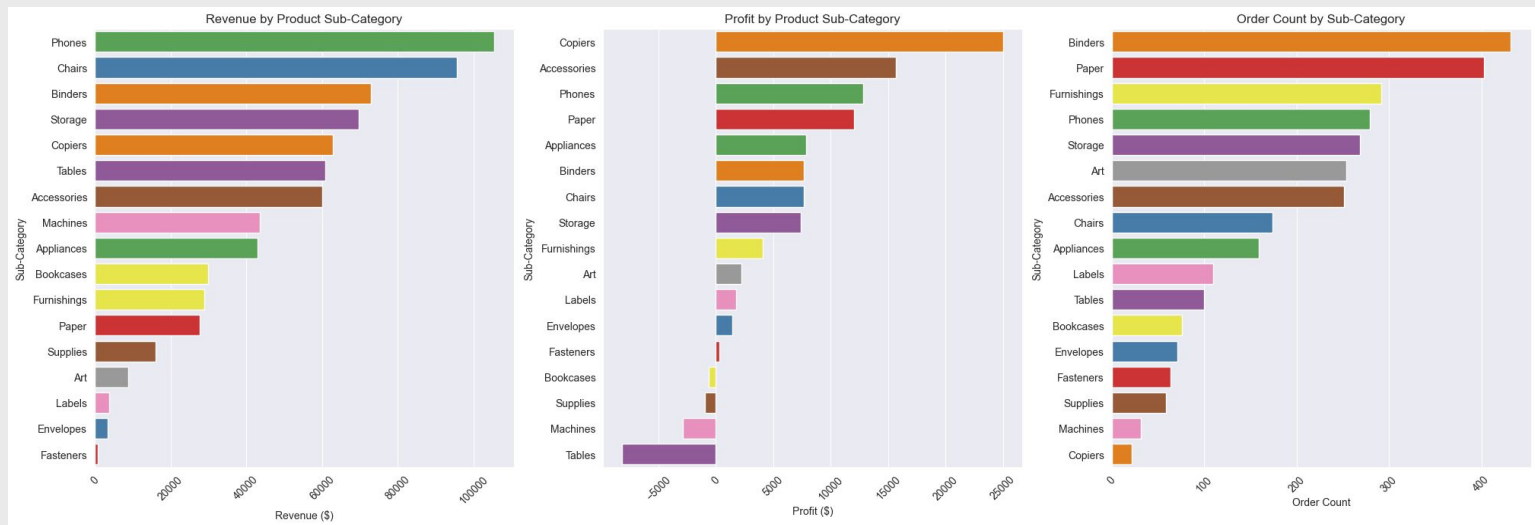


Copiers lead profitability among all customer segments

- **Copiers have a significantly higher profit per order than any other product sub-category**, pushing high profits for the Consumer sub-category
- All other product sub-categories exhibit comparable profits across customer segments

Sales by Product Sub-Category

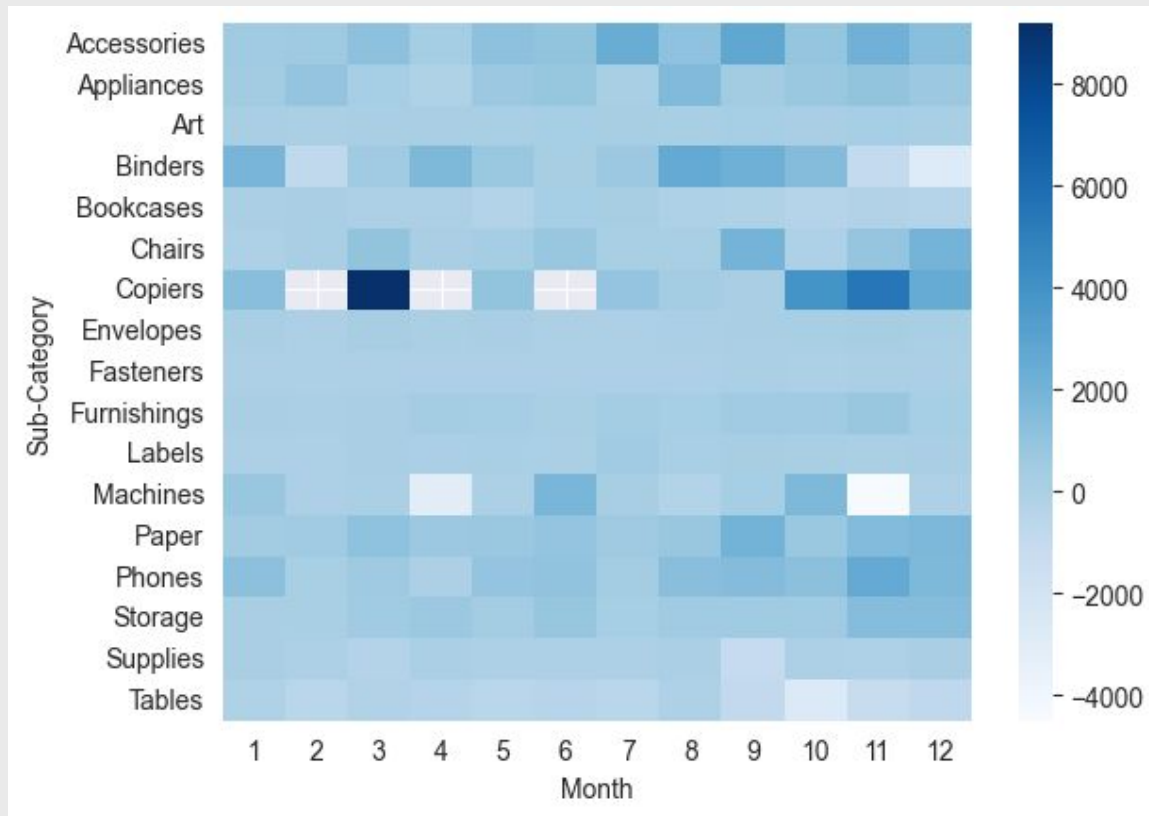
Sales by Product Sub-Category



Revenue, Profit, and Order Quantity are not in alignment across product sub-categories

- Profit:
 - Sales of Bookcases, Supplies, Machines, and Tables all resulted in a loss
- Order Count:
 - Despite highest profitability, Copiers see the least order volume followed by Machines. This is to be expected as **larger tech items are typically purchased infrequently**
 - Customers purchase **high volumes of Binders and Paper** — *are we able to capitalise on this with bulk order deals*

Product Profit Contribution by Month



Copiers supply issue* negatively impacted potential profitability for H1

- Majority of the year's profits are contributed by Copiers (**59%**)
- **In H1 2017, Copier sales only occurred every other month** due to supply issues*, resulting in **assumed profit loss of \$11.6k**

** Mock scenario*

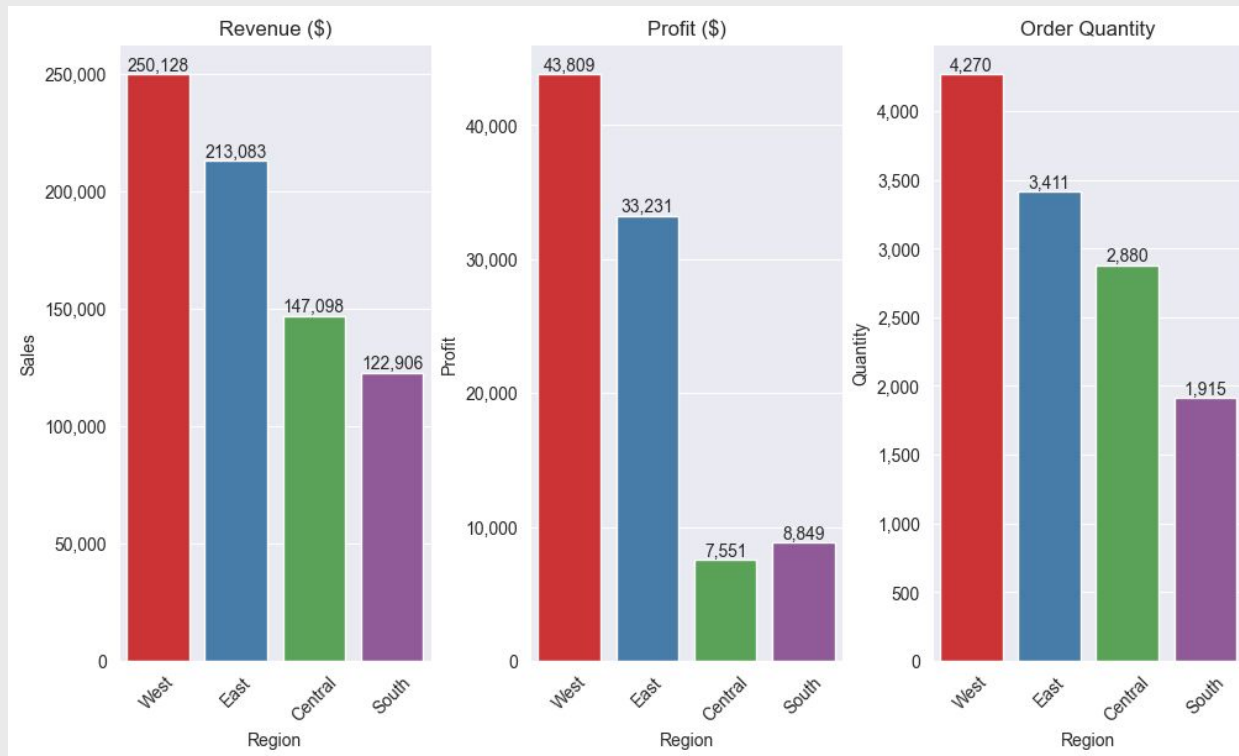
Sales by Customer Geography

Sales by Customer Geographic Region

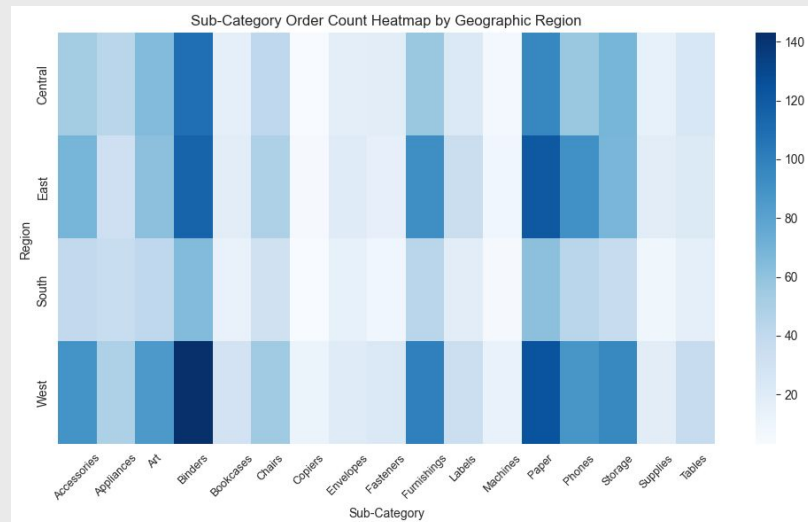
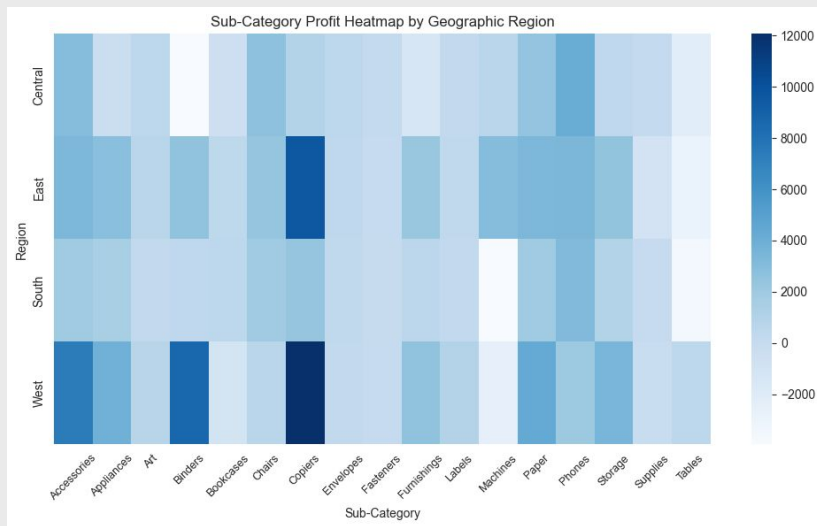
The West leads overall in Sales, with Central and South lagging despite high order volumes

- The West is the most profitable region contributing to nearly half of the year's profits
- **The Central and South regions lag behind in profits**

E.g., Despite 23% of orders coming from the Central region, this region only produces 8% of the year's profits.



Product Sub-Category Sales by Region



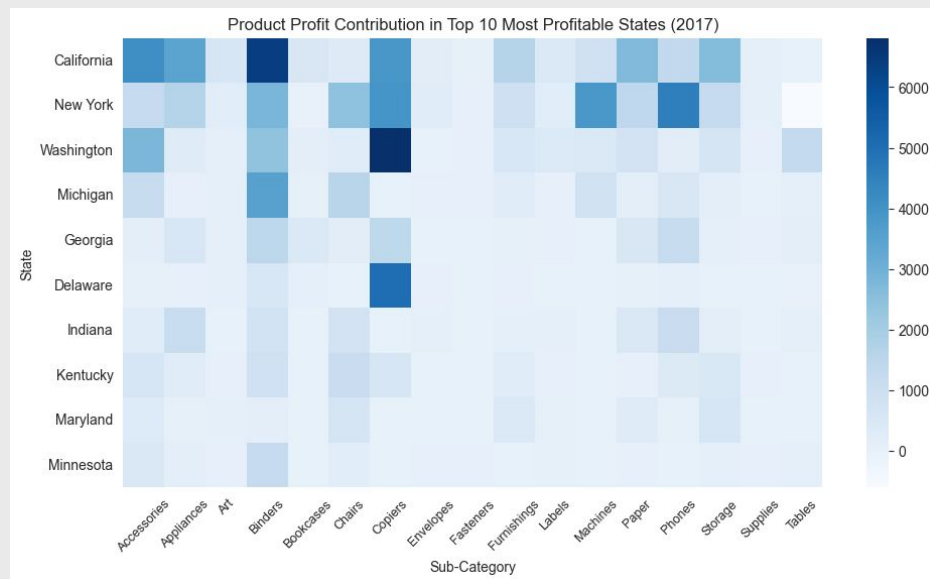
The South and Central regions lack sales of high-profit products

- Profit in the West and the East skewed upwards by sales of Copiers
- Binders and Paper see high sales volumes across all regions except for the South

Are we able to push sales of Copiers in the South and Central, and Binders and Paper in the South?

Top 10 Most Profitable Cities

State	Revenue (\$)	Profit (\$)	Order Count
California	146,388	29,366	344
New York	93,923	24,357	174
Washington	65,540	17,257	164
Michigan	25,834	8,488	100
Georgia	19,160	6,448	99
Delaware	13,755	6,053	96
Indiana	18,516	5,140	86
Kentucky	15,535	4,752	70
Maryland	9,452	2,781	48
Minnesota	6,728	2,460	34



The most profitable cities earned their profits from only a handful of product sub-categories

- California was the most profitable city this year due to the volume of Binders purchased
- New York saw profits spread more evenly across various product sub-categories, earning mainly from lower quantities of more expensive tech items
- Washington made its profits off high sales of Copiers

Proposed Next Steps

Key Findings and Proposed Actions

→ Profit per order highest in Home Office Segment

- With the Home Office segment seeing the smallest order quantity, are we able to increase sales with a marketing push or attractive product bundling
- Alternately, can we apply the same pricing strategy used in Home Office across Corporate and Consumer as well

→ Copiers contributed 59% of year's profits

- Ensure supply is locked in for coming year to prevent potential profit loss
- Are we able to entice Corporate and Home Office customers to purchase Copiers
 - E.g., by creating a bundle offer with other essential office goods;
 - Or incentivising by offering a promo like 'buy a copier, get free paper for the year'

→ Stagnation of profits across mid-tier products

- Are we able to boost sales for 'middle of the pack' products (i.e., chairs, appliances)
 - Pushing more quantity for consumables (e.g., envelopes)
 - Improving profit margin for items that are occasional purchases (e.g., chairs)

→ Products resulting in a loss

- Bookcases, Supplies, Machines, and Tables resulted in a loss this year
 - Investigate root cause (e.g., deep discounting, costly suppliers)
 - Seeing as these products are on the lower end of order quantities, removal from Superstore's offering may also be warranted

For Further Analysis



Discount Strategy

- Which items are typically discounted and why? Which tend to result in a loss?
- Are there certain products that are only purchased when discounted? Which products see the least and the most price elasticity? *(do we want to conduct A/B price testing, or test features that increase value perception?)*



Repeat purchases

- Which products tend to have repeat customers?
- Would it be beneficial to offer a subscribe and save feature?



Products purchased in tandem

- Which products tend to be purchased together?
- Are we able to put together bundle deals (where sensible)



Shipping Timeline

- What is the average order completion timeline (order to ship dates) for various ship modes
- Which mode of shipping do different customer cohorts prefer?
- Could we incentivise our higher loyalty / higher profit customers with free improved shipping?

Thank you