DoorDash: Who's Ordering?

Trend Analysis and Insights for Marketing Optimization

As a recent college graduate, I am well acquainted with the "DoorDash Dinner Routine" – There's nothing like the hard work of my scrolling thumb to put dinner on the coffee table for me and my roommates. But as I look forward to my thrilling (and brief) interaction with the delivery driver, I think "where else is this guy going? Who else, and what else has he seen tonight?" It can't just be me and those across campus. Are my peers all Dashing their dinners? Am I in the majority or minority here? With so many questions, this report satisfies my curiosities as well as identifies opportunities to optimize the future marketing campaigns of DoorDash.

This project was conducted exclusively using Microsoft Excel and involved an extensive dataset comprising over 2,000 rows and more than 30 columns. I focused on exploring the demographics of age groups, educational levels, marital statuses, and number of children in relation to sales totals, investigating the correlation between salary and total spending, and evaluating the effectiveness of various advertising campaigns. The versatility and depth of the dataset allowed me to delve into these areas and uncover meaningful findings.

Priority Objectives:

1. Identify trends, correlations, and opportunities from the dataset.
2. Communicate valuable information to optimize marketing efforts.

Key Insights:

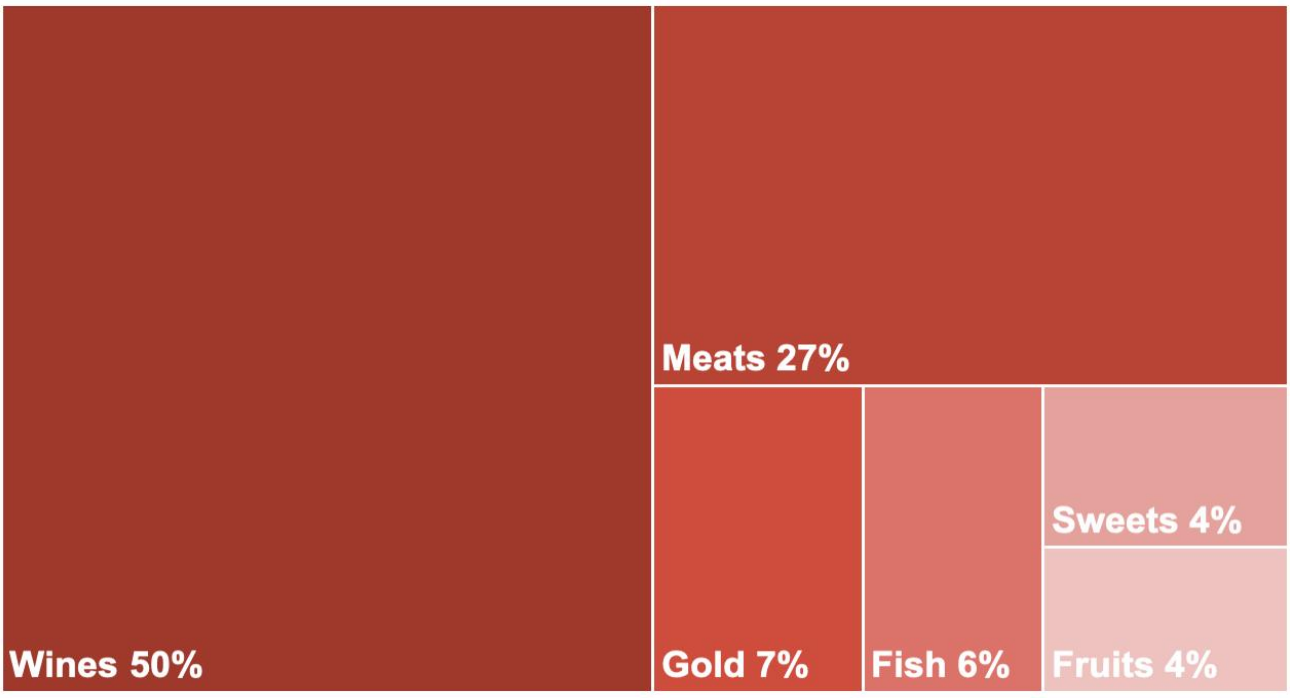
- Wine purchases constitute 50% of the total amount spent.
- 2/3 of the Demographic are parents, but do not out spend the 1/3 of not parents.
- In-Store purchases exhibit the highest level of popularity across all age brackets.
- There is a positive correlation between income and total spending.
- Campaign 6 yielded the highest number of new enrollments, while Campaign 2 had the lowest.
- January and March observed the highest influx of new customers, whereas December recorded the lowest.
- Web visits and web purchases exhibit a negative correlation. However, the conversion rate stands at approximately 4.5%, slightly above average.

Potential Opportunities:

- **Promote wine sales** – expand selection, run wine focused campaigns, collaborate with wine influencers or wine enthusiast.
- **Target marketing toward parents.** Parents make up rough 2/3 of DoorDash's demographic.
- **Improve web sales** – Web sales have limitless potential with lower costs than brick-and-mortar locations. Optimize user experience and use web campaigns to drive online sales.
- **Use Seasonal sale campaigns** to increase sales during slower months.
- Identify successful components of **Campaign 6** and failures of Campaign 2 to create better future campaigns.

What are customers buying?

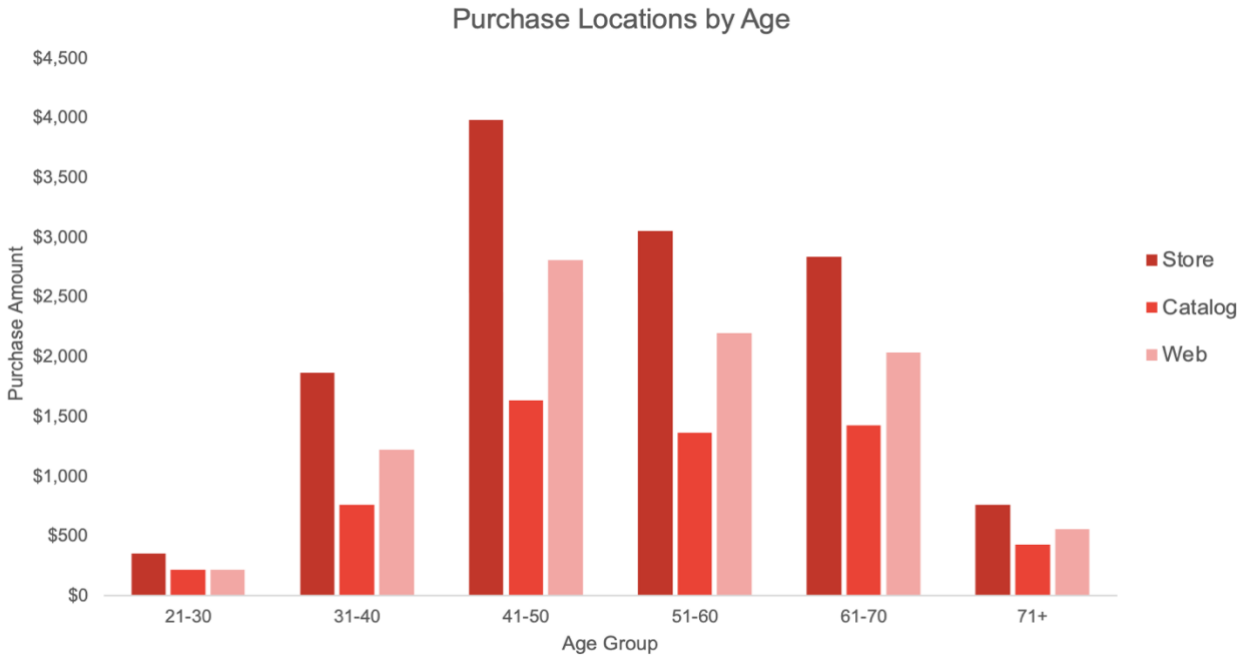
My initial inquiry revolved around determining the proportion of sales contributed by each product category. **Wine accounts for 50% of sales by product quantity.** The second most popular category is meats at 27%. The remaining product categories make up the bottom 23% of sales categories.



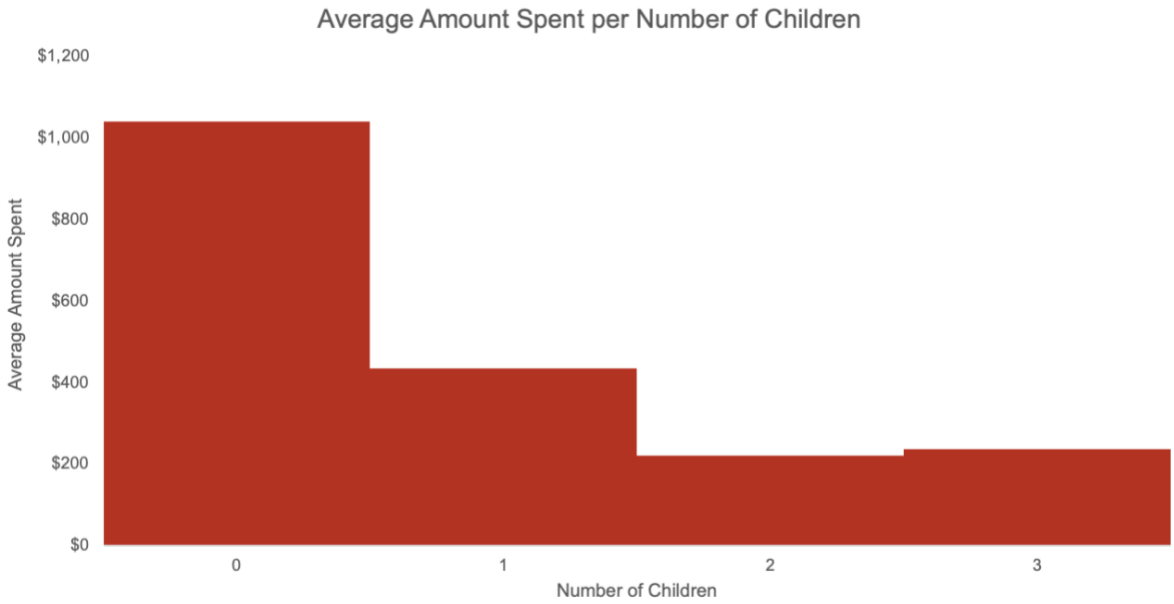
Where and by who are these sales being made?

Customer spending is dependent on income. Customers in this data set have an average spend to income rate of .906% on DoorDash; in other words, **customers spend almost one dollar for every hundred that they make on food delivery.** The scatter plot below visualizes these spending habits. With an R-squared value of .6774, it is indicated that 67.74% of the variance in the total amount spent can be explained by changes in income. This R-squared value determines there is a strong correlation between income and total amount spent.

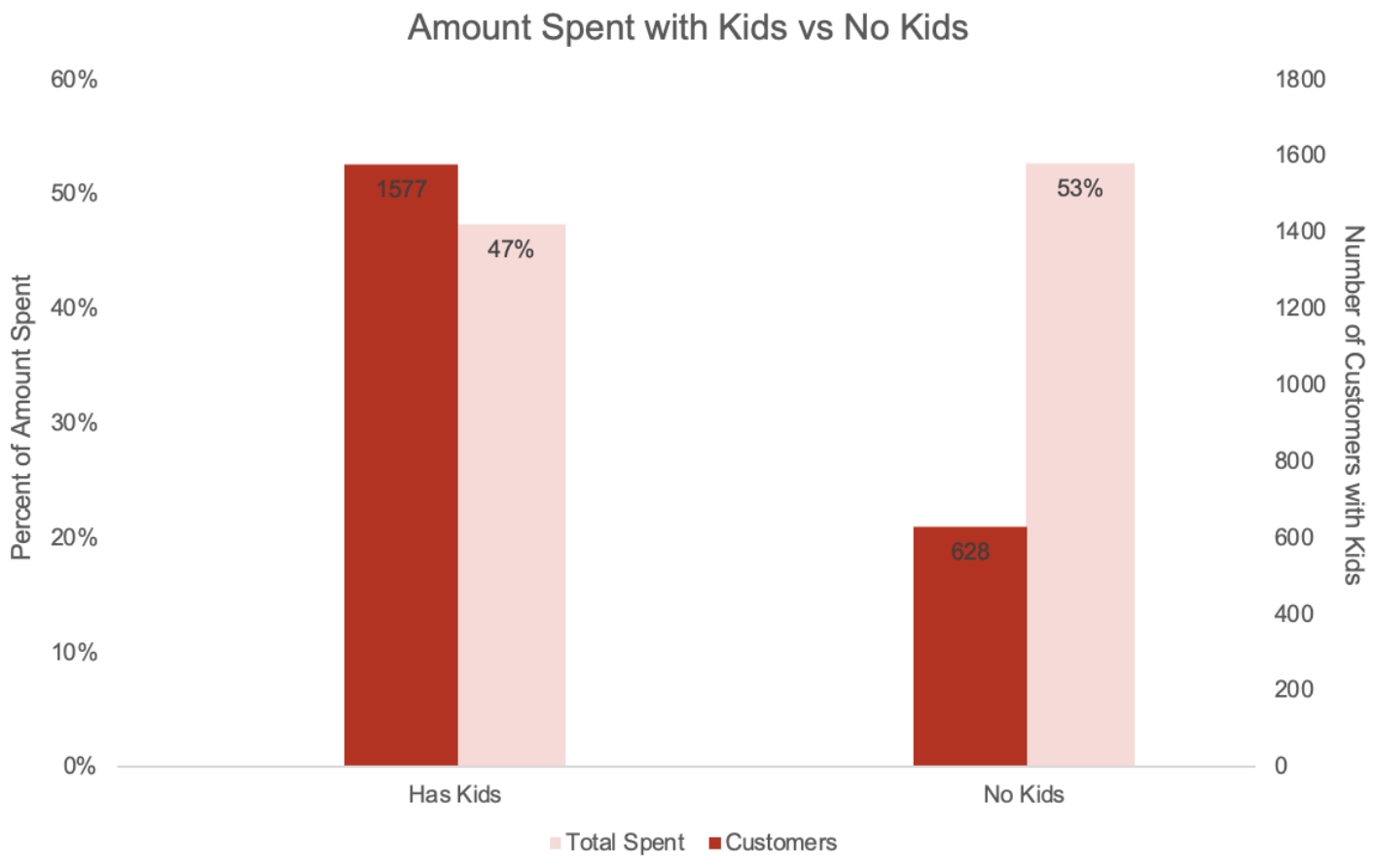
DoorDash has three streams of sales collected in this data: In-store, Catalog, and web purchases. When separated into age categories, **in-store purchases are most popular** among all age groups. This is an interesting insight as one would predict the most popular would-be web purchases, given the nature of delivery services.



Do Children effect the spending of our customers? Yes! The average amount spent by customers drastically decreases for customers with one child and decreases even more with customers with two or three children.

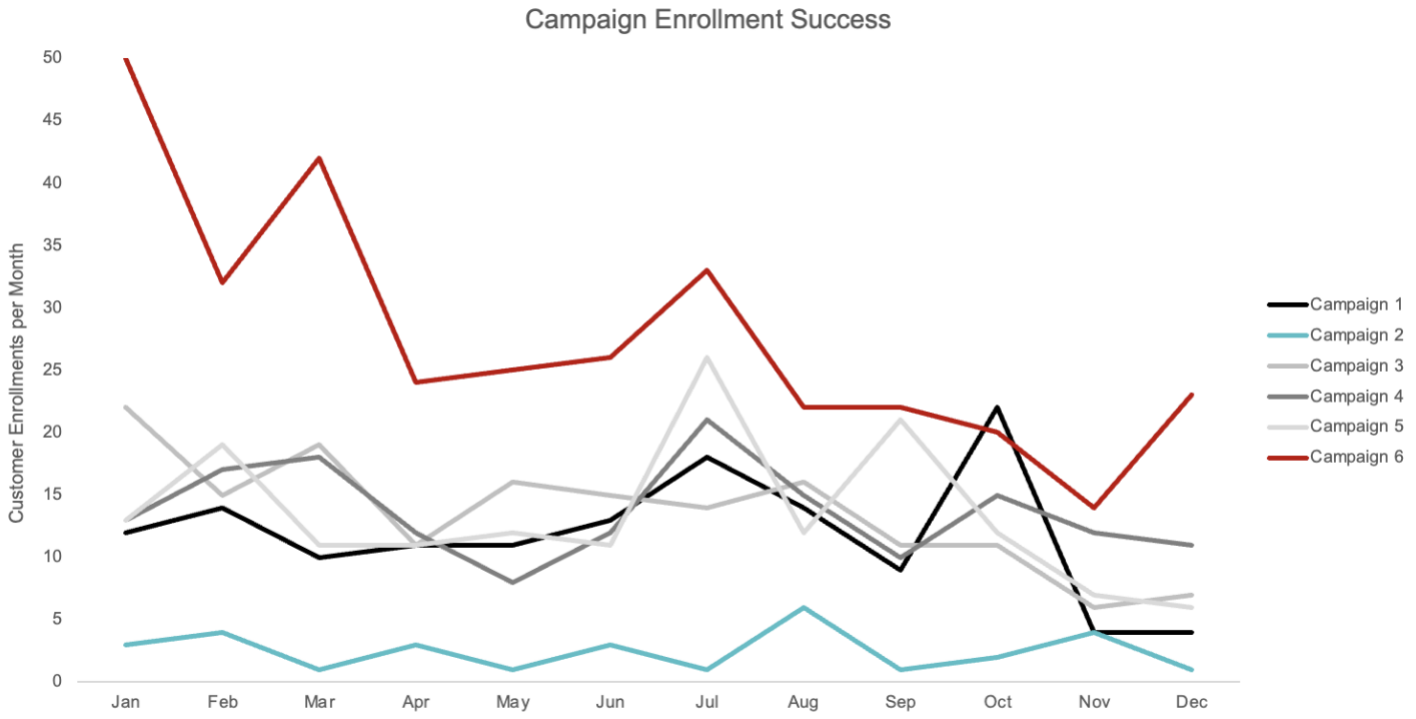


DoorDash has more than **twice as many customers with kids than without kids.** As we saw above the, the spending per customer significantly decreases when kids are introduced. This results in the total spending of both customer groups to remain similar even though each customer in the no kids' category spends twice as much as those with kids. **This could be a great opportunity for DoorDash to market toward parents**.

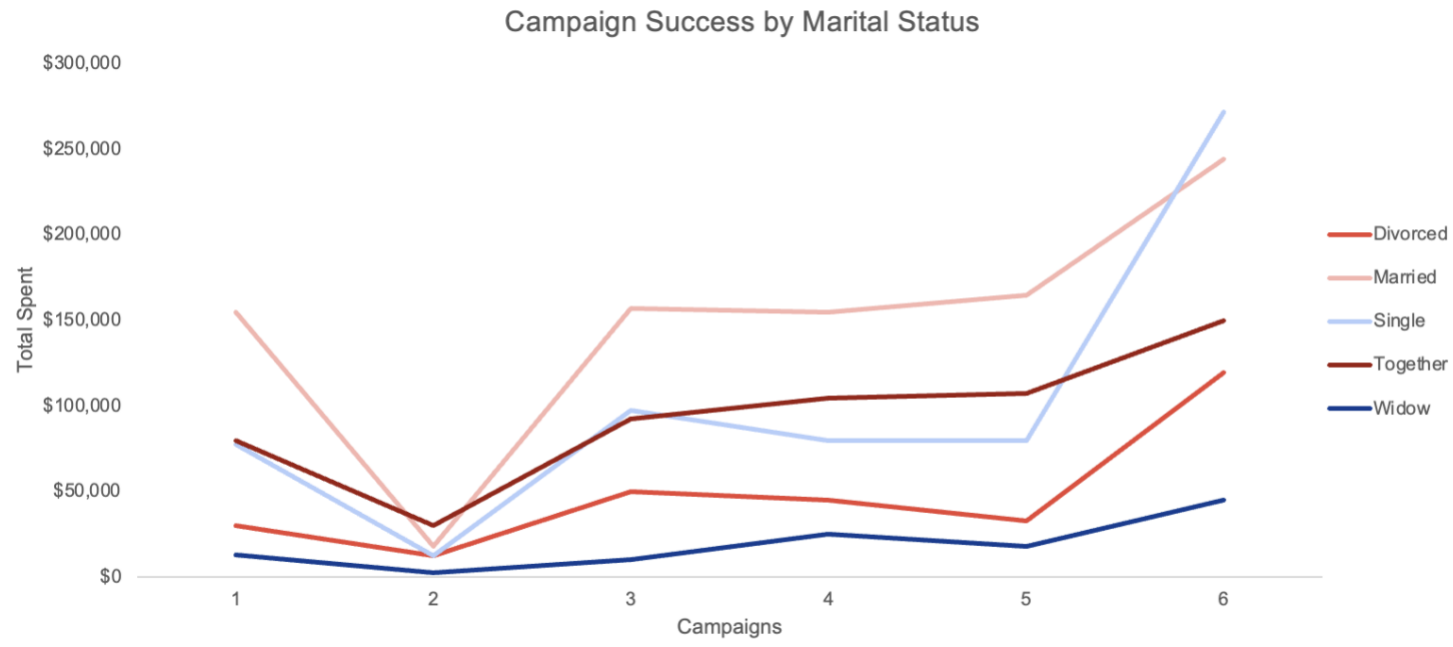


How well did previous sales campaigns perform?

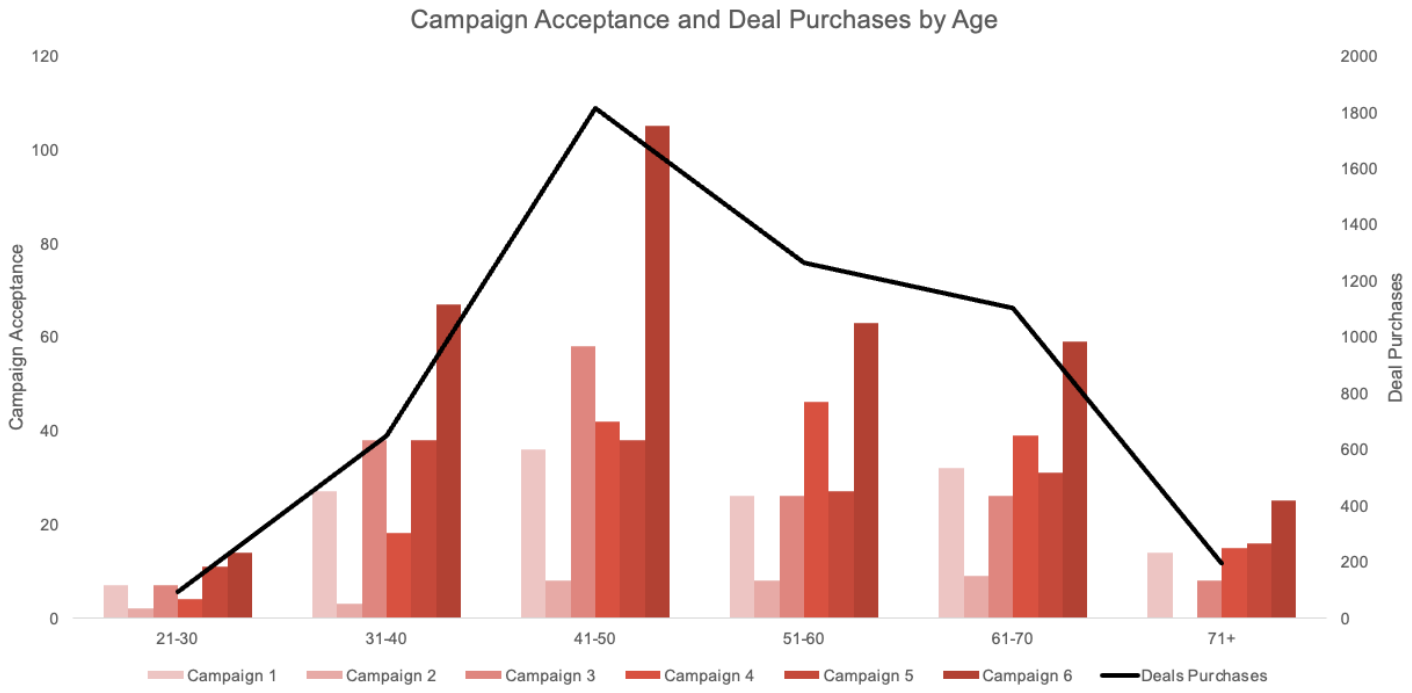
Each Campaign's enrollment numbers per month are in the graph below. **Campaign 6 was the most successful** in promoting new customer signups. Campaign 2 was the least successful at capturing new customers. An interesting point to note is that most of the campaigns had an uptick of new customers in July.



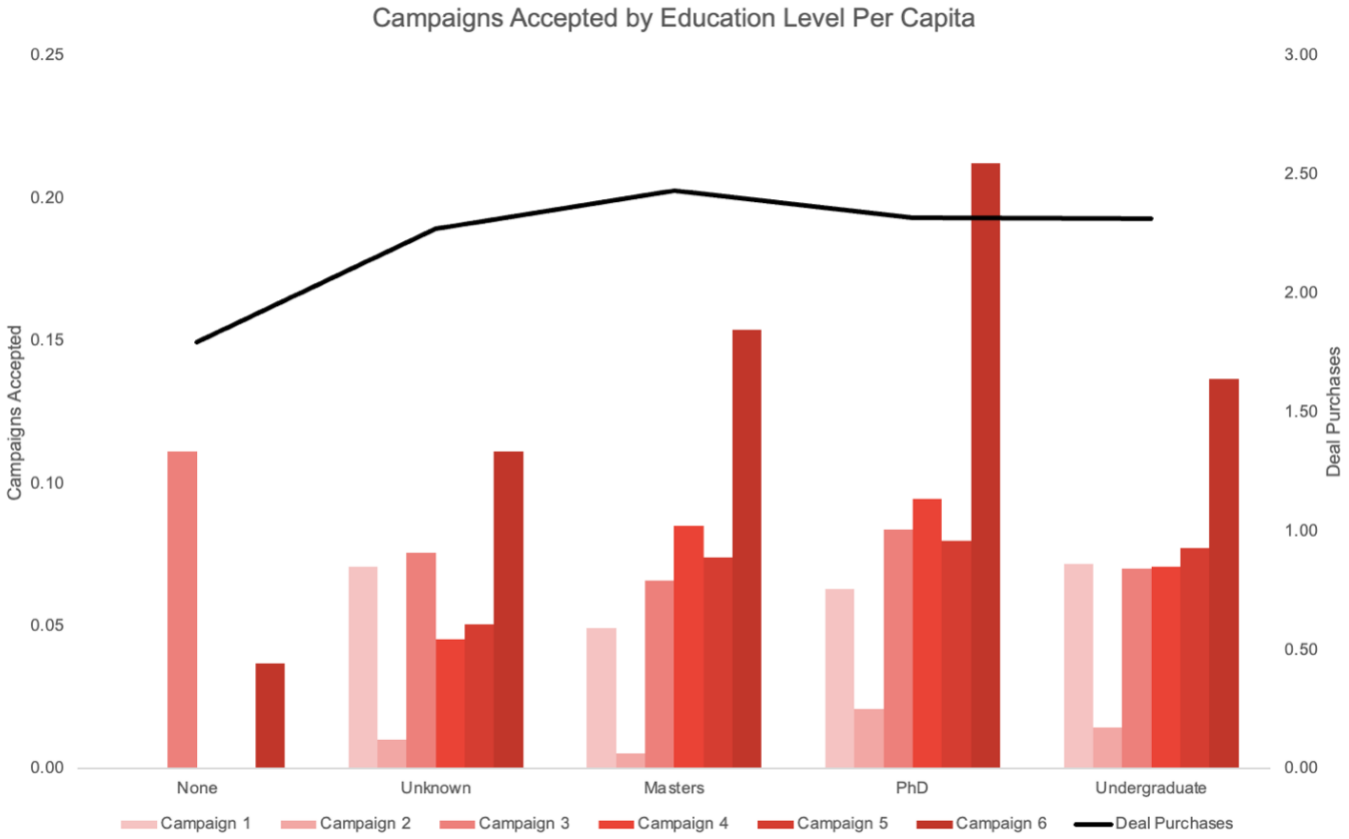
These campaigns vary in success rates per customers' marital statuses. **Married customers spent the most per each campaign**, except for campaign 2. Campaign 6 had the most success across all marital statuses, however, saw the most success with Married and single customers. Campaigns had the least success with widowed customers.



Are Campaigns Promoting Deal Purchases? There is a positive correlation between acceptance of campaigns and purchases using deals. The age group that **accepted the most campaigns is 41–50-year old's**; however, this age group makes up most of the dataset at 32.97%.



Unlike age, **education level had little effect on the use of deals when purchasing**. The demographic with the most purchases per capita using deals are those who hold master's degrees.



Conclusions

This dataset reveals that 41-50 year olds without children do most of the ordering. The customers have a strong preference for wine with a side of meats. Past campaigns have promoted the use of purchases using deals. Customers with children are likely to spend half or less than half as much as those without children. Customers prefer to purchase in-store verses from a catalog or on the web. Marital status has influence on spending as well as campaign success.

About this data

Original dataset: *https://github.com/nailson/ifood-data-business-analyst-test/blob/master/ifood_df.csv*

**Note this project is actually modified from an iFood job interview case study given by the Brazilian equivalent of DoorDash, iFood. The data is 98% real, but slightly modified for educational purposes.*

Data Dictionary:

- Income: Customer's Yearly Income
- MntTotal: Total Amount Spent at Store by Customer
- Kidhome: Number of Young Kids in Home
- Teenhome: Number of Teenagers in Home
- Recency: Number of Days Since Last Purchase
- MntWines: Amount Spent on Purchasing Wine
- MntFruits: Amount Spent on Purchasing Fruit
- MntMeatProducts: Amount Spent on Purchasing Meat
- MntFishProducts: Amount Spent on Purchasing Fish
- MntSweetProducts: Amount Spent on Purchasing Sweet
- MntGoldProds: Amount Spent on Purchasing Gold
- NumDealsPuchased: Number of Purchases With Discount
- NumWebPurchases: Number of Purchases Made Through Website
- NumCatalogPurchases: Number of Purchases Made Through Catalogue
- NumStorePurchases: Number of Purchases Made Through Physical Store
- NumWebVisitsMonth: Number of Visits To Website in Last Month
- AcceptedCmp1: Did The Customer Accept Offer in 1st Campaign
- AccaptedCmp2: Did The Customer Accept Offer in 2nd Campaign
- AcceptedCmp3: Did The Customer Accept Offer in 3rd Campaign
- AcceptedCmp4: Did The Customer Accept Offer in 4th Campaign
- AcceptedCmp5: Did The Customer Accept Offer in 5th Campaign
- AcceptedCmp6: Did The Customer Accept Offer in 6th Campaign
- Complain: Has The Customer Complained In Last 2 Years
- Age: Age of Cusotmer
- Customer_Days: How Many Days Has Customer Been a Customer
- marital_Divorced: Is Customer Divorced?
- marital_married: Is Customer Married?
- marital_Single: Is Customer Single?
- Marital_Together: Is Customer Living With Someone?
- Marital_Widow: Is Customer Widowed?
- education_Basic: Is the customer's highest education level high school?
- education_Graduation: Is the customer's highest education level undergraduate?
- education_Master: Is the customer's highest education level Master's?
- education_PHD: Is the customer's highest education level a PhD?
- MntRegularProds: Total Amount Spent on regular products
- DateJoined: The date the customer first became a customer
- education_2n Cycle: Unknown column