Summer MGMT 59000: AI-Assisted Big Data Analytics in the Cloud \* Group: **DN3**

**Assignment 1: Team Collaborative Analysis**   
Using Cloud Data Lakes for Business Intelligence

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Executive Summary

# Top 3 Unified Insights

## 1. Geographic and Product Mix Drive Profitability More Than Operations

The convergence of sales, product, and regional analyses reveals that location (city impact: 34.1% of sales variance) and product manufacturer (26.5% of sales variance) are the primary drivers of business success.

## 2. Discounting Strategy Creates Systematic Profit Erosion

Aggressive discounting undermines profitability without generating proportional sales increases. This suggests systematic mispricing rather than strategic discount deployment.

## 3. Customer Value Concentration Requires Targeted Retention

Customer behavior analysis reveals extreme value concentration, with Champions generating significantly higher monetary value than other segments. Combined with regional performance data showing customer concentration in high-performing West and East regions, this indicates that business success depends heavily on retaining a subset of high-value customers in profitable geographic markets.

# Critical Business Challenges Identified

**Operational Inefficiency in Underperforming Regions**: Central and South regions consistently lag in both sales and profit metrics

**Misaligned Pricing Strategy**: Heavy discounting on low-margin products creates a downward profit spiral

**Customer Concentration Risk**: Over-reliance on Champion customers and high-performing regions creates vulnerability

**Product Portfolio Imbalance**: High-sales categories (Tables, Bookcases) generate negative profits

# Recommended Priority Actions

**Immediate**: Implement region-specific pricing strategies to reduce unprofitable discounting

**Short-term**: Concentrate marketing and inventory investments in West/East regions and high-margin products

**Medium-term**: Develop comprehensive customer retention programs for the Champion segment

**Long-term**: Restructure or exit unprofitable product categories and regional markets