

Quantum Consulting

Chips Market Performance & Customer Insights

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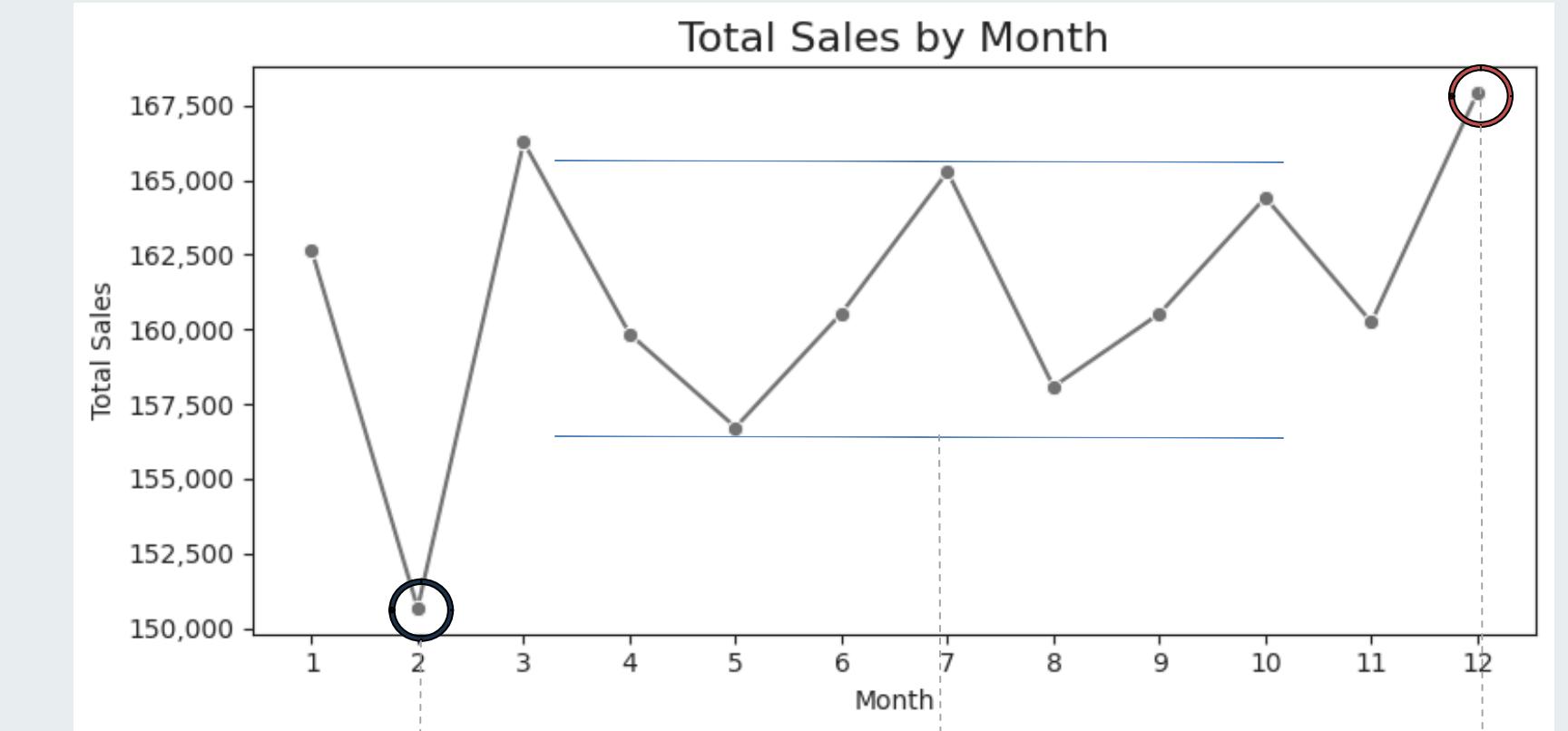
01 Overview: Stable Revenue Base with Strong Retention and Mild Seasonality

Revenue is stable with modest upside from seasonality

- **\$1.93M total revenue with a December peak of \$168K**, indicating mild seasonality

Strong repeat behavior offsets low transaction value

- **73.7% repeat purchase rate** suggests strong customer retention
- **\$7.35 average spend per transaction** suggests single-item purchases (chips + drink/sides), signaling untapped bundling revenue per visit



February is the lowest transaction month (\$150,500/month)

Consistent sales volume with no significant seasonal impact

December peak of \$168K/month

02 Product: Fragmented SKU Demand with Clear Brand Leaders and Substitution-Like Preferences

Revenue is highly fragmented across SKUs with KETTLE as leading brand

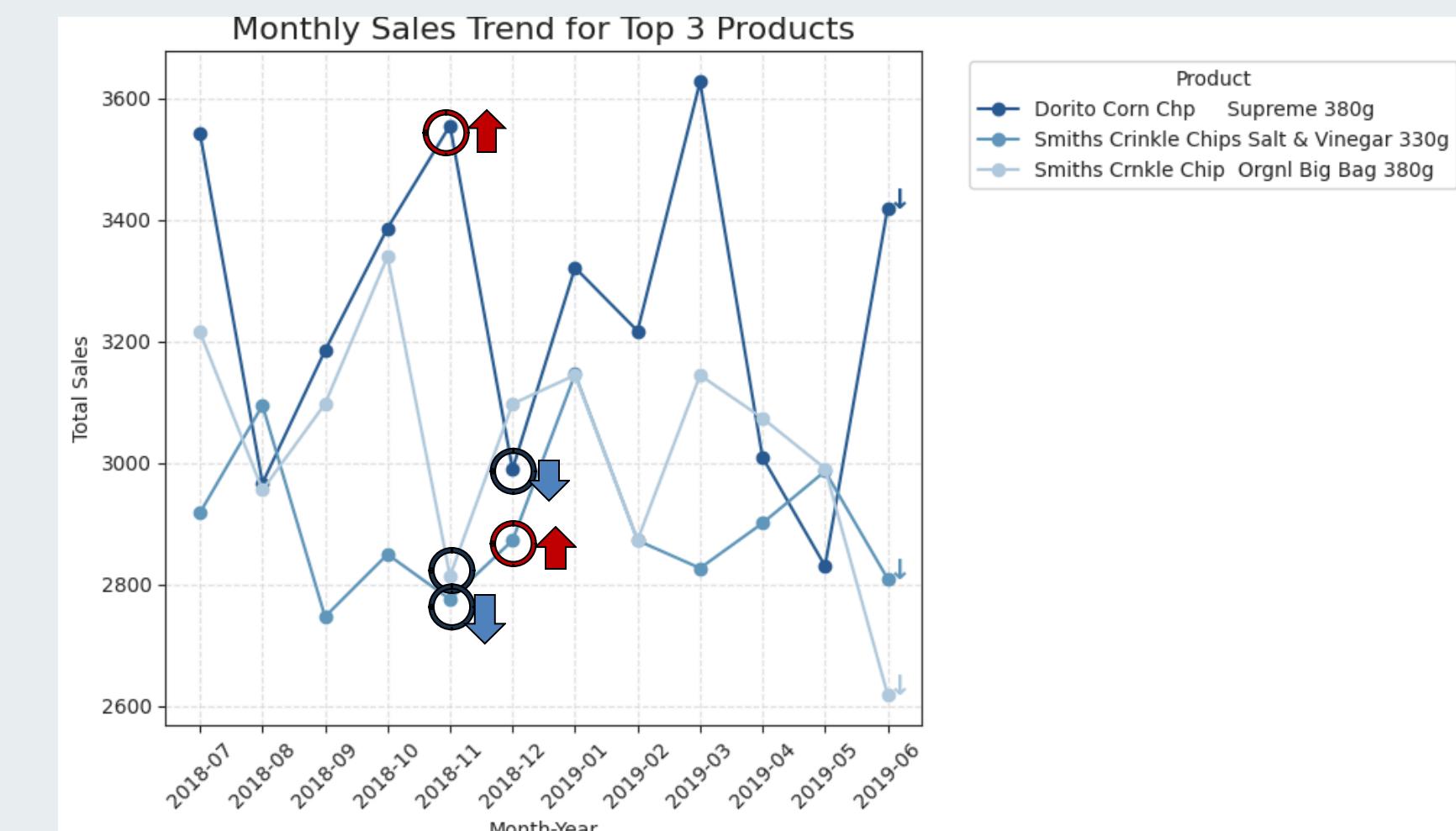
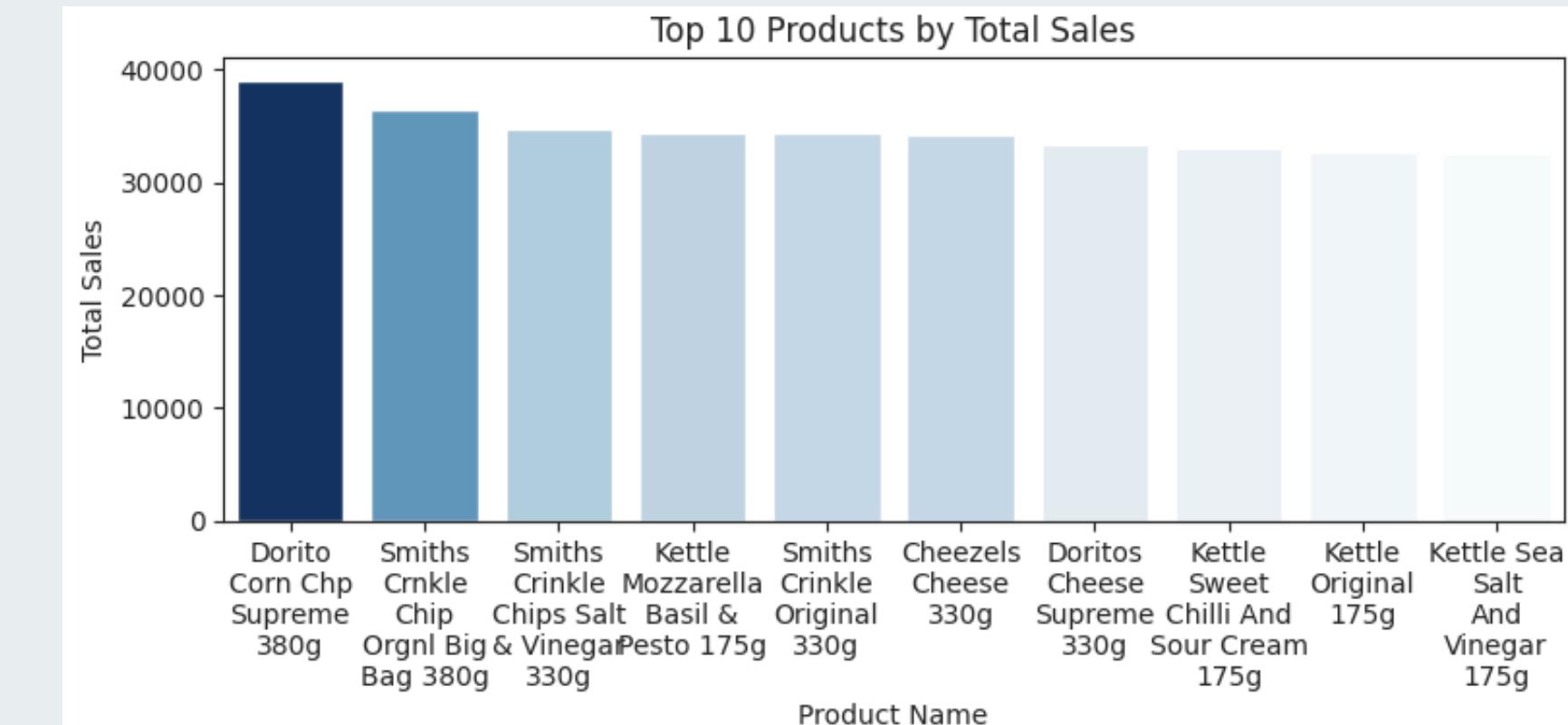
- **Top 10 products** account for ~18% of total revenue, indicating revenue is widely distributed with a long-tail portfolio
- **KETTLE** Brand alone contributes 20% as a standout SKU

Top products show volatile month-to-month performance

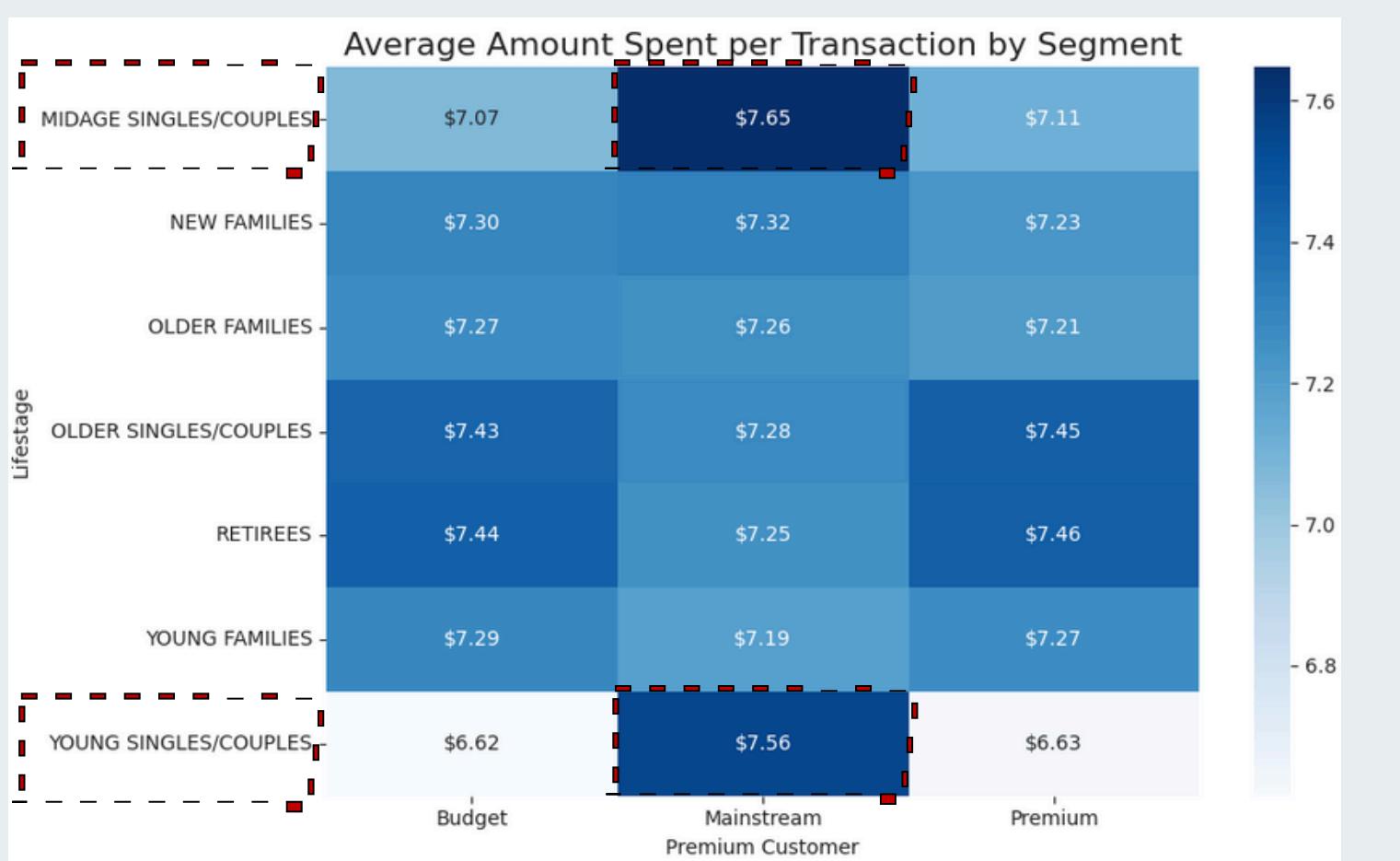
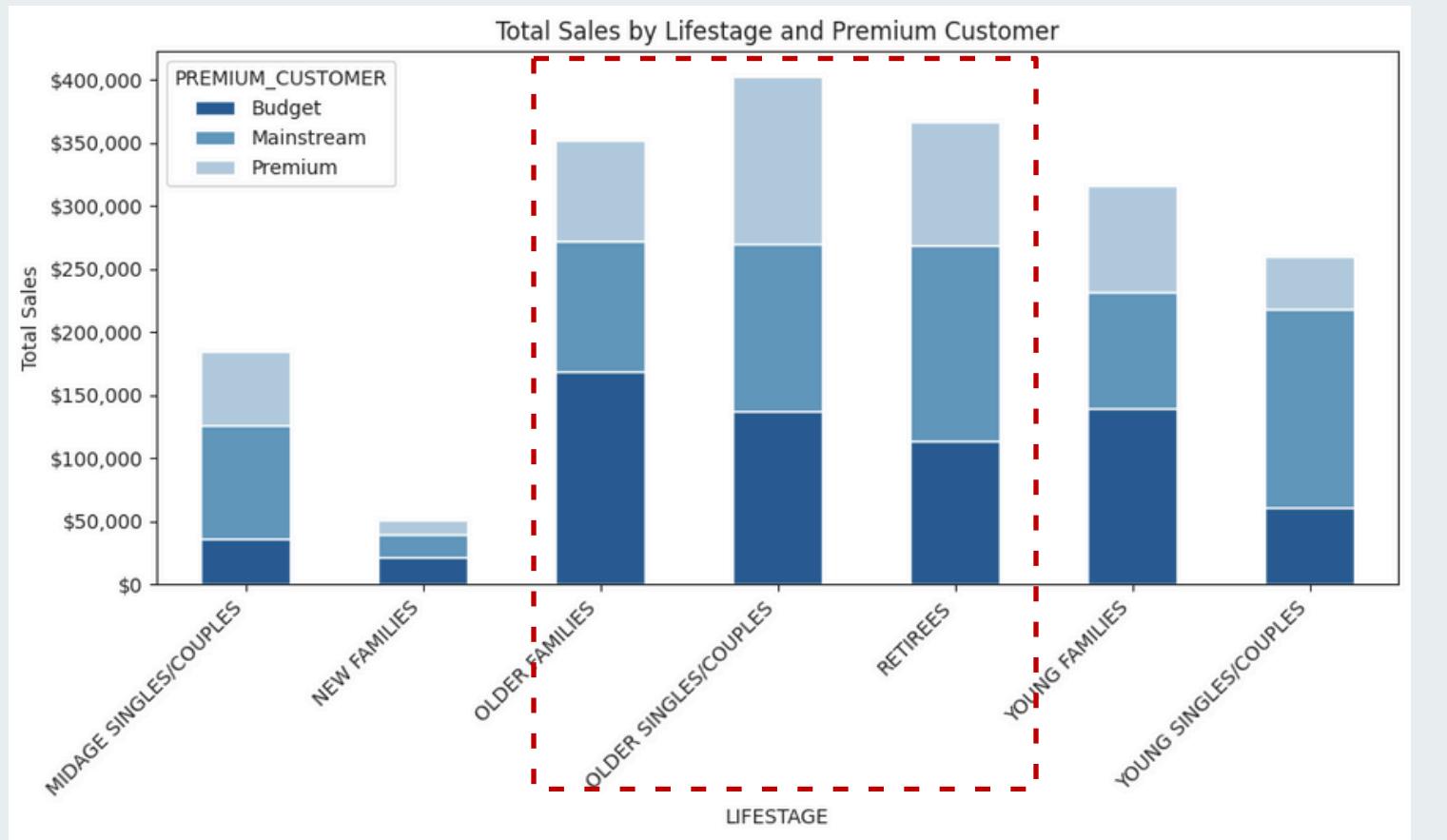
- Sales shifts across leading products appear to be driven by **substitution** rather than incremental demand
- Promotions likely **cannibalize** other SKUs instead of growing category sales

Very low flavor-level repeat rate indicates customers' exploration behavior

- **Low repeat purchase rate (1-3%)** suggests customers rarely buy the same flavor again, highlighting opportunity for promotional campaigns to encourage trial across flavors



03 Customer Segmentations Based on Life Stage and Premium Types



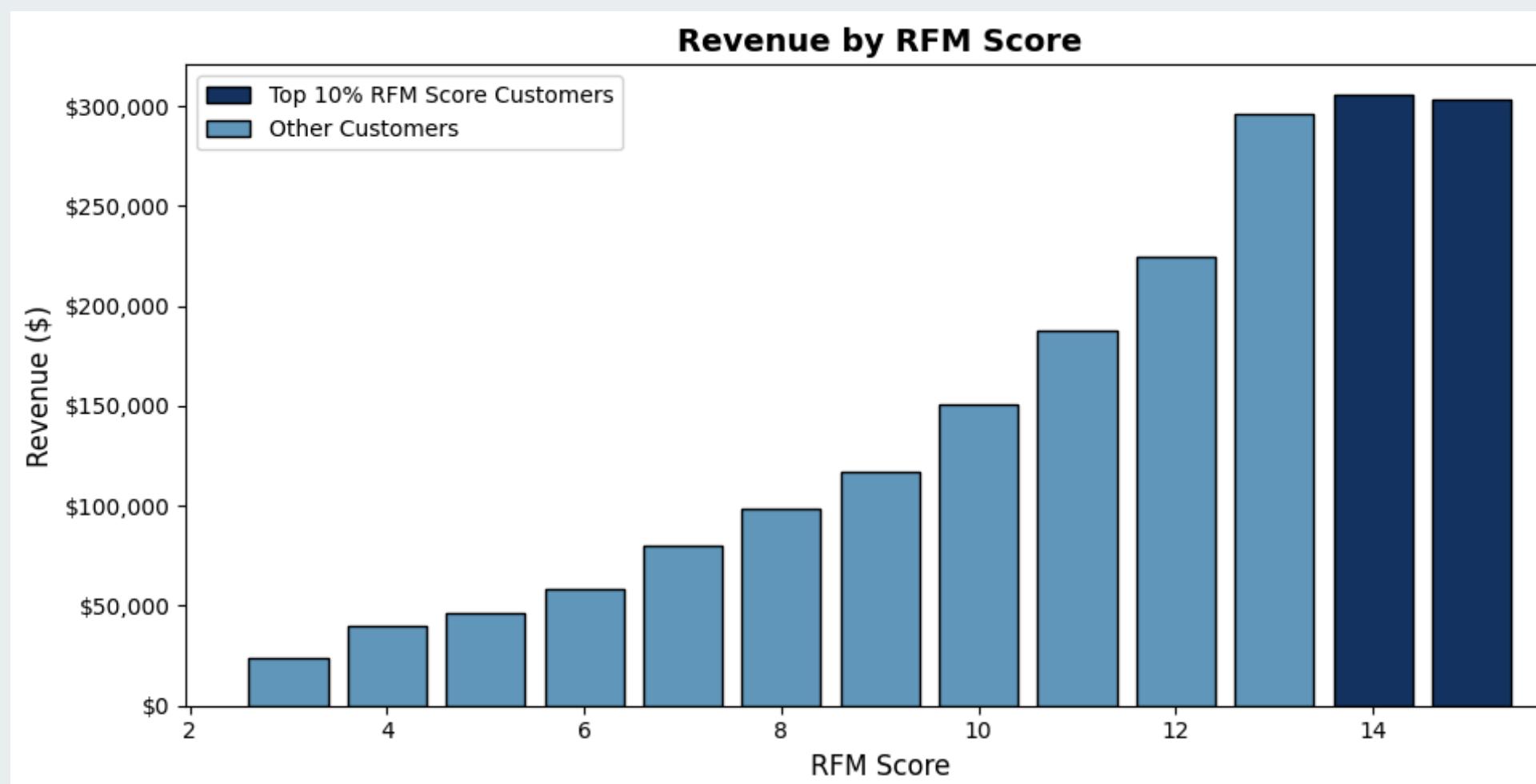
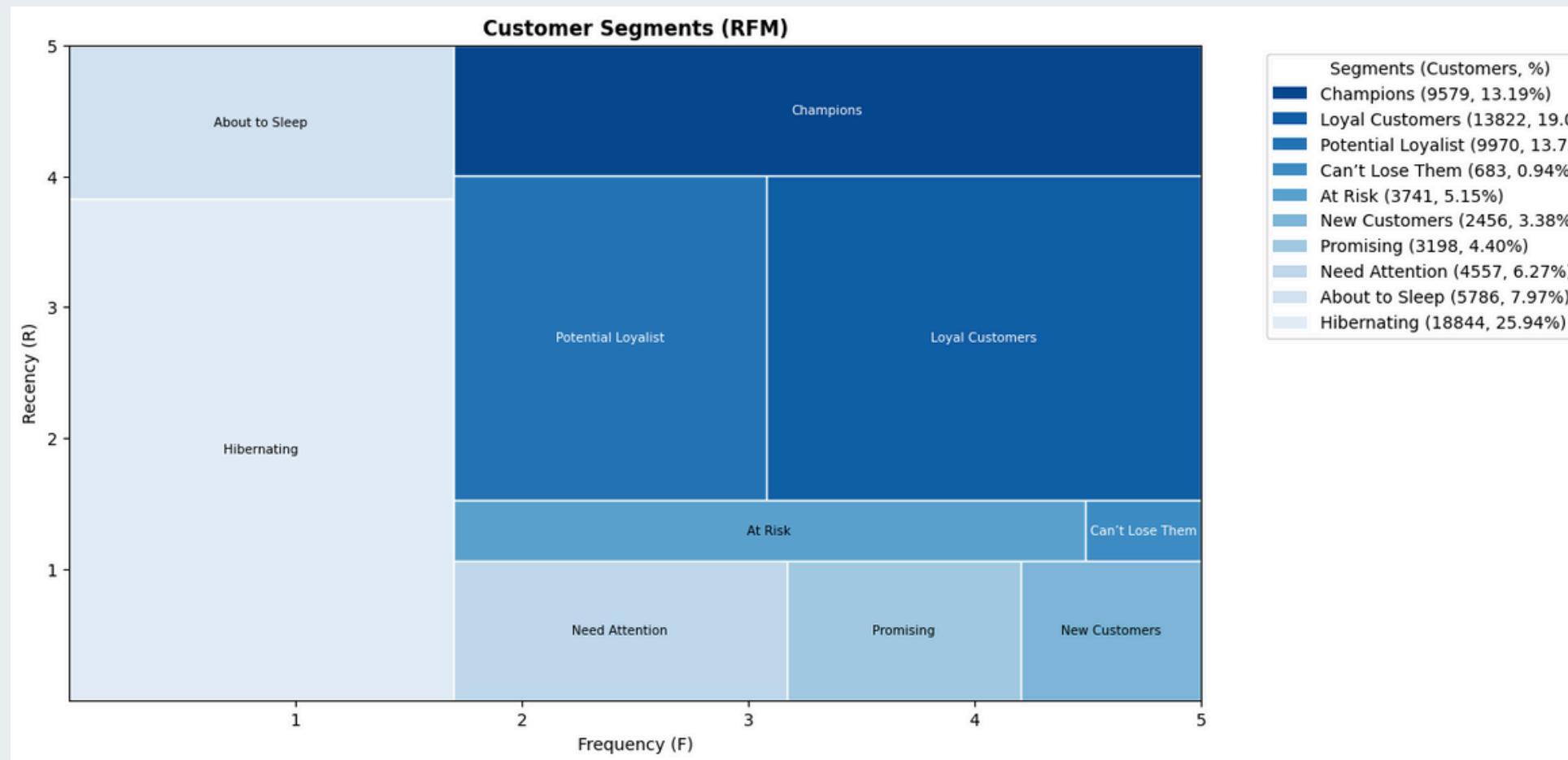
Revenue is driven by family households, not premium types

- **Highest spending segment: Older Families (Budget)** lead with **\$168,363** in total sales and purchase the largest quantities per transaction with Young Families as next, while New Families contribute the least.
- **Mainstream segments** deliver the highest value per transaction (~\$7.55 - \$7.65), with Young-Midage Singles/Couples as the highest to pay, indicating stronger willingness to pay
- Consider to maintain Older generation segments as a stable base, but **reallocating** marketing and bundle strategies toward younger segments to build future demand

Product preferences are consistent across customer segments

- **Top-selling product: Dorito Corn Chip Supreme 380g** dominates across most Lifestages and Premium segments; Midage Singles/Couples prefer **Smiths Crinkle Chip Original 380g**.
- **Preferred pack size: 175g** packs are the most popular across all Lifestages and Premium Customer segments.

04 RFM Customer Segments Overview



Revenue is Concentrated Among High-Value RFM Segments

Revenue is disproportionately driven by a small customer subset

- The **top 10% of RFM customers contribute ~31.5% of total revenue**, confirming strong value concentration.

Champions and Loyal Customers show repeat revenue

- Together, **Champions (13%) and Loyal Customers (19%)** account for the majority of high-frequency, high-value transactions.

Large inactive base represents downside risk, not immediate value

- **Hibernating customers (26%)** show low recency and low spend, contributing limited revenue today.

RFM score strongly correlates with revenue contribution

- Revenue increases sharply with higher RFM scores, validating RFM as an effective framework for retention, upsell, and targeting.

04 RFM Customer Segments Strategies

Segment	Num_Customers	Avg_Recency	Avg_Total_Spent	Customer_Percentage
Hibernating	18844	1.37	\$1.58	25.94%
About to Sleep	5786	1.65	\$2.82	7.97%
Need Attention	4557	3	\$1.75	6.27%
Promising	3198	4	\$1.74	4.40%
New Customers	2456	5	\$1.78	3.38%
At Risk	3741	2	\$4.20	5.15%
Can't Lose Them	683	1	\$3.97	0.94%
Potential Loyalist	9970	3	\$3.88	13.73%
Loyal Customers	13822	4.18	\$3.87	19.03%
Champions	9579	5	\$4.53	13.19%

Clear Segment Roles: Protect, Grow, or Reactivate

Protect: High-value, high-engagement segments

- **Champions, Loyal Customers, and Potential Loyalists (~46%)** combine strong recency with above-average spend and should be prioritized for retention and exclusivity.

Grow: Mid-engagement segments with upside

- **Potential Loyalists (14%) and At Risk customers (5%)** show meaningful spend but weakening engagement. Prime targets for personalized offers.

Reactivate selectively, not broadly

- **Hibernating and About-to-Sleep segments (~34%)** are large but low value; reactivation efforts should be targeted and ROI-tested, not mass-based.

05 Test–Control Stores Matching Process for A/B Testing

Control stores were selected to ensure fair and comparable performance trends

Eligibility filtering:

- Only stores with continuous sales activity in every month were considered to avoid bias from missing or inactive periods.

Similarity measurement (trend alignment):

- Calculated **Pearson correlation** between each trial store and candidate control stores across:
 - Monthly sales
 - Monthly customer count
 - Monthly transactions

Similarity measurement (scale alignment):

- Standardized metrics using **StandardScaler**, then computed **magnitude distance** to capture similarity in overall performance levels.

Combined similarity score:

- Pearson correlation and magnitude similarity were equally weighted (50/50) to balance trend consistency and performance scale.

Final control selection:

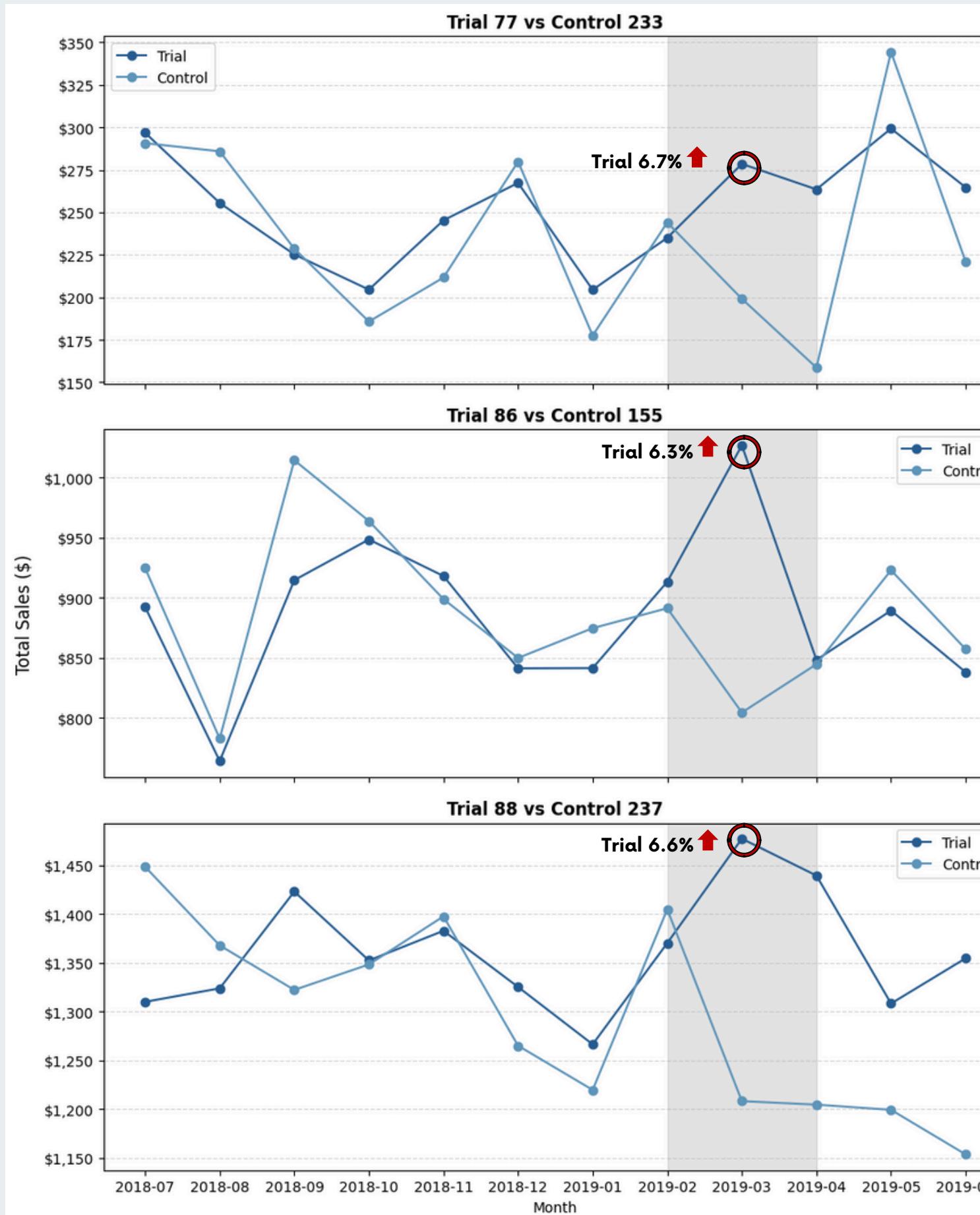
- The store with the highest combined similarity score was selected as the control for each trial store.

Selected control stores:

- Trial 77 → Control 233
- Trial 86 → Control 155
- Trial 88 → Control 237

Trial_Store	Control_Store	Sales_%_Diff	Customers_%_Diff	Transactions_%_Diff	pearson_avg	magnitude_score	combined_score
77	233	7.50%	5.20%	5.20%	0.951	0.996	0.973
86	155	0.10%	3.40%	0.40%	0.821	0.977	0.899
88	237	5.10%	1.10%	4.70%	0.660	0.996	0.828

05 Impact of Trial Initiatives on Sales Performance (A/B Testing)



Trial vs Control Sales Trends: Lift Observed but Variable Across Stores

- **Store 77:** Total sales fluctuated; control store 233 declined slightly.
- **Store 86:** Sales spiked in the first month of the trial, then tapered; control store 155 was mostly flat.
- **Store 88:** Sales rose briefly, then declined slightly; control store 237 dropped significantly.

Promotion Impact: Increased Traffic Drives Sales, But Lift Is Short-Lived

- The sales lift is **not consistent** across months, suggesting the promotion window could be shortened to 1–2 months to optimize results.
- Lift was mainly driven by **higher customer counts** visiting the trial stores.
- **Average spend per transaction** remained stable or slightly declined, so higher revenue came from volume rather than higher spending.
- This indicates that promotional campaigns were effective in **attracting more foot traffic** but did not significantly increase per-customer spending.

06 Appendix

Test vs Control Stores Comparison

