

# **Chips Category Analysis and Strategic Recommendations**

Prepared for Julia, Category Manager

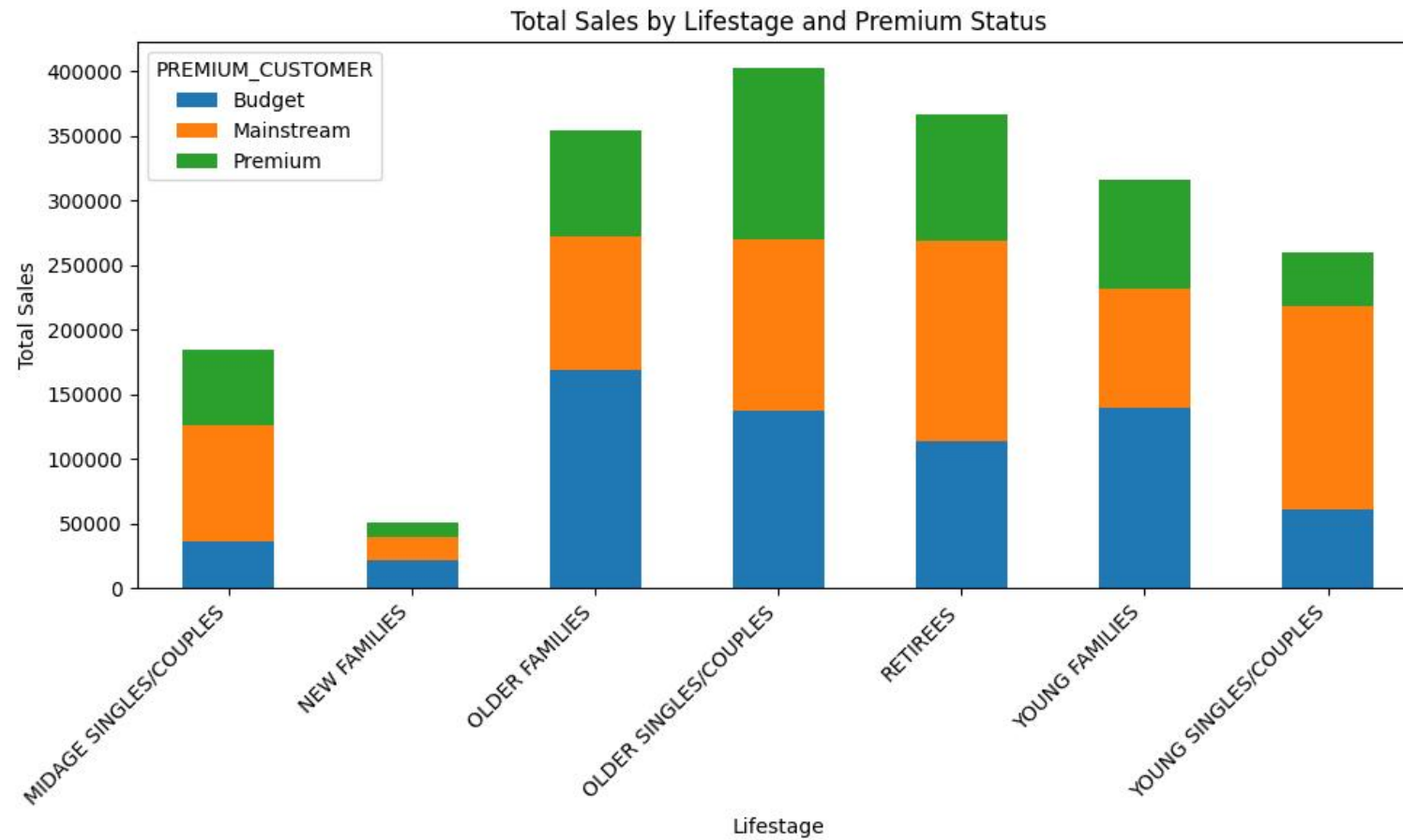
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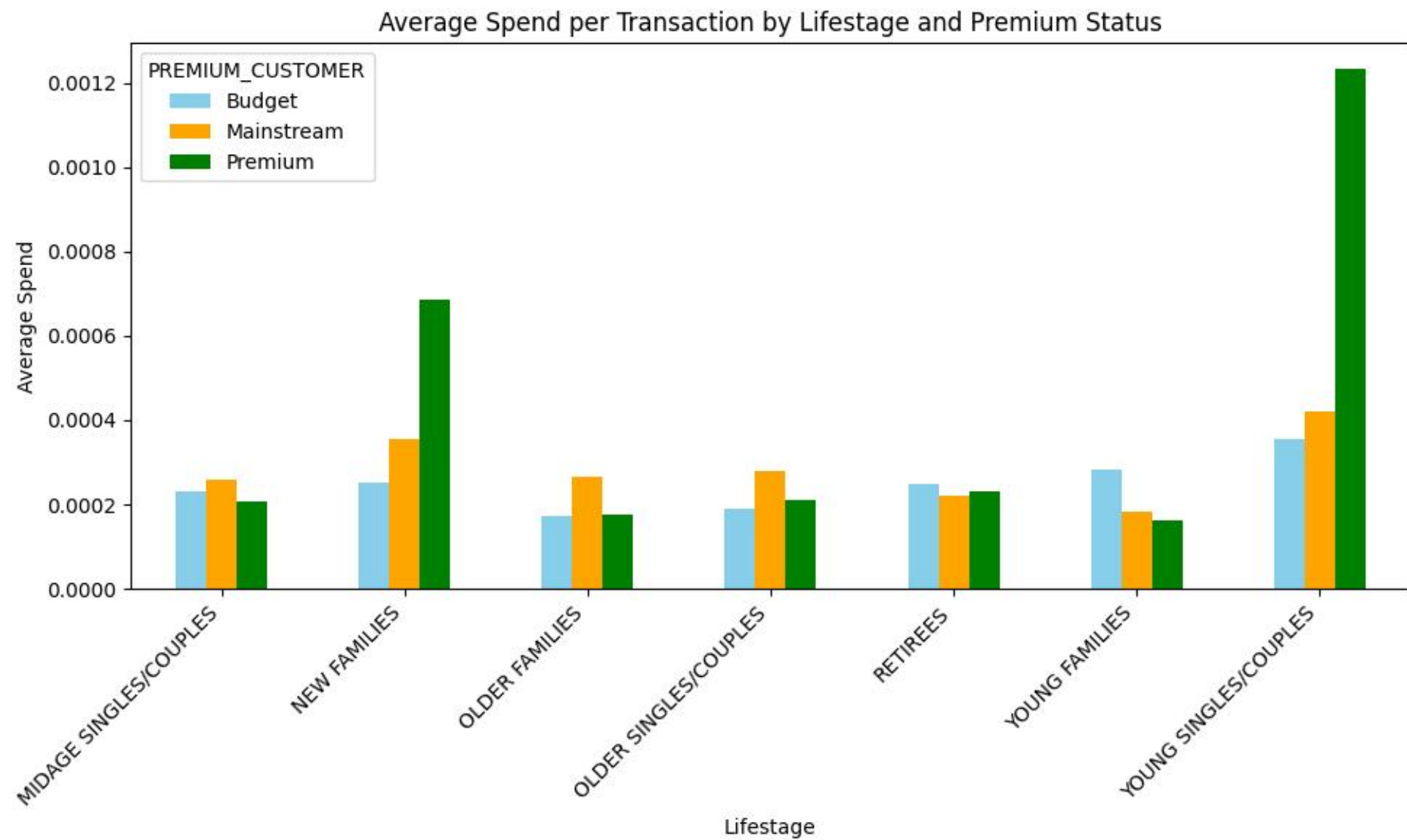
Jeet Sarkar

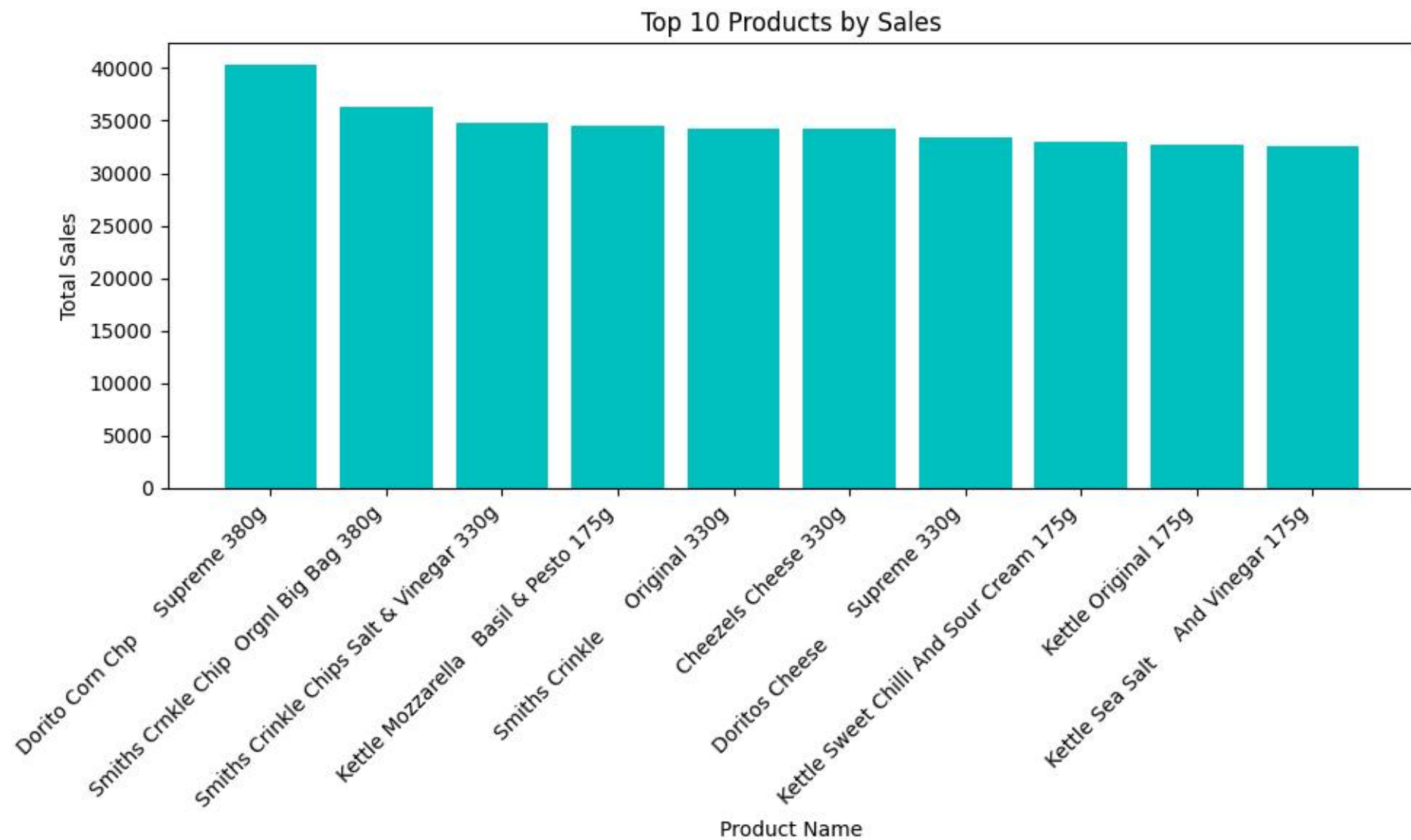
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# Executive Summary

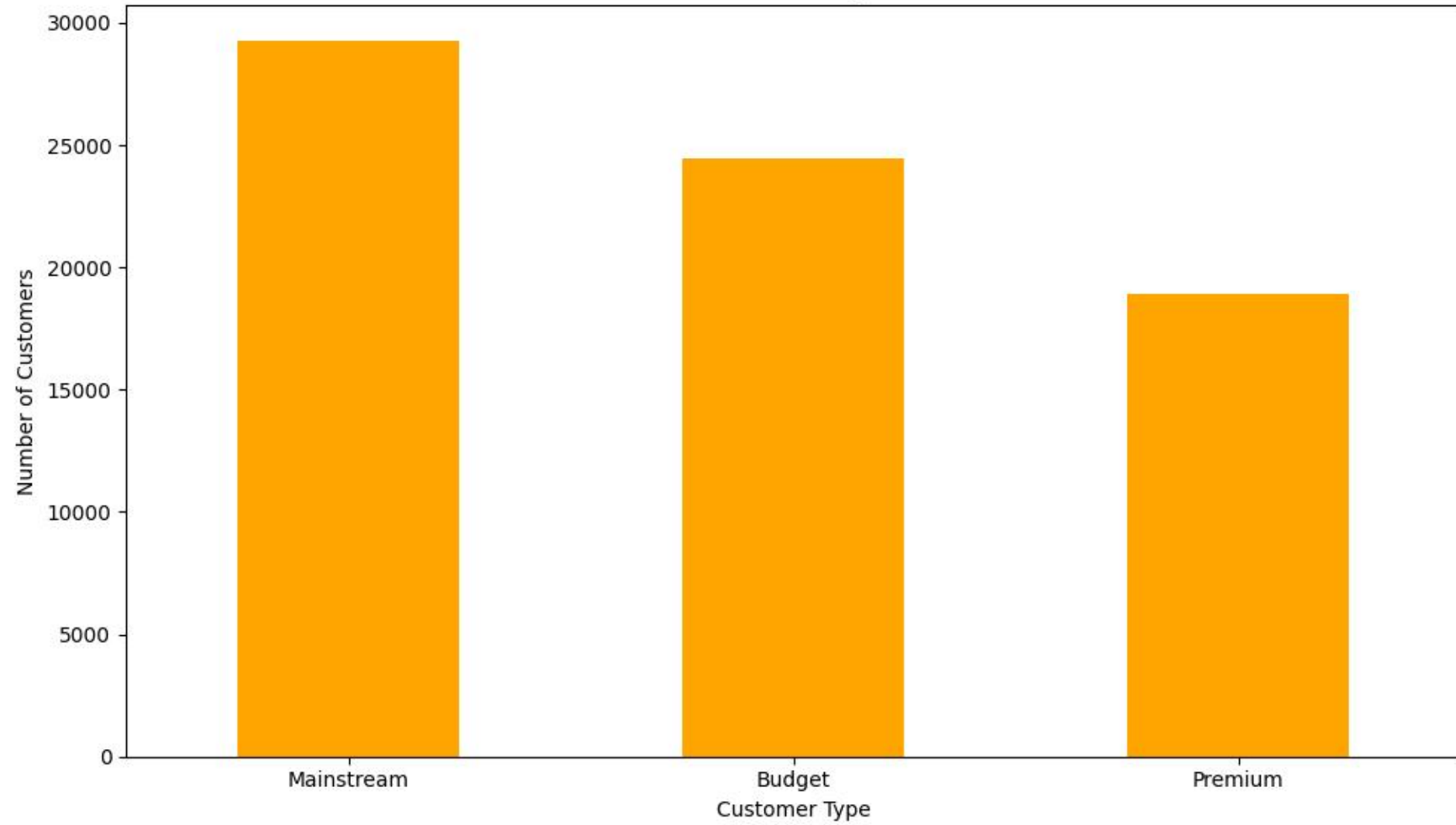
# Task 1:

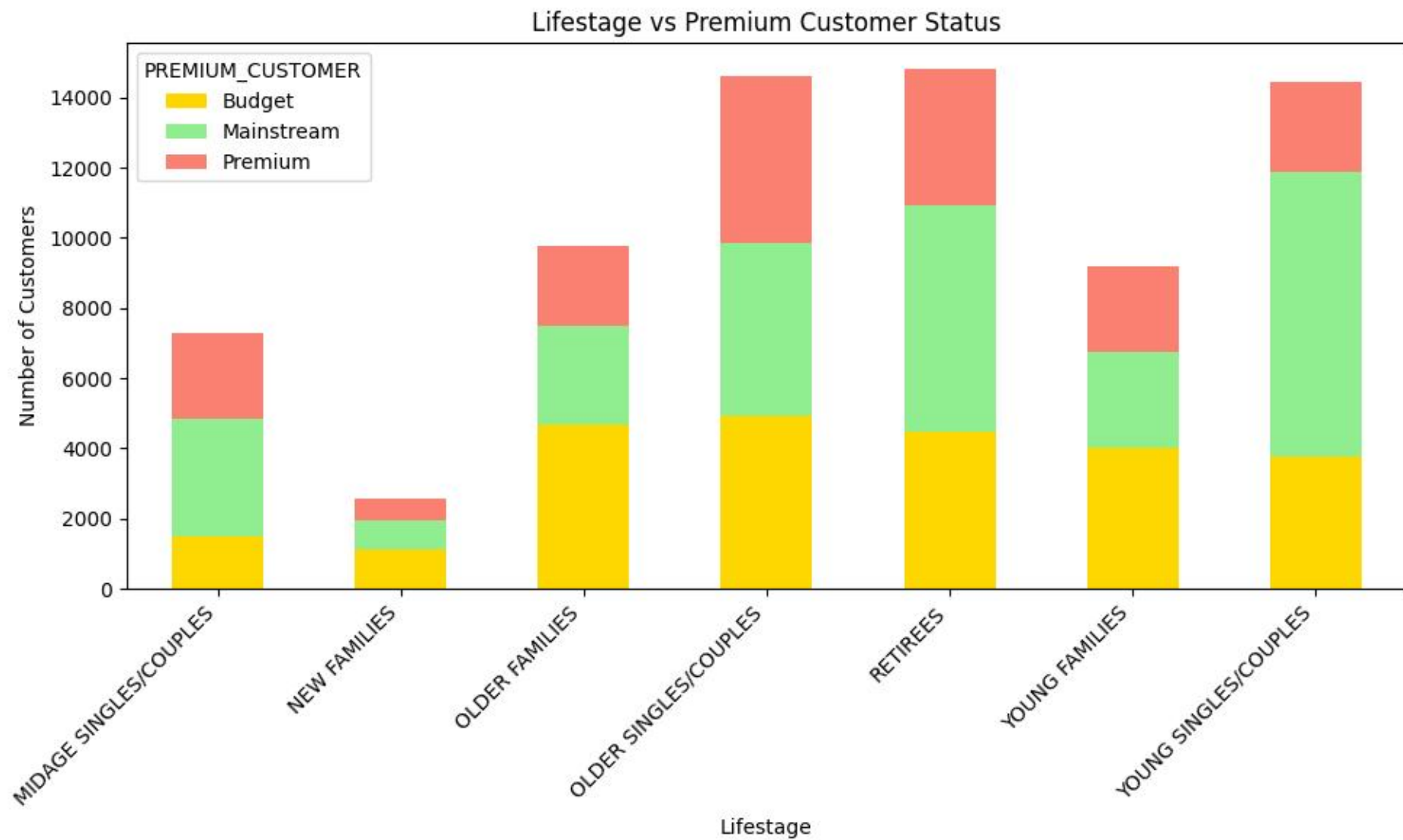






Distribution of Customers by Premium Status





## Comprehensive Analysis:

### Comprehensive Analysis Report:

#### 1. Introduction

This report provides a detailed analysis of customer purchasing behavior and strategic recommendations.

#### 2. Data Summaries

Customer Data Summary:

Number of entries: 72,637

##### **LIFESTAGE categories include:**

- o Young Families: Families with young children.
- o Older Families: Families with older children.
- o Other segments as described in the analysis.

##### **PREMIUM CUSTOMER categories include:**

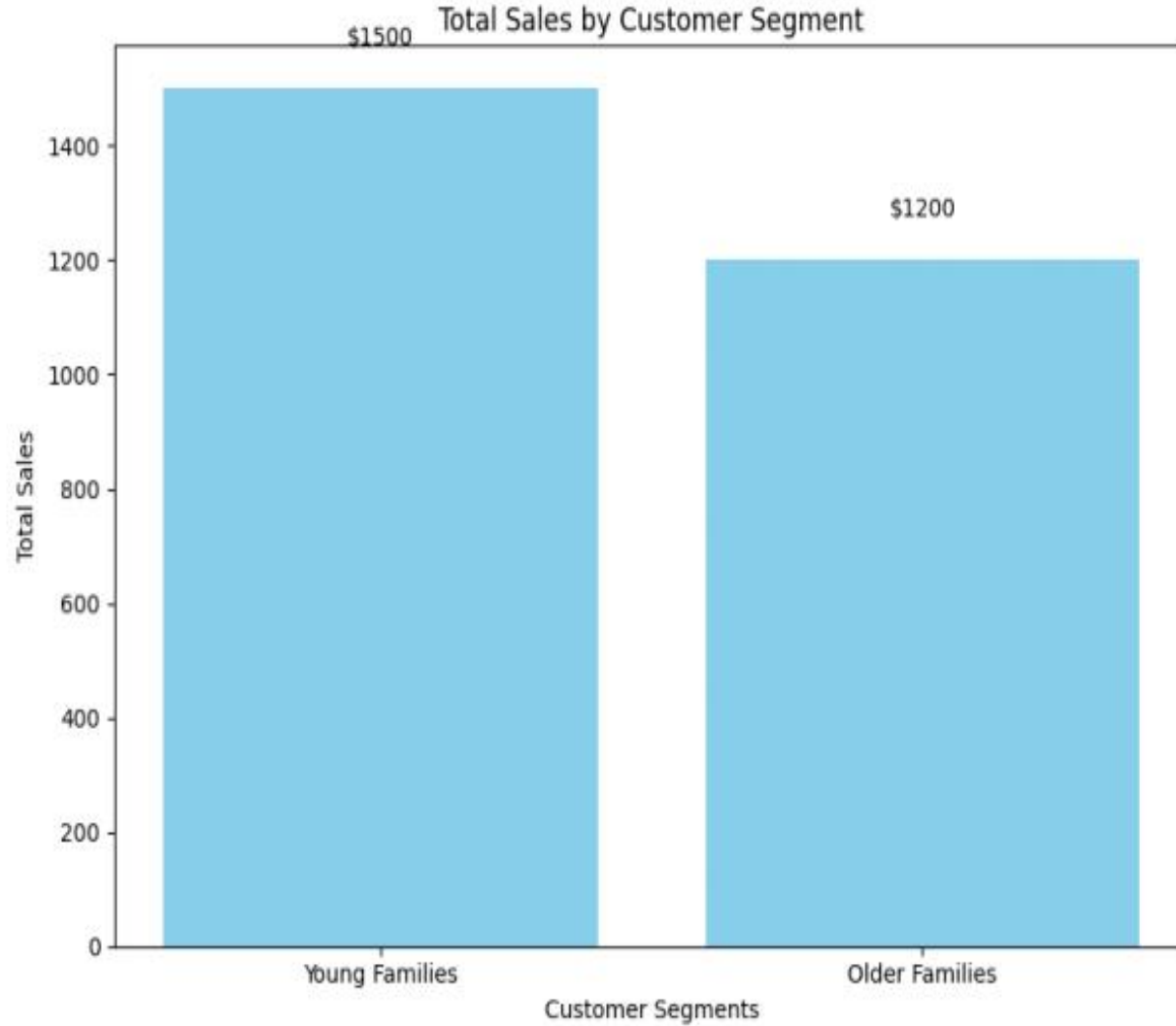
- o Premium: High spending customers.
- o Mainstream: Average spending customers.
- o Budget: Low spending customers



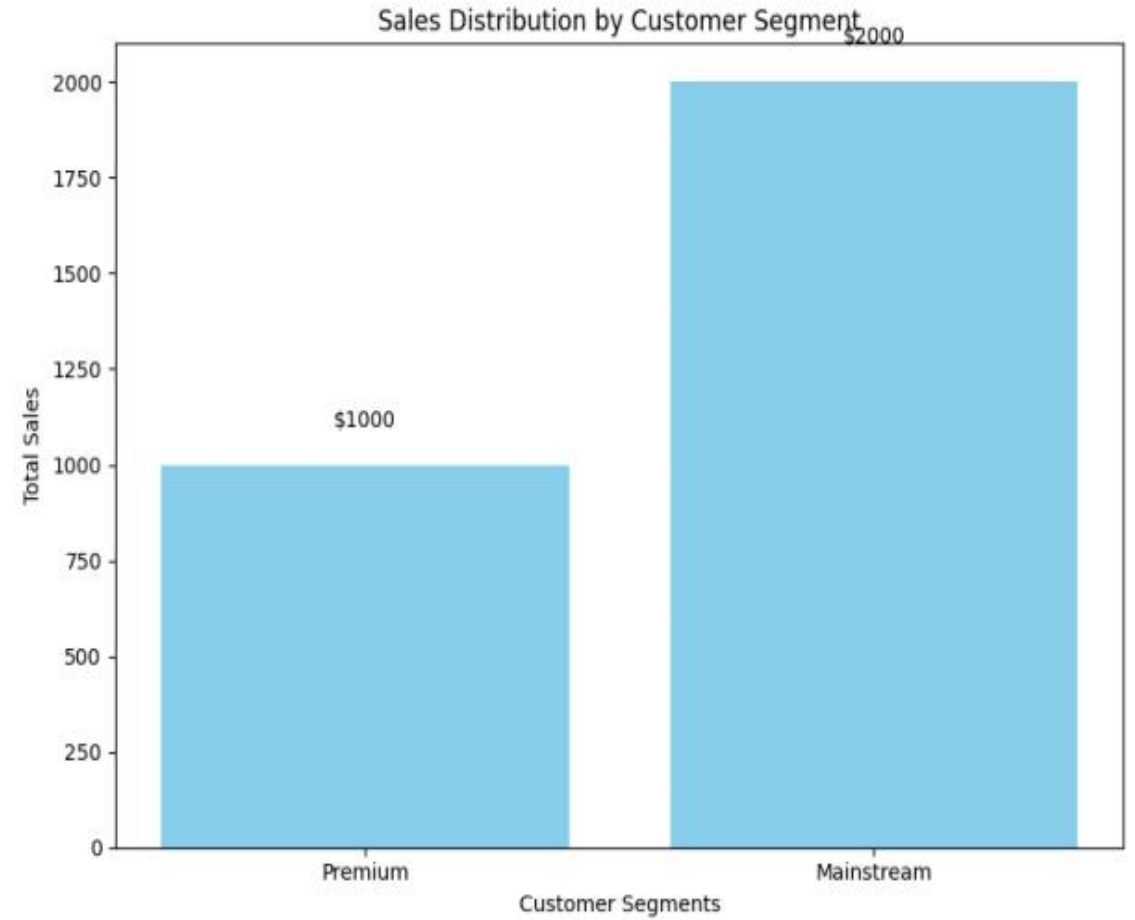
### 3. Strategic Recommendations:

- **Targeted Promotions:** Focus on high-value customer segments that currently have lower spending. For example, the 'Young Families' segment shows high potential for increased chip purchases.
- **Product Bundling:** Offer discounts on bulk purchases or bundles of popular chip brands. This can increase the average transaction value and drive more sales.
- **Seasonal Campaigns:** Implement seasonal promotions around holidays or events that see higher sales volumes. Tailor these campaigns to different customer segments.
- **Loyalty Programs:** Enhance loyalty programs to reward frequent buyers with exclusive offers or points. This can help retain customers and encourage repeat purchases

Total Sales by Customer Segment



Sales Distribution by Customer Segment



## Task 2:

# Trail store performance

# Report on Store Trial Evaluation

## ➤ Objective:

Evaluate the performance of trial stores 77, 86, and 88 compared to their respective control stores: 77 vs 50, 46, 220; 86 vs 227, 247, 155; 88 vs 165, 40, 237.

## ➤ Data Preparation:

Data was cleaned and aggregated to include total sales, number of customers, and number of transactions.

## ➤ Control Store Selection:

Control stores were selected based on similarity metrics and correlation analysis

# Explanation of control stores vs other stores:

When evaluating the effectiveness of a new strategy, marketing campaign, or operational change in a retail environment, it is essential to have a point of comparison to measure the impact of the change. This is where the concepts of "Trial Store" and "Control Store" come into play.

## **Trial Store:**

- Definition: A trial store is a retail location where a new strategy, campaign, or operational change is implemented. The purpose of using a trial store is to observe and measure the direct impact of the new intervention on key performance metrics such as sales, customer traffic, or transactions.
- Example: If a company wants to test a new pricing strategy, they might implement this strategy in specific stores (trial stores) to see how it affects customer behavior and sales.

## **Control Store:**

- Definition: A control store is a retail location that does not undergo the changes or interventions being tested in the trial stores. Instead, it continues operating under the usual conditions. The control store serves as a benchmark, providing a baseline to compare against the trial store. By comparing the performance metrics of the trial store with the control store, it is possible to isolate the effects of the new strategy from other external factors.

## Why Use Control Stores?

- **Isolate Effects:** The primary reason for using control stores is to isolate the effects of the change or intervention being tested. By comparing the trial store's performance against that of a control store, you can determine whether the observed changes in the trial store are due to the intervention or other external factors (e.g., seasonal trends, economic conditions).
- **Reduce Bias:** Without a control store, any observed changes in the trial store might be wrongly attributed to the intervention, even if they were actually due to unrelated factors. Control stores help reduce this bias and provide more accurate results.

## How Control Stores Are Selected

- **Similarity:** Control stores are selected based on their similarity to the trial stores in terms of key characteristics such as:
  - **Geographic location:** Stores in similar regions experience similar economic conditions.
  - **Store size:** Larger stores might have different sales patterns than smaller ones.
  - **Customer demographics:** The makeup of the customer base should be similar to ensure that customer behavior is comparable.
  - **Historical sales data:** Control stores should have similar sales patterns to the trial store before the trial begins.
  - **Correlation Analysis:** Often, statistical methods like correlation analysis are used to match trial stores with control stores. Stores with the highest correlation in sales patterns and customer metrics are typically chosen as controls.

In this analysis, we evaluated the performance of three trial stores (77, 86, and 88) against a set of control stores using various metrics. The focus was on determining if there were statistically significant differences in sales, number of customers, number of transactions, and average transactions per customer between the trial and control stores.

## **Key Findings:**

### **Statistical Significance:**

- **Total Sales:** The differences in total sales between the trial stores and the control stores were not statistically significant, with p-values indicating that any observed differences could be due to random variation rather than a true effect.
- **Number of Customers:** Similarly, the number of customers showed no statistically significant differences between trial and control stores.
- **Total Transactions:** The total number of transactions also did not exhibit statistically significant differences.
- **Average Transactions per Customer:** The average number of transactions per customer was not significantly different between trial and control stores.

## Top Control Stores:

For each trial store, the closest control stores based on Euclidean distance in normalized metric space were identified.

These control stores included:

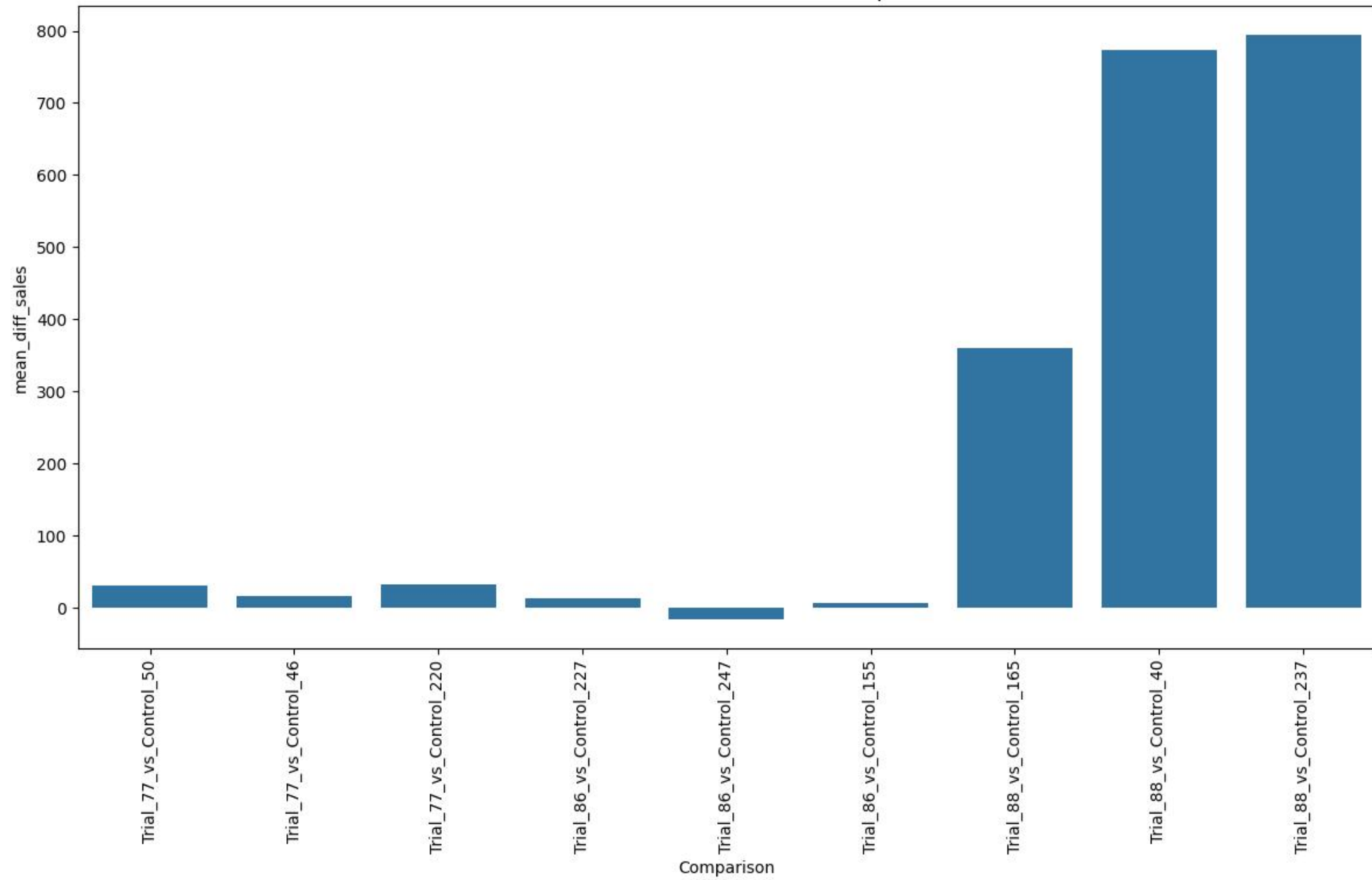
- Trial Store 77: Control stores 50, 46, and 220.
- Trial Store 86: Control stores 227, 247, and 155.
- Trial Store 88: Control stores 165, 40, and 237.

## Comparison Results:

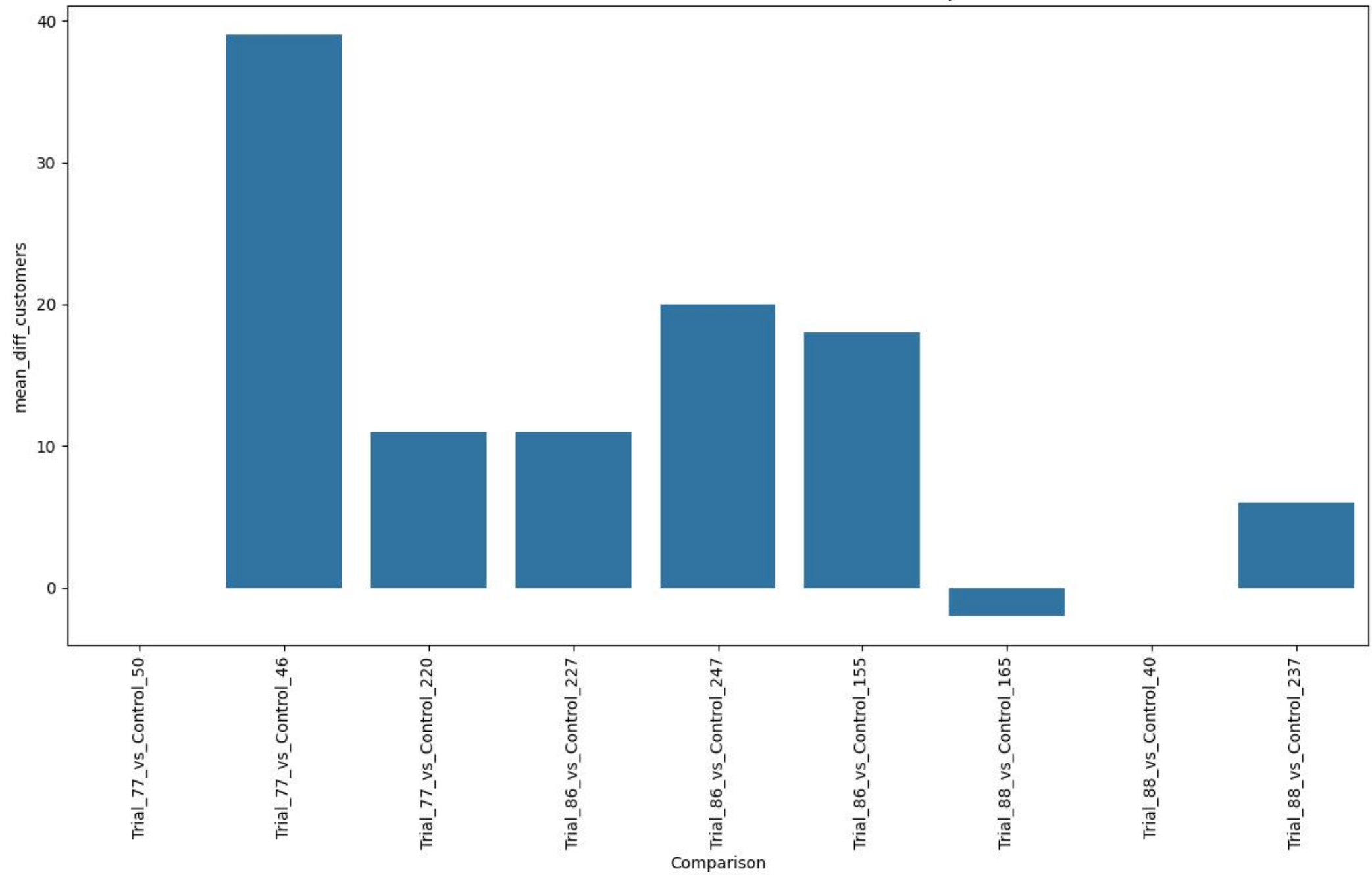
The comparison between trial and control stores showed variability in the differences for total sales, number of customers, number of transactions, and average transactions per customer. However, none of these differences were statistically significant.



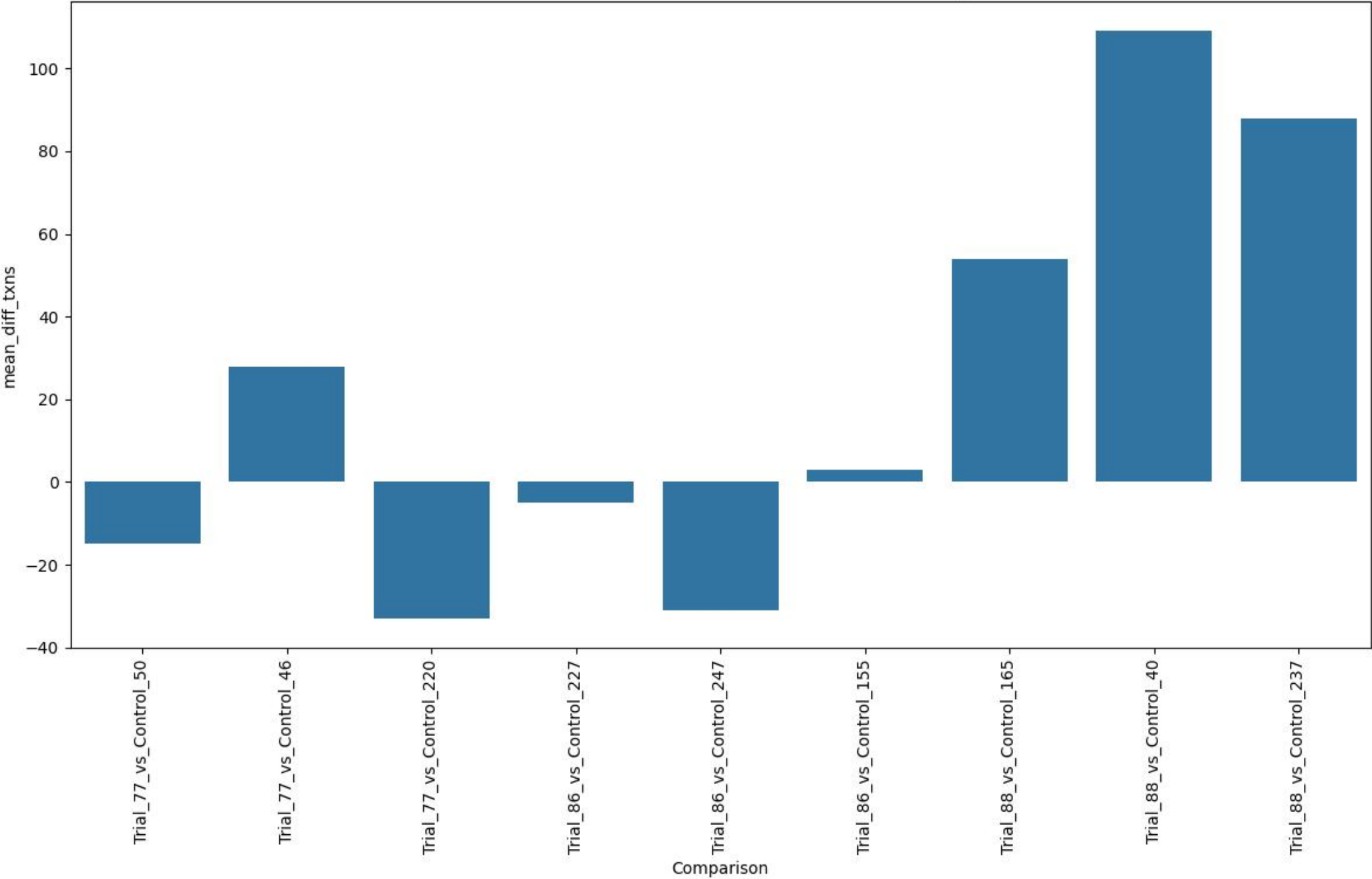
Mean Difference in Sales for Trial Stores and Top Control Stores



Mean Difference in Number of Customers for Trial Stores and Top Control Stores



Mean Difference in Number of Transactions for Trial Stores and Top Control Stores



## Recommendations for Improvement:

### ➤ Targeted Promotions:

Implement more tailored promotions aimed at specific customer segments, such as high-value customers or frequent shoppers. Personalized offers may drive greater engagement and sales.

### ➤ Product Mix Optimization:

Reassess the product mix in trial stores. Consider introducing new or premium products that align with customer preferences identified in the data.

### ➤ Enhanced Customer Experience:

Focus on improving the in-store experience, which could include better customer service, enhanced store layout, or loyalty programs to incentivize repeat visits.

### ➤ Extended Trial Duration:

Consider extending the trial period to capture longer-term effects and allow for seasonal variations in customer behavior.

### ➤ Data-Driven Adjustments:

Continuously monitor the performance of trial stores and make data-driven adjustments to the initiatives based on real-time feedback.