Discount SuperSavers Insight Report

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Executive Summary

Discount SuperSavers operates within a discount-driven retail environment with high revenue volumes that do not consistently translate into strong profitability. Following an unsatisfactory annual profitability performance, stakeholders commissioned an analysis to better understand the factors influencing profit margin outcomes.

This analysis explores product, regional and customer-level performances to identify where profitability and value are created, where profit margins are eroded and which factors have the strongest impact on profitability.

The findings reveal a concentration of profitability across a limited set of products, regions and customer accounts. At the product level, a small subset of Technology products and SKUs account for a disproportionate share of total profit. Regionally, three outlier states account for 41% of total profit with California alone accounting for 20%. Among high revenue volume customer accounts profitability outcomes vary meaningfully. While the majority operate with strong profit margins and moderate variance, a small subset generated substantial revenue with low profitability, and in one case profit loss. Reinforcing that revenue volume alone is an unreliable indicator of value.

Discounting patterns indicate that a significant proportion of revenue is generated at higher discount levels, which is associated with consistent profit margin erosion without delivering corresponding sustainable gains in revenue volume.

Collectively, these insights suggest that improving profitability is less dependent on driving additional revenue volume and more reliant on protecting profit margins through conservative discounting, prioritizing high-quality revenue, and scaling identified profit drivers while reducing exposure to structurally under-performing areas.

Business Context and Problem

Discount SuperSavers is a national discount retailer operating across both online and physical store channels. The business competes in a price-sensitive environment characterized by high competition, frequent discounts and narrow profit margins. While revenue volume is strong, profitability performance varies significantly across products, regions and customer segments, limiting visibility into which areas of the business are creating value versus eroding profit margins.

Stakeholders required a consolidated, data-driven view of profitability to better understand the impact of the discount strategy, customer behaviour and regional performance on the overall profit margin performance. This analysis was conducted to identify profit drivers, find areas of profit margin leakage, and provide insights to support more informed strategic and commercial decision-making.

Objectives and Success Criteria

Identify primary profitability drivers across products, regions and customer segments
Assess the impact of the discount strategy on profit margin performance
Evaluate customer value beyond revenue contribution alone
Identify opportunities to improve revenue quality and strengthen profit margin stability

Role, Data and Methodology

This analysis was conducted end to end, covering data preparation, exploratory analysis, insight developments and data visualization for stakeholders.

Data and Tools

Transactional sales data including orders, customers, products, discounts, regions and profitability.
Tools used: SQL - for data querying and transformation, Excel - for validation and exploratory checks, Power BI - for modelling and visualization

Analytical Techniques

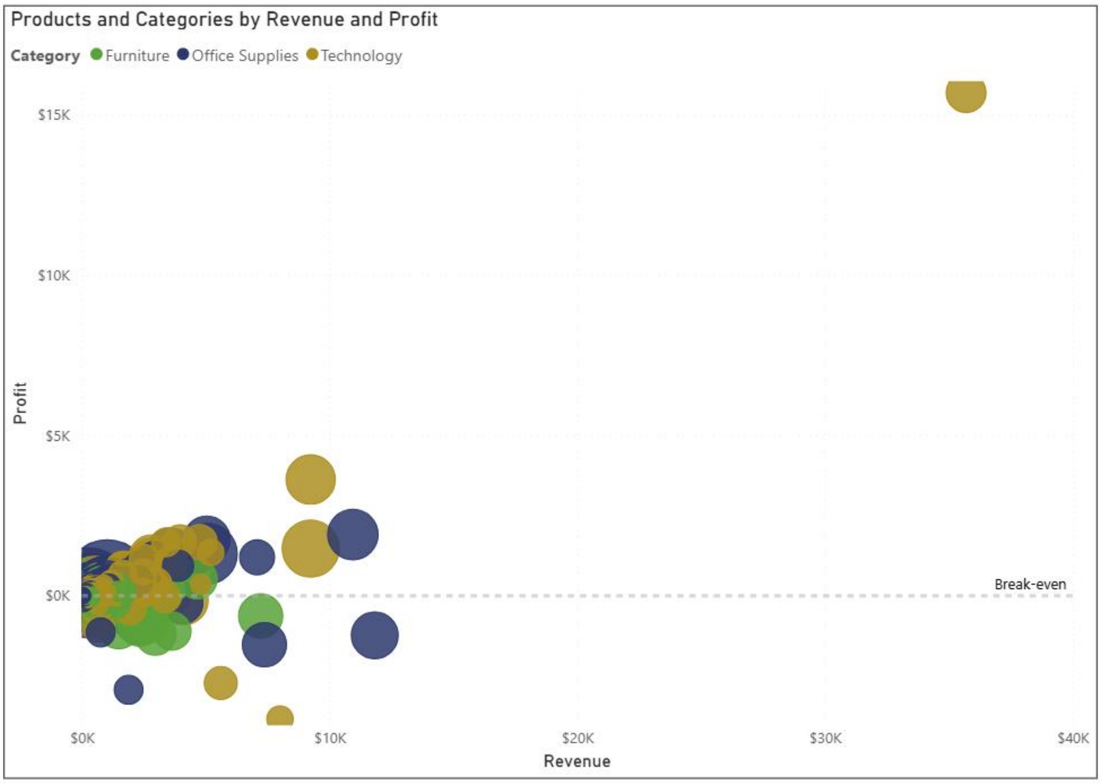
Product and category level profitability analysis to identify value concentration
Discount elasticity analysis to assess the relationship between discount depth, revenue, and margin
Regional analysis to identify performance variations across states
Customer segmentation using RFM (Recency, Frequency, Monetary) analysis
Customer-level profitability analysis to evaluate revenue quality

Approach

The analysis prioritized ease of interpretation and decision relevance, focusing on identifying patterns, contrasts and outliers rather than exhaustive reporting. Findings were validated across multiple dimensions to isolate structural profitability drivers and prevent single-metric conclusions.

Key Insights and Analysis

Profitability in Product and Category is Highly Concentrated



Visual 5.1: Product and Category Performance by Revenue and Profit

A clear profitability hierarchy emerges at the category-level: Technology products sit at the top, outperforming on both revenue and profit. Office Supplies products display variability; some profitable SKUs are offset by the poor performance of several under-performers. Furniture products concentrate below the break-even line pulling down overall profitability.

Technology leads due to a small subset of high-revenue, high-margin SKUs. Many SKUs sit above the $10K-$20K revenue threshold and the category holds the year's most profitable SKU with a 43% margin. Whilst minor, these outliers boost the entire category in both revenue and profitability separating Technology from the other categories.

Office Supplies struggles to consistently turn revenue to profit. Several highly profitable SKUs cluster below the $10K-$20K revenue threshold with two outliers breaking into the threshold. Whilst one of the outliers sits above the break-even line, the second outlier joins several other SKUs with good revenue performance below the break-even line, indicating margin pressure. Altogether it suggests a category where top-line performance fails to translate into bottom-line contribution.

Furniture shows signs of structural margin issues and it is the category in the most need of audit and restructuring. All SKUs fall below the $10K-$20K revenue threshold with majority falling below the break-even line and the remainder achieving break-even at best.

Top 10 Most Profitable Products

Product Name	Category
3D Systems Cube Printer, 2nd Generation, Magenta	Technology
Ativa V4110MDD Micro-Cut Shredder	Technology
Canon imageCLASS 2200 Advanced Copier	Technology
Canon PC1060 Personal Laser Copier	Technology
Fellowes PB500 Electric Punch Plastic Comb Binding Machine with Manual Bind	Office Supplies
Hewlett Packard LaserJet 3310 Copier	Technology
HP Designjet T520 Inkjet Large Format Printer - 24" Color	Technology
Ibico EPK-21 Electric Binding System	Office Supplies
Plantronics Savi W720 Multi-Device Wireless Headset System	Technology
Zebra ZM400 Thermal Label Printer	Technology

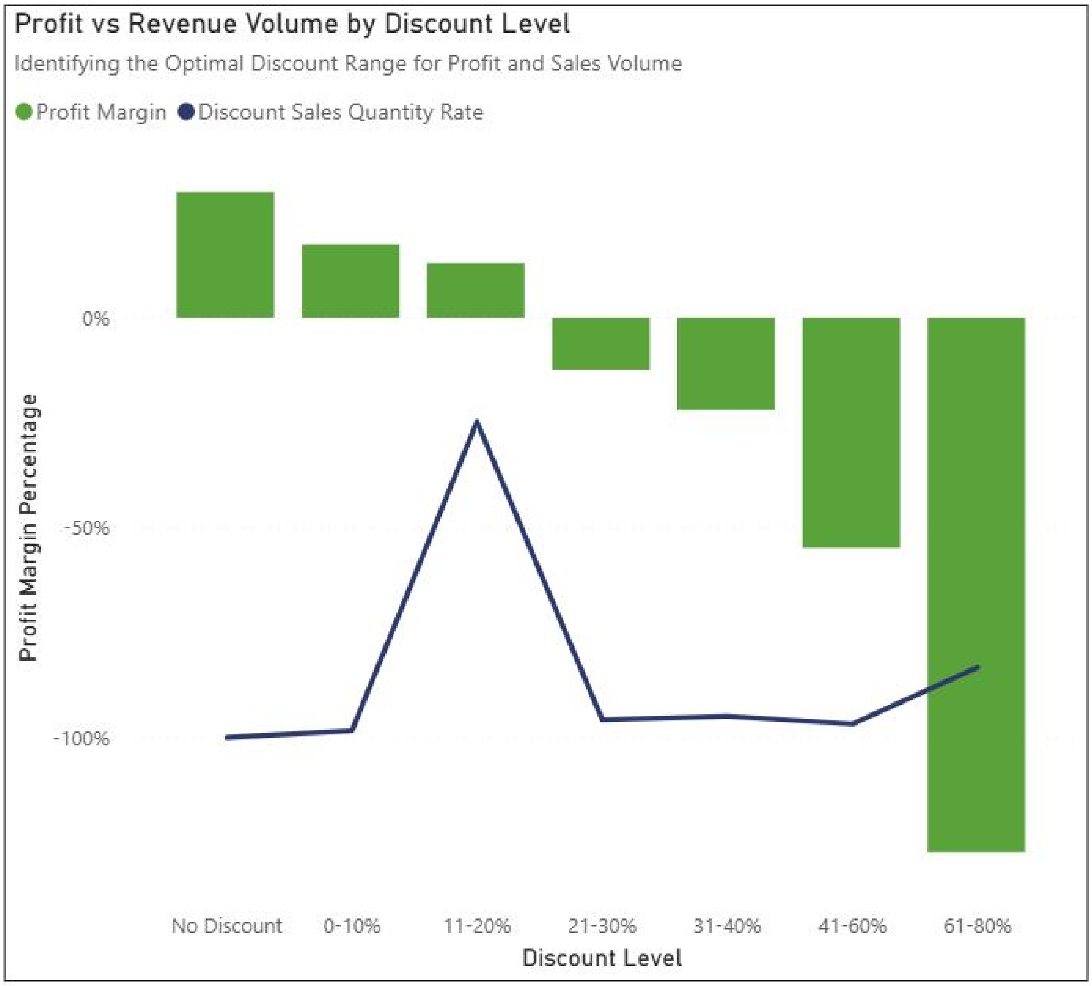
Visual 5.2: Top 10 Most Profitable Products with Categories

The product-level SKU analysis confirms and sharpens the prior category-level findings. Eight of the Top 10 most profitable products are Technology products and these SKUs form the core profit source for Discount SuperSavers. Their Top 10 dominance explains why Technology holds the top profitability tier despite uneven performance across its broader product range. Despite its mixed performance, Office Supplies features two SKUs in the Top 10 most profitable products. No Furniture SKUs are featured, reinforcing the structural issues identified earlier.

Together these analyses offer a consistent picture with actionable insights. Technology's profit and revenue strength is driven by a small set of hero SKUs rather than broad category strength. These SKUs can be isolated for targeted optimization through availability, pricing, demand forecasting and promotion strategies. Despite its variability, Office Supplies holds opportunities to improve its profit and revenue strength through selective initiatives targeted to its strongest SKUs.

Furniture requires deeper audit and margin restructuring to enable it to begin contributing meaningfully to the profit bottom line. However Technology and Office Supplies also present improvement opportunities; Technology is over-reliant on a small set of SKUs leaving it vulnerable shifts in demand whilst Office Supplies features a number of under-performers that can be audited and optimized to improve category profitability.

Discounting Erodes Profit Margins Without Driving Sustainable Revenue Volume

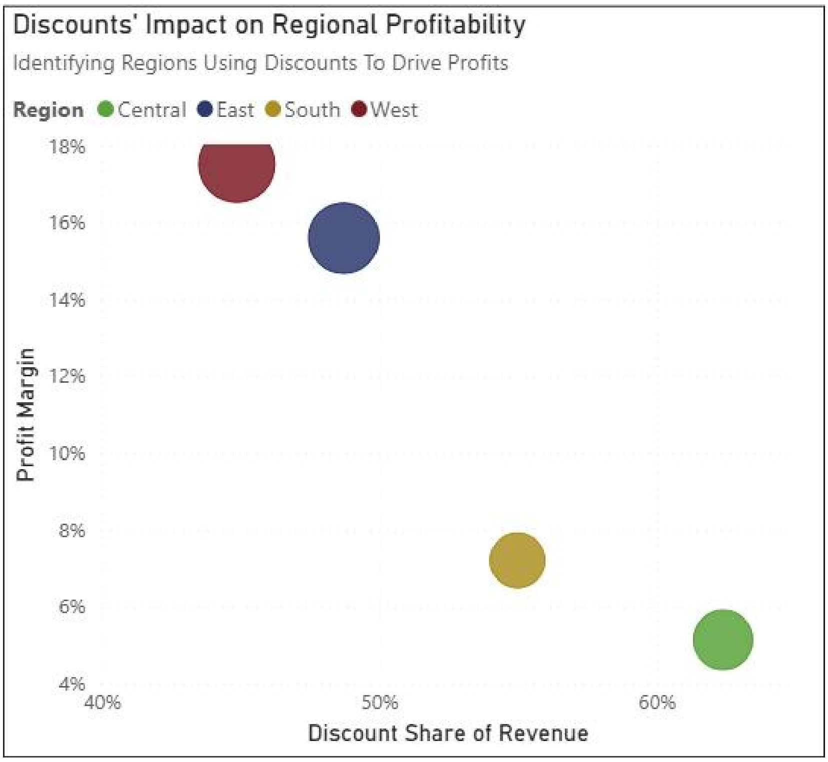


Visual 5.3: Profit-Revenue Relationship Impacted by Discount Levels

The current discount strategy structurally erodes profitability without creating worthwhile revenue gains. As discounts increase, profit margins shrink turning into outright profit loss beyond the 21-30% discount range. The profit loss is severe within the 41-60% and 61-80% ranges, yet sales volume remains weak, indicating that aggressive discount is not stimulating demand.

Around the 11-20% discount range there is a brief peak in sales volume. However within this range profit margins still show a sharp decline, suggesting that the volume increase is insufficient to offset the profit loss caused by the discount. Except for this peak, the sales volume remains relatively flat across discount ranges, confirming that the current discount strategy harms profitability without bringing meaningful sales volume or revenue growth.

As Discount SuperSavers is a discount retailer, eliminating discounts entirely would undermine their commercial model. The data offers a solution however, a conservative discount strategy capped at 11-20% would retain customer value perception, preserving Discount SuperSavers' discount identity and preventing significant profit loss.



Visual 5.4: Regional Profitability Impacted by Discount Levels

The West and East regions are excellent case studies on how an effective discount strategy can improve profitability. With a conservative 45% of revenue coming from discounted sales, the West leads on profitability with the largest sales volume and a profit margin of approximately 18%. Approximately 50% of the East's revenue comes from discounted sales, sales volume decreased but the region still achieved a profit margin of approximately 16%.

Conversely the Central and South regions' discount strategies need audit and restructuring. Discounted sales made up 65% of the Central region's revenue and whilst there was decent sales volume, the region achieved the lowest profit margin of approximately 5%. Discounted sales made up 55% of the South region's revenue yet sales volume was slow and the region achieved a profit margin of approximately 8%.

Increasing discounted sales by just 5% in the East as compared to the West led to a profit margin decrease of approximately 2%. Increasing it by a further 5% in the South led to a 50% loss in profit with the profit margin dropping to approximately 8%. This suggests that 45% is a great conservative cap for discount sales with an allowance to increase discounted sales up to 50% to target new or stubborn markets. Further discounting severely impacts profitability with no clear improvement to sales volume.

Category Profit Tolerance to Discounts

Identifying Discount Ranges with High Profitability

Category	0-10%	11-20%	21-30%	31-40%	41-60%	61-80%	No Discount	Total
Technology	24.39%	15.88%	4.29%	-13.09%	-43.82%	-122.01%	34.42%	**18.65%**
Office Supplies	21.11%	17.55%				-126.12%	29.48%	**16.15%**
Furniture	15.85%	2.71%	-12.47%	-30.51%	-66.56%	-162.37%	22.48%	**1.40%**
Total	**17.41%**	**13.00%**	**-12.35%**	**-22.01%**	**-54.83%**	**-127.29%**	**29.86%**	**12.74%**

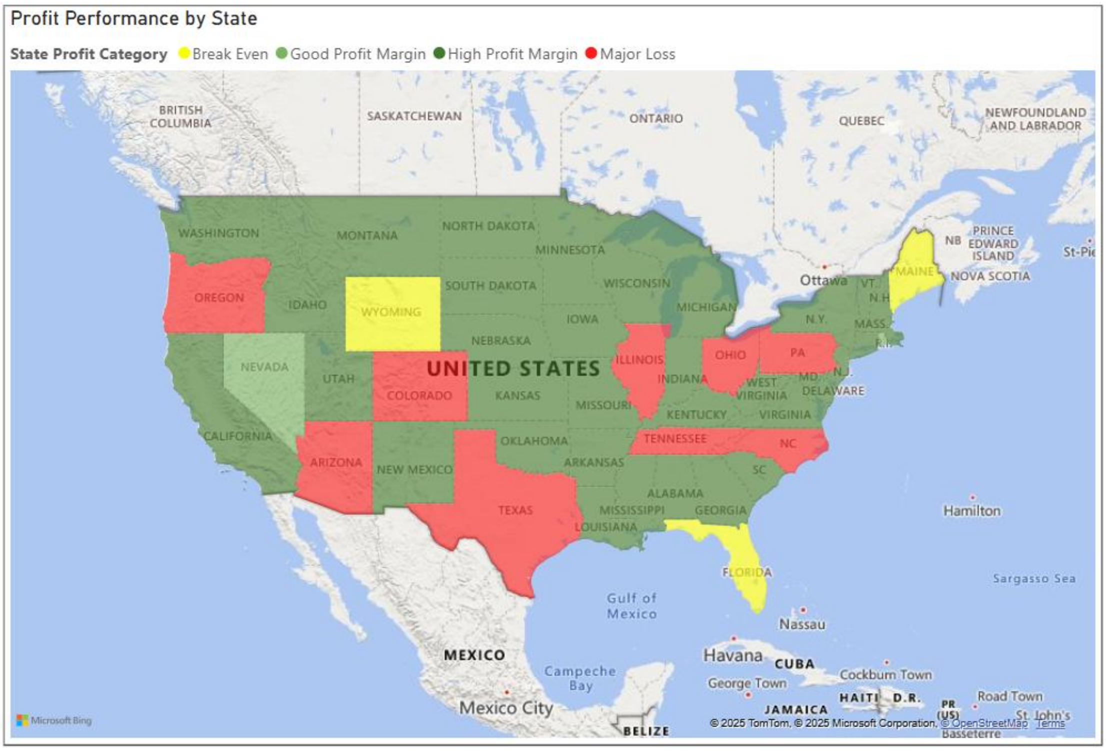
Visual 5.5: Category Profitability at Discount Levels

On the Category-level, Technology is the most resilient to discounts, achieving a profit margin of 4.29% within the 21-30% discount range whilst other categories suffered profit losses. Furniture is the most sensitive suffering a profit margin loss of 13.14% moving from the 0-10% to 11-20% discount range. Across all categories, aggressive discounting leads to profit loss eroding Furniture’s profit margin to 1.40%.

Visual 5.6: Category Discount Vs Non Discounted Revenue

Drilling down into each category’s revenue composition offers a reason for the Furniture category’s poor profitability performance. Discounted sales account for 66.42% of Furniture’s revenue yet it is the category most sensitive to profit loss when increasing discounts. Office Supplies has the least discounted sales with 59.77% of revenue coming from non-discounted sales. As a result, despite suffering profit loss within the 61-80% discount range, Office Supplies achieved a profit margin of 16.5%.

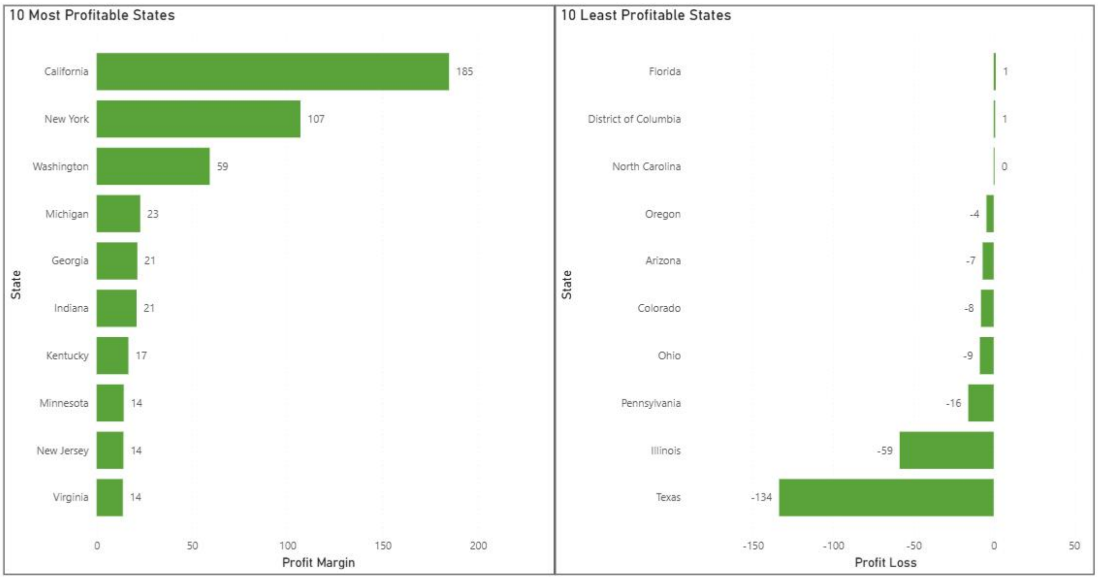
Regional Profitability Performance is Driven by a Small Subset of Outliers



Visual 5.7: Profitability Performance by State

Most states achieved either good(5-15%) or high(15%+) profit margins but the Western region leads in profitability. It contains both the most profitable state California which achieved a profit margin of 185% and the third most profitable state Washington that achieved a profit margin of 59%. The Eastern region follows close behind, containing the second most profitable state New York which achieved a profit margin of 107%. The Central (Midwest) region holds the highest number of states in need of audit, it has three of the states with the highest profit loss. Texas had a profit loss of 134%, Illinois had a 59% profit loss, while Ohio had a 9% profit loss.

However profitability is not evenly spread across strong regions; within the Western region California sits right next to Oregon which had a 4% profit loss. These fluctuations suggest operational issues might be at their root as similar markets achieve vastly different results. The Central (Midwest) region's profitability performance points to regional issues, Texas is the second largest state by size and GDP yet it had the largest profit loss and Illinois has the fifth largest GDP, yet it had the second largest profit loss. The region does have some strong states such as Michigan which achieved a 23% profit margin, providing case studies and a starting point to audit and restructure brand positioning, infrastructure or leadership.



Visual 5.8: 10 Most and Least Profitable States

A trend of outliers driving both profitability and profit loss becomes apparent after isolating the top 10 most profitable states as well as the 10 states with the largest amount of profit loss. In profitability, California, New York and Washington lead the pack. The three states account for approximately 41% of total revenue with California alone bringing in approximately 20% of that. However this large revenue share signals overreliance on these dominant states and thus leaves Discount SuperSavers vulnerable to market shifts within these states.

However after the outliers profit margins sharply drop and settle within relatively uniform ranges throughout the rest of the top 10 states. As these ranges are present within states from various regions, they can be isolated and transformed into future profitability benchmarks and KPIs. 15-20% profit margins can become signals of modest yet positive profitability and a higher profit margin becomes a true sign of a strong state.

This drill-down also confirms the volatility of the Central region's profitability. The region has four states in the 10 most profitable states and all four states' profit margins sit at the higher end of their benchmark ranges. The region also has the two states with the highest profit loss, combined 193%, and this aggressive profit loss could offer a reason to why the overall profit margin fell at a conservative 11%.

3 Most Profitable States Discount Share of Sales

State	Discounted Share of Sales
California	36.46%
New York	24.56%
Washington	34.00%
Total	**32.74%**

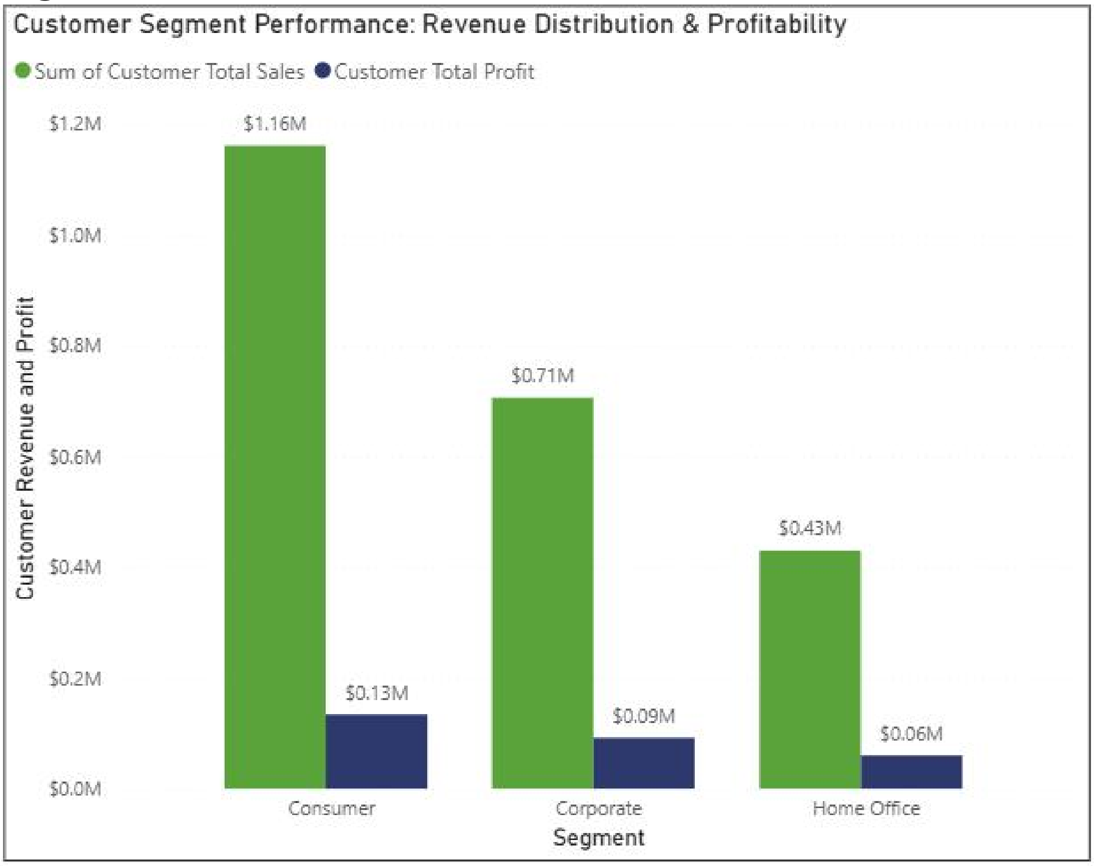
3 Least Profitable States Discount Share of Sales

State	Discounted Share of Sales
Illinois	100.00%
Pennsylvania	100.00%
Texas	100.00%
Total	**100.00%**

Visual 5.9: 3 Most and Least Profitable States with Discount Share of Sales

Outlier states offer the perfect snapshot to see the impact of the current discount strategy on profitability. The three dominant states all employ minimal discount strategies with their discounted share of sales falling far below the 45% cap identified earlier. As such the discounted sales share cap can be restructured to improve profitability whilst maintaining customer value perception. In contrast the states with the highest profit loss had only discounted sales.

Revenue Volume is Not a Reliable Indicator of Customer Segment Value

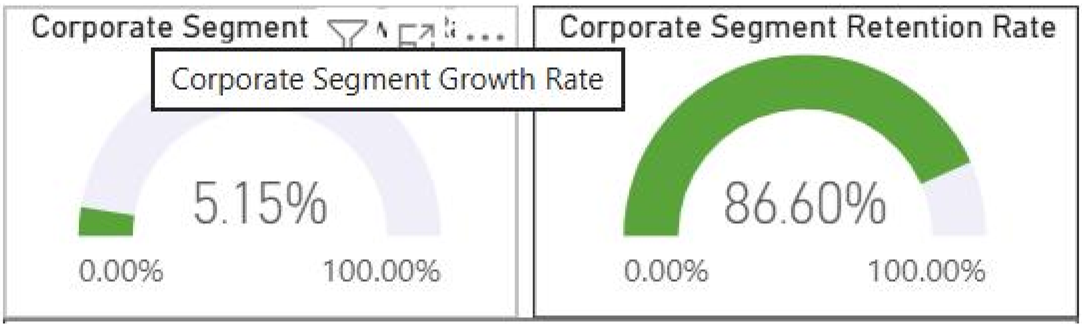


Visual 5.10: Customer Segment Revenue and Profit Breakdown

At first glance direct-to-consumer sales appear to be driving profits, outpacing the other segments in revenue volume. Drilling down into each segment's profits however, presents a different picture altogether. Despite leading in revenue volume, Consumer sales had a profit margin of 11.21%. In contrast Corporate sales had a profit margin of 12.68% and Home Office sales had the highest profit margin of 13.95% despite having the lowest revenue volume. As a result, despite having the strongest revenue volume, Consumer sales remain the least profitable prompting further investigation into the segment's overall health, structural margins and discount strategy.

Visual 5.11: Home Office Sales Segment Health Overview

As the previous insight shows, revenue volume is not a reliable indicator of segment performance. Identifying the drivers of profitability differences therefore requires a deeper analysis of the overall health of each customer segment. Home Office sales, the segment with the highest profit margin, shows strong overall health. It features an excellent retention rate as well as the highest growth rate among all segments.



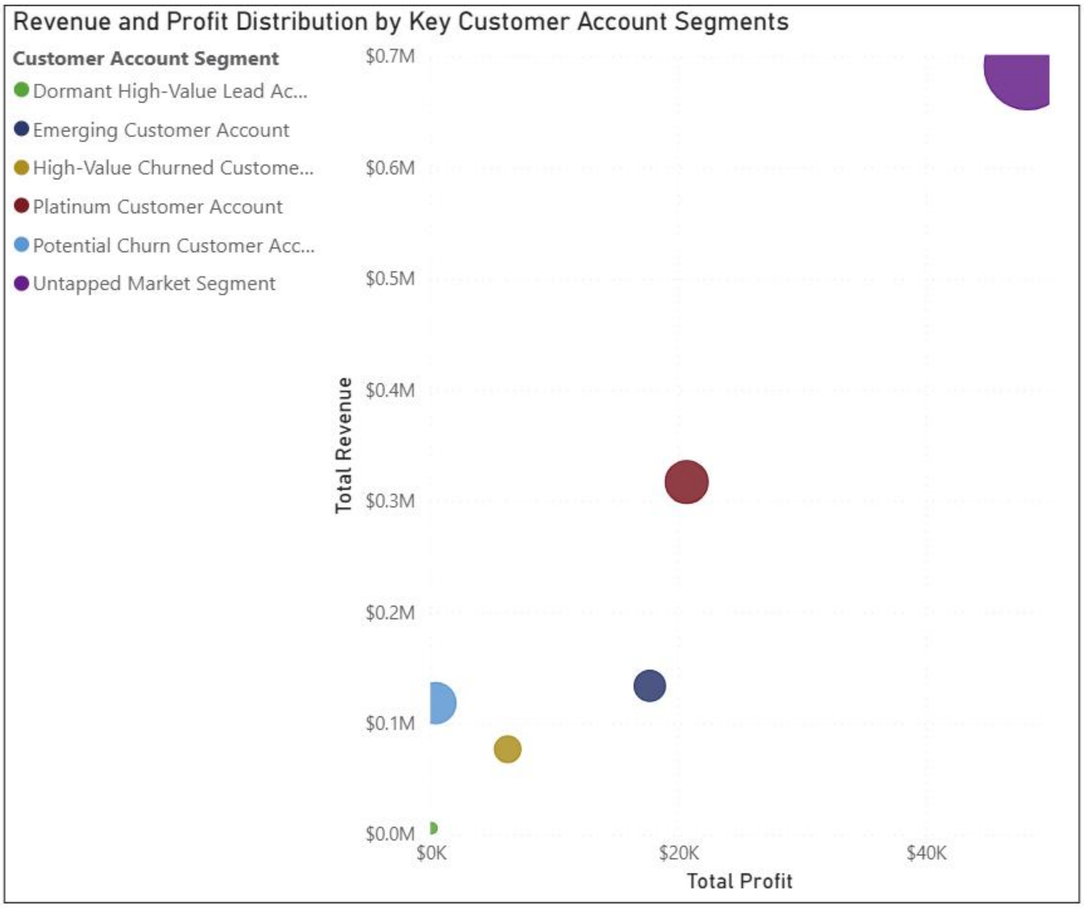
Visual 5.12: Corporate Sales Segment Health Overview

In contrast the Corporate segment has the weakest overall health. It has the lowest growth and retention rates, despite being the segment with the second-strongest revenue volume and sitting in the middle of the profitability range.

Visual 5.13: Consumer Sales Segment Health Overview

The Consumer segment shows the most mixed performance. It delivers the highest retention rate and revenue volume, yet also has the lowest profit margin and a growth rate that sits within the mid-range of the group.

Customer Value is Unevenly Distributed Across Market Segments



Visual 5.14: Revenue and Profit Breakdown by Customer Account Segments

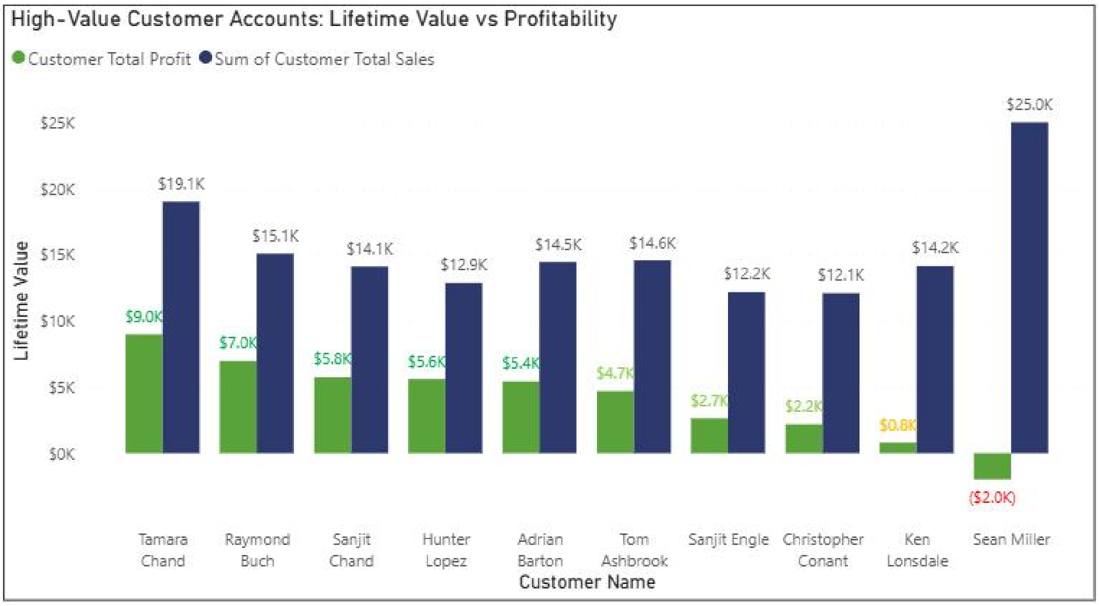
To understand each segment's value concentration, customers were grouped using RFM analysis based on their order frequency, recency and revenue contribution. This market-level view reveals a skewed distribution of customer value.

The majority of active customers are concentrated within the Untapped Market Segment, a group characterized by low engagement, low spend and insufficient order history to establish strong behavioral patterns. Whilst this group has the largest revenue share, this is primarily due to customer revenue volume as opposed to customer quality. Customer value remains thinly distributed and the group is highly sensitive to disengagement and churn.

The next largest customer groups present a stark contrast. Platinum Customer Accounts, though smaller in number, has strong engagement and active customers, confirming their roles as high-value revenue contributors with the second-highest revenue and profitability. In contrast Potential Churn Customer Accounts has a relatively large active customer base whose declining recency and order frequency results in low profitability and revenue volume despite their size.

Altogether this suggests that customer volume does not correlate with customer value. Two additional patterns confirm this imbalance. High-Value Churned Customer Accounts still show residual activity, continuing to provide limited profitability as engagement declines. In contrast, Emerging Customer Accounts provides higher profitability despite having a smaller, less active customer base and lower revenue volume.

High-Revenue Accounts Display Profitability Divergence



Visual 5.15: Top 10 Customer Accounts LTV vs Profitability Breakdown

High-value customer accounts are often assessed through revenue contribution. Introducing profitability as an additional assessment layer provides clearer insight into the quality of revenue generated by these high-value customer accounts. Among the top ten customer accounts by total revenue, the majority delivered strong profit margins with moderate variation, confirming their roles as value drivers within the customer base.

This pattern does not hold consistently across all high-revenue accounts. A small subset of customers generated substantial revenue volumes with low profitability, and in one case delivering profit loss despite having the highest revenue volume of the group. These outliers highlight an important distinction: revenue volume is not a reliable indicator of customer value, instead revenue quality offers a more accurate indicator of a customer's long-term contribution.

An examination into these high-value customer accounts' product purchasing patterns did not deliver significant variations from overall bestseller trends highlighted earlier in the analysis. This suggests that profitability variations are not directly driven by product selection. Instead these variations are more likely attributable to other factors such as customer-level pricing, cost structures or discount strategies.

Strategic Recommendations

Reorient Performance Measurement Towards Revenue Quality and Refocus Performance Management on Profitability

Introduce KPIs targeting profitability alongside existing revenue KPIs at the category, segment and account levels. This ensures new growth initiatives will prioritize revenue quality over volume to increase profitability. Margin and value leakage points become easier to identify supporting more informed strategic and commercial decision-making.

Establish Guardrails Around Discounting Strategy

Setting formal standard discount threshold caps at regional, category and customer levels can limit profit margin erosion while preserving revenue volumes. Formal caps allow Discount SuperSavers to preserve customer value perception while also keeping the business' commercial model. Dynamic caps and exceptions can be implemented following selective monitoring at the category and regional level to enable flexibility without compromising overall profitability and margin discipline.

Prioritize Revenue Quality Within Growth Efforts

Within identified high-revenue customer segments and markets, introducing targeted initiatives aimed at improving engagement and order frequency could shift customers from stagnancy or low-value to higher-value customer segments and mark3ets. This approach would enable and encourage value growth without heavy reliance on aggressive discounting or acquisition spend.

Protect and Scale Identified Profit Drivers

The high-performing SKUs, regions and customer accounts identified in the analysis represent scalable profit centers and opportunities. Prioritizing availability, pricing consistency and operational focus around these profit drivers can reduce reliance on under-performing areas improving overall profit margin stability.

Estimated Business Impact

Improved Profit Margin Protection

Margin erosion could be reduced through improved discount strategies and profitability KPIs which inform decision making.

Improved Revenue Quality

Prioritizing high profit margin products, categories, regions and customer accounts can result in more stable profitability without requiring revenue volume growth.

Reduced Risk

Improving under-performing regions and customer accounts can reduce performance volatility while also preventing over-reliance on narrow subsets.

Increased Decision Efficiency

Faster, more targeted commercial decisions are enabled due to clearer visibility into profit drivers, reducing expenditure and reliance on broad, revenue volume-led optimization which might not deliver expected results.

Technical Appendix

Data Sources

The analysis was conducted using transactional sales data covering orders, customers, products, regions and discount activity from 2014 - 2017. the dataset includes order-level revenue, profit, discount rates, customer identifiers and SKUs, which enabled profitability analysis at multiple levels.

Data Model Overview

The Power BI data model was designed using a star schema to support flexible analyses across products, regions and customers. The structure also enabled revenue, profit and discount aggregation measures while maintaining performance and analytical clarity.

Fact table: Sales transactions
Dimension tables: Customers
Products
Geography
Date

Key Measures and Calculations

Core measures were created to separate volume metrics from value metrics, these include:
Total Revenue
Total Profit
Profit Margin (%)
Discount Rate (%)

Discounts were analyzed both as values and through groups to identify discount threshold effects on profitability.

Customer Segmentation Methodology

Customer segmentation was conducted using RFM analysis, incorporating:
Recency: Time since last purchase
Frequency: Number of orders in the fiscal year
Monetary Value: Revenue contribution

Customers were then grouped into meaningful segments (i.e. Platinum, Emerging, Untapped, Potential Churn etc) to enable analysis of customer quality not just customer revenue volume.

Analytical Approach

The analysis followed a top-down diagnostic approach:
An executive performance overview to assess overall revenue and profitability trends
Product-level profitability concentration analysis
Discount strategy impact assessment
Regional profit contribution analysis
Customer and account-level profitability diagnostics

This allowed broad performance issues to be narrowed into specific drivers of margin erosion and value concentration.

Scope and Limitations

The analysis is diagnostic in nature and does not model causal or counterfactual scenarios. Findings are intended to support stakeholders' strategic discussion and prioritization rather than prescribe operational or pricing decisions.