

Retail Data Analysis

The Retail Store has provided a dataset that contains household-level transactions over two years from a group of 2500 households who are frequent shoppers at this retailer. It contains all of each household's purchases from different categories.

The objective of this analysis is to provide the Retail Store valuable insights and comprehensive market analysis that can improve decision making accuracy resulting in more informed business strategies.

Project By - Purba Nag

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Customer Demographics

Total Households

2500

Married Households

1087

Unmarried Households

1052

Divorced Households

361

2020

2021



Cust Demo



Campaigns



Coupons



Products



Transactions



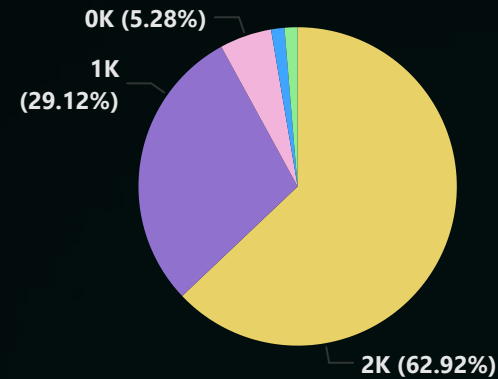
Conclusions



Clear Filters

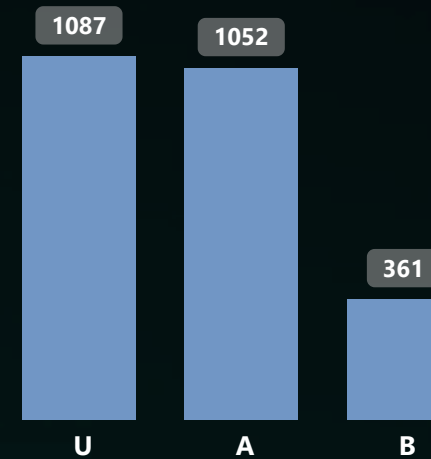
Homeownership-wise Distribution

● Homeowner ● Unknown ● Renter ● Probable R...



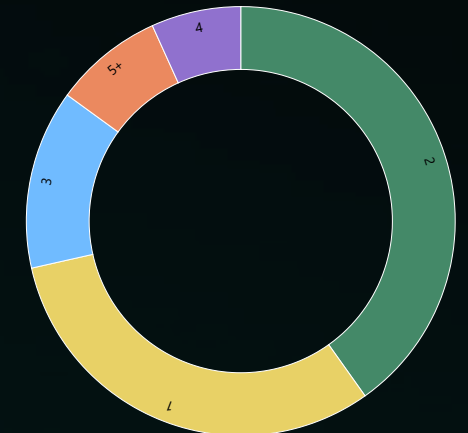
Marital Status Distribution

Marital Status



Household Size Wise Distribution

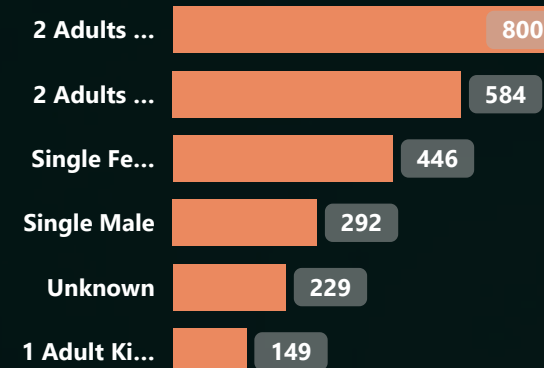
● 4 ● 5+ ● 3 ● 1 ● 2



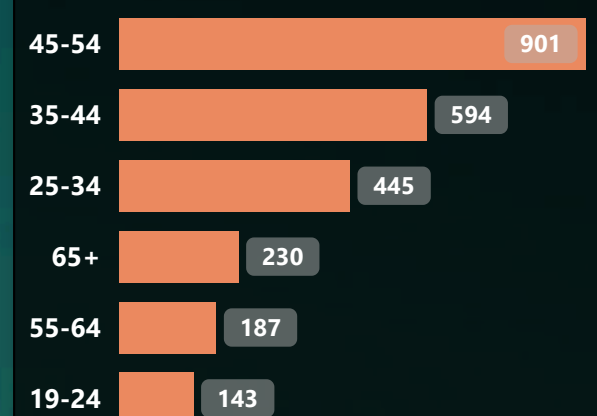
Income Distribution



Household Distribution Composition by Kid



Age Distribution





Campaigns

Total Campaigns

30

Average Duration Days

46.60

Participating Households

1584

2020

2021



Cust Demo



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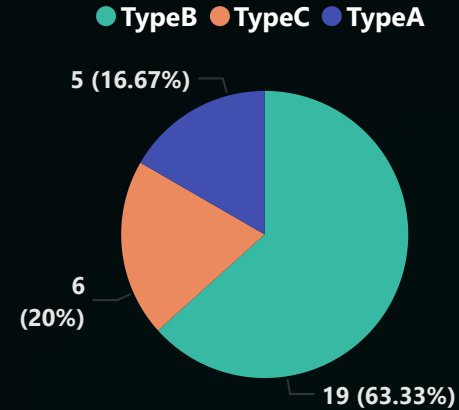


Conclusions

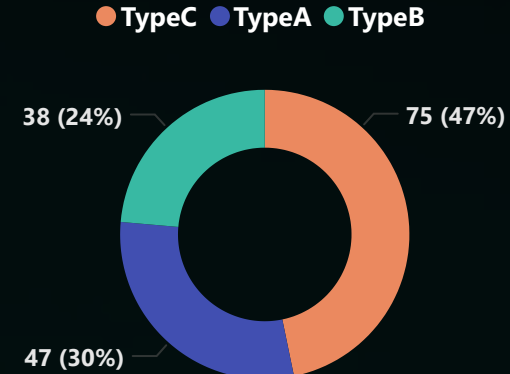


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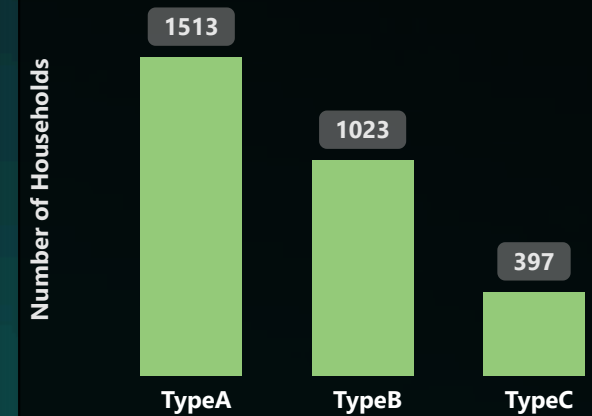
Number of Different Types of Campaigns



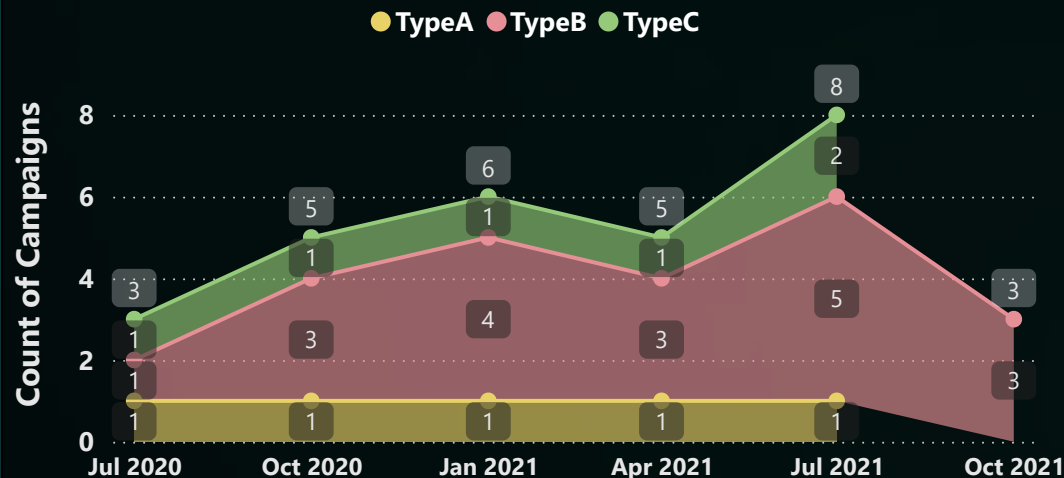
Average Campaign Duration by Description



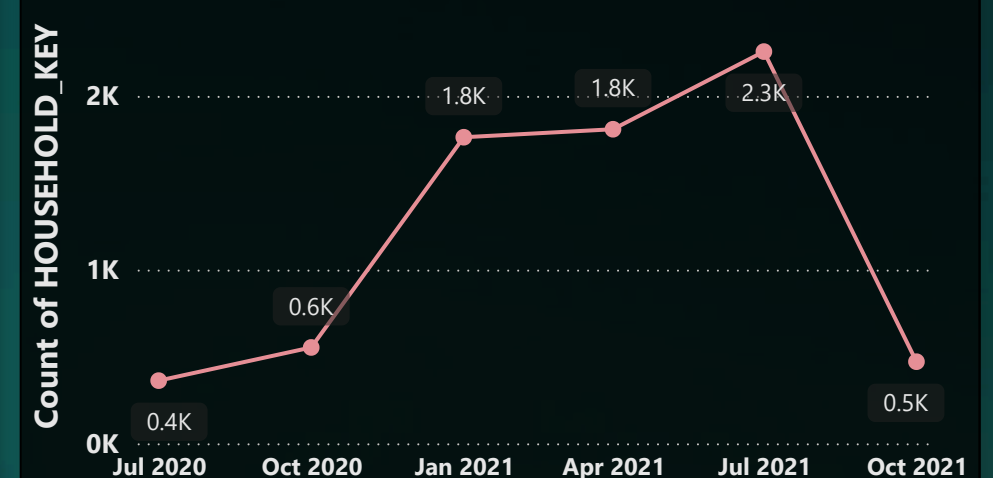
Number of Households per Campaign



Number of Campaigns over the Year



Number of Households over the Year





Coupons

Total Coupons

1135

Total Coupon Redeem

556

Coupon Redemption rate

49%

2020

2021

CAMPAIGN

All



Cust Demo



Campaigns



Coupons



Products



Transactions

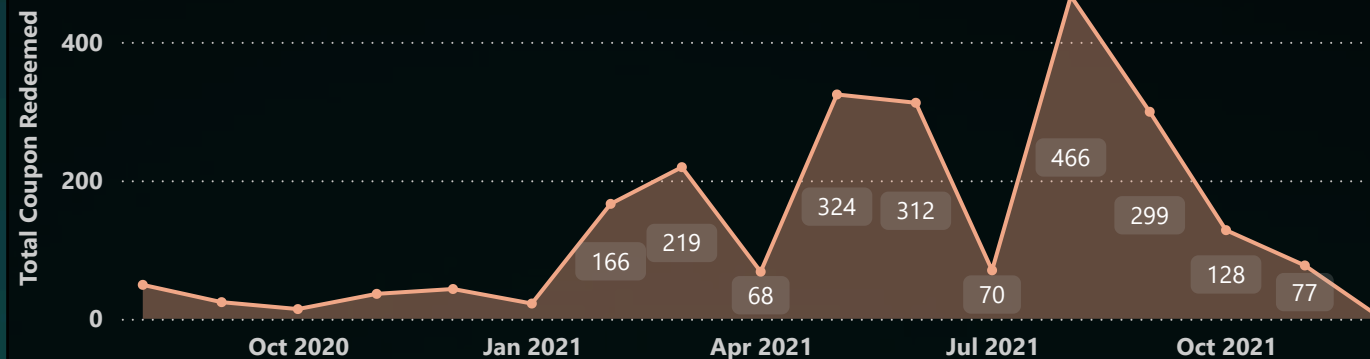


Conclusions



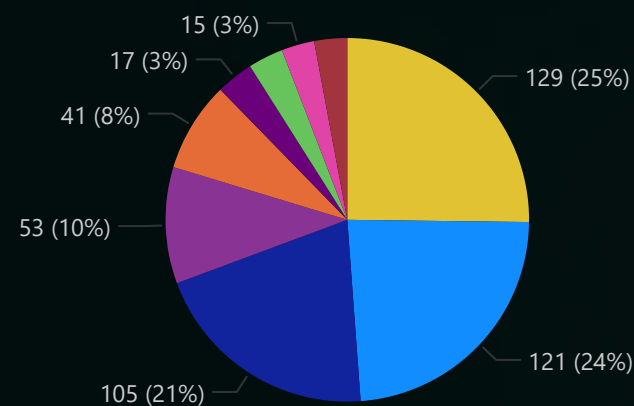
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Coupon Redemption Over the Year



Top 8 Campaigns Coupon Redemption Wise

CAMPAIGN ● 13 ● 18 ● 8 ● 26 ● 30 ● 29 ● 23 ● 20 ● 25



CAMPAIGN	Count of PRODUCT_ID	Count of COUPON_UPC
13.00	35616	207
18.00	35513	209
8.00	17178	209
26.00	3396	181
30.00	3205	181
22.00	1917	21
24.00	1887	2
16.00	1025	13
25.00	826	17
0.00	825	18
Total	44133	1135



Products

Total Sales

8.06M

Total Products

92.35K

Total Manufacturer

6476

2020

2021



Cust Demo



Campaigns



Coupons



Products



Transactions



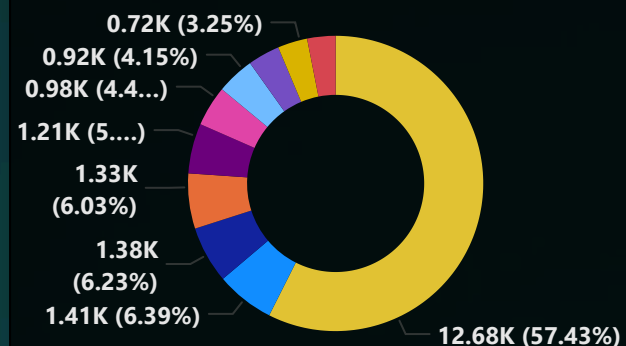
Conclusions



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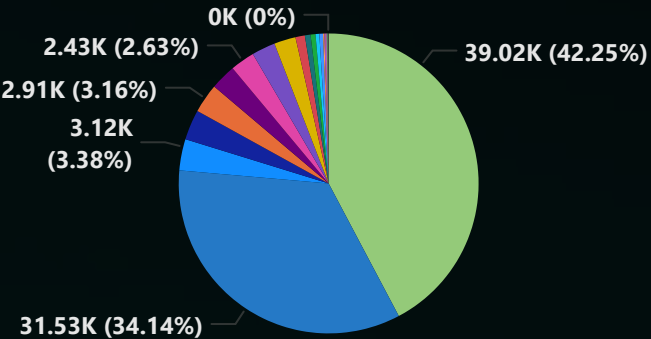
Manufacturer Wise Products

69 2 5423 764 1407 693 544

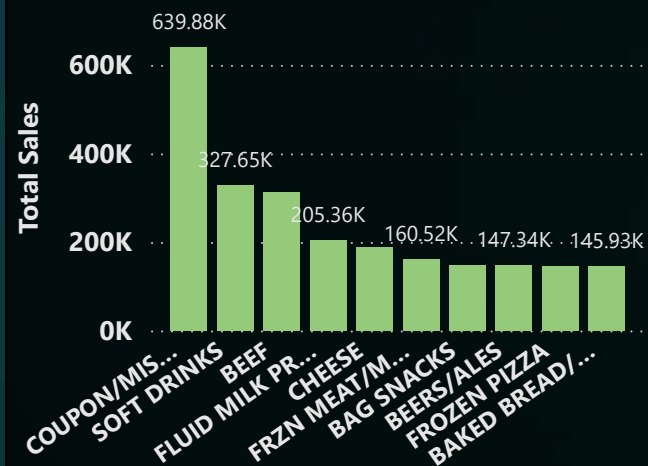


Department Wise Products

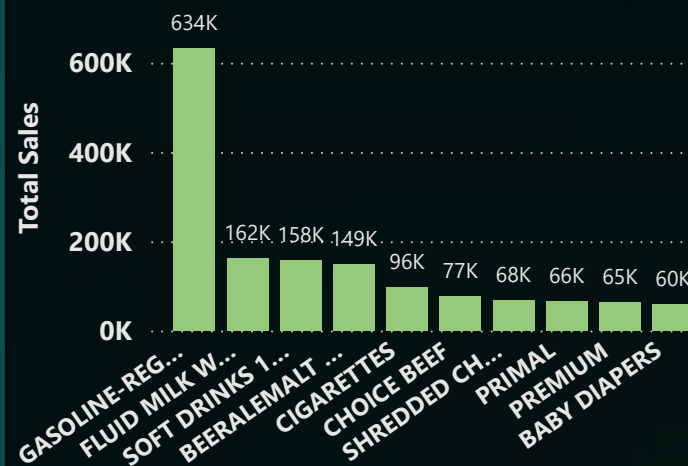
GROCERY DRUG GM PRODUCE COSMETICS



Top 10 Commodity Sales Wise



Top 10 Sub-Commodity Sales Wise



BRAND

National

Private

Top 10 Department Sales Wise





Transactions

Total Sales

8.06M

Avg Transaction Value

3.15K

Total Retail Discount

-1.40M

Total Coupon Discount

-46.81K

Total Coupon Redeem
Discount

-6.69K

2020

2021



Cust Demo



Campaigns



Coupons



Products



Transactions

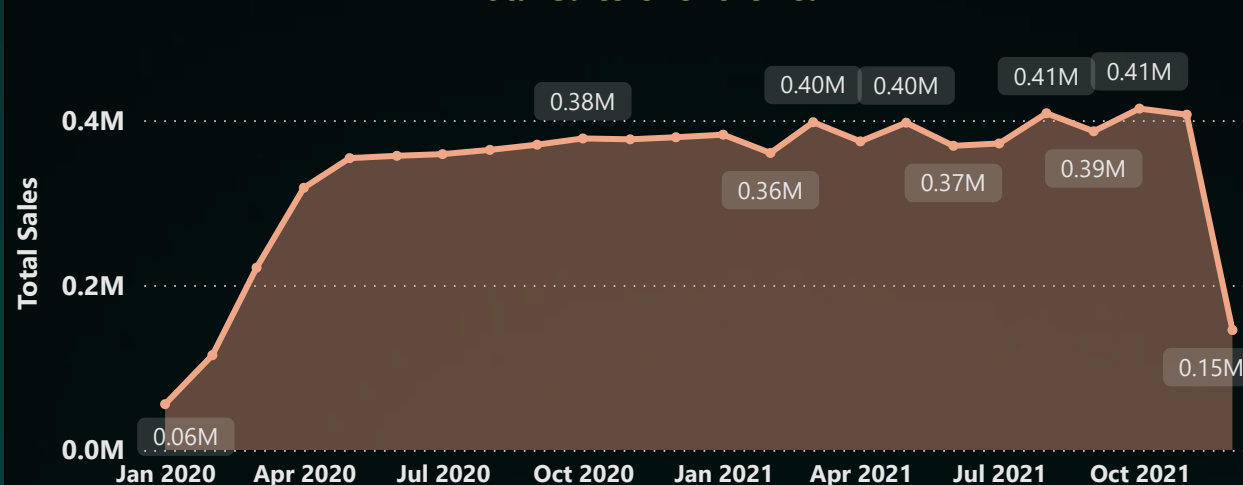


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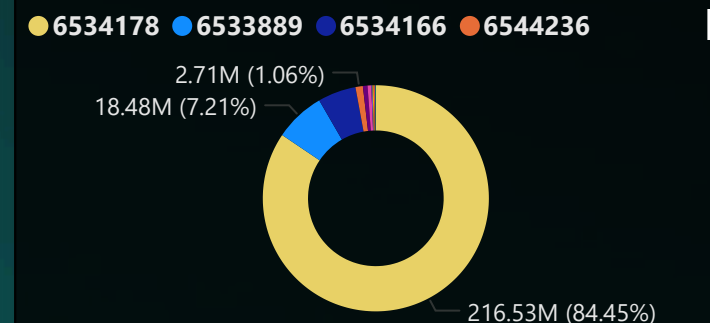


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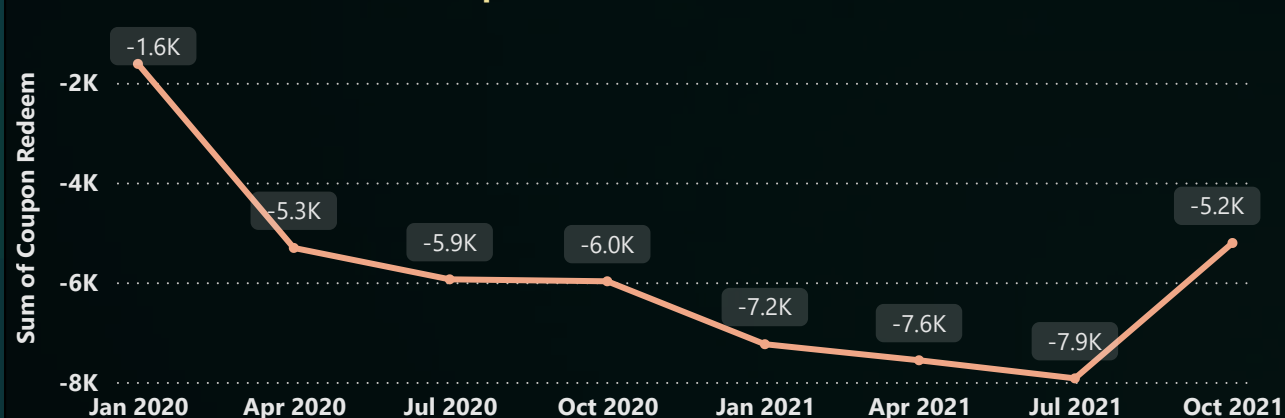
Total Sales Over the Year



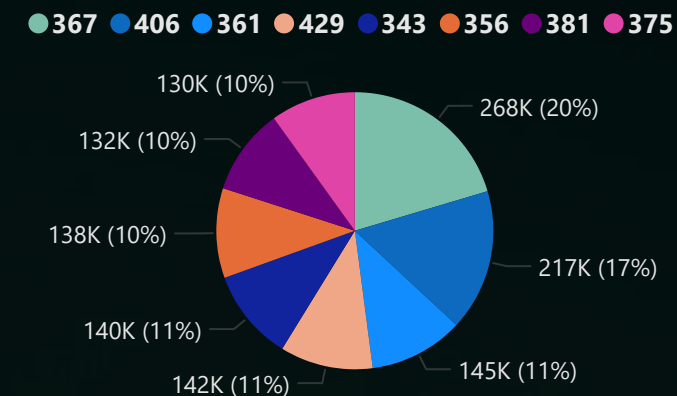
Quantity Wise Products Distrubution



Coupon Redeem Over the Year



Sales Distribution Store-Id wise





Conclusions

Next



Cust Demo



Campaigns



Coupons



Products



Transactions



Conclusions



Clear Filters

Customer Demographics:

Customer demographics are categories of consumer populations that are useful to a business for purpose, such as marketing and product design.

- 1) There are total 2500 households in customer demographic population.
- 2) Visualization shows that couples without children are the largest customer group, followed by couples with children.
- 3) The retail store can focus on stocking products that are popular with couples without children, such as household goods, appliances and clothing. They can also stock products that are popular with couples with children, such as baby products, toys and furniture.
- 4) Income distribution chart shows that most households fall within the income bracket 50-74k and followed by 35-49K , very few households earns more than 150k .
- 5) The demographic distribution shows that the highest percentage of households fall within the age group of 45-54, followed by 35-44, providing valuable insights for retail stores to target their products and marketing strategies towards these age segments.

Conclusions

Next



Cust Demo



Campaigns



Coupons



Products



Transactions



Conclusions



Clear Filters

Campaigns

Every retail store do campaign to build awareness, increase foot traffic and improve conversion rates.

- 1) The average campaign duration is 46.6 days, type A campaigns with an average duration of 49 days, which have been more successful than the other two types.
- 2) Improve Type C campaigns by analyzing reasons behind lower success rate.
- 3) Implement targeted outreach strategies and incentives to engage non-participating households.
- 4) Replicate successful elements from campaigns 8,13 and 18 and address shortcomings of unsuccessful campaigns.
- 5) Identify and replicates strategies from campaigns 13,18 and 8 to boost product sales in future campaigns.
- 7) The number of campaigns has increased over time, but sales have not increased much so have to analyze marketing channels to increase sales.


Coupons

- 1) Coupons can drive customers to your business and introduce new customers to your store.
- 2) Only 556 coupons out of 1135 coupons have been used, Coupon redemption rate is 49% .
- 3) The number of campaigns has increased but the redemption rate of coupon has not increased to same extent.
- 4) Focusing on coupons reveals that customers are not showing much interest in redeeming them.
- 5) During campaigns 13,18 and 8 there was a high redemption rate of coupons by customers.
- 6) Tailor coupon offers to match individual customer preferences and purchase history. This can be achieved through customer segmentation and targeted marketing campaigns, resulting in higher coupon redemption rates.
- 7) Create a sense of urgency by introducing limited-time coupon offers to prompt customers to redeem them before they expire.

Conclusions


Front page 

 **Cust Demo**


 **Campaigns**

 **Coupons**

 **Products**

 **Transactions**

 **Conclusions**

 **Clear Filters**

Products

- 1) Total sales from the products both national and private combined is 8.06 millions.
- 2) Products from the National brand generated greater sales amount.
- 3) Analyze the performance of the grocery department and identify opportunities for further growth, this could involve expanding product offerings, improving product placements and visibility .
- 4) Strengthen the partnership with Manufacture-69 as they have generated high sales. Explore possibilities for exclusive promotions, strategic collaborations or joint marketing efforts to further boost sales.
- 5) Capitalize on the popularity of coupon/MISC items by offering a wider range of discounts promotions or deals. Ensure that these items are prominently displayed and promoted to maximize sales potential.

Transactions

- 1) Average transaction value is 3.15k.
- 2) It is unlikely that sales and coupon redemption will increase over time in future.
- 3) Top 3 sales generating stores are 367, 406 and 361.
- 4) Total retail discount is 1.40 million.
- 5) Conduct market research, competitor analyzing and adjust pricing to ensure competitiveness and drive sales.
- 6) Implement loyalty program, personalized recommendations, and referral incentives to encourage repeat purchase and increase sales.