

SALES PROFITABILITY AND TRENDS

The background is a solid dark red color. It features several overlapping, semi-transparent hexagons in a lighter shade of red. A large, thin-lined hexagon is positioned on the right side of the image. There are also several small, solid hexagons scattered across the background.



INTRODUCTION

In today's competitive retail landscape, understanding sales trends and optimizing profitability are critical for business success. This project, titled "Sales Trends and Profitability Analysis", focuses on analyzing sales data from a Superstore to uncover key insights into performance patterns, customer behavior, and profit-driving factors.

AGENDA

01 introduction To Data

02 Sales and Profitability Analysis by subcategories

03 Analysis and Findings: Subcategories in Loss

04 Customer Segments

05 Subcategories vs Segments

06 Profitability By City

1. ABOUT DATA

The dataset used in this analysis is sourced from Kaggle and contains 9,694 records. It includes the following fields:

- Row ID: Unique identifier for each row.
- Order ID: Unique identifier for each customer order.
- Order Date and Ship Date: Dates when the order was placed and shipped.
- Ship Mode: Shipping method used by the customer.
- Customer ID and Customer Name: Identifiers and names of customers.
- Segment: Customer segment (e.g., Consumer, Corporate, Home Office).
- Country, City, State, Postal Code, Region: Geographic details of customers.
- Product ID: Unique identifier for each product.
- Category and Sub-Category: Classification of products.
- Product Name: Name of the product.
- Sales: Revenue generated from the sale.
- Quantity: Number of units sold.
- Discount: Discount applied to the sale.
- Profit: Profit or loss from the sale.



SALES AND PROFITABILITY ANALYSIS BY SUBCATEGORIES

This data highlights the profitability of various product sub-categories. Copiers lead with the highest profit of \$55,617.82, followed by Phones and Accessories. Sub-categories like Paper and Binders also contribute significant profits. On the other hand, Tables and Bookcases show notable losses, with Tables incurring a loss of \$17,725.5.



sub_category	Total Orders	Quantity Sold	Profit
Copiers	68	234	55617.82
Phones	881	3254	44447.88
Accessories	775	2976	41936.64
Paper	1267	4811	32712.17
Binders	1433	5614	29983.02
Chairs	617	2356	26590.17
Storage	821	3065	21527.91
Appliances	466	1729	18138.01
Furnishings	910	3390	11588.64
Art	796	3000	6527.79
Envelopes	246	880	6460.87
Labels	364	1400	5546.25
Machines	115	440	3384.76
Fasteners	212	901	942.44
Supplies	176	590	-1348.57
Bookcases	228	868	-3472.56
Tables	319	1241	-17725.5

Analysis and Findings: Subcategories in Loss

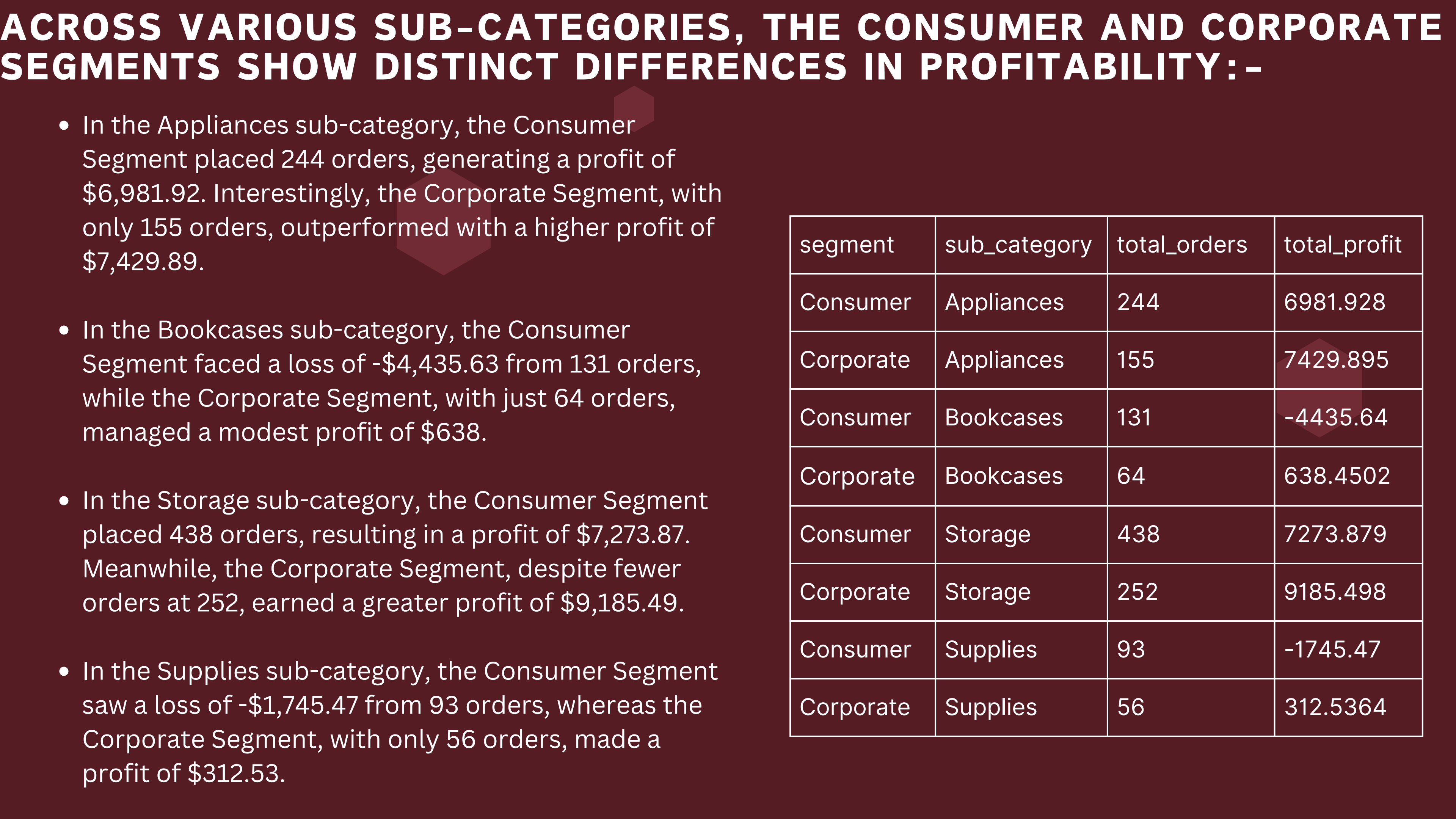
- Based on the analysis of the Tables subcategory, we observe a moderately strong negative correlation of -0.67 between discount and profitability. This means that as discounts increase, profitability tends to decline significantly.
- In the bookcase subcategory, the Consumer segment has incurred a significant loss of \$4,435.64 over 131 transactions, while the Home Office and Corporate segments have shown profits of \$324.63 and \$638.45 from 33 and 64 transactions, respectively.

Segment	sum(profit)	count(*)
Consumer	-4435.64	131
Home Office	324.632	33
Corporate	638.4502	64

WHICH CUSTOMER SEGMENT IS MOST PTOFITABLE ?

- The Consumer Segment generated the highest total profit, with 5,044 orders contributing a total profit of \$132,669.78. However, when looking at average profit per order, the Home Office Segment stands out, with 1,730 orders and an impressive \$34.58 average profit per order.

segment	total_orders	total_sales	total_loss	total_profit	overall_profit	average_profit
Consumer	5044	1150166	-83843.8	216513.5	132669.8	26.3
Corporate	2920	696604.5	-44386	134752.3	90366.3	30.95
Home Office	1730	425679.2	-26281.4	86103.09	59821.68	34.58



PROFITABILITY BY CITY

- We have successfully delivered orders across 529 cities. Of these, 416 cities have been profitable, while 113 cities have experienced losses.
- The tables below present a summary of city performance. The upper table highlights the Top 5 Profitable Cities, while the lower table showcases the Top 5 Loss-Making Cities

Most Profit Making 5 City

state	city	loss_making_orders	profit_mmaking_orders	total_orders	total_loss	total_profit	overall_profit
New York	New York City	47	846	893	-3,966.02	65,590.08	61,624.06
California	Los Angeles	42	689	731	-1,170.33	30,977.25	29,806.92
Washington	Seattle	22	390	412	-385.17	29,254.17	28,869.00
California	San Francisco	28	466	494	-1,341.77	18,518.44	17,176.67
Michigan	Detroit	0	111	111	0	13,117.05	13,117.05

Most Loss Making 5 City

state	city	loss_making_orders	profit_mmaking_orders	total_orders	total_loss	total_profit	overall_profit
Pennsylvania	Philadelphia	238	269	507	-19,373.06	5,640.72	-13,732.34
Texas	Houston	182	188	370	-14,665.13	4,620.82	-10,044.30
Texas	San Antonio	34	25	59	-7,831.03	531.98	-7,299.05
Ohio	Lancaster	13	16	29	-7,378.64	206.82	-7,171.82
Illinois	Chicago	149	152	301	-10,897.21	4,436.93	-6,460.28

The image features a dark maroon background with several overlapping, semi-transparent hexagonal shapes of varying sizes and orientations. These shapes create a layered, geometric effect. Scattered across the background are several small, solid maroon hexagons. In the center, the words "THANK YOU" are written in a bold, white, sans-serif font. The text is positioned such that it appears to be floating within or attached to one of the larger hexagonal shapes.

THANK YOU