

Dunnhumby The complete Journey

Introduction:

This dataset contains household level transactions over two years from a group of 2,500 households who are frequent shoppers at a retailer. It contains all of each household's purchases, not just those from a limited number of categories. For certain households, demographic information as well as direct marketing contact history are included. This is used to study the effects of direct marketing to customers.

Understanding the data:

There are 8 tables containing:

- 1) **hh_demographic**: This table contains demographic information for a portion of households. (801 households)

AGE_DESC	Estimated age range(['65+', '45-54', '25-34', '35-44', '19-24', '55-64'])
MARITAL_STATUS_CODE	Marital status (A-married, B-single, U-Unknown)
INCOME_DESC	Household Income(['35-49K', '50-74K', '25-34K', '75-99K', 'Under 15K', '100-124K', '15-24K', '125-149K', '150-174K', '250K+', '175-199K', '200-249K'])
HOMEOWNER_DESC	Homeowner, Renter, Unknown, Probable Renter, Probable Owner
HH_COMP_DESC	'2 Adults No Kids', '2 Adults Kids', 'Single Female', 'Unknown', 'Single Male', '1 Adult Kids'
HOUSEHOLD_SIZE_DESC	1,2,3,4,5+
KID_CATEGORY_DESC	'None/Unknown', '1', '2', '3+'
household_key	Uniquely identifies each household

- 2) **Transaction_data:** This table contains all products purchased by households within this study. Each line found in this table is essentially the same line that would be found on a store receipt. (2500 households bought 92339 products)

<i>Household_key</i>	<i>Uniquely identifies each household</i>
<i>Basket_id</i>	<i>Uniquely identifies purchase occasion</i>
<i>Day</i>	<i>Day when transaction occurred</i>
<i>Product_Id</i>	<i>Uniquely identifies each product</i>
<i>Quantity</i>	<i>Number of products purchased during the trip</i>
<i>Sales_value</i>	<i>Amount received by retailer from sales</i>
<i>Store_ID</i>	<i>Identifies unique store</i>
<i>Retail_disc</i>	<i>Discount applied by retailer loyalty card</i>
<i>Trans_time</i>	<i>Time of day when the transaction occurred</i>
<i>Week_no</i>	<i>Week of transaction</i>
<i>Coupon_disc</i>	<i>Discount applied by manufacturer</i>
<i>Coupon_Match_disc</i>	<i>Discount applied by retailer</i>

- 3) **Campaign_table:** This table lists the campaigns received by each household in the study. Each household received a different set of campaigns. (1584 households mailed 30 campaigns)

<i>Household_key</i>	<i>Uniquely identifies each household</i>
<i>Campaign</i>	<i>Uniquely identifies each campaign. 1to30</i>
<i>Description</i>	<i>Type of campaign(Type-A,B,C)</i>

- 4) **Campaign_desc:** This table gives the length of time for which a campaign runs. So, any coupons received as part of a campaign are valid within the dates contained in this table. (30 campaigns)

<i>Campaign</i>	<i>Uniquely identifies each campaign. 1to30</i>
<i>Description</i>	<i>Type of campaign(Type-A,B,C)</i>
<i>Start day</i>	<i>Start day of campaign</i>

<i>End_day</i>	<i>End day of campaign</i>
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- 5) **Product:** This table contains information on each product sold such as type of product, national or private label and a brand identifier.(92353 products)

<i>Product_Id</i>	<i>Uniquely identifies each product</i>
<i>Department</i>	<i>Groups similar products here</i>
<i>Commodity_desc</i>	<i>Group similar products at a lower level</i>
<i>Sub_Commodity_desc</i>	<i>Group similar products at the lowest level</i>
<i>Manufacturer</i>	<i>Code that links products with same manufacturer together</i>
<i>Brand</i>	<i>Indicates Private or National label brand</i>
<i>Curr_size_of_product</i>	<i>Indicates package size</i>

- 6) **Coupon:** This table lists all the coupons sent to customers as part of a campaign, as well as the products for which each coupon is redeemable. Some coupons are redeemable for multiple products.(1135 coupons promoted 44133 products for 30 campaigns)

<i>Campaign</i>	<i>Uniquely identifies each campaign(1 to 30)</i>
<i>Coupon_upc</i>	<i>Uniquely identifies each coupon</i>
<i>Product_id</i>	<i>Uniquely identifies each product</i>

- 7) **Coupon_redempt:** This table identifies the coupons that each household redeemed.(434 households redeemed 556 coupons from 30 campaigns)

<i>Household_key</i>	<i>Uniquely identifies each household</i>
<i>Day</i>	<i>Day when transaction occurred</i>
<i>Coupon_upc</i>	<i>Uniquely identifies each coupon</i>
<i>Campaign</i>	<i>Uniquely identifies each campaign(1 to 30)</i>

- 8) **Causal_data:** This table signifies whether a given product was featured in the weekly mailer or was part of an in-store display (other than regular product placement). (68377 prodcuts)

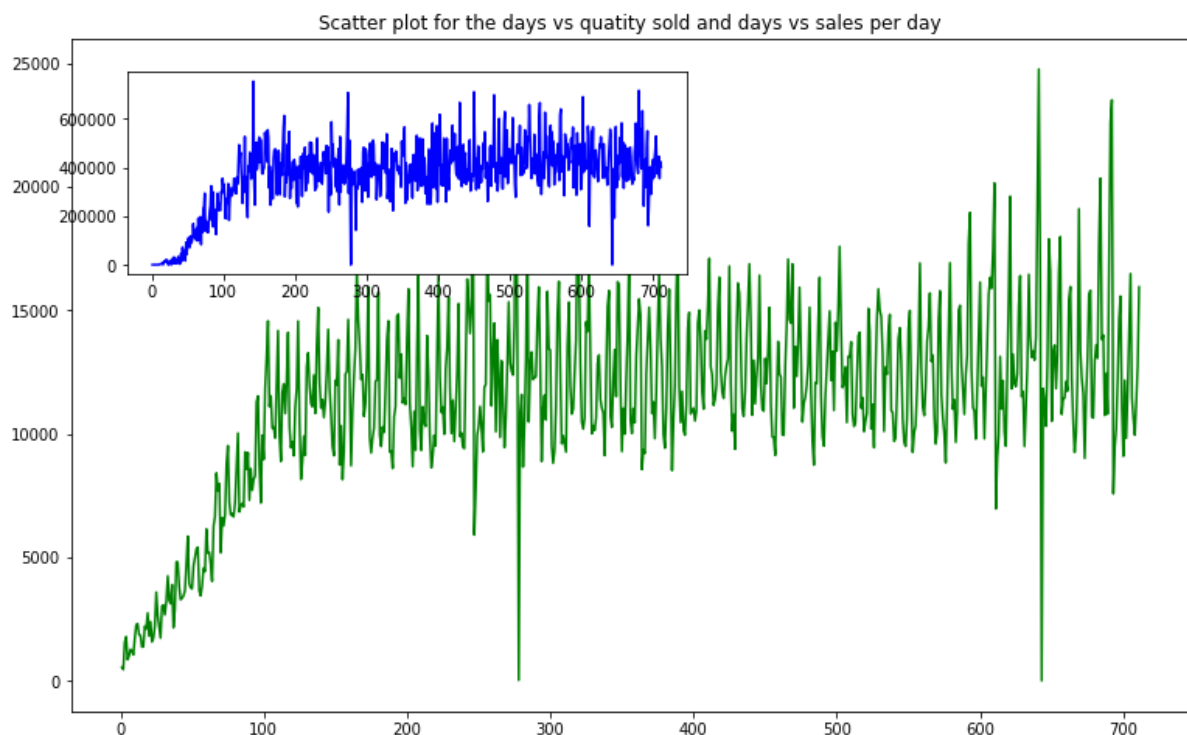
<i>Product_id</i>	<i>Uniquely identifies each product</i>
<i>Store_ID</i>	<i>Identifies unique store</i>
<i>Week_no</i>	<i>Week of transaction</i>
<i>Display</i>	<i>Display location(0-Not in display, 1-store front, 2-Store rear, 3-Front end cap, 4-Mid-aisle end cap,5-Rear end cap, 6-Side aisle end cap, 7-In aisle, 8-Secondary location display,A-in shelf)</i>
<i>Mailer</i>	<i>Mailer Location(0-Not on ad, A-interior page feature, C-Interior page line item,D-Front page feature, F-back page feature, H-wrap front feature, J-wrap interior coupon, L-wrap back feature, P-interior page coupon, X-free on interior page, Z-free on front page,back page or wrap)</i>

Changes made in the data:

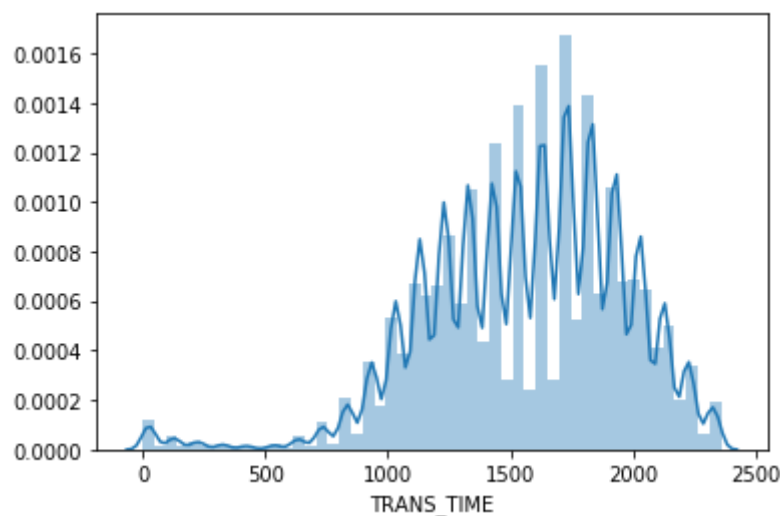
- 1) Changed Week_no in transaction_data table as transaction_week
- 2) Changed Week_no in Causal_data as causal_week
- 3) Changed Day in transaction_data as transaction_day
- 4) Changed Day in coupon_redempt as redempt_day
- 5) Converted all the columns/features to lower case letters.
- 6) Replaced "None/Unknown" in KID_CATEGORY_DESC to '0'. As records with "None/Unknown" in KID_CATEGORY_DESC also have HH_COMP_DESC as "No Kids".

Data Insights:

- Based on the information from the transaction_data table the number of products purchased during the trip and the amount of dollars retailers received from the sales was increasing gradually until 120th day. After that there have been fluctuations in both the quantity sold and the sales per day.
- So, In order for the campaign to reach the public and for the campaign to get the required flow of sales it takes around 120 days.



- The peak hours are between 10:00 to 20:00 : That means there is a heavy floating of customers from 10:00AM to 20:00PM



- The discounts provided by the retailer, manufacturer and retailer to loyal customers are independent of each other.
- Each campaign type is associated with distinct campaigns, and each household received a different campaign.

Campaign Description	Households reached through campaign	Campaign	Days
Type A	3979	8,13,18,26,30	47 days(approx)
Type B	2655	1,2,4,5,7,9,10,11,12,16,17,19,21,22,23,24,25	32days(approx)
Type C	574	3,6,14,15,20,27	64days(approx)

- These are the highest selling department from the past two years data:

Department	Products sold
GROCERY	39,021
DRUG GM	31,529
PRODUCE	3118
COSMETICS	3011
NUTRITION	2914
MEAT	2544
MEAT-PCKGD	2427
DELI	2354
PASTRY	2149

There are 15 missing values in the department feature

- Top selling products in a department and in their lower levels of sub department.

Department	Commodity_desc	Sub_commodity_desc	Count of products
DRUG GM	GREETING CARDS/WRAP/PARTY SPLY	CARDS EVERYDAY	1005
GROCERY	BEERS/ALES	BEERALEMALT LIQUORS	770

GROCERY	SPICES & EXTRACTS	SPICES & SEASONINGS	606
DRUG GM	GREETING CARDS/WRAP/PA RTY SPLY	GIFT-WRAP EVERYDAY	547
DRUG GM	HAIR CARE PRODUCTS	SHAMPOO	512
COSMETICS	MAKEUP AND TREATMENT	MAYBELLINE	509
GROCERY	YOGURT	YOGURT NOT MULTI-PACKS	505
COSMETICS	MAKEUP AND TREATMENT	COVERGIRL	501
GROCERY	BAG SNACKS	POTATO CHIPS	483
GROCERY	SALD DRSNG/SNDWCH SPRD	POURABLE SALAD DRESSINGS	458
DRUG GM	GREETING CARDS/WRAP/PA RTY SPLY	CARDS SEASONAL	456
MISC. TRANS.	NO COMMODITY DESCRIPTION	NO SUBCOMMODITY DESCRIPTION	429
DRUG GM	CANDY - PACKAGED	SEASONAL CANDY BAGS-CHOCOLA TE	428
GROCERY	SOFT DRINKS	SOFT DRINKS 12/18&15PK CAN CAR	403
DRUG GM	CANDY - PACKAGED	CANDY BAGS-CHOCOCL ATE	395
DRUG GM	CIGARETTES	CIGARETTES	386
GROCERY	FRZN MEAT/MEAT DINNERS	FRZN SS PREMIUM ENTREES/DNRS/ N	330

- From the above query we can see that Drug, Groceries are the most sales generating departments.

Understanding each customer:

Trying to understand the data through a customer point of view. Learning about their household demographics, look at their past 2 years transactions, coupons they received ,coupons they redeemed, find whether he/she bought the product after being featured in in-store display or mailer or not featured at all.

Household_key = 1:

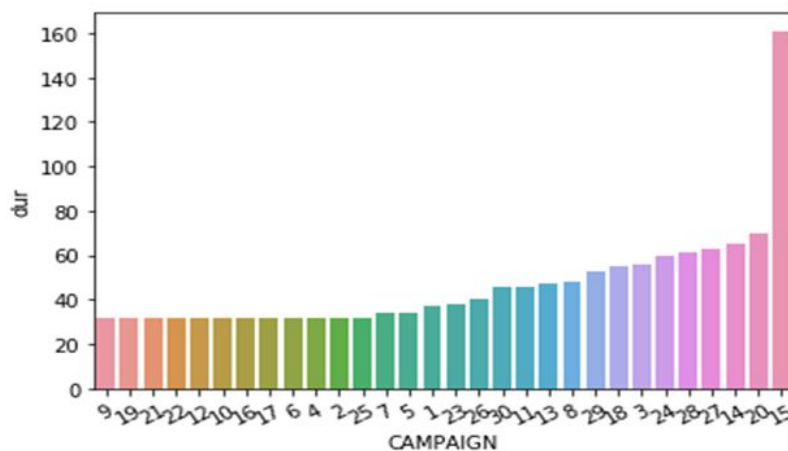
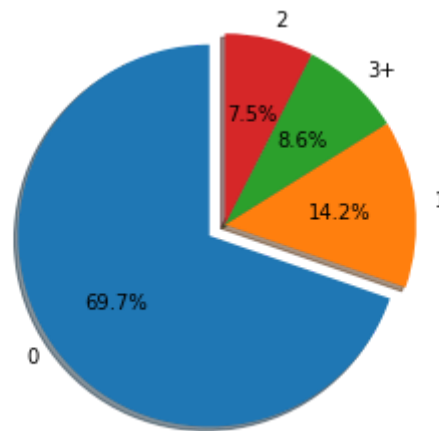
Day=51

- This customer is 65+ years old, married and living with his wife. Here this particular consumer is the homeowner so made an assumption that this person is a male. His income belongs to the 35-49k category.
- Now looking at his transaction, he had made 1727 transactions in this 2years span. From this we can assume that he is a regular customer. His 1st transaction occurred on the 51st day. That day he bought 30 items. He took all the items in a single visit on that day. He came out of the store at 14:56 PM.
- This particular customer received 8 campaigns
- Now let's have a look at the products he bought. The items he bought are:
Grocery:Salad dressing(30oz),cheese(8oz),Eggs(1dz), traditional ice creams(56oz), fruit bread(16oz), toilet tissue(1), pineapple(20oz), oranges(15oz), sour cream(16oz), frozen vegetables(16oz), pudding(0.9oz), cookies(5.5oz), broth soup(14oz), peaches(15oz),cottage cheese(24oz*2), peanut butter(18oz), beans(14.5oz*2), food storage bags(25ct), dairy case juice(64oz), frzn novelties(25ct*2),
Deli: turkey meat().
Meat-packaged: entrees(24oz*2), pickles(20oz),bacon precooked(2.2oz)
Pastry: muffins(10oz), Fruit pie(11oz)
Produce: bananas(40lb).
Drug Gm: chocolates bag(3.5oz), chocolates boxed(3.5oz).
- He bought the products before the products were featured in the display.

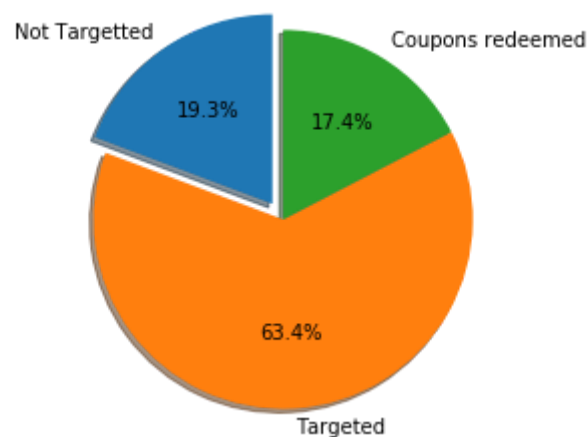
Day 67:

- He bought 12 items.
- Grocery: fruit bread(16oz), cookies(6oz), frzn novelties(6ct), softdrinks(12oz), dairy case juice(64oz),potato chips(11.5oz)
Drug Gm: chocolates bag(3.5oz), cigarettes(ctn), vitamin-minerals,gum,cigarettes(ctn)
- Product_code 8090541-in causal_week=10 was not featured in the display, and was on the front page of the mailer.
- Product_code 9527290 in causal_week =10 was featured on the store front, and was on the interior page of the mailer.

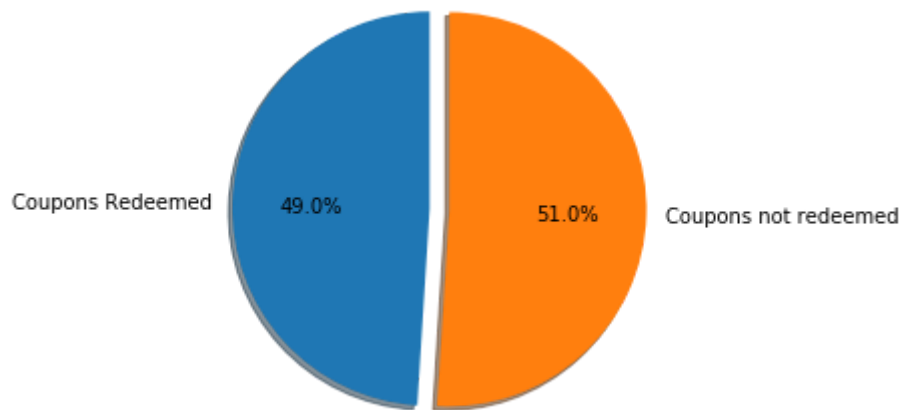
- Most of the consumers don't have kids. We can see from the pie chart below.



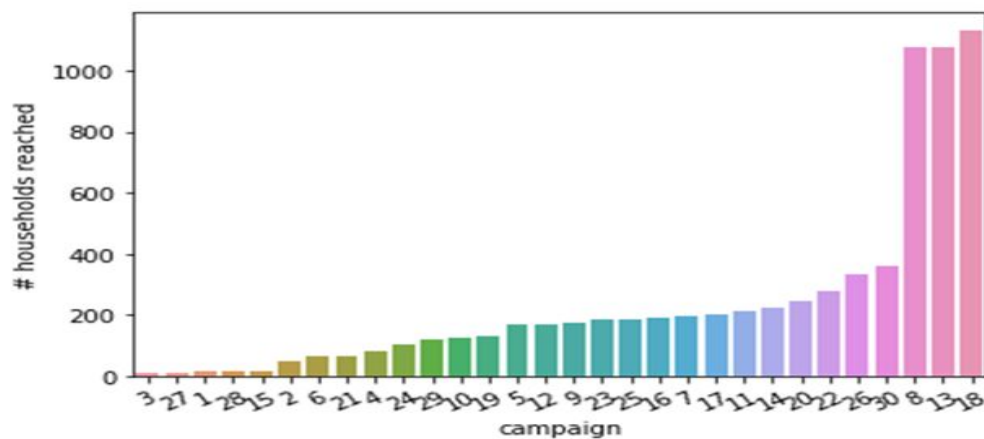
- Campaign no 15 was run for 160 days, whereas the other campaigns ranges close to each other.
- From the transaction_data table we can see that there were 2500 households who did transactions. But only 1584 households were targeted in this campaign which we can see from the campaign_table. Finally by the end of this 2 year marketing campaign only 434 households redeemed 556 coupons(coupon_redemp table) among 1135 coupons(coupon table).



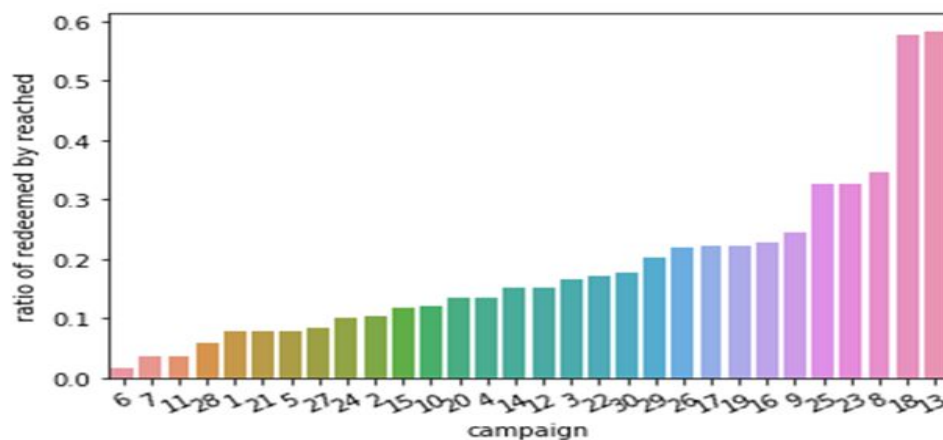
- 49% coupons were redeemed by the consumers



- 2500 households shopped 92339 products(transaction_data). But there were 92353 products available in the stock keeping unit(SKU). This tells us that 14 products were never bought by any consumer by the end of the 2 years marketing campaign.
- Campaigns 18,13,8 reached more than 1000 consumers. And these campaigns 18,13,8 belong to the TypeA campaign.



- The campaigns with the most redemption rate are also 18,13. With the redemption rate of more than 0.5 for 18,13. With a redemption rate of around 0.3 for 25,23,8.



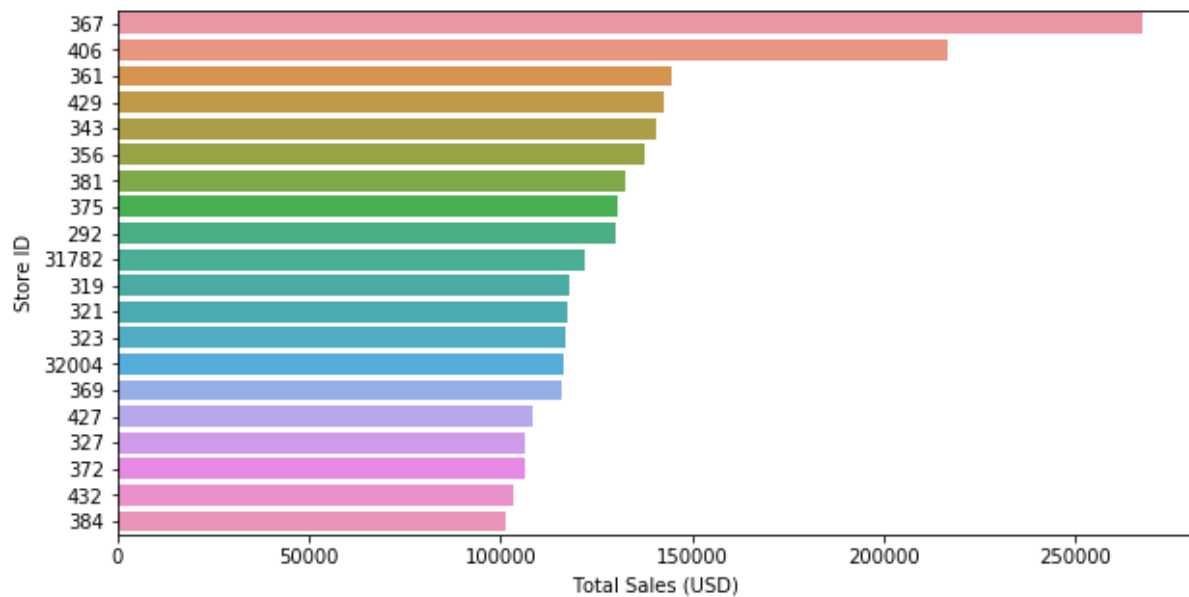
Based on this observation we can say that the marketing managers for the campaigns 18,13 were successful in promoting these campaigns more frequently.

- There were 14 products that weren't sold in this 2 year campaign.

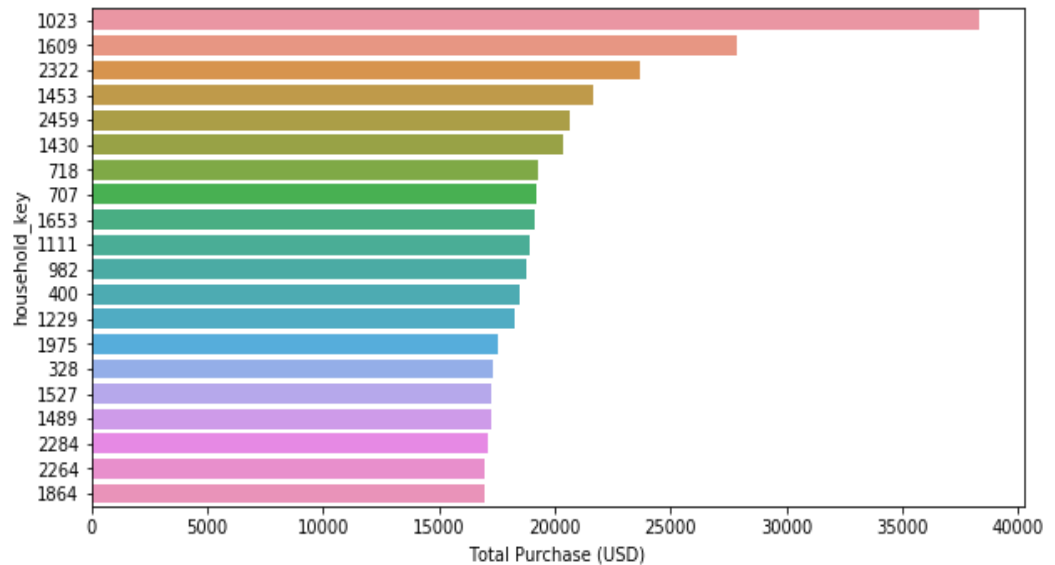
product_id	Manufacturer	Department	brand	commodity_desc	sub_commodity_desc	curr_size_of
56663	69	GROCE RY	Private	FRZN POTAT OES	FRZN FRENCH FRIES	32oz
424426	69	NUTRITI ON	Private	WATER	SPRING WATER	16.9oz
833727	2393	COSME TICS	National	FRAGR ANCES	DESIGN ER FRAGR ANCES	
883999	5583	COSME TICS	National	FRAGR ANCES	DESIGN ER FRAGR ANCES	
891602	5029	DRUG GM	National	ORAL HYGIEN E PRODU CTS	DENTU RE CLEAN SERS	
993259	638	GROCE RY	National	FROZE N PIE/DES SERTS	FROZE N CAKES/ ALL TYPES INCLUD I	10.75oz
1118507	4978	DRUG GM	National	INFANT FORMU LA	INFANT FORMU LA MILK BASE	26 REC oz
2068363	2	PRODU CE	National	SQUAS H	SQUAS H ZUCCHI NI	18lb
7441392	958	COSME	National	MAKEU	MAYBE	

		TICS		P AND TREAT MENT	LLINE	
8180896	603	DRUG GM	National	VITAMI NS	VITAMI N - INDIVID UAL	
9887432	856	DRUG GM	National	DIETAR Y AID PRODU CTS	DIET CNTRL BARS NUTRITI ONAL	1 ct
1248790 9	1628	DRUG GM	National	HALLO WEEN	LOREAL COSME TICS	
1260554 8	1937	DRUG GM	National	PERSO NAL CARE APPLIA NCES	PERSN L APPL: FT BTH/MA SSGRS	
1597207 5	471	COSME TICS	National	FRAGR ANCES	PARFU MS DE COUER	

- There are 582 stores transaction data available with us. Among these stores the top stores based on total sales are: 367,406 with more than 200,000 dollars sales in this 2 year marketing campaign.



- There is a total of 2500 household information that is available in the transaction_data table. Among these households the top buying households are:



- We don't have any demographic information about the top buyer household(1023), and this household was not given any coupons.
- The second top buyer household(1609) in the 45-54 age group has an income 125-149k, which is relatively a high income group. The household size is 5+ and has kids 3+. This can be the possible reason for this buying behaviour. He was given promotions on 3 separate campaigns(11,13,18). But this household redeemed coupons only from campaign 18.
- Household(2322) in the 45-54 age group has an income 175-199k, which is relatively a high income group. This person is a single male. He was given a promotion on campaigns(5,6,8,10,13,16,17,19,22,25). But he redeemed coupons only from the campaign(8).
- Household(1453) in the 45-54 age group has an income 125-149k, which is relatively a high income group. The household size is 3 and has 1kid. He was given promotions on campaigns(6,8,12,13,14,17,18,20,22,23,24,25,29). But this household redeemed coupons only from campaigns 8,17,18,23,24
- Household(2459) demographic information is not available.
- Household(1453) in the 35-45 age group has an income 35-49k, which is relatively a mid income group. The household size is 3 and has 1kid. He was given promotions on campaigns(6,7,8,9,12,14,16,18,20,23,25). But this household redeemed coupons only from campaigns 8.
- Household(1453) in the 45-54 age group has an income 23-34k, which is relatively a low income group. The household size is 5+ and has 3+kids. He was given promotions on campaigns(3,5,10,11,13,16,17,18,19,22,23,25,26,27,30). But this household redeemed coupons only from campaigns(10,18,26,27,30).
- Household(707) in the 25-34 age group has an income 100-124k, which is relatively a high income group. The household size is 5+ and has 3+kids. He

was given promotions on campaigns(8,11,13,14,17,18,21,23,25). But this household redeemed no coupons.

- Household(1653) in the 35-44 age group has an income under 15k, which is relatively a low income group. The household size is 1 . She was given promotions on campaigns(8,12,13,14,17,18,20,22,23,24). But this household redeemed coupons only from campaigns(18).
- Household(1111) demographic information is not available.
- Household(982) in the 45-54 age group has an income under 35-49k, which is relatively a low income group. The household size is 4 and 2 kids . He/She was given promotions on campaigns(5,8,10,11,13,14,16,17,18,20,22,23,24,25). But this household redeemed coupons only from campaigns(8,10,13,14,17,18,22).

Understanding Campaigns:

- For the whole customer data the campaigns were distributed as follows

TypeA	55.20%
TypeB	36.83%
TypeC	7.96%

Age group(19-24):

- TypeA 51.01%
- TypeB 37.65%
- TypeC 11.33%

Age group(25-34):

- TypeA 46.94%
- TypeB 44.31%
- TypeC 8.73%

Age group(35-44):

- TypeA 49.01%
- TypeB 41.65%
- TypeC 9.33%

Age group(45-54):

- TypeA 52.91%
- TypeB 38.77%
- TypeC 8.30%

Age group(55-64):

- TypeA 58.41%
- TypeB 35.31%
- TypeC 6.27%

Age group(65+):

- TypeA 62.88%
- TypeB 30.24%
- TypeC 6.87%

Campaign 1:

- Most of the products were from the manufacturer 407(42%),317(25%).
- All these products belong to the GROCERY department.
- These products in this campaign belong to the brand National(94.5%),Private(5.5%)
- The products that were promoted are CHEESE,VEGETABLES,FRUIT,FRZN MEAT,MILK BY-PRODUCTS,REFRGRATD JUICES,CANNED JUICES,CONDIMENTS/SAUCES.
- All are TypeB campaigns.
- The households targeted in these campaigns are 68,93,293,2200,1483,1258,1238,932,630,568,536,529,105.
- There is no pattern in these households, except there were no 65+ age group.

Campaign 2:

- Most of the products were from the manufacturer 794(18%),282(17%),69(12%).
- Most of these products belong to the GROCERY(98%) department and MEAT-PCKGD(2%)
- These products in this campaign belong to the brand National(87.3%),Private(12.6%)
- The products that were promoted are FROZEN PIZZA, FRZN BREAKFAST FOODS, FRZN VEGETABLE, FRZN MEAT, FRZN POTATOES, FROZEN BREAD/DOUGH, SEAFOOD, DRY BN/VEG/POTATO/RICE, FROZEN MEAT, REFRGRATD JUICES
- The households targeted in these campaigns are:
16,239,271,345,454,2459,2371,2336,1558,1412,989,968,947,886,684,681,647,598,583,2295,2294,2224,2008,1978,1954,1916,1769,1754,1745,1729,1622,1617,1613,1353,1336,1316,1299,1117,1060,1055,996,995,513,470,364,305,287,29.

Campaign 3:

- Most of the products were from the manufacturer 869(34%),70(25%).
- Most of these products belong to the GROCERY department(75%). There are some products belonging to other departments like DRUG GM(24%), Nutrition,MEAT PACKD,COSMETICS each of around 0.2%.
- These products in this campaign belong to the brand National(99%),Private(1%)
- The products that were promoted are DRY BN/VEG/POTATO/RICE, SALD DRSNG/SNDWCH SPRD, PASTA SAUCE, SOAP - LIQUID & BAR, MARGARINES, TEAS, HAND/BODY/FACIAL PRODUCTS, LAUNDRY ADDITIVES, HAIR CARE PRODUCTS, LAUNDRY DETERGENTS, DEODORANTS, SINUS AND ALLERGY, FRAGRANCES, REFRIGERATED, MEAT - MISC

Campaign 4:

- Most of the products were from the manufacturer 5258(26%),1225(15%),5612(10%),1046(10%), 531(9%)
- Most of these products belong to the GROCERY department(98.5%). There are some products belonging to other departments like DRUG GM(1.5%).
- These products in this campaign belong to the brand National(94.5%),Private(5.5%)
- The products that were promoted are LAYER CAKE MIX, REFRIGERATED COOKIES-CHUB, BITS & MORSELS, FROSTING, SWEETENERS, FRZN WHIPPED TOPPING, BUTTER, EGGS - LARGE, VEGETABLE/SALAD OIL, MARGARINE: TUBS AND BOWLS, REFRIGERATED COOKIES-BREAK N B,

CANNED MILK, EGGS - X-LARGE, COOKING CHOCOLATE (EX SMI-SWT), CANOLA OILS, GLASS BAKEWARE, SPECIALTY CAKE, REFRIGERATED COOKIES-SEASONAL, SEASONAL CANDY BAGS NON-CHOCOL, BAKING COCOA.

Campaign 5:

- Most of the products were from the manufacturer 177(37%),131(20%)5072(16%).
- All these products belong to the GROCERY department.
- These products in this campaign belong to the brand National. **Since most of the products in this DRUG department are Baby products, Consumers preferred National Brand to Private Brand.**
- The products that were promoted are BABY FOODS, BABY HBC, DIAPERS & DISPOSABLES, FILM AND CAMERA PRODUCTS, INFANT FORMULA, HAIR CARE PRODUCTS, COFFEE FILTERS

Campaign 6:

- All the products were from the manufacturer 759(100%).
- All these products belong to the GROCERY department.
- These products in this campaign belong to the brand National
- The products that were promoted are YOGURT MULTI-PACKS . **We can assume that this campaign is specified for this particular product from this manufacturer. These products can be either newly launched or a clearance sale.**

Campaign 7:

- Most of the products were from the manufacturer 1492(36%),764(34%),2350(15%).
- Most of these products belong to the DRUG GM department(91.5%). There are some products belonging to other departments like GROCERY(8%), COSMETICS(0.3%)
- These products in this campaign belong to the brand National. **Since most of the products in this DRUG department are Hygiene products, Consumers preferred National Brand to Private Brand.**
- The products that were promoted are HAND/BODY/FACIAL PRODUCT, ORAL HYGIENE PRODUCTS, HAIR CARE PRODUCTS, FEMININE HYGIENE, FRZN MEAT/MEAT DINNERS, FROZEN PIZZA, SHAVING CARE PRODUCTS, SOAP - LIQUID & BAR, MAGAZINE, SUNTAN, BATH, BABY HBC

Campaign 8:

- Most of the products were from the manufacturer 69(15.6%),764(34%),2350(15%).
- This campaign promoted products from all the departments. **This marketing campaign is run by the store.**
- These products in this campaign belong to the brand National(84%) and Private(16%).
- There are 820 product types distributed randomly.

Campaign 9:

- Most of the products were from the manufacturer 69(17%),194(15%),317(12%),624(10%)
- This campaign promoted most of the products from the GROCERY department(62%), rest all are in DRUG GM(19%), NUTRITION(18%).

- These products in this campaign belong to the brand National(82%) and Private(18%).
- These products are Packaged Food items like snacks, cereals, drinks, cookies, chips etc. These products are aimed

Campaign 10:

- Most of the products were from the manufacturer 177(24%),5072(18%),751(17%),764(13%),1282(12%).
- This campaign promoted most of the products from the DRUG GM department(96.5%), rest all are in GROCERY(2%), PASTRY(1%).
- These products in this campaign belong to the brand National(98.8%) and Private(1.2%). **Since most of the products in this DRUG department are Baby products, Consumers preferred National Brand to Private Brand.**
- These products are Baby foods, Diapers, BABY HBC.

Campaign 11:

- Most of the products were from the manufacturer 1266(34%),751(12.5%),1256(10%).
- This campaign promoted most of the products from the DRUG GM(42%), GROCERY(58%).
- These products in this campaign belong to the brand National(100%).
- These products are usually used for kids and these will be usually bought by consumers with kids.

Campaign 12:

- Most of the products were from the manufacturer 794(25%),236(17%),1046(14%),69(12%).
- This campaign promoted most of the products from the MEAT-PKGD(10%), GROCERY(86.6%),NUTRITION(3%) departments.
- These products in this campaign belong to the brand National(88%),Private(12%).
- These products are usually used for breakfast or a meal.

Campaign 13:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the DRUG GM(32%), GROCERY(30%) departments. Rest all are from various departments.
- These products in this campaign belong to the brand National(85%),Private(15%).
- These products are assigned with some randomness. So, These products are marketed by the store to either increase the sales or clearance sale.

Campaign 14:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the DRUG GM(46%), GROCERY(52%) departments. Rest all are from MEAT-PKGD, COSMETICS departments.
- These products in this campaign belong to the brand National(99.7%),Private(0.3%).
- Most of these products are household essential items like cleaning products, cosmetics, and toiletries. Usually these products generate a lot of revenue.

Campaign 15:

- Most of the products were from manufacturer 1225.

- This campaign promoted products from the GROCERY departments.
- These products in this campaign belong to the brand National.
- **This product is a cat food.**

Campaign 16:

- Most of the products were from various manufacturers with 33% manufacturer 373.
- This campaign promoted most of the products from the COSMETICS(75%), DRUG GM(22%), GROCERY(2%), RX(0.1) departments.
- These products in this campaign belong to the brand National.
- Most of these products are MAKEUP AND TREATMENT, FEMININE. **So these are aiming for female consumers.**

Campaign 17:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(90%), SEAFOOD_PKGD(7.5%), MEAT-PKGD(2.3%) departments.
- These products in this campaign belong to the brand National(98.5%), Private(1.5%).
- Most of these products are Frozen Foods.

Campaign 18:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the DRUG GM(32%), GROCERY(30%), and rest all from various departments.
- These products in this campaign belong to the brand National(86%), Private(14%).
- These products are random. So, these products are marketed by the stores.

Campaign 19:

- Most of the products were from various manufacturers.
- This campaign promoted the products only from the DRUG GM(100%) department.
- These products in this campaign belong to the brand National.
- These products are baby products. **The global baby product market size was valued at USD 10.91 billion in 2017 and is expected to register a CAGR of 5.5% over the forecast period on account of rising spending capability and changing lifestyles. Rapid urbanization and growing middle-class population across several developing regions are driving the market further. Changing lifestyle, particularly in developing countries, has encouraged the adoption of convenience-oriented routine, making these items desirable, which will fuel the industry growth over the forecast period.**
Moreover, rising consumer awareness regarding child health is boosting the sales of these products, thereby augmenting industry growth. Manufacturers, with the support of government and NGOs, have been promoting baby hygiene, which in turn will fuel the demand for various cosmetics and toiletries like skin, hair care, and other products. Baby food is the second-largest segment and is expected to gain significant share over the forecast period.

Campaign 20:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the DRUG GM(53%), GROCERY(47%).
- These products in this campaign belong to the brand National.

- Most of the products are household essentials. These are usually bought by almost every household.

Campaign 21:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(80%),DELI(7%),SEAFOOD_PKGD(5%),PASTRY(4.5%),PRODUCE(2%),MEAT_PKGD(0.4%) .
- These products in this campaign belong to the brands National(95%),Private(5%).
- There are some random products belonging to the food section. SUPER PREMIUM PINTS,AUTHENTIC THAI FOODS,SHREDDED CHEESE,REFRIGERATED PASTA,SEAFOOD-FRZ-MISC,SPECIALTY CRACKERS,OLIVE OIL etc

Campaign 22:

- Most of the products were from various manufacturers. And 1407 with (59%)
- This campaign promoted most of the products from the DRUG GM(70%), GROCERY(28%),MEAT_PKGD(2%),NUTRITION(0.1%) .
- These products in this campaign belong to the brands National(99%),Private(1%).
- There are some random products belonging to the food section. GREETING CARDS/WRAP/PARTY SPLY(70%),Rest all are food items like snacks, drinks etc

Campaign 23:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(76%), NUTRITION(19%) ,DRUG GM(4.4%).
- These products in this campaign belong to the brands National(83%),Private(17%).
- There are some random products belonging to the food section.

Campaign 24:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(99%),DRUG GM(0.26%),MISC.TRANS(0.2%),COUP/STR&MFG(0.1%).
- These products in this campaign belong to the brands National(81.5%),Private(18.5%).
- There are some random products belonging to the Pet Care section, like Dog food, Cat food. **This marketing campaign aimed consumers to buy more pet supplies, which is a growing industry.**

Campaign 25:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(93%),PRODUCE(4.5%),DRUG GM(2%),NUTRITION(0.5%),COSMETICS(0.1%).
- These products in this campaign belong to the brands National.
- There are some random products belonging to the food section. There are some foods like snacks, drinks etc.

Campaign 26:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(72%),DRUG GM(18.5%),PRODUCE(3.5%),MEAT_PKGD(2%),DELI(1.5%),

NUTRITION(1%),FLORAL(0.4%),SEAFOOD-PKGD(0.1%),
MEAT(0.05%),COUP/STR(0.02%).

- These products in this campaign belong to the brands National(78%),Private(22%).
- There are some random products belonging to the food section. There are some foods like ice cream,frozen pizzas, cold cereal etc.

Campaign 27:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(60.4%),DRUG GM(39.4%),COUP/STR(0.15%).
- These products in this campaign belong to the brands National(97%),Private(3%).
- There are some random products belonging to the food section. There are some foods like hair care products, dry rice, pasta sause, salad dressing etc.

Campaign 28:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY.
- These products in this campaign belong to the brands National(82%),Private(18%).
- There are some random products belonging to the frozen food section. There are some foods like ice cream, frozen pizza, cheese, refrigerated dough etc.

Campaign 29:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(94.3%),NUTRITION(4.3%),DRUG GM(1.3%).
- These products in this campaign belong to the brands National(82%).
- There are some random products belonging to the milk products section.

Campaign 30:

- Most of the products were from various manufacturers.
- This campaign promoted most of the products from the GROCERY(68.5%),DRUG GM(23%), and products from various departments.
- These products in this campaign belong to the brands National(81%),Private(19%).
- There are some random products belonging to the food items section.

