

Final Project Report

Dataset: CollegeLife Data Challenge.xlsx

Description: The dataset consists of three excel sheets namely store, product and transaction data. The data contained in this file includes sales and promotional information from a sampling of stores over 156 weeks, beginning January 2009 through December 2011. These are the sales metrics of products in 4 categories: mouthwash, pretzels, frozen pizza, and boxed cereal, the top 5 products from each of the top 3 brands in each category.

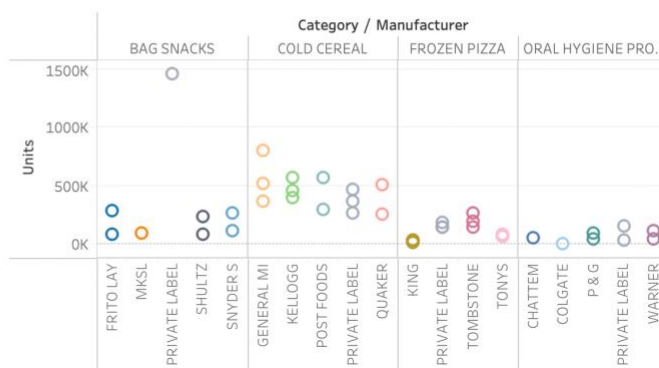
Data Visualizations and Inferences:

1. People spent more on Cold cereal especially on adult family cereal. And cold cereal was bought the most. It is recommended to stock cold cereals more specifically adult family cereal more.
In bag snacks private label manufacturer products were sold much more than any other brand.

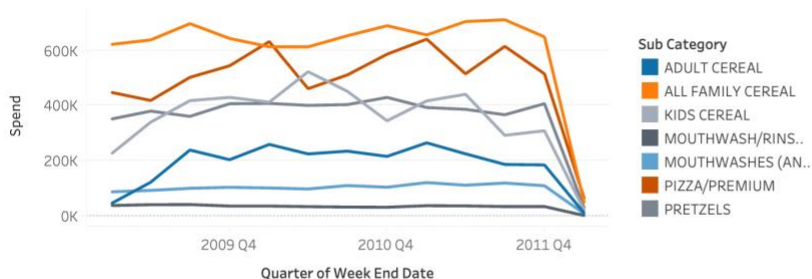
Average Spend on Each Category



Units sold by Manufacturer per Category

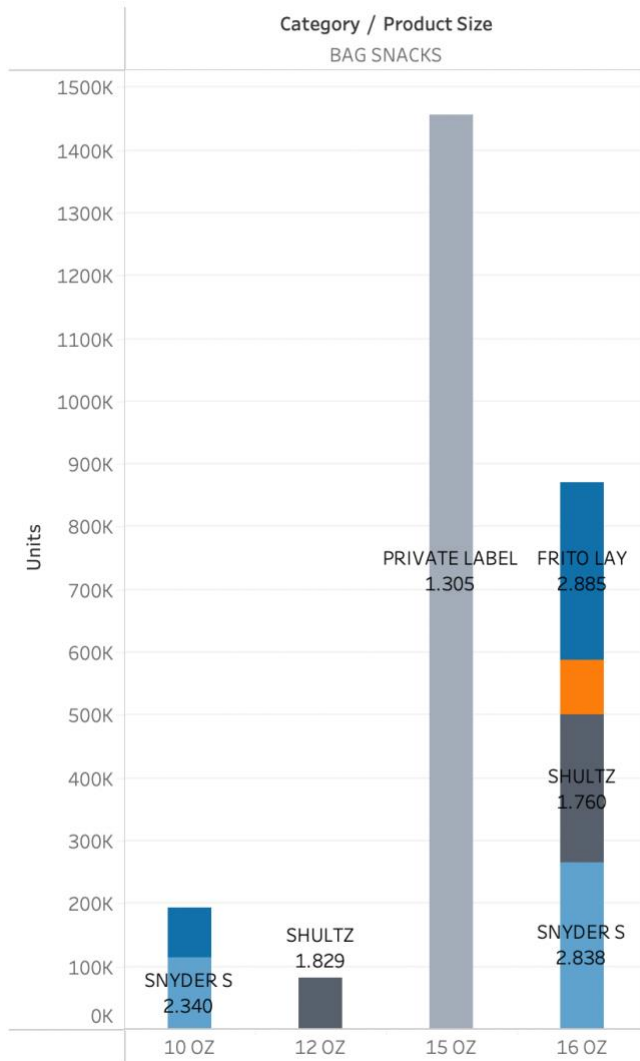


Spend Trend



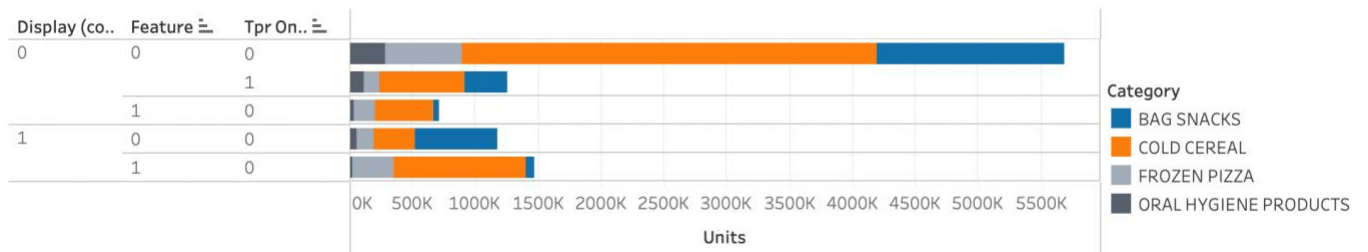
2. To further see the reason for it we can see that private label only old 15oz bag at avg price of 1.305 this is cheaper than the competitor brands.

Plot showing why certain brand did sell more



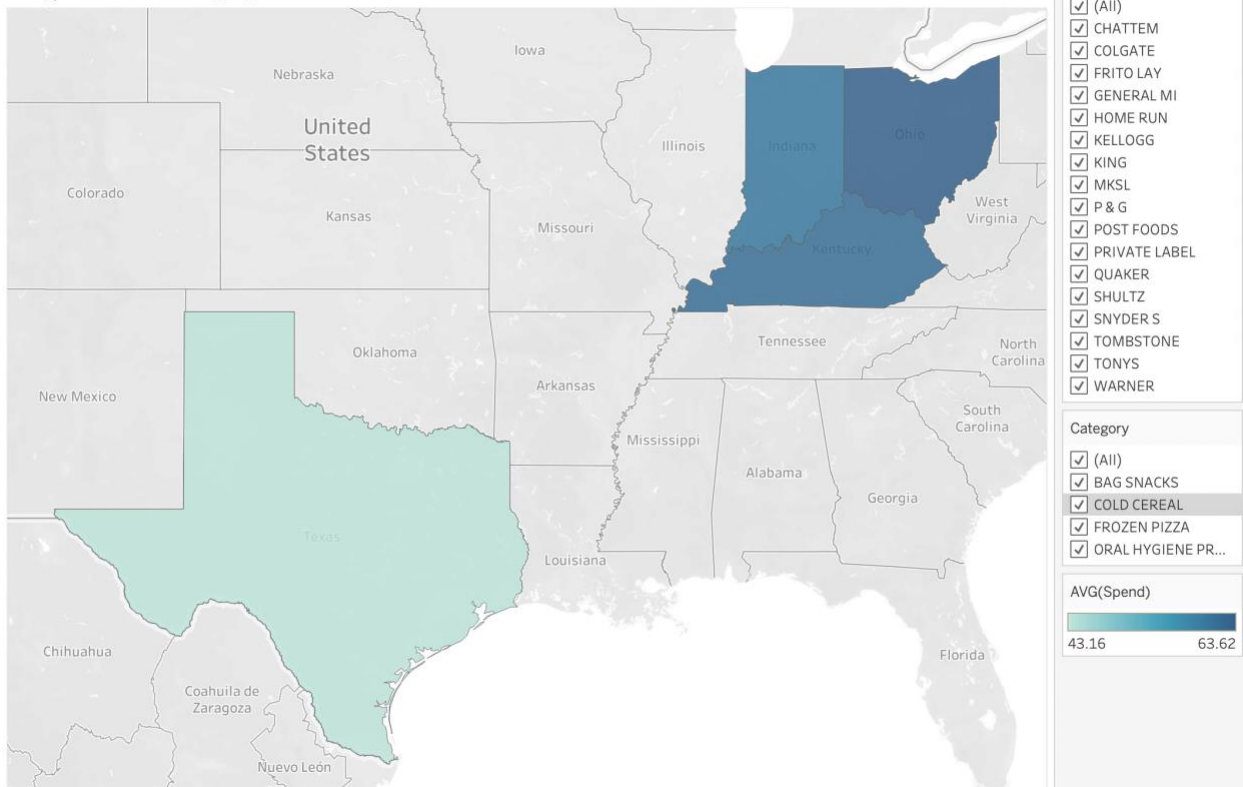
- Display, featuring and temporary price reduction did not have much effect on overall sales.

Effect of promotional events on sales



- Bag of snacks and oral hygiene products were consumed more in Ohio than any other state. Frozen pizza was sold more in Indiana with average spend of 80.10. As for Texas for all the categories it's spend inclination was towards lower side. This can help to know which products should be stocked more at stores based in different cities of the mentioned states.

City/State wise Avg Spend

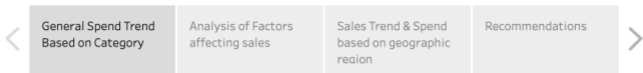


- Area of the store also played a key part in overall sales. Stores with larger area ranging between 45000 to 81000 had more customer visits. These stores also had big spend and sales. This makes sense because as the area is large the more convenient it is for customers to look for the items and store can also include variety of items.

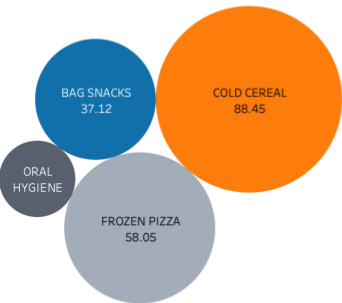
Effect of Area on sales



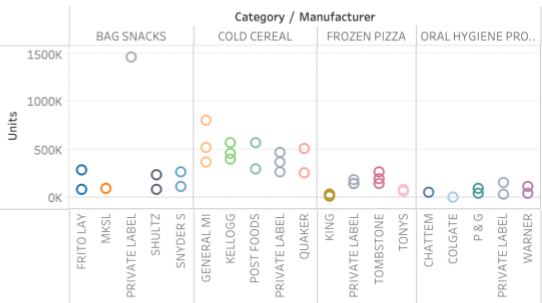
Storyboard:



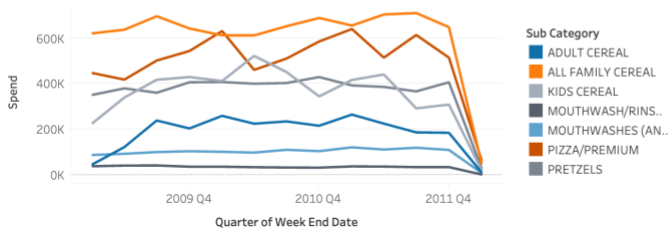
Average Spend on Each Category



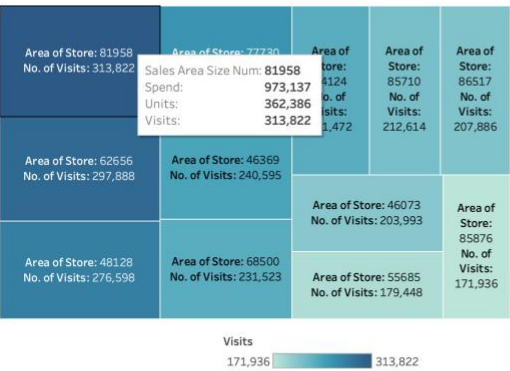
Units sold by Manufacturer per Category



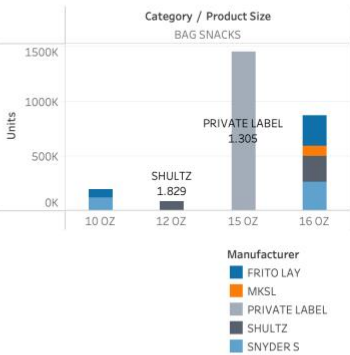
Spend Trend



Effect of Area on sales



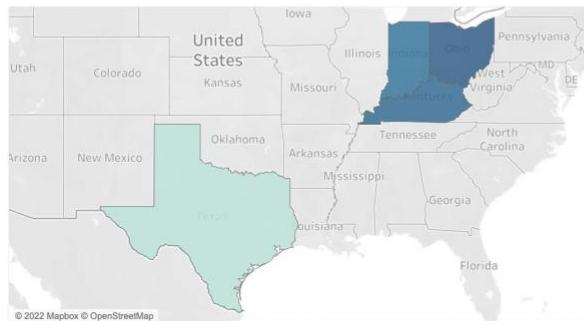
Plot showing why certain brand did sell more



Effect of promotional events on sales



City/State wise Avg Spend



Category

- ☒ (All)
- ☒ BAG SNACKS
- ☒ COLD CEREAL
- ☒ FROZEN PIZZA
- ☒ ORAL HYGIENE PRODU...

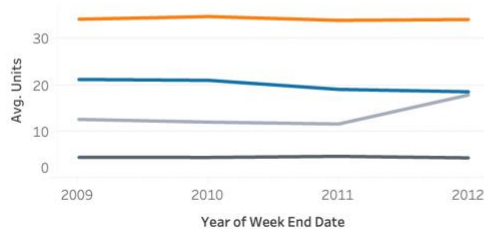
Avg. Spend

43.16 63.62

Manufacturer

- ☒ (All)
- ☒ CHATTEM
- ☒ COLGATE
- ☒ FRITO LAY
- ☒ GENERAL MI
- ☒ HOME RUN
- ☒ KELLOGG
- ☒ KING
- ☒ MKSL
- ☒ P & G
- ☒ POST FOODS
- ☒ PRIVATE LABEL
- ☒ QUAKER
- ☒ SHULTZ
- ☒ SNYDER S
- ☒ TOMBSTONE
- ☒ TONY'S
- ☒ WARNER

Sales Trend



Recommendations for Business Growth in coming years

1. More stocking of cold cereal specifically adult family cereal across all regions.
2. Focus and plan to keep/increase area of store ranging between 45000 to 81000 or more.
3. Order more 15oz bag snacks from Private Label manufacturer.
4. Consider cities located in different states for the category wise sales trend.

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Conclusion:

After performing exploratory data analysis on the given dataset, the recommendations were provided for business growth in upcoming years.