

Note: ~This project was created as part of my coursework for TripleTen's BIA program. This report adapts my classwork to be more suitable for presentation in Github. Because of this, some of the methods and visualizations may seem strange- many of the requirements of this project were meant to prove to my teachers I had a firm grip of how to use Tableau and not necessarily to showcase "professional analysis". I plan to continue to adapt this project to remove its 'school-work-like' quality. More to come, thank you for reading! - Courtney Ignace~



Superstore Profits, Advertising Strategy & Returns Analysis

Data-driven decisions to cut losses, boost advertising ROI, and control high-cost returns at Superstore.



Project Summary

This project analyzes three critical aspects of Superstore's financial operations:

1. **Profits and Losses**
2. **Advertising Effectiveness**
3. **Returned Items**

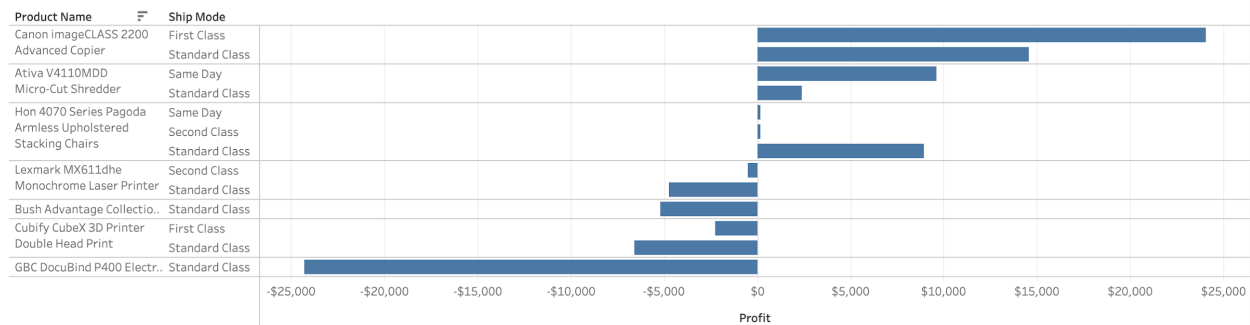
The analysis focuses on **analysis created from Tableau visualizations**. Viewers will find each numbered part of this analysis to have multiple tableau visualizations which are subsequently described and analysed. From this analysis we uncover actionable insights and will make **policy recommendations**.



Part 1: Profits and Losses

Here is visualised top products in the profit and loss categories separated by shipping method.

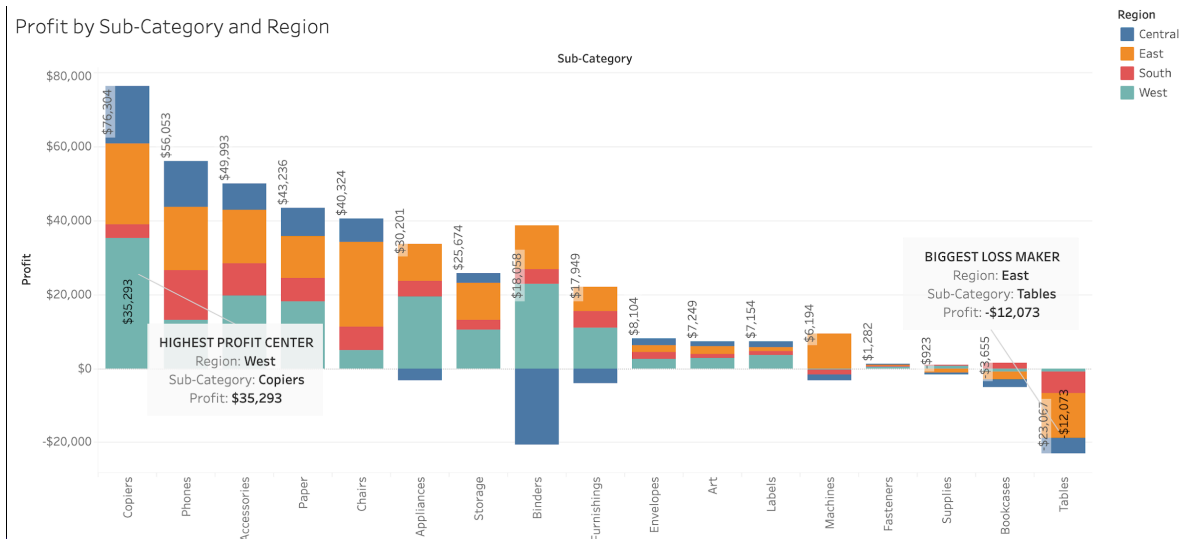
Top profit centers and loss-makers of product by shipping method



- The largest loss occurs from orders of the **GBC DocuBind P400 Electric Binding System** shipped via **Standard Class**.
- The biggest profit driver is the **Canon imageCLASS 2200 Advanced Copier**, also shipped via **Standard Class**.
 - From these findings we see **Shipping method** is not a key profitability factor—**product selection** is.
- **Recommendation:** Discontinue **all products sold at a loss**, regardless of shipping method. See the chart: "[Recommended to Stop Selling](#)" for a complete list.

Visualization 2: "Profit by Subcategory and Region"

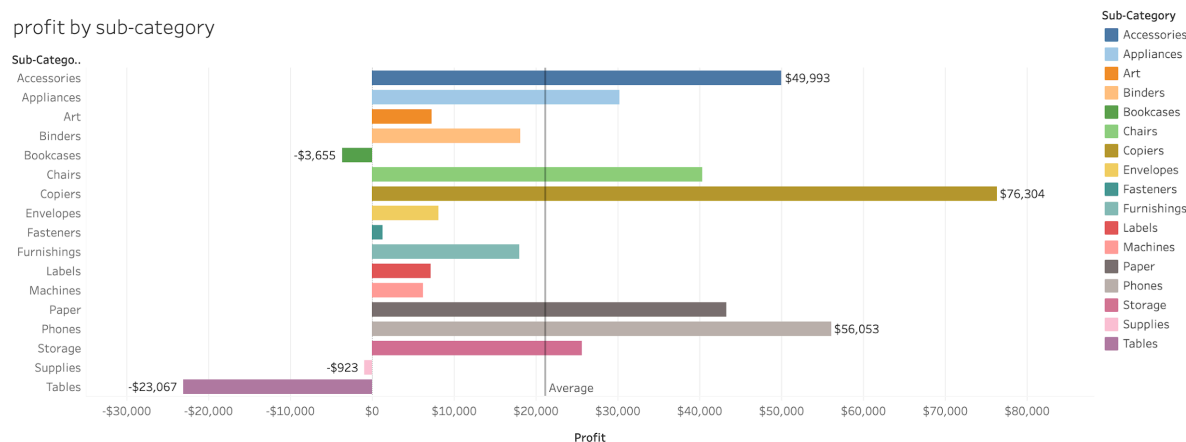
Visualised below we see regions represented in 4 colors, graphed by the profit they produce on the y axis and sub-categories in the x axis. The size of each colored rectangle represents the amount of profit or loss in that region/ subcategory matrix.



- **Conclusions:**
 - **Copiers** in the **West** are Superstore's top profit drivers.
 - **Tables** in the **East** are the biggest loss-makers—also unprofitable in all other regions.

Visualization 3: Profit by Sub Category

Seen below, a graph represents the profits by subcategory (colors distinguish subcategories)



- **Conclusions:**
 - Additional subcategories causing losses: **Bookcases** and **Supplies**.
 - Profitable subcategories: **Copiers, Phones, and Accessories**.

⚠ Outlier Alert:

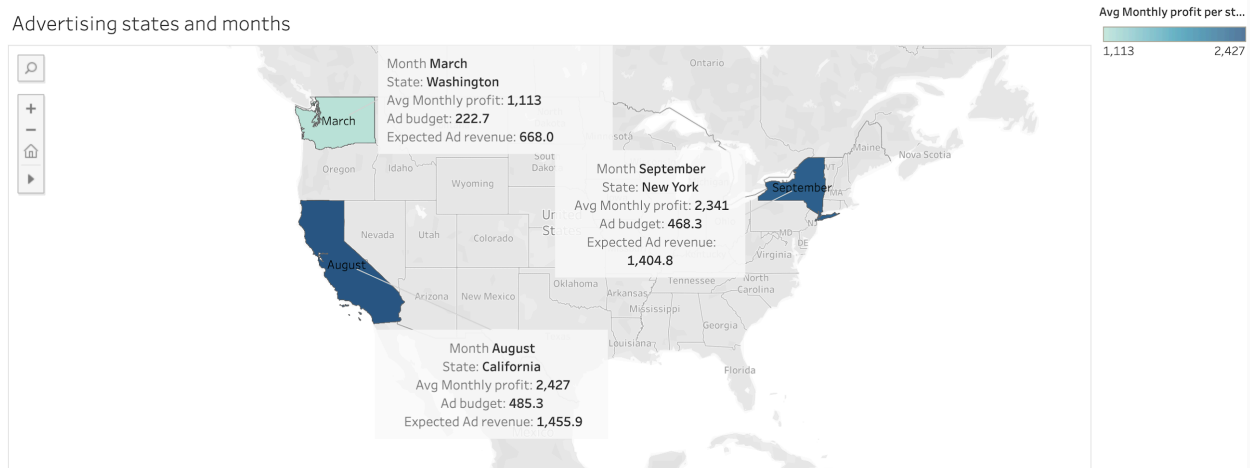
The **Binders** subcategory appears unprofitable due to one extreme case. See Part 3 for details.



Part 2: Advertising Strategy

Seen below a map visualizes highest revenue-earning state/month combinations. All irrelevant data has been filtered out leaving only the top 3 performing states/ months.

In order to create this data there was created a state/ month matrix showing the ad revenue by each of the 48 continental states by month. This matrix was pulled from to create this map-view of the same data.



- The top 3 performing advertisement campaigns by state are:
 - **Washington in March**
 - **California in August**
 - **New York in September**
- **Recommendation:** Allocate **1/5 of the average monthly profit** for advertising in these locations during these months. The dashboard provides suggested budgets and revenue projections.

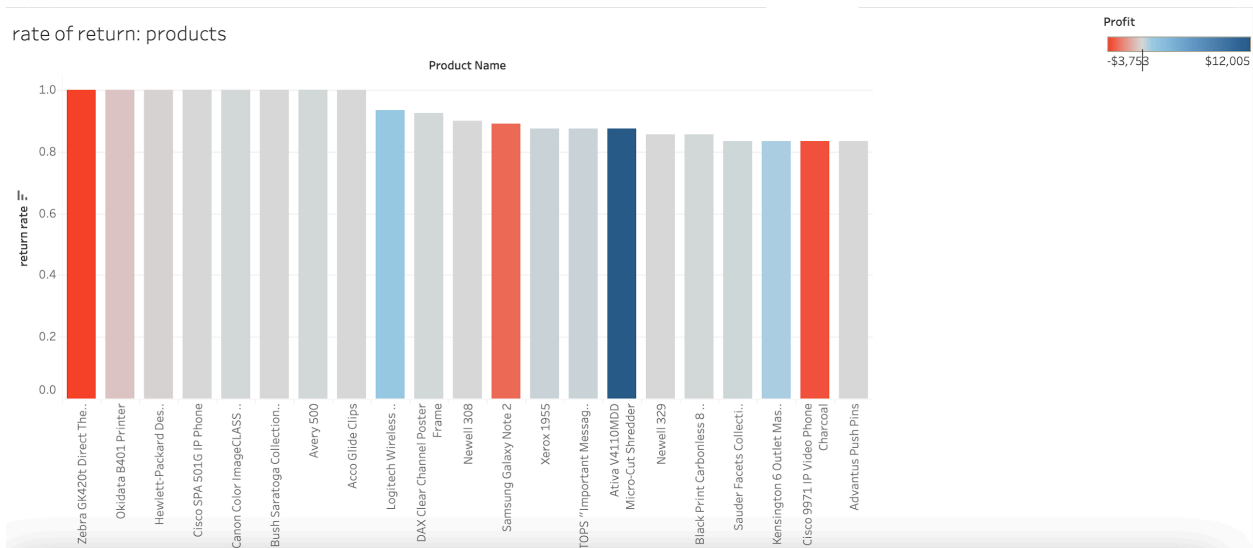


Part 3: Returned Items & Policy Adjustments

Visualization 1: Rate of Return: Products

The visualization below shows the rate of return by individual item. Colors diverge from red to blue representing loss or profit respectively. Notice how the **return rate does not necessarily correlate with the profit losses**. While it logically follows that if something is returned more often the company loses money on it, **many of our highest return-rate items suffer very little loss or even create profit**.

rate of return: products

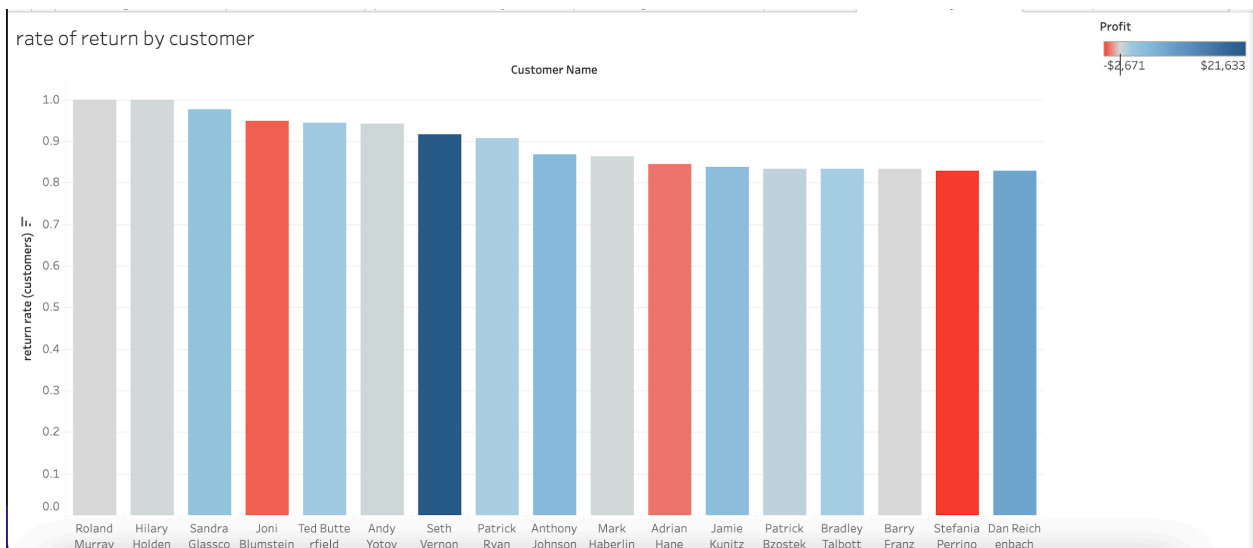


List of top 3 High Return-Rate Products (with losses):

- Zebra...Printer – 100% return rate, -\$3,753
- Samsung Galaxy Note 2 – 88% return rate, -\$2,834
- Cisco...Charcoal – 88% return rate, -\$3,335

Visualization 2: Rate of Return by Customer

The visualization below shows the rate of return by customer. Colors diverge from red to blue representing loss or profit respectively. This chart, similarly to the last one, showcases that a **high return rate doesn't necessarily mean that the customer is driving losses**. The story is much more complicated than it first appears.

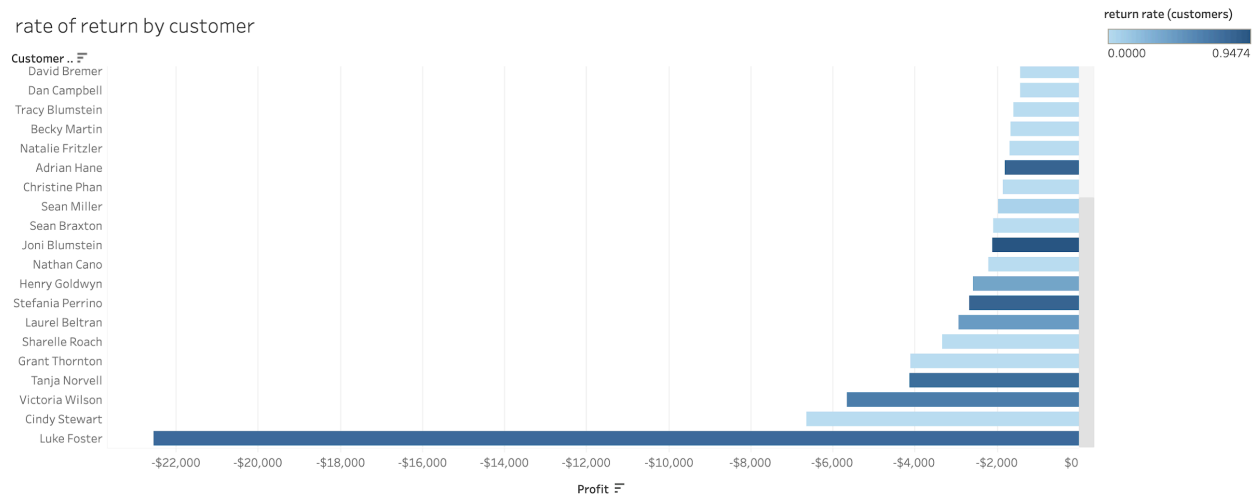


- Conclusions:

- Some customers (e.g., Roland Murphy, Hilary Holden) show **positive profits despite 100% return rates**.
- Of the top 30 money-losing customers: 16 of them have a **0% return rate** — indicating other factors driving losses.
- Profit loss is not always tied to high return rates.

Visualization 2: rate of return by customer (2)

This visualization shows the individual customers who drive the greatest losses and showcases specifically one outlying customer versus the others: Luke Foster.



Return Policy Recommendations:

- Introduce a restocking fee for high-cost items (e.g., copiers, phones, electronics).
- Flag and review all returns over \$100 for fraud prevention.
- Establish stricter criteria for same-day delivery returns, especially during peak periods and holidays.

⚠ Special Case: Outlier Luke Foster

- **Customer: Luke Foster (Texas, 2018)**
- **Action:** Ordered and returned the GBC DocuBind P400, causing a **\$22,211 loss**.
 - This single return represents **10% of all-time losses**
 - This single return skews:
 - **The Binders subcategory**
 - **Texas' profitability**
 - **The Central region's data**
- **Action Taken:**

- This outlier was **excluded** from certain visualizations to maintain analytical accuracy.
 - **Recommendation:**
 - Investigate and establish safeguards against similar high-loss incidents.
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Tools & Techniques

Tableau for dashboards and visualizations

Custom calculated fields

Dimensional breakdowns by state, region, category, product, and customer

Outlier detection and data cleansing



Conclusion

This analysis offers a strategy to:

- **Cut losses by eliminating underperforming products**
- **Target ads where and when they'll make the biggest impact**
- **Control returns through updated policies and smarter customer insights**

Together, these insights pave the way for stronger profitability and operational efficiency at Superstore. Thank you kindly for reading.