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A Moveable Feast
Written Analysis

Background:

Similar to many other industries, the restaurant industry has been completely revolutionized by tech companies such as GrubHub, DoorDash, UberEats and Postmates. Whether you want takeout or delivery, Indian food or pizza, almost every restaurant and cuisine is available right at your fingertips.

While these companies didn't start during the pandemic, these apps saw a huge increase during the pandemic when people were forced to transition to takeout-only options. In 2020, almost 112 million Americans used a food delivery service, resulting in the online food delivery industry generating $26.5 billion in sales that year.

Even though the pandemic is over and restaurants are open again, the numbers and statistics of those using DoorDash, GrubHub and UberEats have only continued to rise. In fact, in the United States, 60% of Americans now order takeout or delivery at least once a week, many with 2-3 lunch or dinner orders per week.

For our group project, we thought it would be interesting to dive into data from one of the major competitors in this space, DoorDash. DoorDash and their subsidiaries currently hold 59% of the US consumer's meal delivery sales.

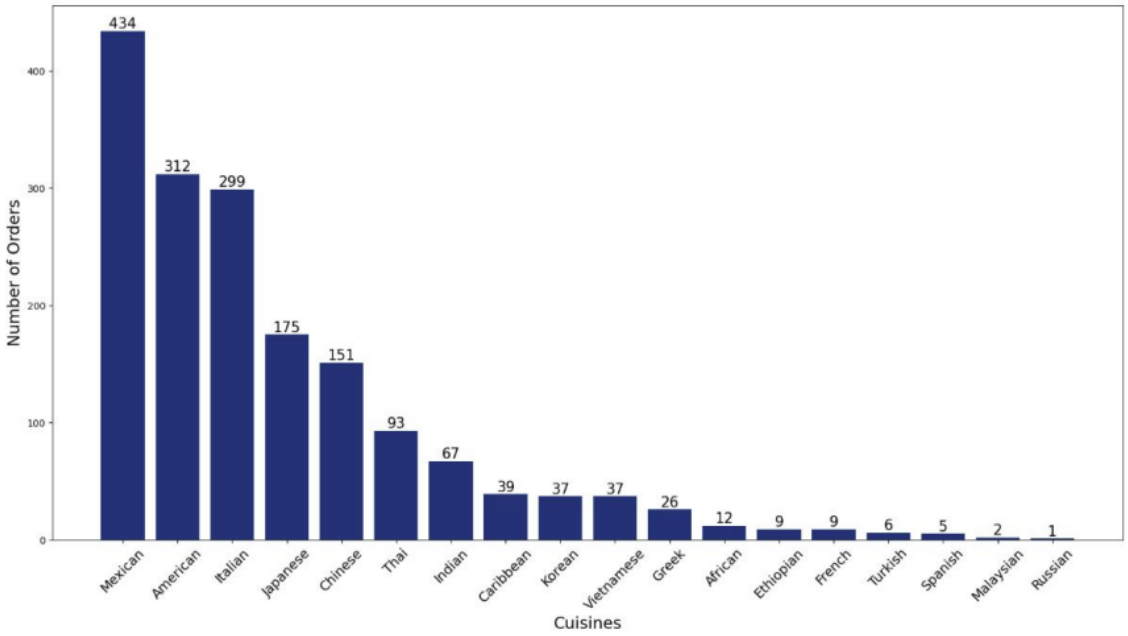
We looked at one day's worth of delivery data for Door Dash in 4 of the major U. S. markets – New York City, Boston, Chicago and Los Angeles. DoorDash is a major player in each of these markets, holding at least a 35% market share in each of these cities.

The data allowed us to look at the cumulative data as well as the regionalized data to answer 3 main business questions:

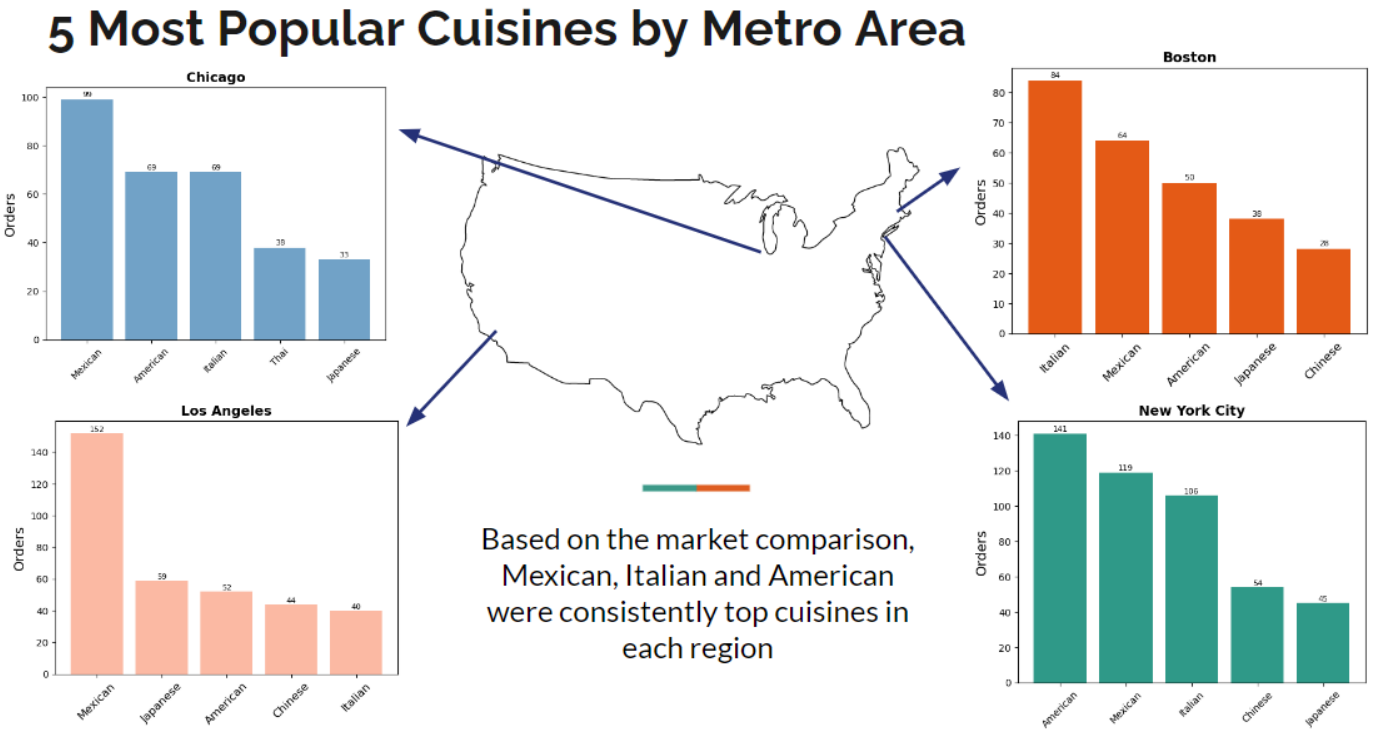
1. What was the most popular type of food ordered via DoorDash? How did that change depending on the city?
2. What was the breakdown of restaurant food vs non-food items?
3. Was there a correlation between delivery times and ratings?

Business Question 1: What was the most popular type of food ordered via DoorDash? How did that change depending on the city?

We found that at both the nation and regional level, Mexican, American and Italian food was the most popular, with nearly 61% of orders being for one of those types of cuisines.

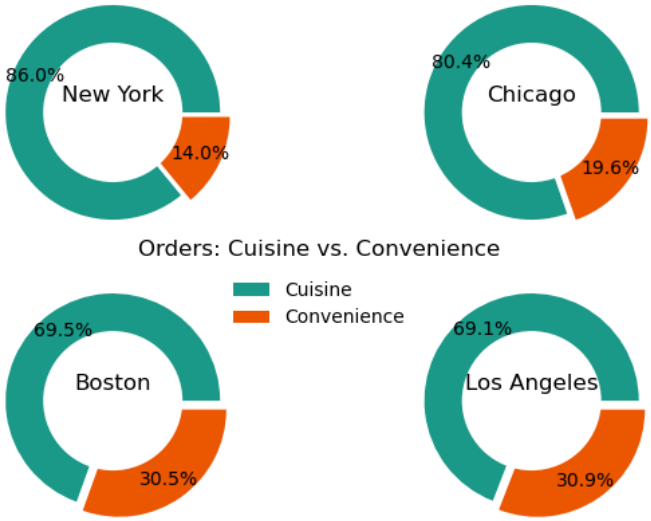


Chicago, Boston and New York City all have those 3 cuisines as the top 3 cuisines ordered. While Los Angeles still has these 3 cuisines represented in their top 5 favorites, they showed a little differentiation from the other cities in their top 5 list.

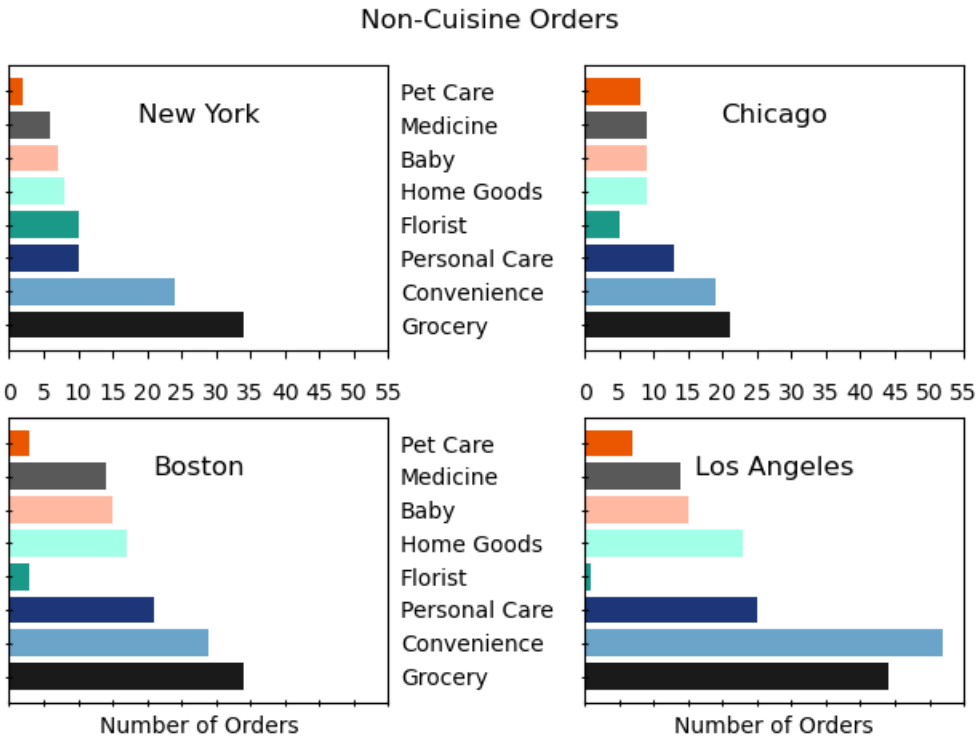


Business Question 2: What was the breakdown of restaurant food vs non-food items?

In 2020, DoorDash entered into partnerships with CVS and Albertsons to help expand their delivery model. As a result of this, we wanted to look at the breakdown of orders of restaurant food versus non-restaurant food orders. We found that all 4 markets have both restaurant and non-restaurant orders, however the ratio of each varies between the markets. Boston and Los Angeles have the highest percentage of their orders coming from non-food orders, both at about 30%. New York City and Chicago have a much lower percentage of non-food orders.



Taking this analysis one step further, when we dive deeper into what people ordered when they were not ordering food from DoorDash, we found a variety of categories of items they would order. Interestingly, when DoorDash users weren't ordering restaurant food through DoorDash, they were still ordering food. The highest number of orders for 3 of the 4 markets was groceries.



Business Question 3: Was there a correlation between delivery times and ratings?

Overall, we did not see a correlation between delivery time and rating scores for the business either for the entire analysis or when looking at individual markets. The linear regression results returned r-values for each of the metros that were near 0 and almost all had a p-value <0.05.

Data:

- Data Set:
  - Doordash Restaurant Data: https://www.kaggle.com/datasets/polartech/doordash-restaurant-data
- Limitations:
  - We didn't have information on when the data was collected and couldn't do a deeper analysis on consumer's order patterns.
  - Data only included 4 metro areas (5 states), not the entire country.
  - Was difficult to do a more in-depth analysis around what other factors contributed to the ratings.
  - Cuisine categorization wasn't standardized and needed manipulation.