

Superstore Returns



Project Overview

In this project, we investigated the root causes of the high number of returned orders at the Superstore using **Tableau Desktop**. Our goal is to help the CEO understand why customers are returning orders and recommend ways to reduce the volume of returns.



Tasks Completed

- **Data Preparation:**
 - The **Returns** table was **LEFT JOINED** onto the **Orders** table. The **Returned** column now shows both “Yes” and **null** values.
 - A calculated field was created:
 - **Returned** = 1 if “Yes”, 0 if **null**.
 - The **average** of this field gives the **return rate**, while the **sum** gives the **total number of returns**.
- **Visual Analysis:**
 - **Scatterplot:** Correlation between total sales and total returns by product subcategory.
 - **Bar Chart:** Return rate by product category.
 - **Customer Analysis:** Return rate by customer, filtered to show only customers with more than one order.
 - **Geographic Map:** Return rate by state to identify geographic concentration.
 - **Time Series:** Return rate by month to identify seasonal trends.
 - **Dashboard & Story:** Combined visualizations with interactive filters for deeper insights.

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Key Findings

1 Sales vs. Returns

- There is a **positive correlation** between total sales and total returns.
 - *Insight:* Higher sales volumes naturally lead to more returns, but the correlation may point to quality or expectation mismatches.
 - **Action:** Send targeted surveys to customers via email to identify product or service issues.
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2 Product Categories

- **Highest return rates:** Machines and Fasteners.
 - **Lowest return rates:** Envelopes, Labels, and Art Supplies.
 - *Action:* Audit the high-return subcategories. Work with vendors or manufacturers to identify and resolve quality or supply chain issues.
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3 Geography

- States with the highest return rates:
 - **Utah:** 57%
 - **California & Oregon:** 45%
 - **Tennessee:** 38%
 - *Action:*
 - Deploy teams to high-return locations to inspect store processes and product handling.
 - Send targeted surveys in these states to identify common issues.
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4 Seasonal Trend

- **August:** Peak month for returns.
 - **November:** Lowest return month.
 - *Action:* Investigate if seasonal promotions, back-to-school campaigns, or specific product launches in August contribute to higher returns.
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Conclusion

The analysis shows clear patterns between returns and product categories, customer segments, geography, and time.

The **interactive dashboard** allows stakeholders to filter by subcategory, state, and time period to drill down into specific problem areas.

Recommendations

Customer Feedback:

- Deploy surveys focusing on customers in high-return states and high-return product categories.
- Use feedback to identify recurring problems.

Vendor/Manufacturer Audit:

- Review contracts and processes with suppliers of high-return items.
- Improve quality control checks.

Store & Regional Checks:

- Inspect high-return stores for operational issues such as poor handling, incorrect product information, or packaging problems.

Monitor Promotions:

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- Analyze if certain promotions or discounts correlate with higher returns and adjust campaigns accordingly.
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Next Steps

- ✓ Share survey results and supplier audits with stakeholders.
- ✓ Continue monitoring with updated Tableau dashboards.
- ✓ Track improvements in return rates quarterly.