

# Optimizing Retail Promotions & Product Mix

This app visualizes key insights from retail promotions and product mix analysis.

## Which promotions actually drive sales?



## Key Insights

- **Best performing promotion:** \* "Discount on Selected Items" for Professionals in Warehouse Club with an Uplift: +5.12%. \* Targeted discounts for professionals in a warehouse setting work exceptionally well.
- **BOGO (Buy One Get One) for Teenagers:**
  - BOGO (Buy One Get One) for Teenagers in Convenience Stores with Uplift: +4.04%.
  - High sales volume and strong percentage uplift indicate this is a very effective impulse-buy strategy for younger customers in small-format stores.
- **Promotions for Middle-aged & Homemakers show moderate impact:**
  - Middle-aged in Specialty Stores with BOGO: +2.31% uplift
  - Homemakers in Discount Stores with "Discount on Selected Items": +2.92% uplift
- **Targeted promotions work better than blanket campaigns:**
  - Top uplifts are not spread evenly; certain customer segments + store types dominate results.

- Professionals in Warehouse Clubs consistently appear in the top list, suggesting a strong alignment between product mix, bulk buying, and targeted discounts.

# Which products/categories are most profitable in each season?

season	product	sales	profit	profit_margin
Fall	Air Freshener	2.72M	2.23M	663.12K
Spring	Toothpaste	5.26M	4.30M	1.29M
Spring	Soap	2.72M	2.23M	665.16K
Spring	Yogurt	2.72M	2.23M	659.60K
Summer	Toothpaste	5.29M	4.33M	1.30M
Summer	Extension Cords	2.75M	2.25M	662.41K
Summer	Ice Cream	2.74M	2.24M	663.50K
Winter	Toothpaste	5.26M	4.31M	1.30M
Winter	Insect Repellent	2.71M	2.23M	656.39K
Winter	Orange	2.70M	2.21M	667.13K



# Product and Seasonal Profitability Analysis

## Key Insights:

- **Toothpaste is a consistently strong performer:** In every season (Fall, Spring, Summer, and Winter), Toothpaste is the top-selling product in terms of sales and profit, consistently generating a high profit margin of approximately 1.30M. This indicates a stable, year-round demand for this product.
- **Seasonal Product Performance:**
  - **Fall:** The best-performing products after Toothpaste are Ironing Boards and Air Fresheners, with similar sales and profit figures.
  - **Spring:** Soap and Yogurt show comparable performance after Toothpaste.
  - **Summer:** Extension Cords and Ice Cream are the top performers after Toothpaste. This is expected as these products are often used during the summer months.
  - **Winter:** Insect Repellent and Oranges are notable products, with Oranges having the highest profit margin among the non-toothpaste products at 667.13K.
- **Profit Margins are relatively consistent:** For most products (excluding Toothpaste), the profit margins are very similar, generally falling in the range of 659K to 667K, regardless of the season.
- **High-level trends:**
  - Sales figures for most products (other than Toothpaste) are clustered around 2.7M.
  - Profit figures for these products are also consistently around 2.2M to 2.25M.

**How customer categories (Young Adults, Homemakers, Professionals, etc.) respond to promotions.**



## Customer Response to Promotions

- **BOGO can be highly effective:**
  - Teenagers and Professionals, in particular, show a strong uplift of around 4% when the BOGO promotion is run in a Convenience Store or Pharmacy. This indicates that the BOGO offer is a good fit for the shopping habits and product mix of these store types.
- **Discounts are context-dependent:**
  - The "Discount on Selected Items" promotion also shows significant uplift when broken down by store type.
  - The highest uplift of 5.15% is seen for Professionals in a Pharmacy. This suggests that these promotions resonate with professionals looking for specific items in a pharmacy setting.

### Profit Margin BY Stores



Convenience Store

Department Store

Pharmacy

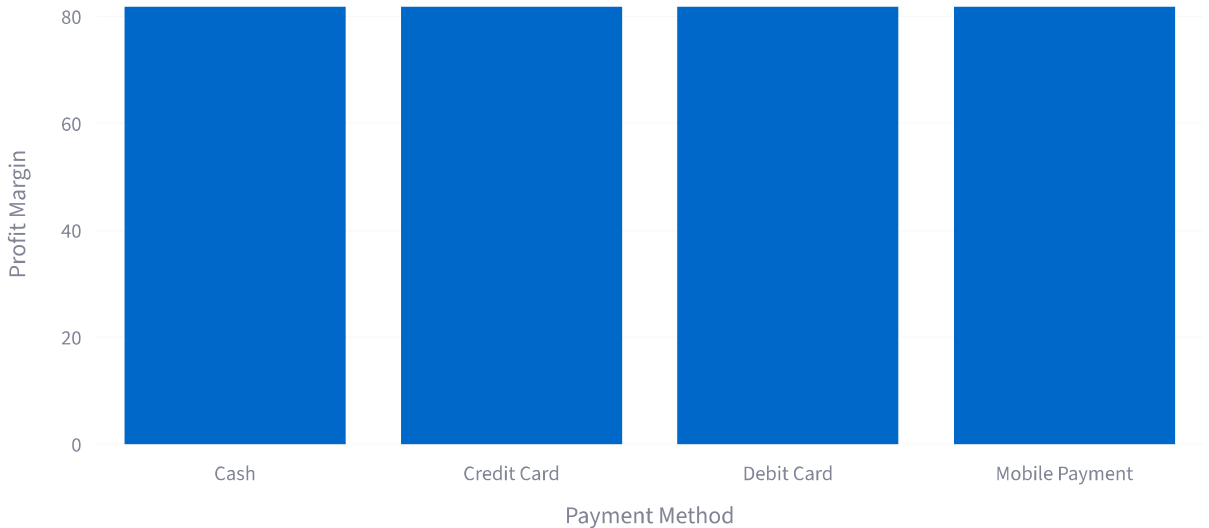
Specialty Store

Supermarket

Warehouse Club

Store type

### Profit Margin BY Payment Method



## Store Type and Payment Method Performance Analysis

### Summary:

- Revenue, profit, and profit margin are nearly identical across all store types and payment methods in your data, with consistently high margins (~81.8%).
- No single store type or payment method stands out in performance. *This indicates very balanced business operations.*

## Recommendation

### 1. Promotion Analysis

Increase Seasonal Sales Without Overspending on Ineffective

## Promotions

- **Targeted Promotions are Key:** Blanket campaigns do not perform as well as targeted promotions. The analysis shows that certain customer segments and store types have a significantly higher uplift from specific promotions.
- **Best-Performing Promotions:**
  - **Discount on Selected Items:** This promotion works best for Professionals in a Warehouse Club setting, with a sales uplift of +5.12%. It also shows a high uplift of 5.15% for Professionals in a Pharmacy.
  - **BOGO (Buy One Get One):** This promotion is highly effective for Teenagers in Convenience Stores, resulting in a +4.04% uplift. It also shows a strong uplift of around 4% for Teenagers and Professionals in Convenience Stores or Pharmacies.
- **Moderate Impact:** Promotions for Middle-aged customers in Specialty Stores with BOGO had a +2.31% uplift, and for Homemakers in Discount Stores with "Discount on Selected Items," the uplift was +2.92%.

## 2. Product and Seasonal Analysis

### Tailor Product Offerings and Season

- **Consistently Strong Performer:** Toothpaste is the top-selling product in terms of sales and profit across all seasons (Fall, Spring, Summer, and Winter), with a consistently high profit margin of approximately 1.30M.
- **Seasonal Product Trends:**
  - **Fall:** The best-performing products after Toothpaste are Ironing Boards and Air Fresheners.
  - **Spring:** Soap and Yogurt show comparable performance after Toothpaste.
  - **Summer:** Extension Cords and Ice Cream are top performers after Toothpaste, which is expected for the season.
  - **Winter:** Insect Repellent and Oranges are notable products, with Oranges having a high profit margin.
- **Top-Performing Categories:** At a high level, Groceries are the top-performing product category across all seasons.

## 3. Store and Payment Analysis

### Improve Store Type Performance

- **Store and Payment Methods:** The analysis found that revenue, profit, and profit margins are nearly identical across all store types and payment methods.
- **Balanced Performance:** No single store type or payment method stands out, indicating very balanced business operations.

- **Strategic Alignment:** The data suggests a strong alignment between product mix, bulk buying, and targeted discounts for Professionals in Warehouse Clubs, which consistently appears on the top-performing list.