Small Businesses Serve Catering Needs

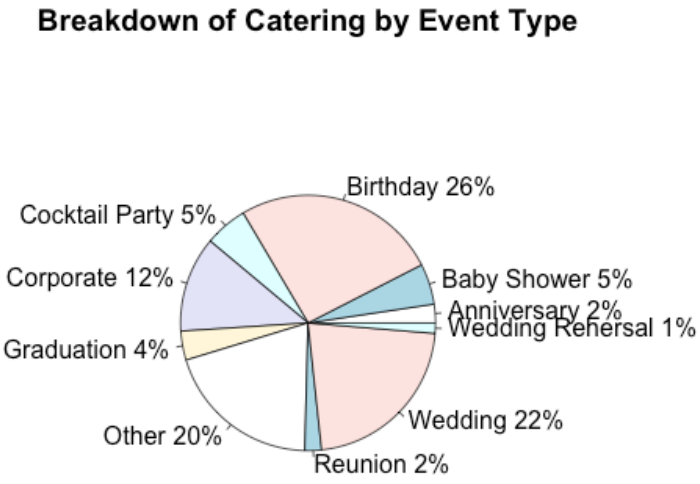
February 19, 2017 by Shreya Ganeshan

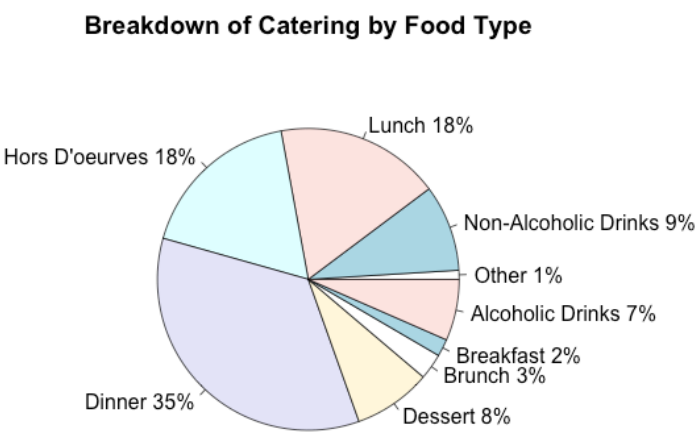
Customers from 10 regions on the Westeros continent rely on Thumbtack to find the small business caterer to serve their event needs.

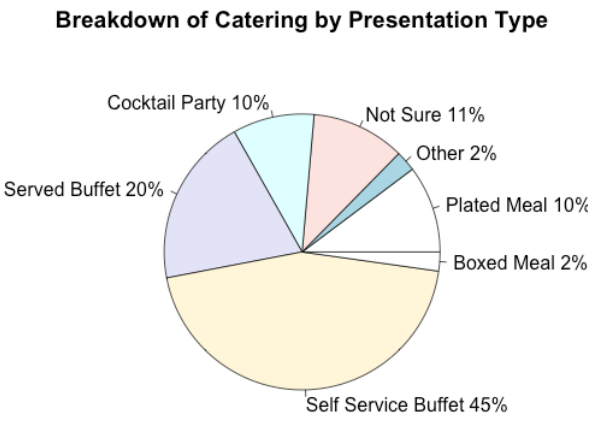
Customer Needs

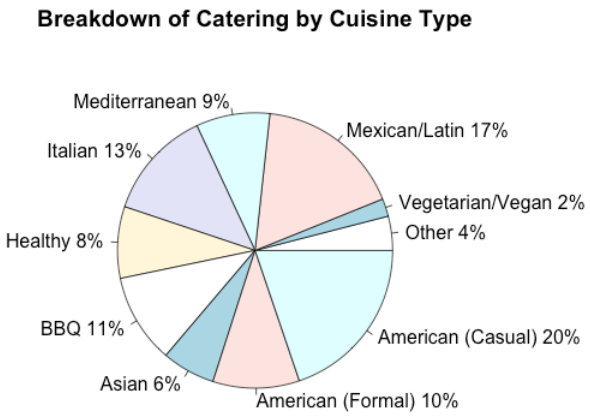
In 2015, we received requests from 3,935 customers and 8,502 orders total. Individual customers placed 2 orders, on average. Overall, most orders came from the Dorne region (1,904), followed by the Beyond the Wall (1,119) and the Westerlands (1,052) regions.

Most customers requested catering services for evening birthday (26%) and wedding events (22%). Overall, customers requested self-service-buffets (45%), American casual food (20%), and dinners (35%).







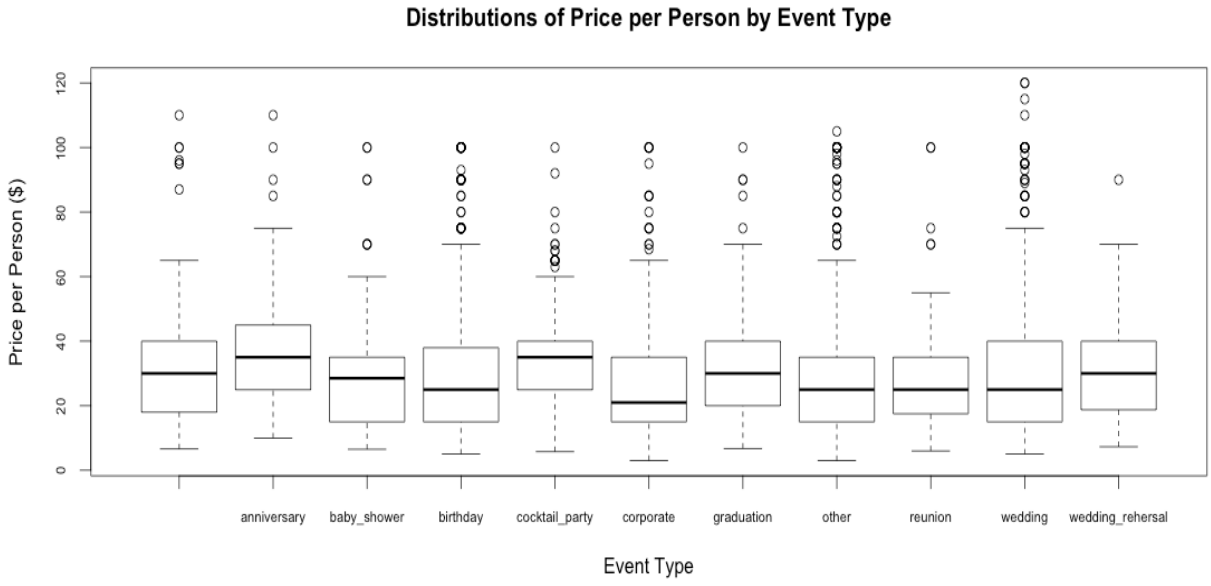


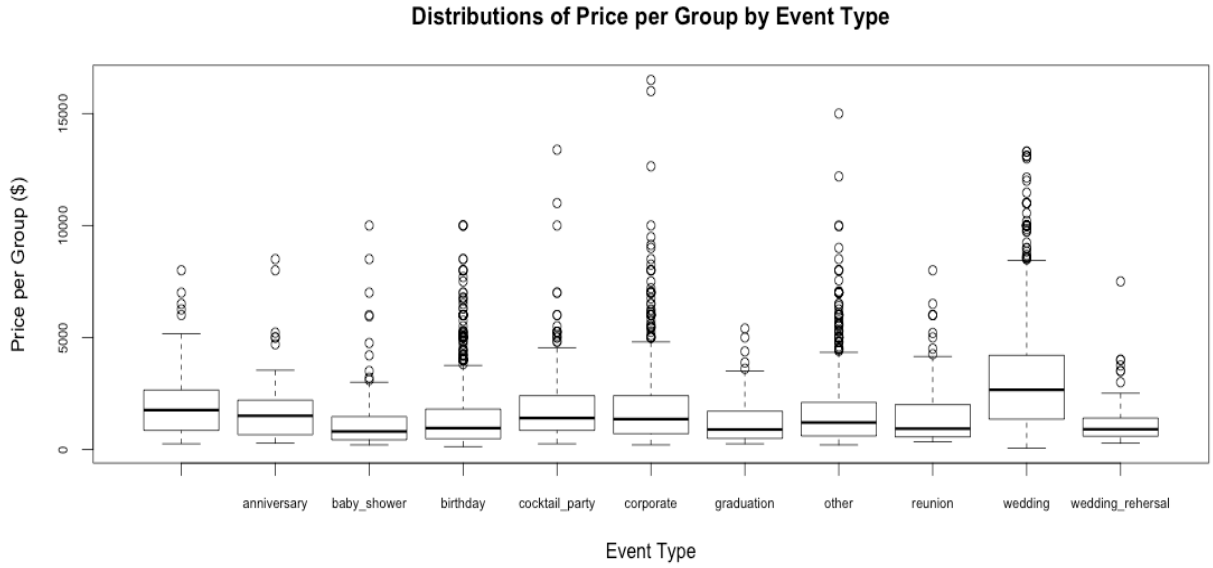
On average, customers placed orders almost 3 months (81.8 days) in advance of their events, most of which took place on a Sunday in May. From our records, our online form cataloged the most requests on Tuesdays. Most orders were placed in the month of October.

Using this form, customers specified their preferences for fixed payments: “per group” or “per person.” The typical or median quote price per group was $1,300. The typical or median quote price per person was $25. The expected event attendance, among the majority of customers who chose to pay a fixed rate for an entire group or per person, was 20 to 30 people.

Preferences Impact Price

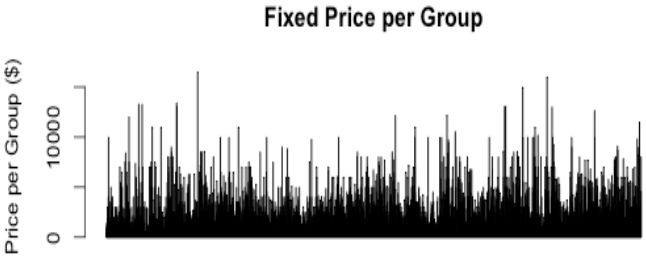
Between the two most popular event types (birthdays and weddings) weddings often displayed more variability in price – regardless of whether customers paid per person or per group.

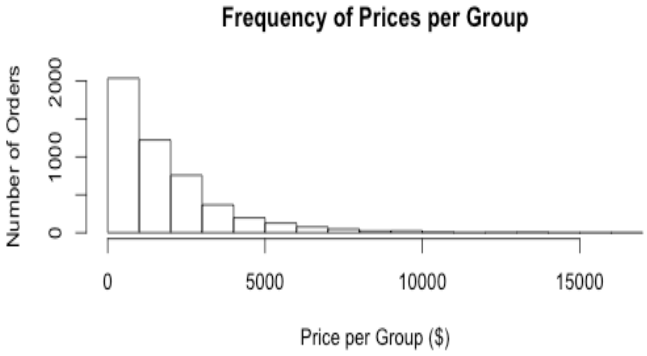


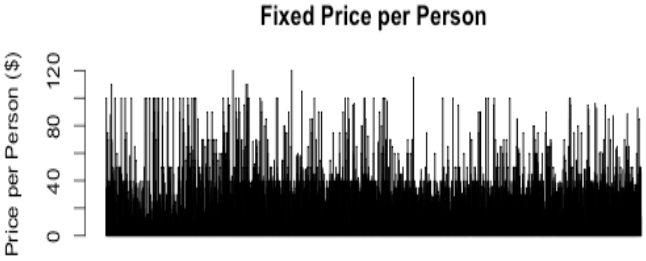


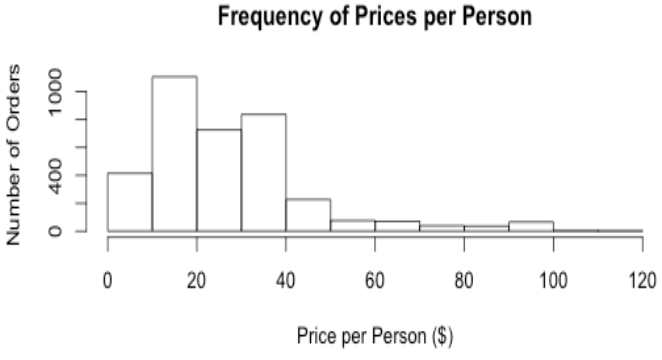
From the summary statistics and plots below, it becomes evident that most customers who preferred "per person" payments, paid $40 or less for every attendee. Whereas the majority of customers who opted for "per group" rates, paid lump sums under $10,000. *Note: "Overall Price per Unit ($)" encompasses both "per person" and "per group" customers.

Statistic	Overall Price per Unit ($)	Price per Person ($)	Price per Group ($)
Lowest	2.95	2.95	47.00
Median	400.00	25.00	1,300.00
Mean	1,115.00	29.41	1,915.00
Highest	16,500.00	120.00	16,500.00









Among a variety of options selected by customers who chose to pay "per person," the following factors help determine the price of their bills:

- Type of event (e.g. baby shower, anniversary)
- Type of food served (e.g. alcoholic beverages, dinner, etc.)
- Method of food presentation (e.g. self-service buffet, plated meal, etc.)
- Cuisine served (e.g. American (formal), Italian, etc.)
- Month when orders were placed.

Among a variety of options selected by customers who chose to pay "per group," following factors help determine the price of their bills:

- Type of event (e.g. birthday, wedding, corporate, graduation)
- Type of food served (e.g. alcoholic beverages, dinner, etc.)
- Method of food presentation (e.g. self-service buffet, plated meal, etc.)
- Cuisine served (e.g. American (formal), Italian, etc.)
- Month when orders were placed
- Month of event.

Additional Research Opportunities

With more time for analysis, I would like to evaluate how multiple quotes from individual customers, given previous orders, change over time. This information could demonstrate how customer needs evolve based on prior preferences. Using external (e.g. census) data sources, it would also be interesting to see if event location and regional demographics play any in role in the price of orders. Also, data on event proximity to caterers could further contextualize order price.

Overall, the data are very noisy. Using outlier-removal and kernel-regression techniques, the probability density functions of both "per person" and "per group" data subsets could be smoothed to represent normal and log-normal distributions, respectively. Only after satisfying the requisite baseline sets of model assumptions for each, can we attempt to extract causal relationships among any of the variables.