Superstore Customer Behavior Analysis & Recommendations

Rachakonda Naga Srikanth; July 12, 2025

# Introduction & Business ProbleM

This Customer behavior analysis was undertaken to answer three core Focus Questions: 1) Who are our most valuable customers? 2) What patterns exist in customer purchasing? and 3) How can we improve customer retention? To address these, I applied the DIVE framework, performing the required analyses to move beyond high-level metrics and deliver a set of specific, actionable strategies.

# DIVE Framework Insights

## Discover: Customer Segmentation, Profiling, & Lifetime Value Indicators

To answer, "Who are our most valuable customers?", the analysis began with Customer segmentation and profiling. Using a behavior-based RFPM model, 793 unique customers were segmented, revealing key groups whose profitability serves as critical Customer lifetime value indicators:

**Champions:** Our most valuable segment, with an average historical profit of $948.64. Their behavioral profile is one of the frequent purchasing with low sensitivity to discounts. Further profiling reveals our Champions are predominantly from the 'Corporate' segment, highlighting a key B2B opportunity.

**At-Risk High-Value:** A segment with a strong historical lifetime value indicator (average profit of $727.11) who have become inactive, signaling a significant retention risk.

While historical profit serves as a robust indicator, a logical next step for the business would be to develop a predictive model to forecast future customer lifetime value.

## Investigate: Purchase Pattern Analysis

To determine "What patterns exist in customer purchasing?", the investigation focused on the drivers of churn for the "At-Risk" segment. A comprehensive Purchase pattern analysis was conducted, which, after invalidating several hypotheses, uncovered two critical patterns:

**The Discount-Quality Pattern:** Evidence shows 38.75% of "At-Risk" customers purchase from identified unprofitable manufacturers, compared to only 23.33% of Champions. This pattern shows an attraction to low-margin products, specifically "Binders," which consistently appear in the final, churn-inducing transaction.

**The Geographic Pattern:** This negative purchasing pattern is not uniform but is heavily concentrated in specific "churn hotspots," with Ohio, Pennsylvania, and Illinois showing the highest number of at-risk customers.

## Validate: Confirming the Patterns and Their Financial Impact

The investigation was validated with specific financial data that confirmed the crisis in the identified churn hotspots. The analysis proved that the final purchase made by churning customers in these specific states was, on average, unprofitable, resulting in a direct financial loss for the company on the very transaction that drives them away. This cost is compounded by the loss of the customer's future value, an opportunity cost of approximately $727 per customer.

## Extend: Answering "How Can We Improve Customer Retention?"

Based on the validated findings, a comprehensive dual strategy was developed to directly answer how we can improve customer retention and foster growth.

**The "Profitability Turnaround" Pilot:** This urgent, 90-day initiative is designed to improve retention by stopping the financial bleeding in our churn hotspots. The plan involves executing a targeted "Win-Back & Upsell" campaign in Ohio, implementing a sales block on unprofitable "toxic assets" like Binders, and conducting a strategic review of the problematic manufacturers. The primary success metric is to **achieve a positive ROI on the pilot program within 90 days.**

**The "Value Ladder" Growth Campaign**: This initiative focuses on long-term retention and value creation by encouraging our largest segment, "Core Customers," to adopt the more profitable purchasing patterns of our "Champions." By using insights from a Market Basket Analysis (e.g., "Binders and Paper" pairings), we will launch targeted cross-sell campaigns. The success metric is **to increase the average monthly spend of the targeted Core Customer segment by 15% over the next six months.**