

Insights Report: Superstore Sales Analysis

Executive Summary: The Superstore Sales Analysis project uncovers 50 critical insights from the sales data, providing actionable recommendations to improve profitability, optimize operations, and enhance customer satisfaction. This report summarizes the findings derived from SQL queries and highlights key trends, customer behaviour, regional performance, and product profitability.

General Analysis:

1. **Total Sales:** The superstore generated a total sales revenue of **\$2.29 Million**.
2. **Total Profit:** The total profit from all transactions is **\$286,000** , indicating a profit margin of **12%**.
3. **Total Quantity Sold:** A total of **37873 units** were sold across all product categories.
4. **Average Discount Applied:** Discounts averaged **0.15 %** per transaction.
5. **Total Number of Orders:** The dataset contains **5009 orders**, reflecting a robust customer base.

Sales Trends:

6. **Monthly Sales Trends:** Peak sales occurred in **November 2017**, while the lowest sales were observed in **February 2014**.
7. **Yearly Sales Trends:** Sales have grown by an average of **23%** from **Year 2015** to **Year 2017**, showcasing consistent growth.
8. **Weekly Sales Trends:** Weeks **46, 12, 48, 38, 51** recorded the highest sales, suggesting seasonal demand.
9. **Day-wise Sales Analysis:** Sales peak on **Day 17, Day 2, Day 1, Day 8, Day 21**, indicating customer preferences for placing orders on specific days.
10. **Seasonal Sales Patterns:** **Autumn (Sep-Nov)** accounted for the highest sales, aligning with holiday shopping trends.

Customer Analysis:

11. **Top Customers by Sales:** Customer **Sean Miller** is the highest contributor, with total sales of **\$25043**.
12. **Top Customers by Profit:** Customer **Tamara Chand** generated the highest profit, amounting to **\$8981**.
13. **Average Sales per Customer:** Each customer contributed an average of **\$2897** in sales.
14. **Customer Retention Rate:** **98.5%** of customers placed repeat orders, reflecting strong loyalty.

15. **Orders per Customer Segment:** The **Consumer** segment accounts for **51.6%** of all orders, highlighting its dominance.

Product Performance:

16. **Best-Selling Products:** **GBC Premium Transparent Covers with Diagonal Lined Pattern** sold the most units (**67 units**).

17. **Least-Selling Products:** **Penpower WorldCard Pro Card Scanner** had the lowest sales (**1 units**) along with few other products as well.

18. **Most Profitable Products:** **Canon imageCLASS 2200 Advanced Copier** generated the highest profit of **\$25,199**.

19. **Most Discounted Products:** **Eureka Disposable Bags for Sanitaire Vibra Groomer I Upright Vac** received the highest average discount (**0.8%**).

20. **Profit Margin per Product:** The highest profit margin was achieved by **Product "While you Were Out" Message Book, One Form per Page** (**41%**).

Regional Analysis:

21. **Sales by Region:** The **West** region contributed the most sales **\$725K**

22. **Profit by Region:** The **West** region achieved the highest profit **\$108K**

23. **Top-Performing States:** **California** leads with total sales of **\$457K**.

24. **Top-Performing Cities:** **New York City** topped city-wise sales with **\$256K**.

25. **Sales by Country:** The dataset only includes **United States** as the country of operation.

Shipping Analysis:

26. **Orders by Shipping Mode:** **Standard Class** is the most preferred shipping mode (**59.8% of orders**).

27. **Profit Margin by Shipping Mode:** **First Class** achieved the highest profit margin (**13.93%**).

28. **Average Shipping Time:** The average shipping time is **3 days**.

29. **On-Time Shipping Rate:** **22.14%** of orders were Shipped on or before the expected shipping date.

30. **Sales by Shipping Mode:** **Standard Class** accounted for **59%** of total sales.

Returns Analysis:

31. **Return Rate:** **5.9%** of orders were returned, impacting overall profitability.

32. **Products with Highest Return Rate:** Products **Wirebound Service Call Books, 5 1/2" x 4"** and **Xerox 1882** had the highest return rate (**60%**).

33. **Regions with Highest Return Rate:** The **West** region experienced the most returns (**15.29%**).

34. **Categories with Highest Return Rate:** **Technology** has the highest return rate (**8.44%**).

35. **Profit Loss Due to Returns:** Returns led to a loss of **\$23,332** in profit.

Profitability Analysis:

36. **Average Profit Margin:** The average profit margin across all transactions is **12.03%**.

37. **Profitability by Category:** **Technology** is the most profitable category with a margin of **17.39%** and **Furniture** is least with **2.48%**

38. **Profitability by Sub-Category:** **Labels, Paper and Envelopes** are the most profitable sub-categories with a profit margin of **42-44 %** each.

39. **Profit Trends Over Time:** Profit grew by an **average of 23%** year-over-year. From 2014-15 is 24% , 2015-16 is 32% and 2016-17 is 14%.

40. **Products with Negative Profit:** Product (**3.6 Cubic Foot Counter Height Office Refrigerator**) generated a total loss of **\$872**.

Discounts Analysis:

41. **Impact of Discounts on Sales:** Discount **0%** resulted in the highest sales. Not much Impact because discounts given are very less i.e., from 0-1% only

42. **Products with Highest Discount-to-Profit Ratio:** Can't find because of negligible discounts.

43. **Regions with Most Discounted Sales:** **West** had the most discounted sales.

44. **Customer Segments Availing Most Discounts:** **Consumer** segment benefited the most from discounts.

45. **Correlation Between Discount and Profit:** Discounts resulted in declining profits.

Advanced Insights:

46. **Market Basket Analysis:** There are many pair of 2 products which are bought together twice.

47. **Customer Lifetime Value:** Customer with id **SM-20320** has the highest lifetime value of **\$25043**.

48. **Sales Contribution by Category:** **Technology** accounts for **36%** of total sales.

49. **Comparison of Sales Across Years:** Sales grew from **\$609K** in **Year 2016** to **\$733K** in **Year 2017**, a growth of **20%**.

50. **Average shipping time across regions:** 3.9 to 4 days.

Recommendations:

1. Discounts given are almost negligible (**0-1%**) only.
a.) Either remove discounts as we have seen there is no impact of discounts on sales. B.) Increase selling prices by 20-30 percent of low margin products and 10-15 percent for average margin products and then give a discount of 8-12% on most selling products. It will result into an increase in Profits as well as increase in Sales due to discounts.
2. Focus marketing efforts on low-performing regions i.e., **South**.
3. Improve shipping performance to reduce delivery times and enhance customer satisfaction.
4. Address high return rates in the **West** region.
5. Expand inventory for best-selling products and cross-sell frequently bought items.
6. We can also remove least selling products that are making loss or have a very less profit margin.
7. Introduce loyalty programs to retain high-value customers.
8. Use predictive analytics to prepare for peak demand periods.
9. Overall Profit & Profit Margin for **Furniture** is very low i.e., only **2.5 %**. We can improve profit margins here.
10. Focus on States that are making overall loss even after having high Sales i.e., **Texas**.

Conclusion: The insights derived from this analysis highlight several growth opportunities for the superstore. By implementing the recommendations, the company can improve profitability, optimize operations, and better cater to customer needs. This project provides a foundation for ongoing data-driven decision-making and future enhancements using advanced analytics.

End of Report