Promotion Campaign Recommendation

Questions

When would you recommend each campaign be launched? (Be as specific as you think is reasonable given the data available.)

What demographic groups, geographical regions, etc would you recommend targeting in each campaign?

What products or product types would you recommend that the company highlight in each campaign?

1. Introduction

In this report, we are going to examine the trends and dynamics of new and repeat user for the e-commerce service from different demographic and geographic segments. After identifying low user acquisition and retention month and segments, recommendations are given to stress each problem.

Section 2 identifies the problems; Section 3 and 4 are analysis on user segment performance of US market; Section 5 is analysis on UK market; Section 6 offers recommendations on campaign strategies.

Important graphs that might offer insights and help the decision making process are included in the report. For other distribution checks, please refer to Looker for detailed graphs. The index in square brackets are the same as the index of graphs in Looker folder.

2. Problems

Number of repeat customers increases steadily across quarters. Every year shows the same pattern, especially for the past 3 years (2017-current) [1]. Summer shows slower user increase while there appears to be a boost in winter. Zooming into months, February sees a dip in every year. There is either no increase or slight decrease in repeat users in April and June. [2]

Different from repeat users, we can observe great increase of new users along the quarters of a year, especially in the fall/winter season [3]. Hypothesis is people buy more products from the platform for Christmas. Summer months attract less new users than their power to retain repeat users. [4]

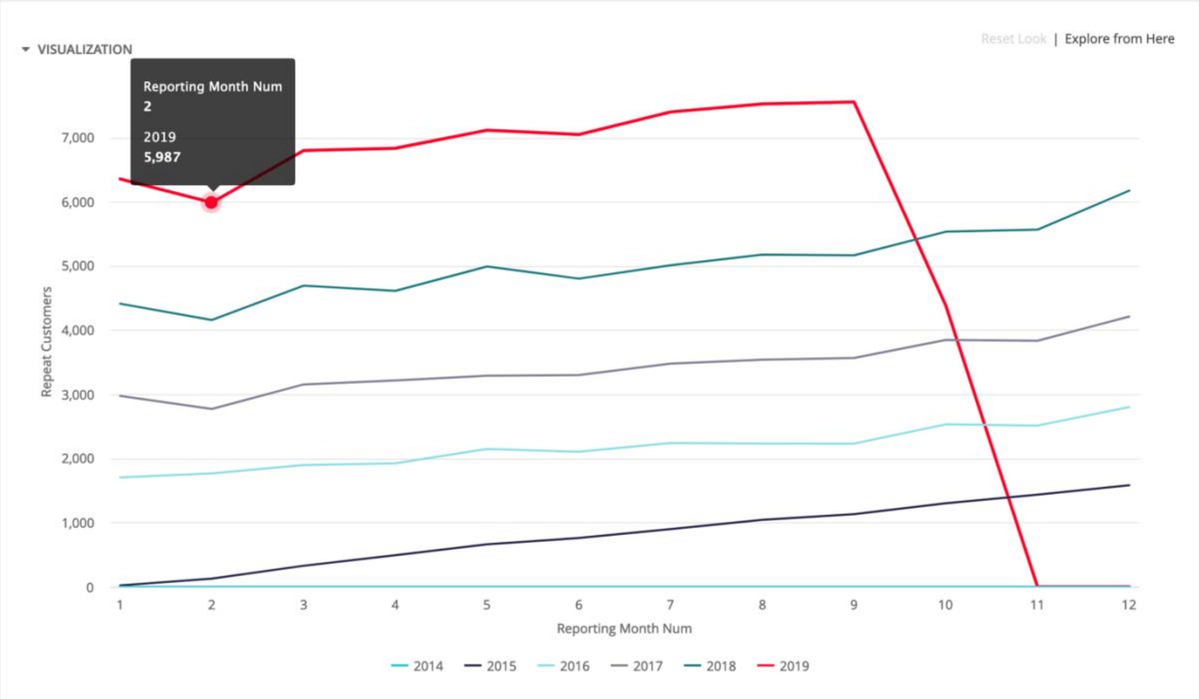

Figure 1: Number of Repeat Users VS Months for Each Year

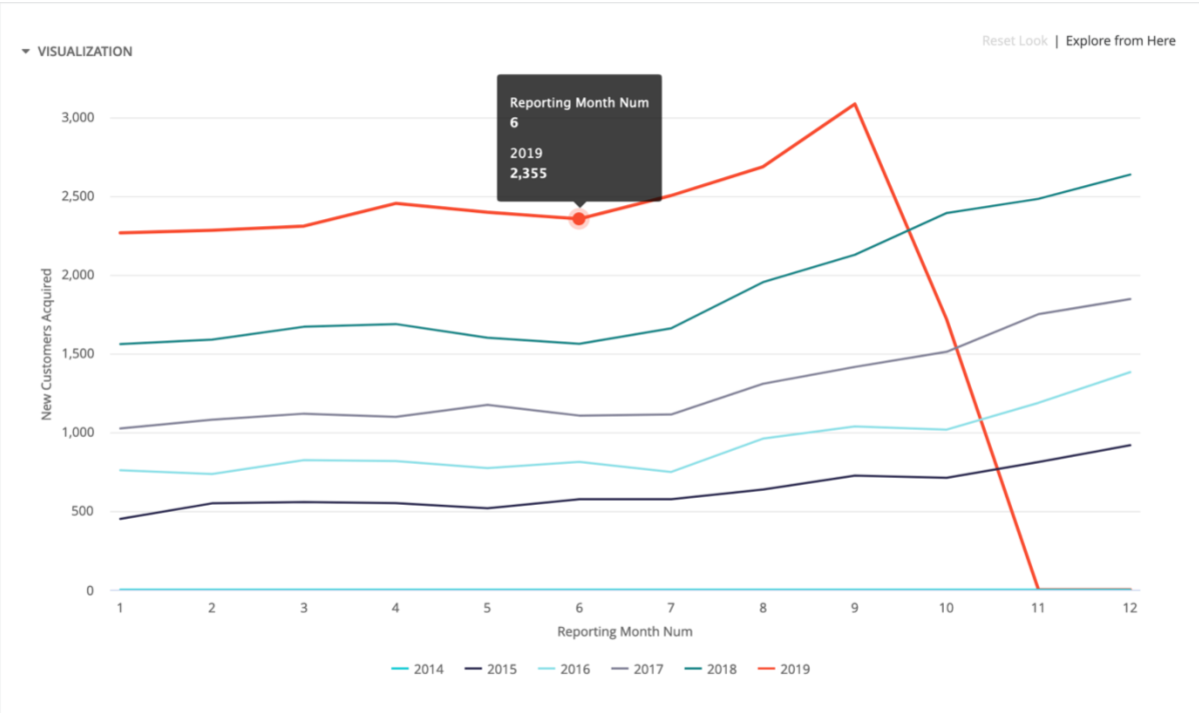

Figure 2: Number of New Users VS Months for Each Year

In summary, there are 2 problems in user acquisition/retention. First, user retention is low in February; second, user acquisition is low in summer months. The focus of the analysis will be on observing user distributions in summer and winter, especially for months such as February, June-July to find out the reason behind different trends in user growth.

3. The US Market

The common characteristics are summarized for the US market for the past 3 years (2017-current). Geographical location, age, gender distributions are similar between new and repeat user groups. Relative proportion of new and repeat users is balanced between genders, age tiers and states (~55% new users). Additionally, the product categories and brands that appeal to new users also appeal to repeat users. [5-11]

3.1 Geographic

For the past 3 years, over 90% users (new and repeat) come from US. It is also the case for all historical records. The service is especially popular in states such as California, Texas, New York, Illinois, Florida, which all seem to be big tech cities. This could imply that there is possibility that the e-commerce service is more accessible where technology is better developed, at least for the US market.

Although these states are great markets, the percentage of increase of repeating customers decreased from 2018 to 2019 as shown in the line graph. Comparably, in states like Missouri or Pennsylvania, it displays a larger increase.

Generally, the graph also shows significant signal for Arizona, Michigan, Ohio. [5]

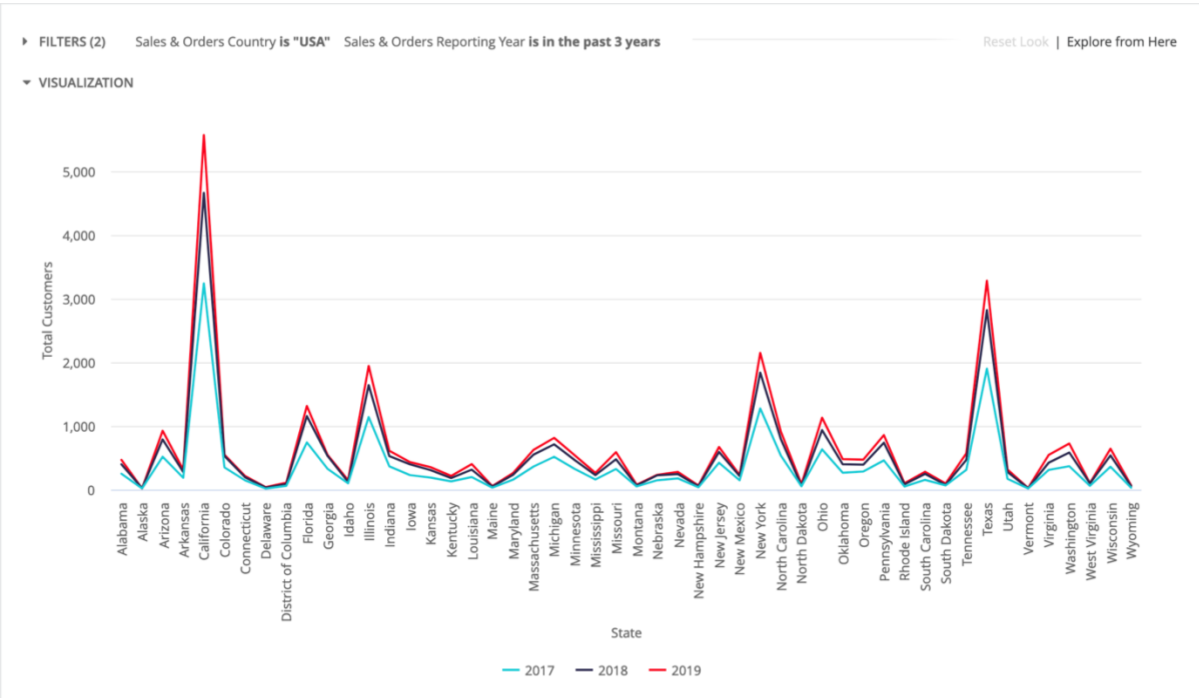

Figure 3: Number of Total Users VS US States for Each Year

3.2 Age

The stacked bar plot shows that the major user group has the age between 10-19. In most of the top states, this age group contributes to 30-40% of total repeat users. The service is also quite popular with users from 30-39 and 40-49 age groups, each composing approximately 20% of total users. [6]

3.3 Gender

Gender between repeat users is balanced, with percentage of females (~55%) slightly higher than that of males with the exception of Rhode Island, Delaware. [7]

Hoodies, coats, pants, shorts attract more male users, while dresses and blazers are popular with females as these are gender-special categories. But it would be safe to run long-term continuous campaign on accessories, jeans and tops/tees as these are universally favourited. Most liked brands include Levi's, Ray-Ban, Columbia, Champion, Dockers, Carhartt for both male and female users; Hanes, Russell Athletic, Duofold for males; and Allegra K, TrendsBlue, Patty for females. [12, 13]

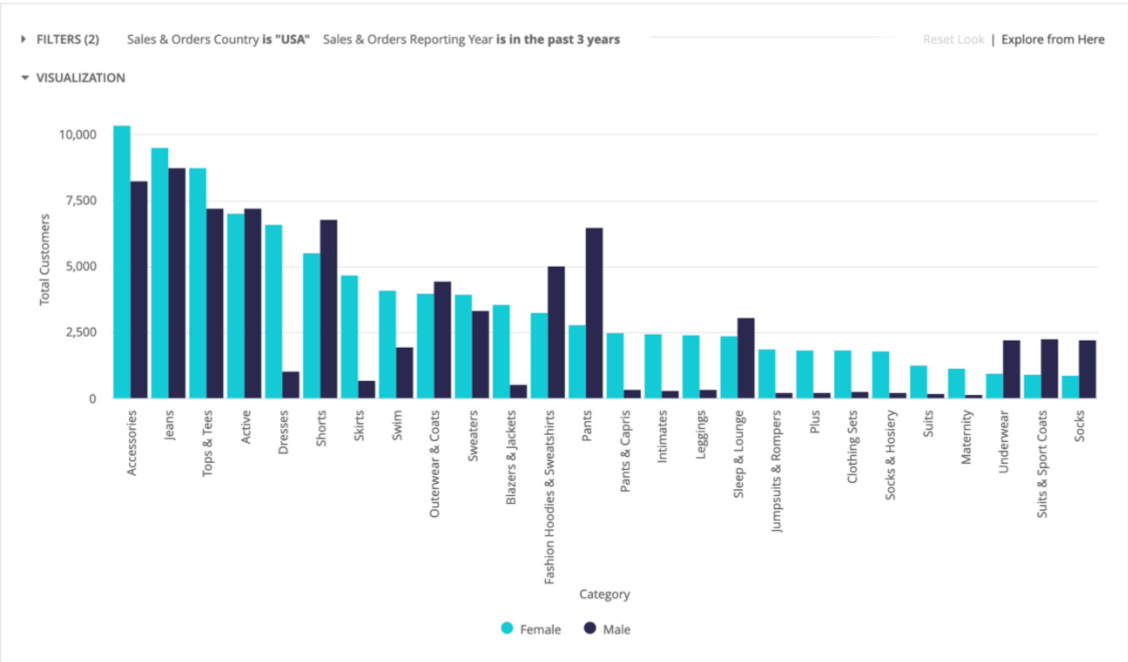

Figure 4: Most Favourited Categories by Both Genders

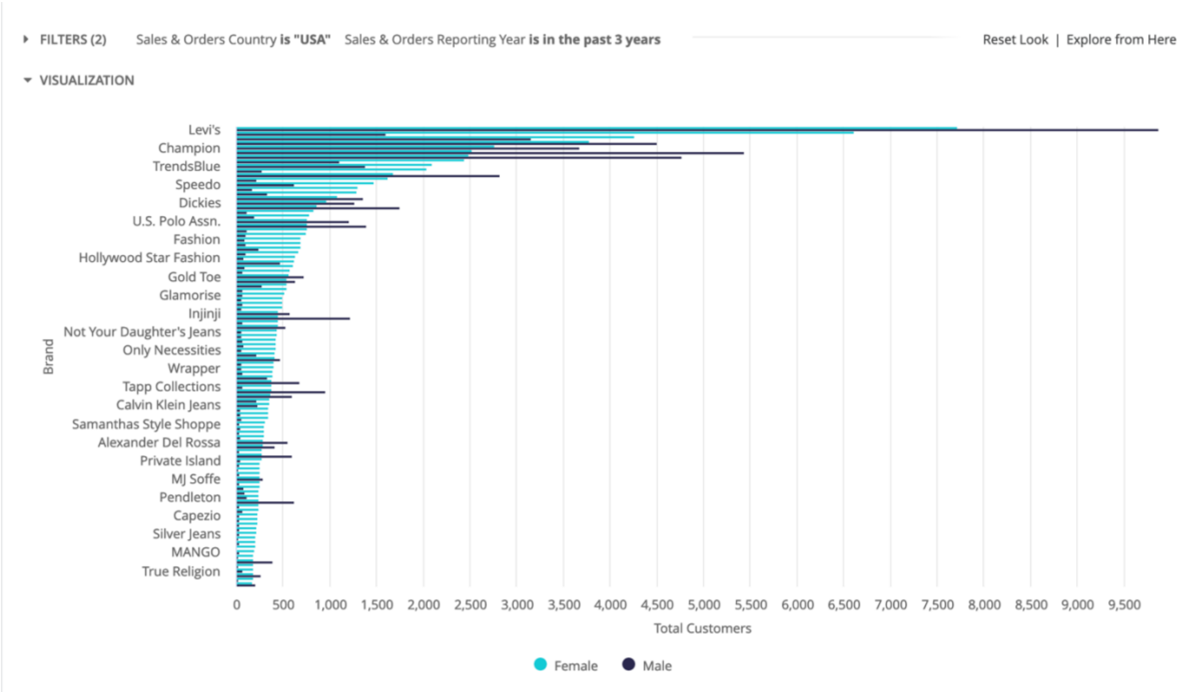

Figure 5: Top Liked Brands

42% repeat female users buy from men's department. While this phenomenon is intuitive to explain because females in a household often take charge in clothing, interestingly, 22% repeat male users also buy from women's department. One hypothesis is that male users buy present for their partners. We can validate this hypothesis and run a campaign targeted at this user group during February when Valentine's Day is approaching. This can also compensate the low number of repeat users in February which we observed in the first graph. Some popular gift brands are Allegra K, Lee, FineBrandShop. [14, 15]

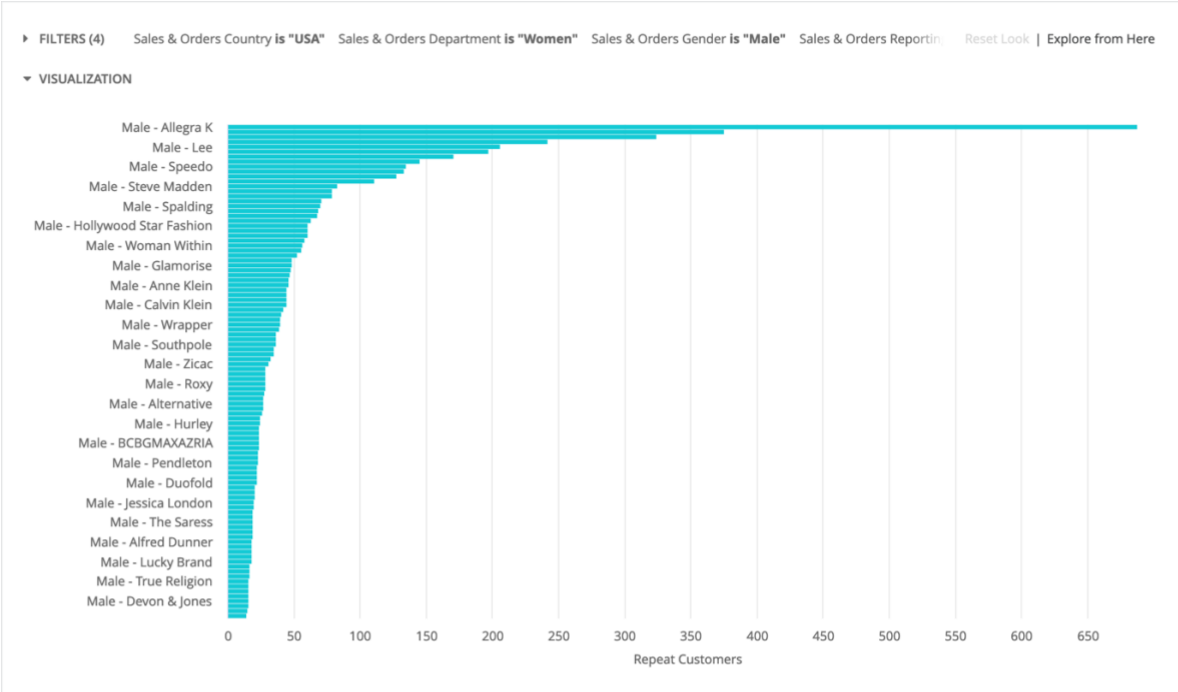

Figure 6: Top Gift Brands Bought by US Male

4. A Closer Look at Summer

By comparing new users and repeat users, it is possible to figure out why user acquisition is low in summer.

Zooming into summer months, the top product categories all see different degrees of decreasing in new customer acquisition, and most of the decrease happens in June (accessories, active; dresses, hoodies, blazers) and July (jeans, tops and tees, shorts; outwear, sleep and lounge). [16]

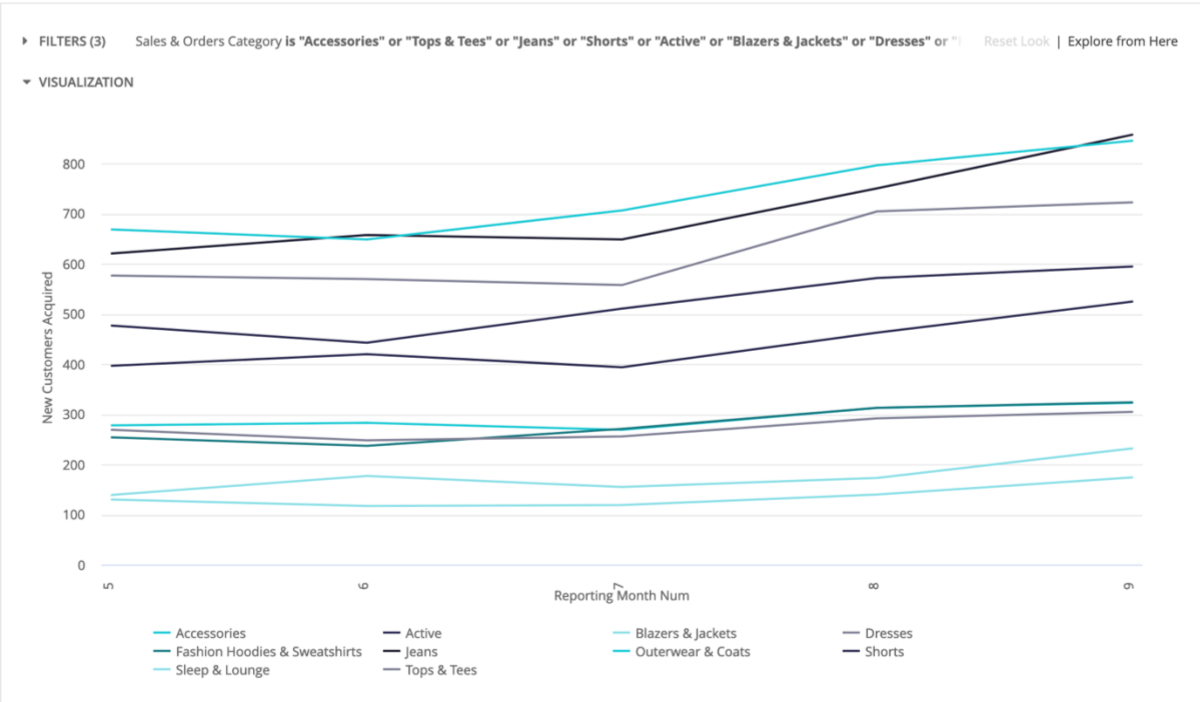

Figure 7: User Trends in Summer for Top Categories

Both male and female new users are fewer in summer month. Major age groups that buy less in summer month are 10-19, 40-49, 30-39, while other age groups' buying pattern is steady between May and August. New campaign's focus could be put on several brands that display the "V" pattern between May and September (Allegra K, Ray-Ban, Champion) on the afore mentioned categories. [17, 18]

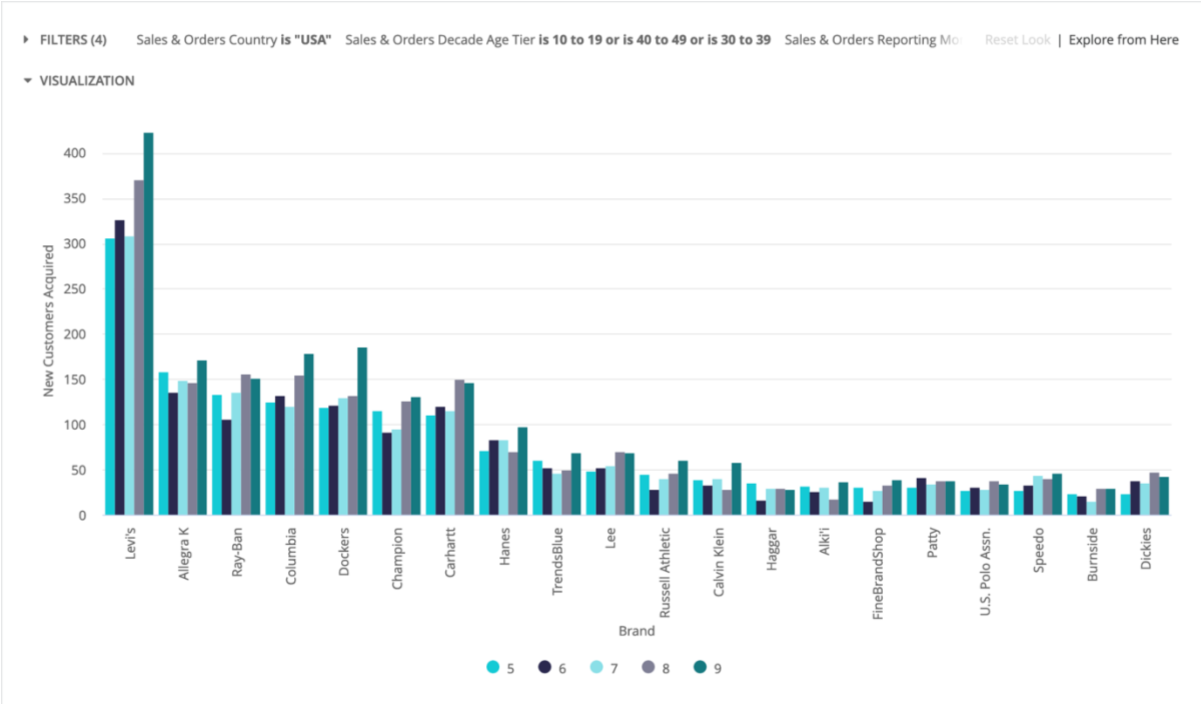

Figure 8: Brand Performance for Summer Months

5. The UK Market

Except from different states, user distribution in the UK is quite similar to that of the US. The major age groups are the same (10-19, 30-39, 40-49), while female users compose more of the total users than the US (female ~60%) in each state. Although UK users contribute a lot less in absolute amount, there are more states in the UK that have strong signals, including Birmingham, Leicester, Croydon, Glasgow, Hampshire, Sheffield, Staffordshire.

Significant user increase can be observed in huge states like Birmingham; small to medium states including Barnsley, Bath and North East Somerset, Blackpool, Bingley. Aberdeenshire, Bridgend are losing users. [19, 20]

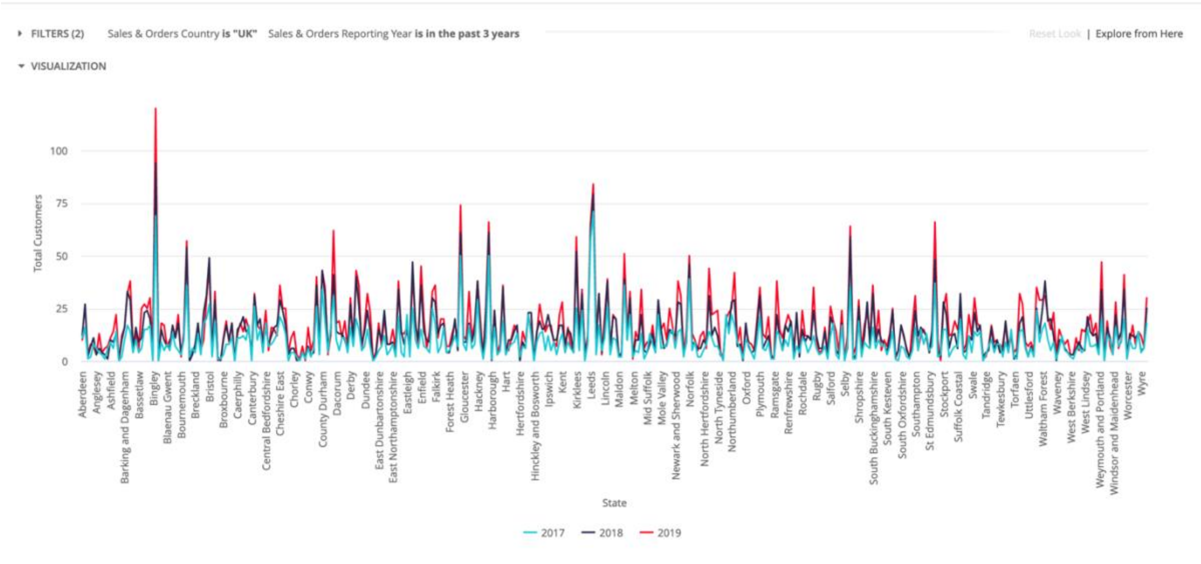

Figure 9: Number of Total Users VS UK States for Each Year

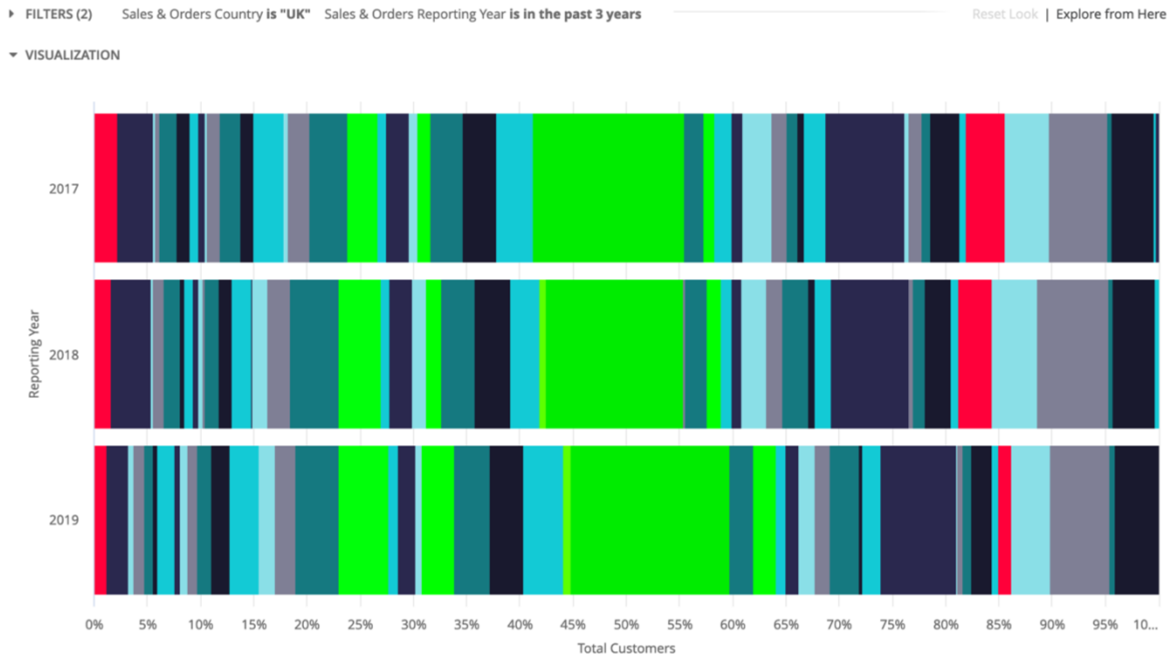

Figure 10: Change of Proportion of Users from Each UK State

Number of new customers dips in February-March, June; number of repeat customers dips in February, April; both boost in winter months. All trends are similar to that of the US.

Thus, the solution would be similar: run a Valentine's Day campaign in February and try to boost the sales for top categories. Recommended brands include Allegra K, Patty, Alki'i. [21]

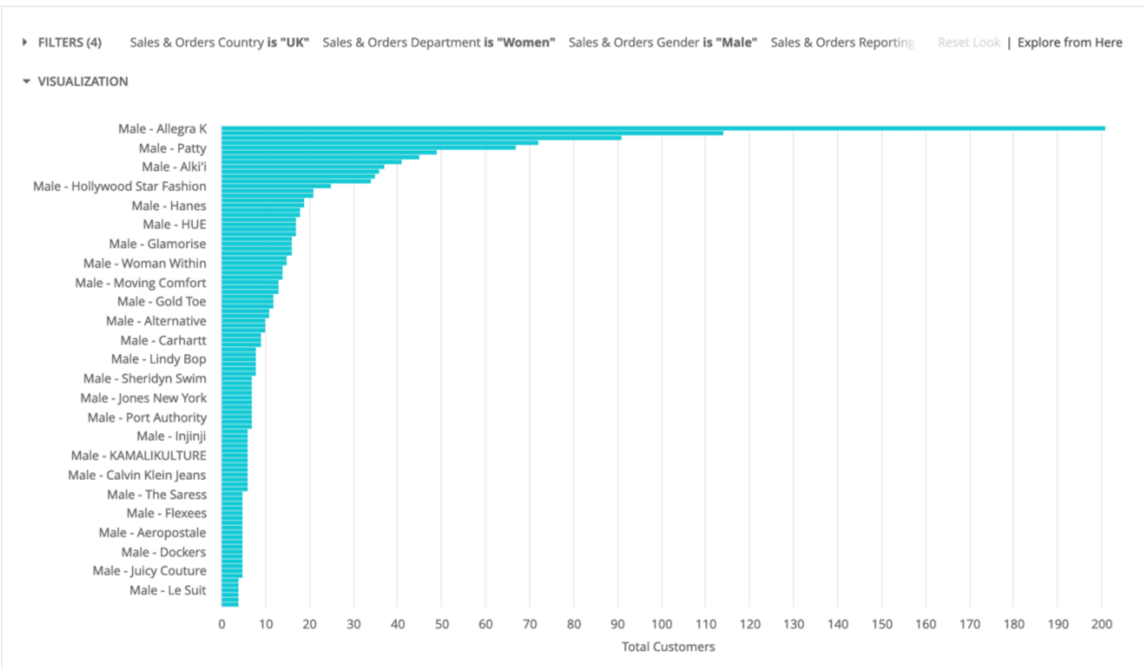

Figure 11 Top Gift Brands Bought by UK Male

6. Conclusion

We recommend to launch a campaign for repeat users in February prior Valentine's Day, targeting on male users who buy gift for their partners and focusing on popular gift brands such as Allegra K, Lee, FineBrandShop.

For new users, the campaign should focus on summer months (June and July) and on "fall preparation" categories such as outwear, blazers, hoodies, sleep and lounge. We might decrease the price to attract new users to prepare in advance for off-season clothing. Promising brands are Allegra K, Ray-Ban, Champion for US and Allegra K, Patty, Alki'i for UK.

We can also run a more general long-term campaign on the most popular product categories (accessories, jeans, active, tops and tees), brands (Levi's, Ray-Ban, Columbia, Champion, Dockers, Carhartt; Hanes, Russell Athletic, Duofold for males; Allegra K, TrendsBlue, Patty), states (California, Texas, New York, Illinois, Florida; Birmingham, Leicester, Croydon, Glasgow, Hampshire, Sheffield, Staffordshire) and major user groups (10-19, 30-39, 40-49) to keep the momentum of user growth.

To expand the business, we want to target less exploited markets with high potential, such as Missouri, Pennsylvania, Arizona, Michigan, Ohio (US); Barnsley, Bath and North East Somerset, Blackpool, Bingley, Aberdeenshire, Bridgend (UK) and 20-29 years old users in long terms.