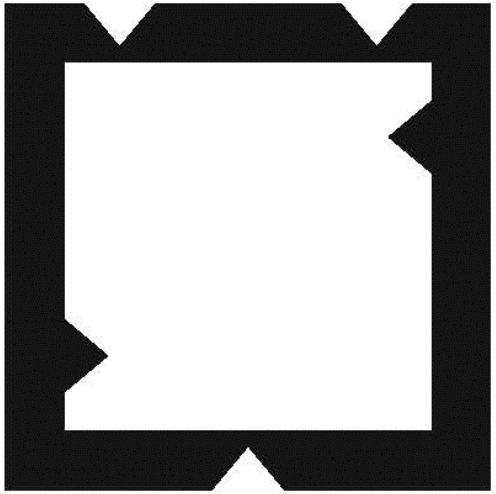
Business Case Study of an Online Delivery Platform
– Data Insights & Strategies

@Wenyi Tao



WEBER SHANDWICK

engaging always.

We deliver our data model as well as actionable insights.

——Bomoda

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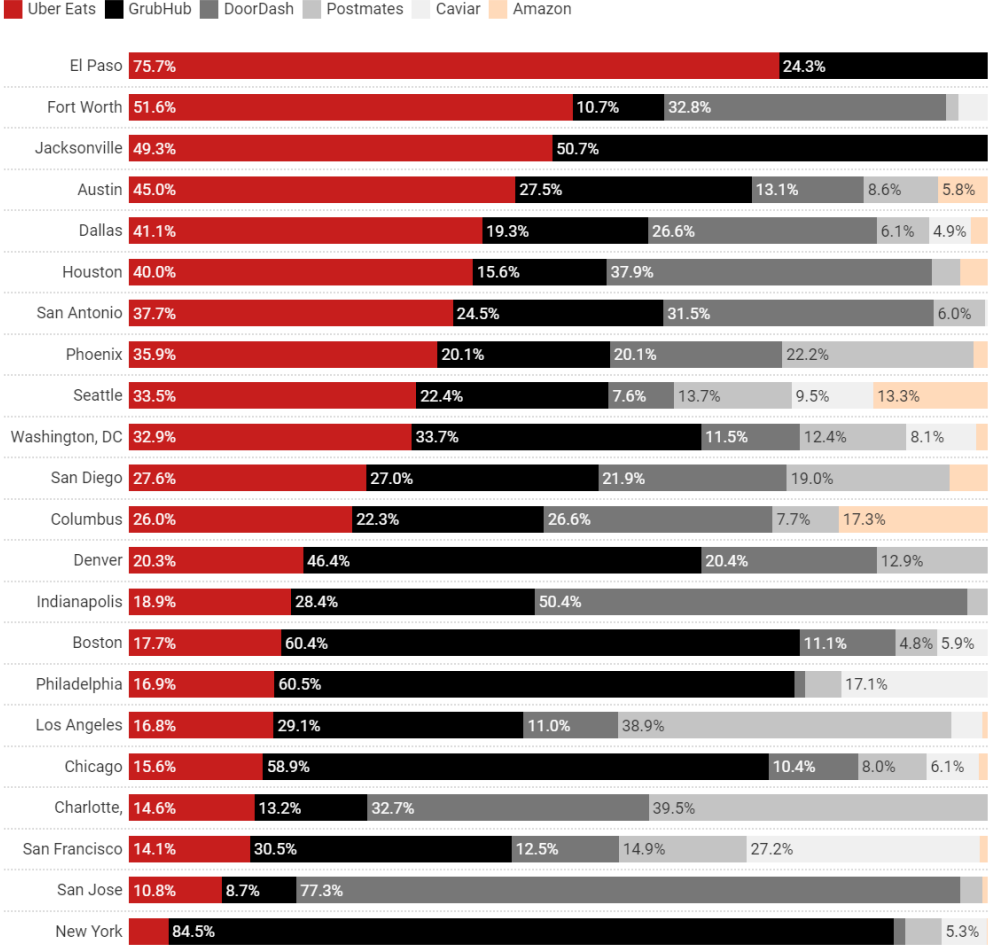

Data for March 2018. Postmates data may be slightly overrepresented due to other delivery types.

Source: Second Measure • Get the data • Created with Datawrapper

Industry Overall Analysis

- **Demand-Driven:** The higher demand will drive bigger supply
- **Customer-Stickness:** The key of success is to acquire customers at the early phase
- **Market-Maker:** Price gap will be formed by the local market, the market maker can leverage asymmetric information to gain profit
- **Economics-Scale:** More customers will bring down the unit cost

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Insights 1– Customer Satisfaction

Customer are sensitive to the speed and the price of the delivery.

- The faster the speed, the higher rate will be given.
- The absolute amount of money the user paid matters. The higher the fee, more picky the user will be.

A1

Courier Bonus can apply when delivery is fast and in-time.

```
==============================================================================
Dep. Variable:     rating_by_customer   R-squared:                       0.014
Model:                            OLS   Adj. R-squared:                  0.013
Method:                 Least Squares   F-statistic:                     30.39
Date:                Wed, 30 Jan 2019   Prob (F-statistic):           6.25e-59
Time:                        15:40:56   Log-Likelihood:                -22016.
No. Observations:               21824   AIC:                         4.405e+04
Df Residuals:                   21813   BIC:                         4.414e+04
Df Model:                          10
Covariance Type:            nonrobust
================================================================================================
                                   coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------------------------
Intercept                        4.7856      0.022    219.481      0.000       4.743       4.828
vehicle_type[T.car]             -0.0202      0.010     -2.108      0.035      -0.039      -0.001
vehicle_type[T.motorcycle]      -0.0881      0.032     -2.762      0.006      -0.151      -0.026
vehicle_type[T.scooter]         -0.0981      0.039     -2.535      0.011      -0.174      -0.022
vehicle_type[T.truck]           -0.1126      0.042     -2.657      0.008      -0.196      -0.030
vehicle_type[T.van]             -0.0890      0.044     -2.043      0.041      -0.174      -0.004
speed                            0.3150      0.019     16.220      0.000       0.277       0.353
price_over_purchase              0.0001      0.000      0.304      0.761      -0.001       0.001
price_over_distance              0.0014      0.001      2.507      0.012       0.000       0.003
distance_pickup_to_dropoff_km   -0.0918      0.008    -10.827      0.000      -0.108      -0.075
customer_price_usd              -0.0042      0.003     -1.352      0.176      -0.010       0.002
==============================================================================
Omnibus:                    17760.614   Durbin-Watson:                   1.994
Prob(Omnibus):                  0.000   Jarque-Bera (JB):           327556.104
Skew:                          -4.007   Prob(JB):                         0.00
Kurtosis:                      20.204   Cond. No.                         140.
==============================================================================
```

Speed = distance_pickup_to_dropoff_km / duration *1000
Price_over_purchase = Customer_price_usd/Purchase_price

Rating =
fixed_effect +
speed_effect +
price_effect +
other_effect

1. **Speed effect**

Faster the delivery, the better the user experience

2. **Price effect:**

higher the price, customer will raise high standard for the service. People are sensitive to absolute amount they pay.

3. **Other effect:**

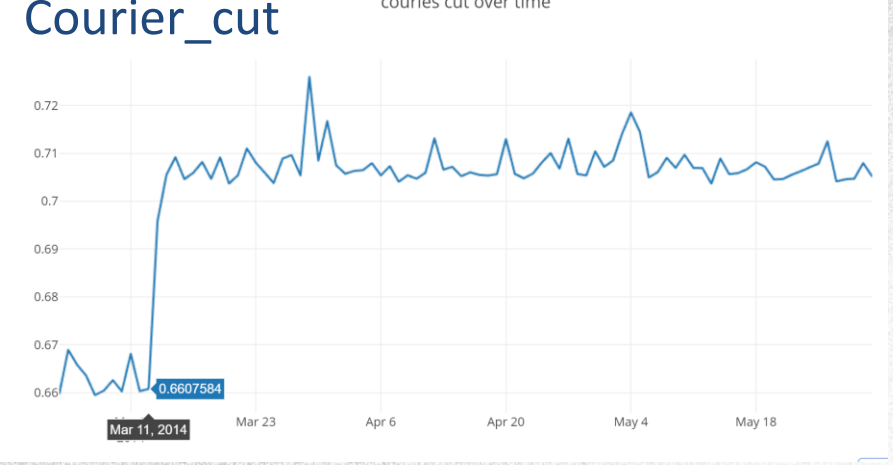
The delivery man service, communication and so on. More data needed.

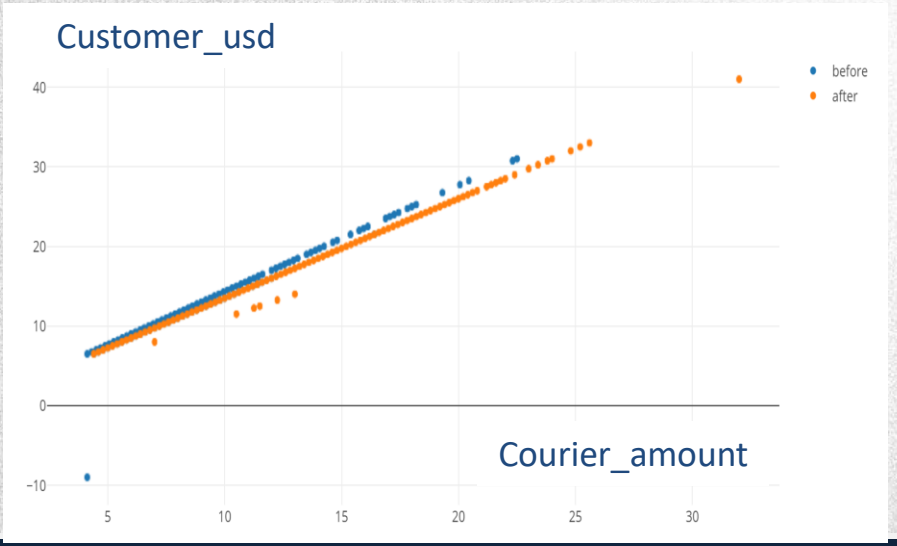
Insights 2- Strategic Expansion

Around 2014.03.12, the company raised the courier cut from 0.63 to 0.72 The overall daily orders increased about 10% thereafter. We believe this pricing strategy play an important role for the increase.

A2

Strategic pricing policy for acquiring more couriers on the local markets.





Before
2014/03/12

After
2014/03/12

63%

72%

Courier share

10% boost

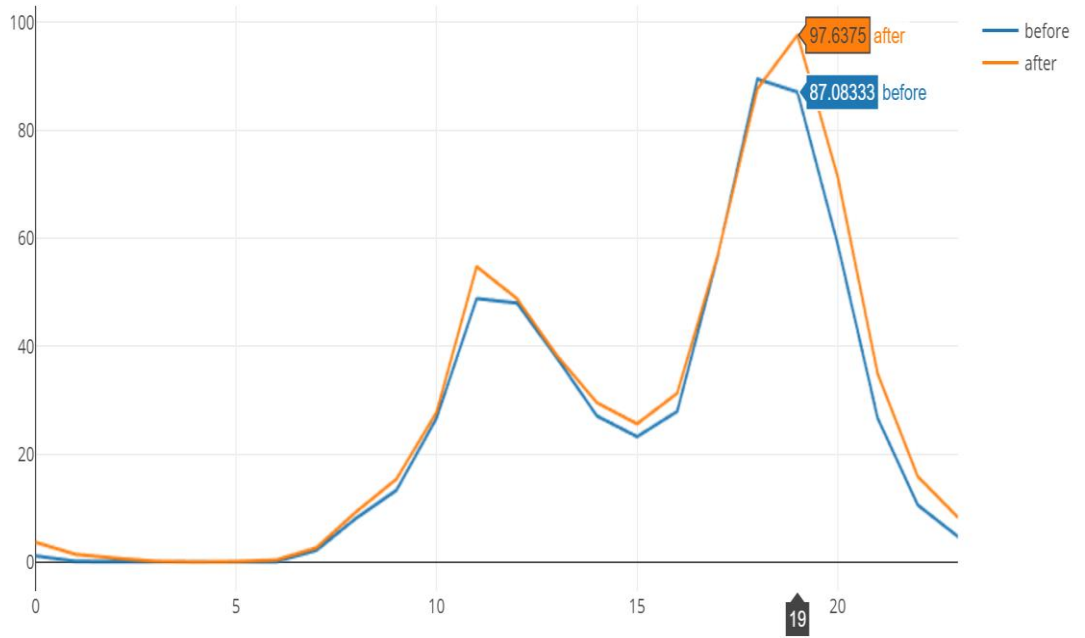
598

626

Daily Order

Insights

Hourly order



Hourly breakdown

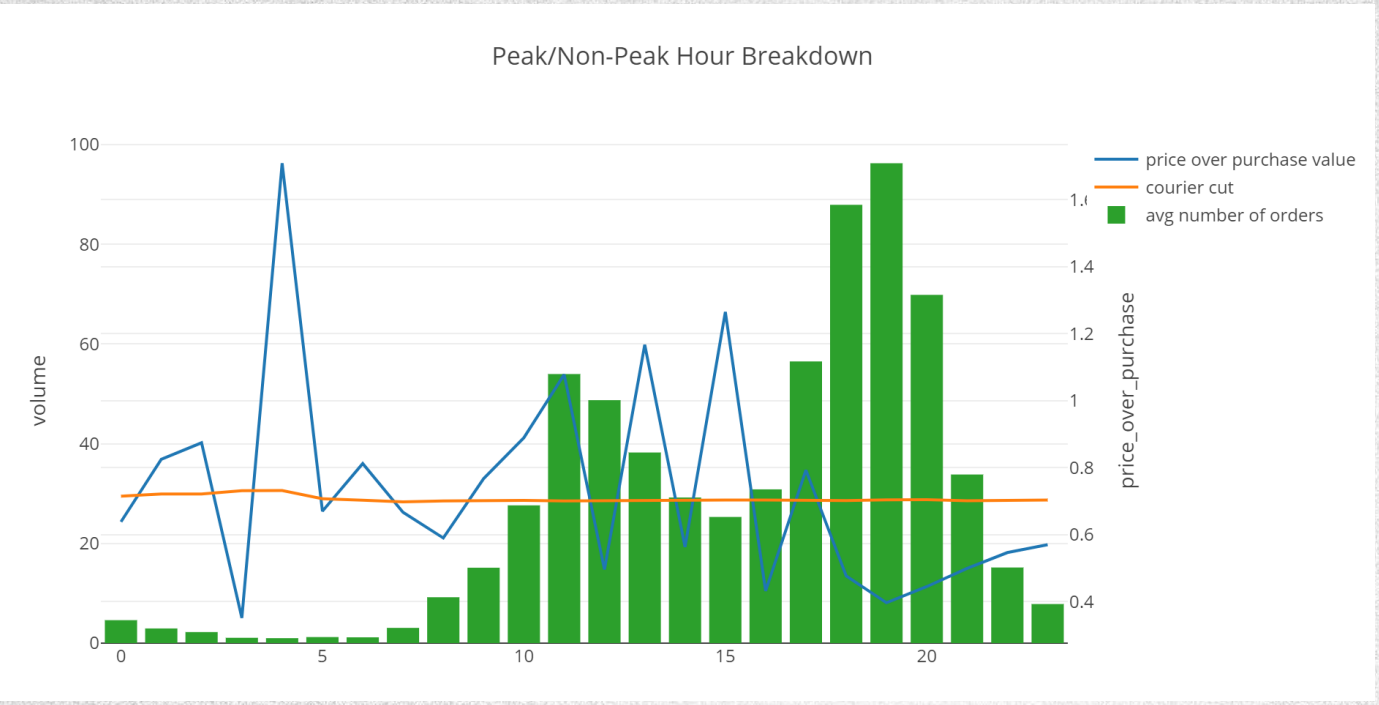
Peak hour is around dinner time and lunch time. we also see the orders increase.

Insights 3 – Market Efficiency

When: The peak of the demand is around 11a.m. and 6-7 p.m. and the price over items fluctuates, however courier cut dose not.
Where: Certain Areas (zipcode 94100,94132) have high demand of local pickup and drop-off orders.

A3

Dynamically adjust the price and courier cut to meet the demand.
Display the geographic location for peak and nonpeak time for better logistic management

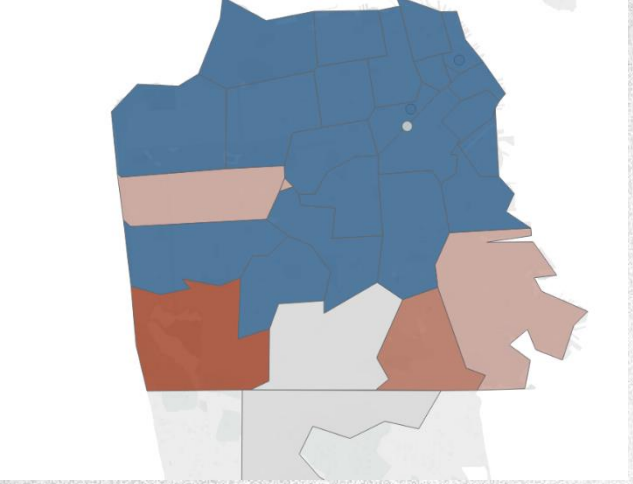


Peak Hour:
11 a.m – 1 p.m
19 p.m. – 20 p.m

Courier Cut:
Around 0.7 and is very stable

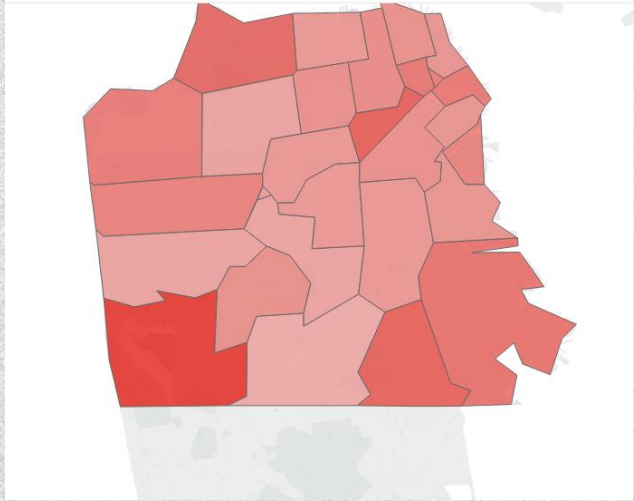
Price over purchase:
Fluctuate over the hours. High at late night, low at lunch/dinner time

1. At late night, it is hard to find deliveryman
2. Maybe the delivery type differs, delivery items have different ratios



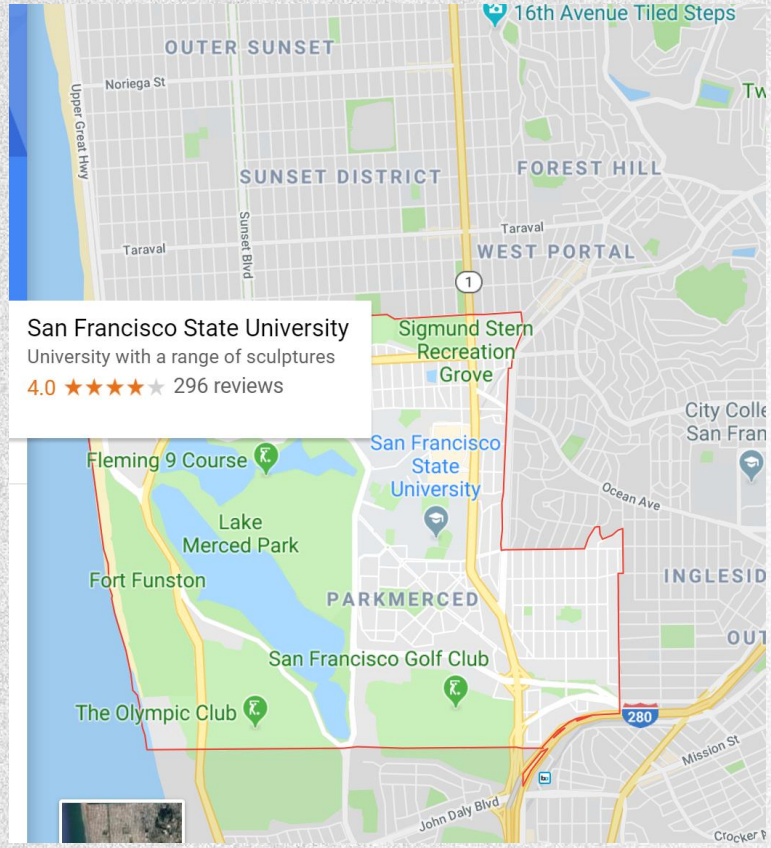
Profit

Total profit by drop-off zip code
Profit = customer_paid – credit_applied – courier_share
Total profit display by area.
Red: losing money area
Blue: gaining money area



Rating

Low rate ratio by drop-off zip code
Low_rate_ratio = # of low rate orders/ total orders
Dark Red: high low_rate orders
Light Red: less low_rate orders



Place worth investigation:
zipcode: 94132
San Francisco State University located.

College students are the main force to order food delivery online.
Why this place is losing money and why this place have a high proportion of low rate orders?

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Summary

- **The customers are sensitive to the speed and the price of the delivery.**
- **The company has a strategic raise of the courier cut to attract more couriers.**
- **The Demand is time variant and the orders differs geographically**

Discussion

- **Time bonus for couriers and adjusting the ratio in accordance with the orders.**
- **Pricing policy for courier is effective and we suggest using it as market entry strategy.**
- **Better Time Management & Better logistic deployment. Pre-deployed courier man to pickup locations**

THANKS

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Questions & Answers