Postmates Markets Case Study

POSTMATES

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Goals

1. Explore and obtain insights from April 2015 transactions in Chicago, Phoenix, and San Antonio, and make recommendations using the data.

2. What initiatives did Postmates begin in 2017, and how can they be factored into a 3-5 year growth plan, new strategic initiatives, and competitive advantage.

3. Pick one of the strategic initiatives that you mentioned above and create a light business case around it. Think about how would you launch it in markets that you reviewed in Part 1. How would you enter into the market?

Determinations

1. There have been are some outliers for certain orders and customer behavior
2. Most of the jobs occur on Wednesdays through Sunday with Thursday at 7 pm as the busiest day and time.
3. San Antonio is a new market that started on April 14th.
4. There have been new partnerships between companies like Farmstead, CaryRx,and Mary Jane with Snoop Dog to improve customer experience and reduce delivery time.
5. There have been new innovations in the platform like “DRINKS” and new tech partnerships with Starship-technologies for robotic deliveries
6. There could be better service with Mexican food and if a platform is created there could be an incentive to purchase Mexican food on Mondays where volume is at its lowest.

1. Dataset Exploration

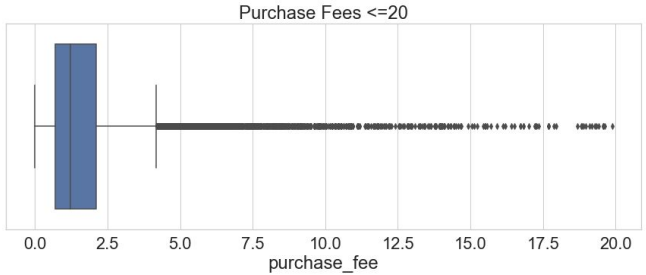
2. 2017 Postmates Initiatives Investigations

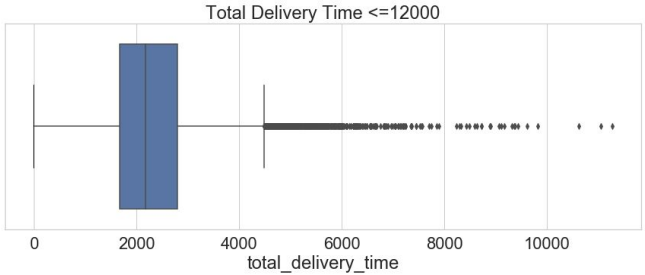
3. Initiative Recommendations Based On Data

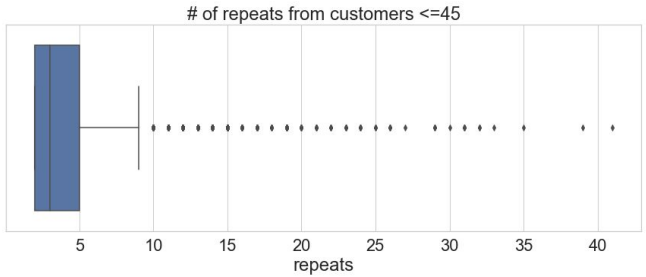
Dataset Exploration and Analysis

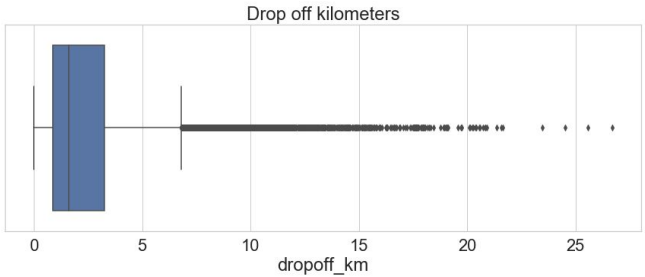
Overall Market Dataset Exploration

- Cleaning the data and filtering out black swans (outliers)









Boxplots: The first whisker is the minimum, the first half of the box is the first quartile, the line in the box is the median, the remaining box right of the median line is the third quartile, the right whisker is the maximum, and the dots/diamonds outsides of the whiskers are statistical outliers.

There were 30751 jobs that were a part of this dataset. The first job was on April 1st 2015 at 12:07am and the last on April 30th at 11:58pm

Some jobs were removed for being outliers.There was one purchase fee of $1013.13, a delivery time of 23 hours, and a single account that had 67 jobs in a month.

Nevertheless, features like “Drop Off Km” was left alone because it’s maximum values was 26.7 Km which is high, but within the realm of possibility.

Overall Market Dataset Exploration

- After filtering outliers this is a basic market breakdown

Market	Total Jobs	% of Total Jobs	Customers In Market	"Full Profit" Sum	Median “Full Profit” From One Job	Mean Days between Orders
Chicago	22626	74.23%	9928	$74,805.44	$2.78	4.2
Phoenix	6611	21.69%	3077	$19,278.17	$2.53	4
San Antonio	1243	0.04%	620	$3,039.15	$2.17	2.5

Chicago was by far the largest market with 74% of all the transactions in the dataset.

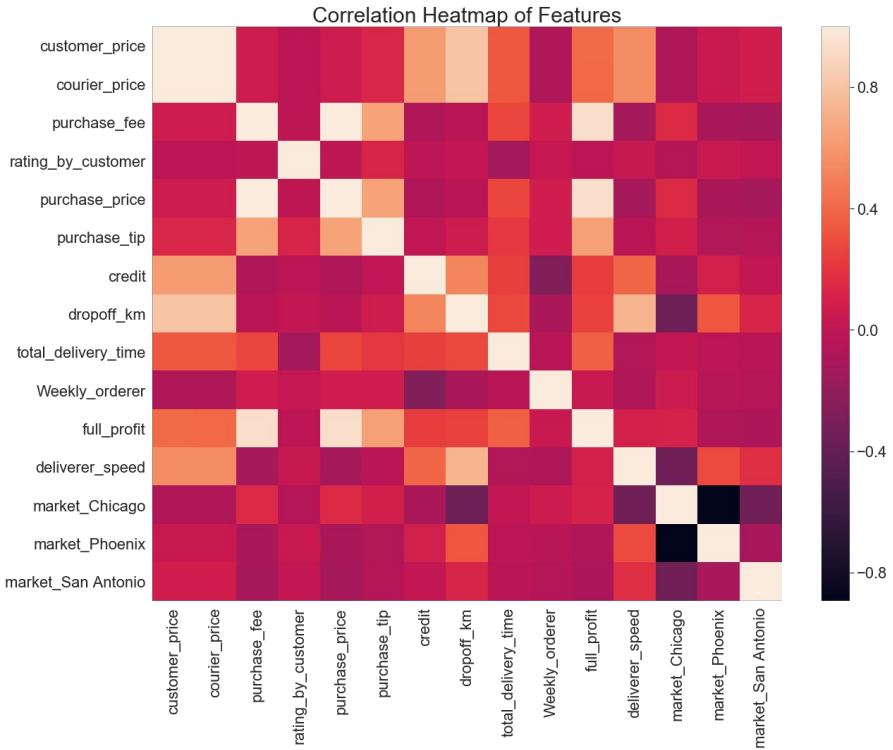
There are about half as many customers as the amount of jobs in the market.

The profit from each transaction means more in Chicago with $2.78 made on average per transaction

San Antonio was a bit of an outlier, but that’s because it was a newly established market.

Overall Market Insights

- Finding correlation between features



This is a correlation heatmap chart the lighter squares mean those features are more related like how the purchase price directly outputs the purchase fee because it's 9% of the purchase price.

I have created some of my own features too:

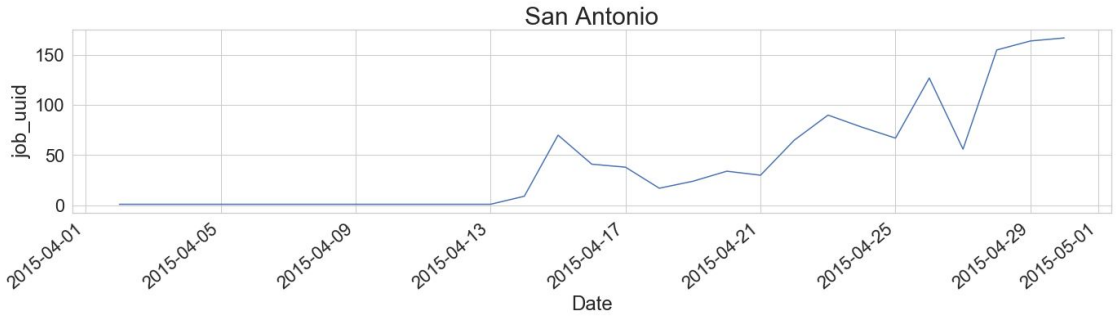
Weekly_orderer = customer with 4 and over transactions in April

Full_profit = (customer_price - courier_price) + purchase_fee

Deliver_speed =dropoff_km*total_delivery_time*

Market Insights

- Difference in order volume throughout the month

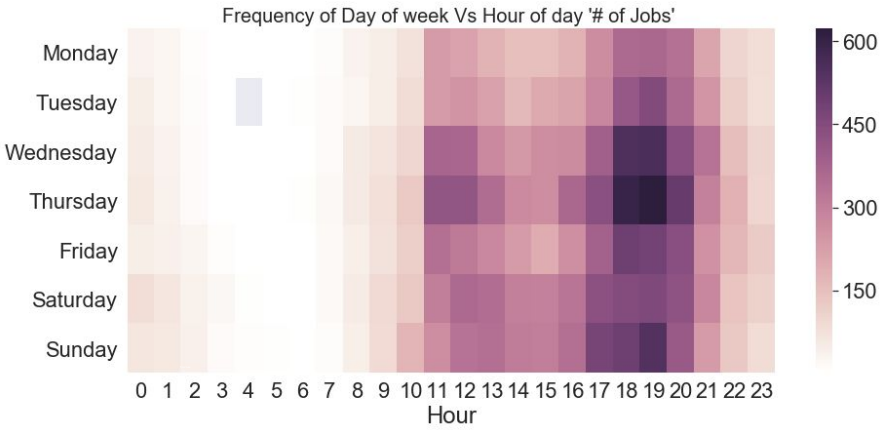


All Markets had peaks and troughs. The peaks in demand were generally on the weekends.

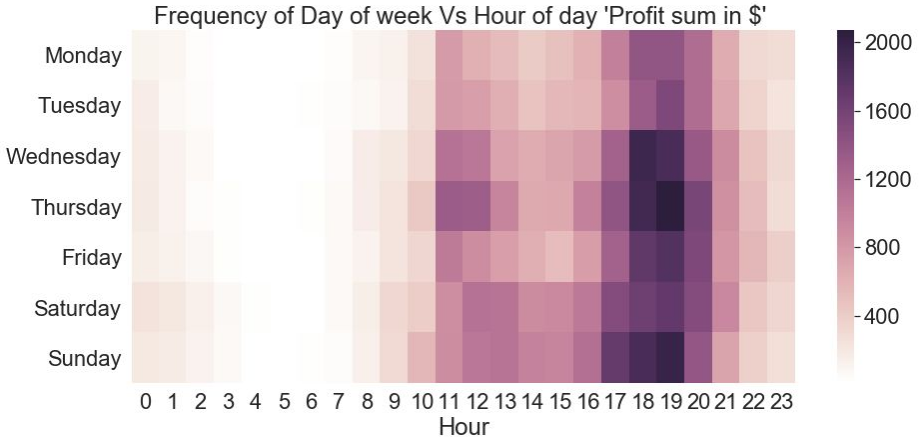
Note: San Antonio as a market started on 4/14/19.

Overall Market Insights

- Finding the busiest times and most profitable times



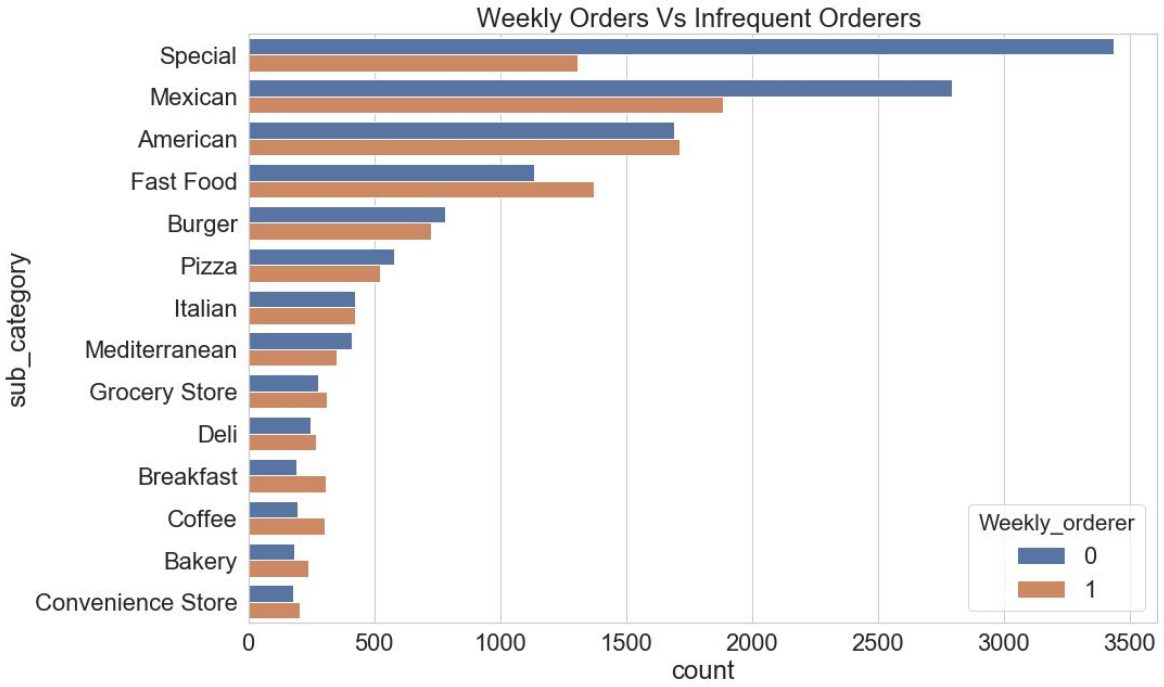
Most of the orders occur around Wednesday, Thursday, and Sunday night.



The profit sum follows the counts of jobs per night for the mostly. Saturday has a wider distribution of profit sums

Overall Market Insights

- Finding the best sub categories for returning customers



Dig into Mexican food and its ratings. No pun intended.. See if ratings for Mexican food are lower than average. In next chart.

Do the percentages. If possible

Find out the rating for each sub category and split by if they're a weekly ordered

Overall Market Insights

- Observing customer ratings weekly orderers and sub categories

	sub_category	Weekly_orderer	sum_of_jobs	rating_by_customer	total_delivery_time
96	Special	0	3204	4.811486	2305.969732
70	Mexican	0	2545	4.742633	2125.669889
71	Mexican	1	1840	4.808696	1978.586207
3	American	1	1690	4.811243	2409.351809
2	American	0	1572	4.760814	2474.965701
38	Fast Food	1	1342	4.825633	1978.884195
97	Special	1	1292	4.854489	2267.453364
37	Fast Food	0	1075	4.797209	2072.875000
15	Burger	0	728	4.798077	2517.135377
16	Burger	1	712	4.790730	2454.000000

2017 Postmates Initiatives and Partnerships

2017 Initiatives

- More partnerships to improve customer experience and innovations

CaryRx

FARMSTEAD

POSTMATES

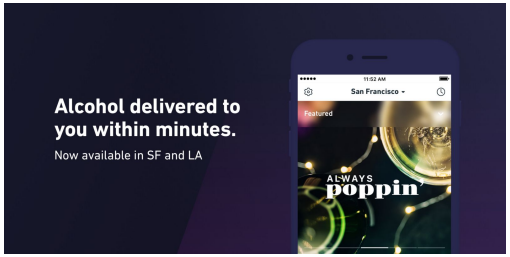
MERRY JANE

During 2017 Postmates has made many new partnerships to improve the customer experience. These partnerships have given the company a advantage in terms of service for customers. Thinking ahead it has been more sustainable for companies to invest in existing markets with new products rather than spend more money in marketing in new locations.

Nevertheless, Postmates had opened its first international city in Mexico City in 2017 to reach new customers.

2017 Initiatives

- Innovations and services



There have been partnerships with autonomous robot delivery companies like Starship technologies,

New platforms like DRINKS that have made the experience for the retail seller and the consumer much easier

In Honolulu there was a pilot for “on demand anything”. Postmates has established itself as an item agnostic company that may delivery anything could be an advantage over other companies.

Recommendations Based on Dataset

Recommendation Based on Data and initiatives

- Targeting areas of improvement in the problem space

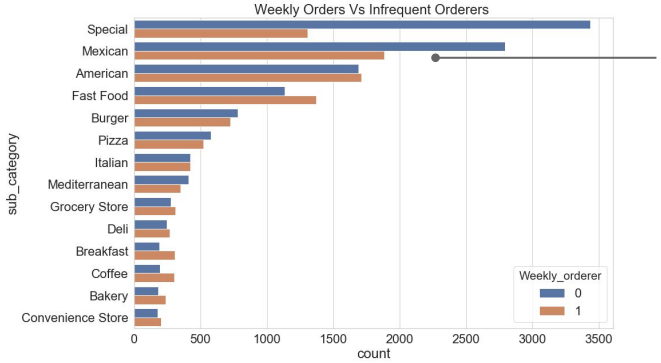
Based on the dataset that I've explored and postmates 2017 initiatives I believe that a better customer experience should be developed for Mexican food, and there could be incentives like dropping the service fee on Mondays to balance the overall demand throughout the week.

In my data analysis I found that there a lot of people who didn't order regularly that ordered mexican food and that on average those customers had a lower rating that didn't correlate with the total time of the deliver, so it was another element of CX that was probably the culprit.

Monday night was the slowest night of the week, and has been every monday of April 2015, so it would be advantageous to initiate an incentive on that day to smooth the out the trough of lower jobs on Monday nights.

Recommendation Based on Data and initiatives

- Data to support recommendation



There is a large difference in weekly orderers vs those that are not of Mexican food

	sub_category	Weekly_orderer	sum_of_jobs	rating_by_customer	total_delivery_time
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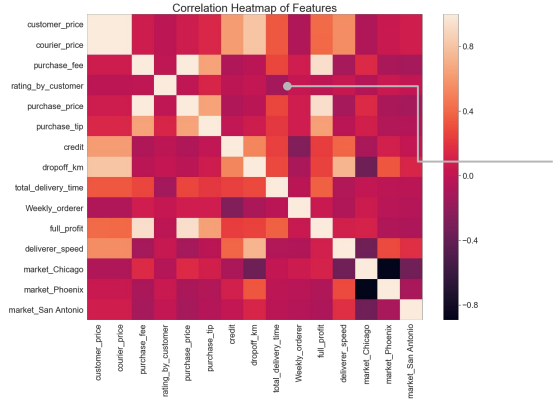
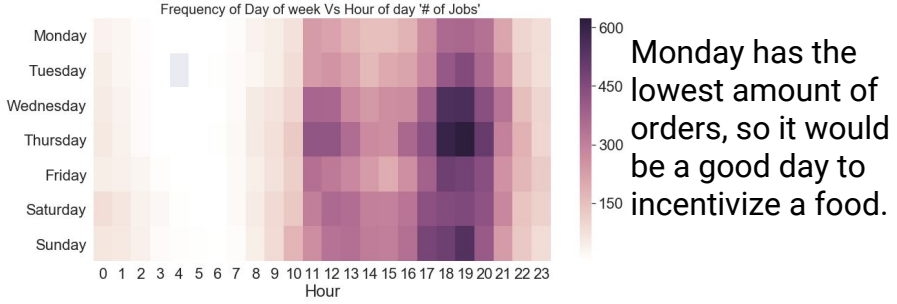
Mexican food has a relatively low total delivery time



Ratings and total delivery time is negatively correlated, so the longer the time the lower the rating.



Monday has the lowest amount of orders, so it would be a good day to incentivize a food.

Closing

- Further data exploration and future improvements

- There could be weather data that is linked to the initial dataset. This would be useful to gather insight on if people order more during a weather event like rain.
- Figure out the R^2 value of the increase in orders to predict volume
- Create a model to predict when purchase fees are activated.
- Add percentages of the customers who were weekly orders vs less frequent orderes to get a better insight

https://github.com/Leetyler050/Case_Study

Thanks!

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