

Grubhub vs DoorDash

Market Share
&
Member Behavior

Background

Business: Restaurant pick-up and delivery service

Grubhub Inc.

- Connects approximately 80,000 local restaurants with diners in 1,600 cities
- Founded in 1999
- Headquartered in Chicago
- Market cap \$8B
- It was dominant in the business but it is facing competitions in recent years

DoorDash

- Founded in 2013
- Headquartered in San Francisco
- Private company, valued at 1.4B

Source: yahoo finance and How I Built This podcast

Other players such as Uber Eats, Square Caviar are not included in this exercise.

Data

Data: Approx. 10M Grubhub and DoorDash sample transactions between 1/2014 - 3/2017 in the US.

85,248 potential duplicate records are considered as duplicates and are excluded from the analysis.

Example

company	date	member_id	amount
Grubhub	2014-01-01	6d9693ace3d64beda1d18a09424c60b4	24.47
Grubhub	2014-01-01	6d9693ace3d64beda1d18a09424c60b4	24.47

Checked items

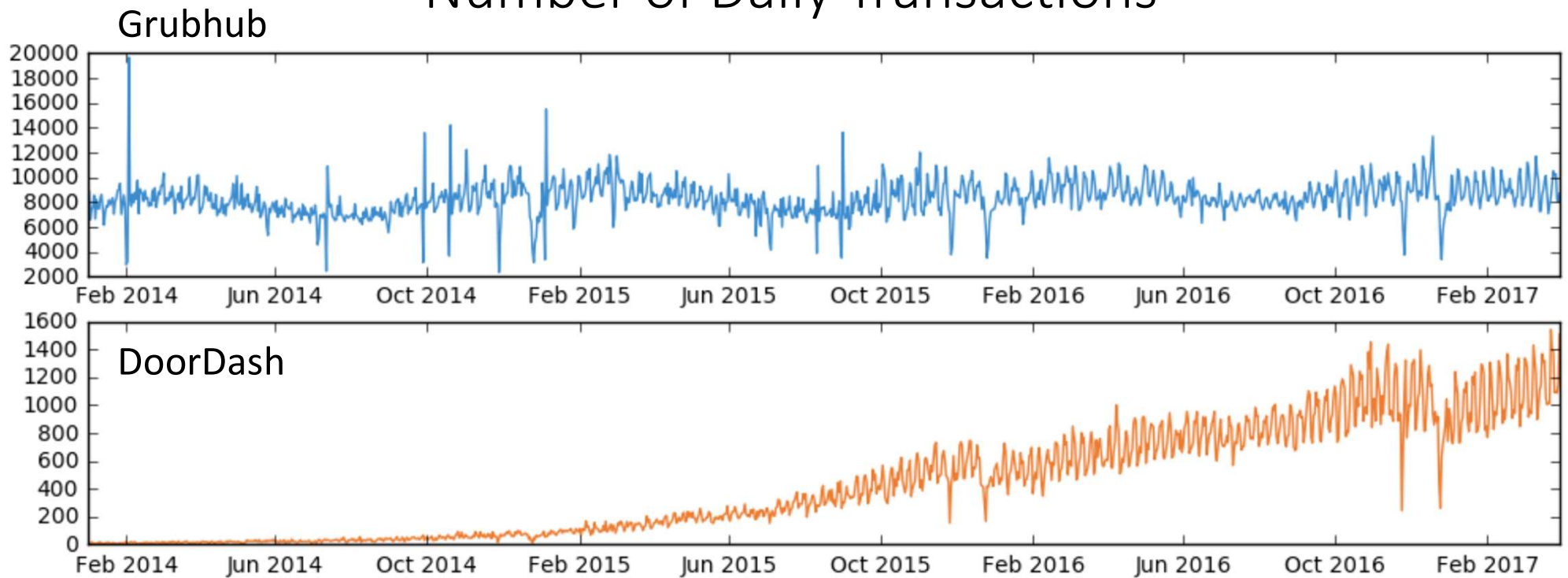
Company Name: ['DoorDash', 'Grubhub']

Date Range: [2014-01-01, 2017-03-31]

Missing Date: None

Transaction Min and Max: [0.0100, 8073.1201]

Number of Daily Transactions



Observation

- A big dip on 2/2/2014 followed by a big spike on 2/3/2014 for Grubhub
- Fewer transactions in the summer months
- A dip on days following Thanksgiving and Christmas

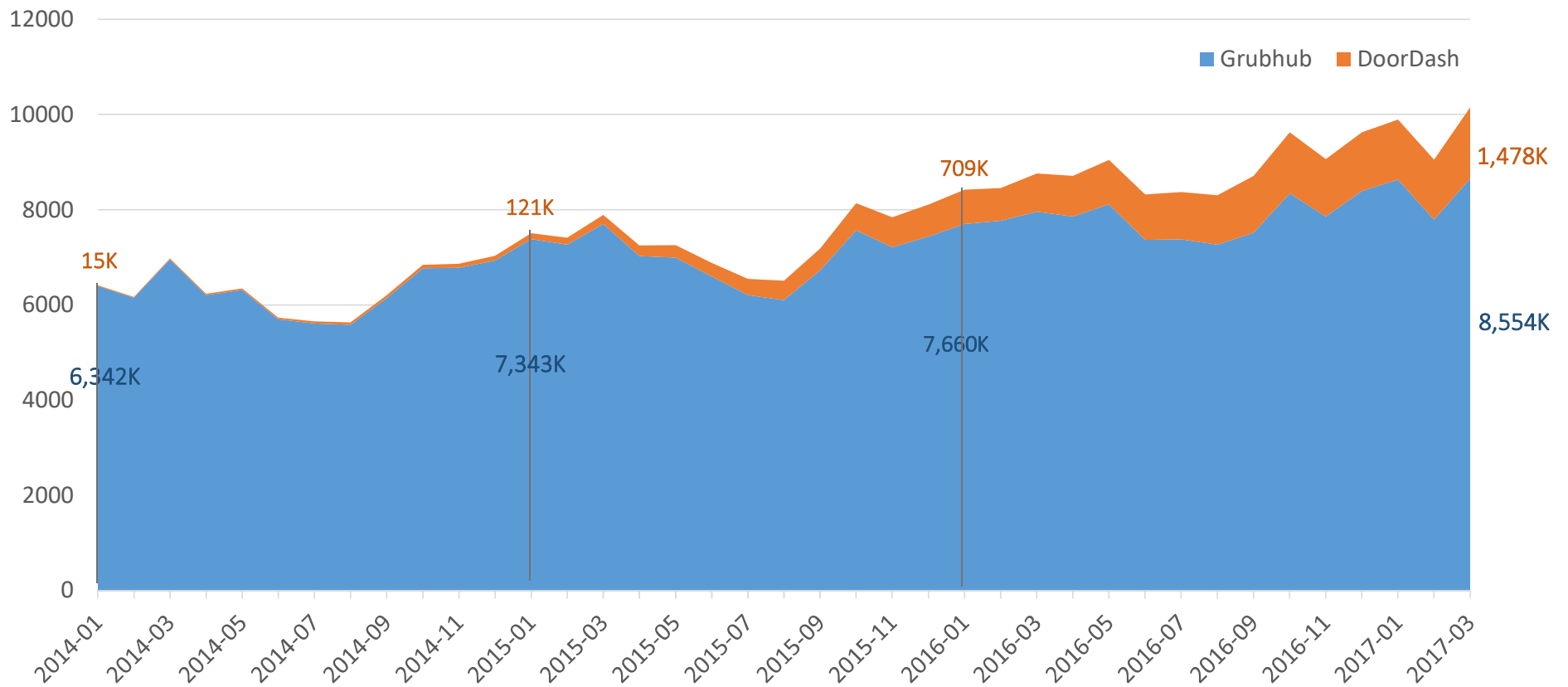
Q1. What is the market share between Grubhub and DoorDash in the US?

Method

Calculated monthly transaction amount for each company and found the percentage breakdown.

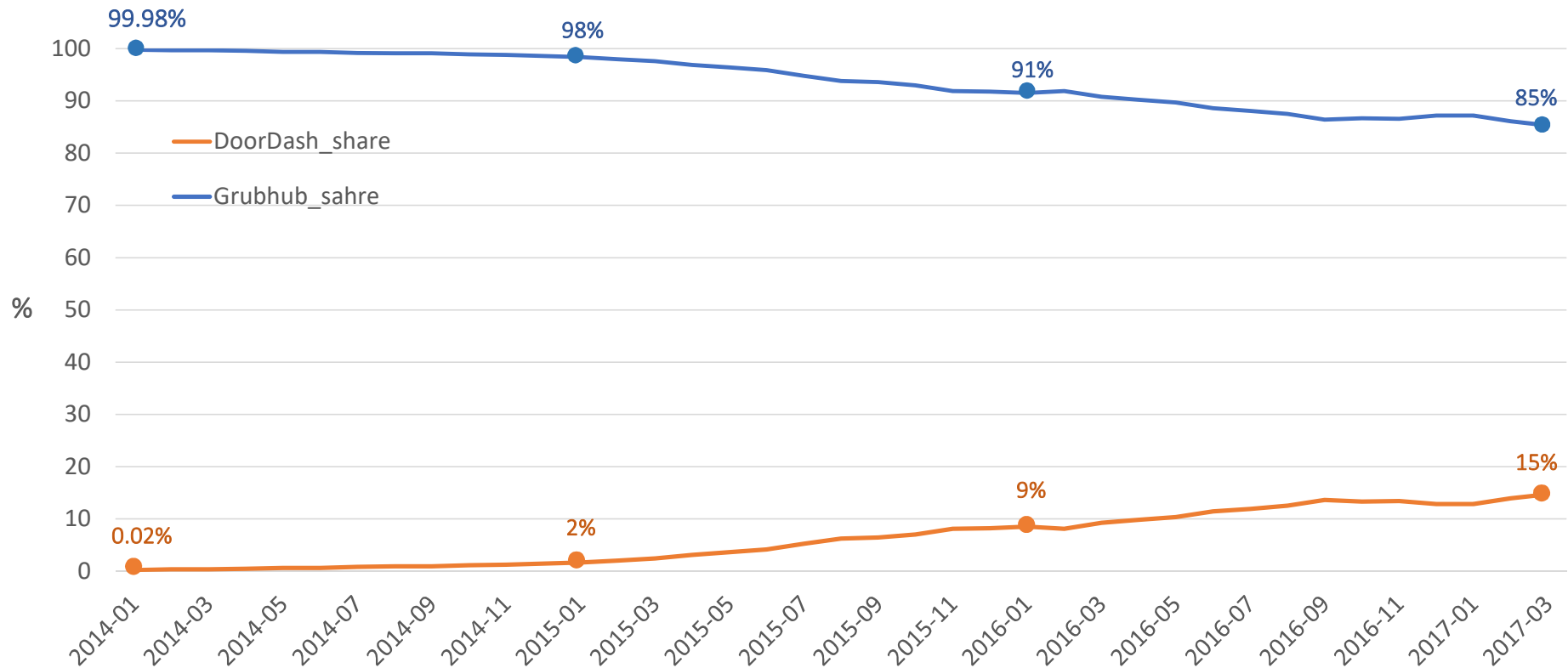
Monthly Transaction Amount

(in \$1,000)



- Both companies increased the transaction amount since Jan 2014.
- DoorDash's transactions grew much more than Grubhub.

Market Share Between Grubhub and DoorDash



- In 1/2014, Grubhub had almost 100% market share between the 2 companies.
- In 3/2017, Grubhub had about 85% and DoorDash has about 15% market shares.

Q2. For members predominantly using DoorDash in January 2015, are they still predominantly using DoorDash or has their behavior changed?

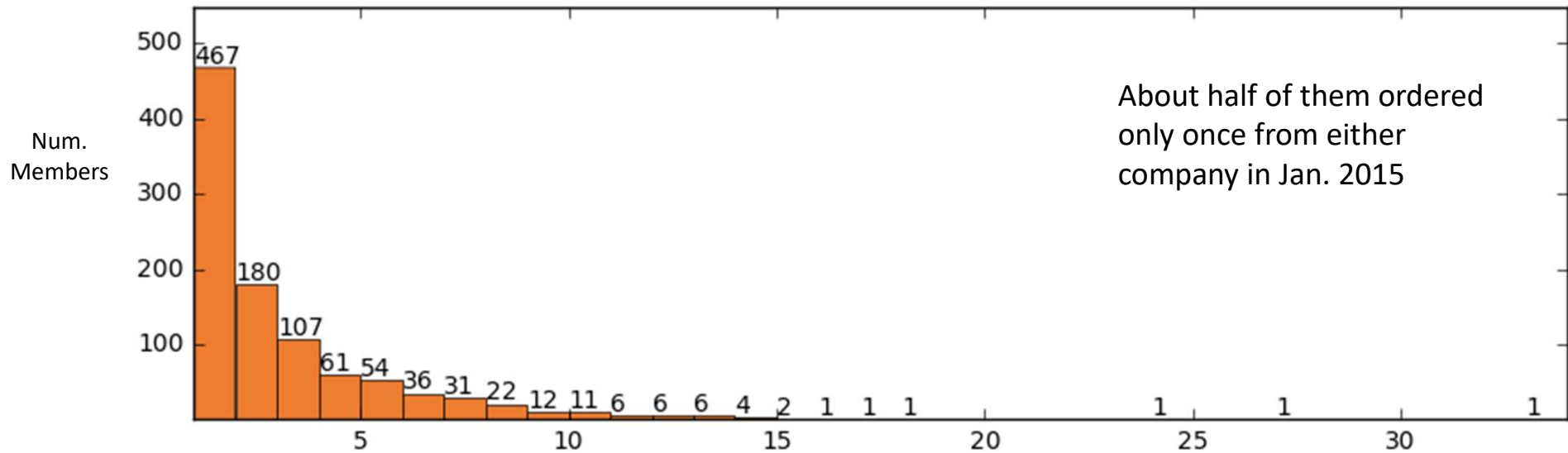
First Step

Define “members predominantly using DoorDash”.

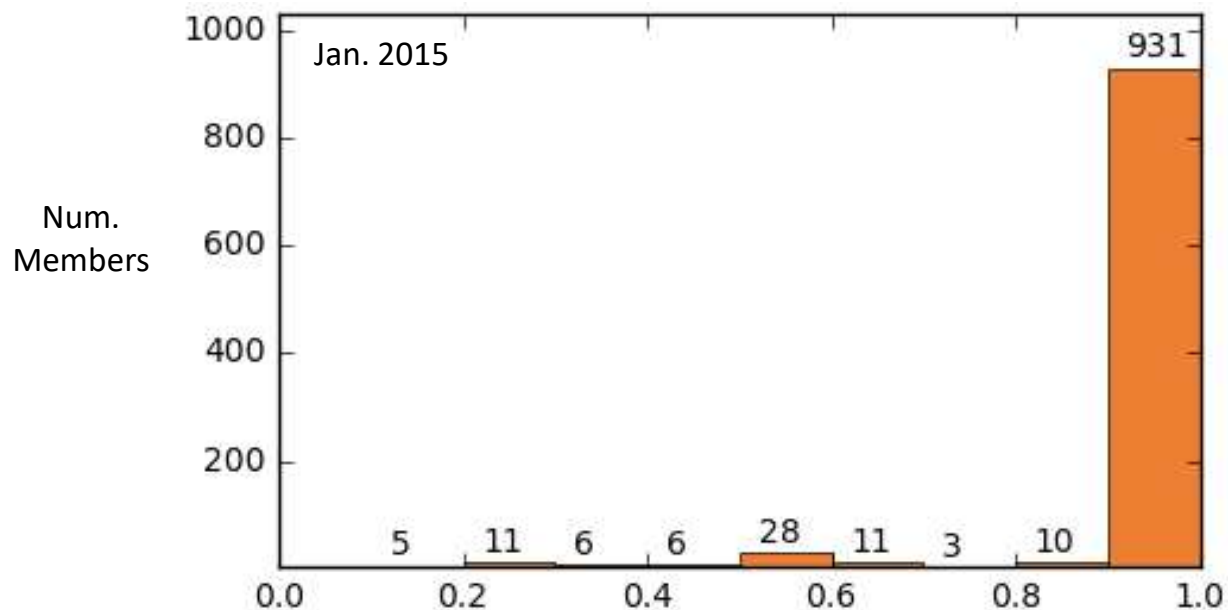
Question: Is there a good threshold to separate members into 2 groups?

- In Jan 2015, 72,101 members ordered from either company.
- Of those, 1,011 members ordered from DoorDash at least once.

Distribution - Number of Orders in Jan 2015 for the 1,011Members



Ratio of DoorDash Orders for the 1,011 Members



Observation

There is no clear threshold to separate members into the 2 groups.

Definition

“Members predominantly using DoorDash” (DoorDash fans) - 941 members

- Members who ordered at least once from either company in Jan 2015, and
- Ordered from DoorDash at least 80% of the times.

Method

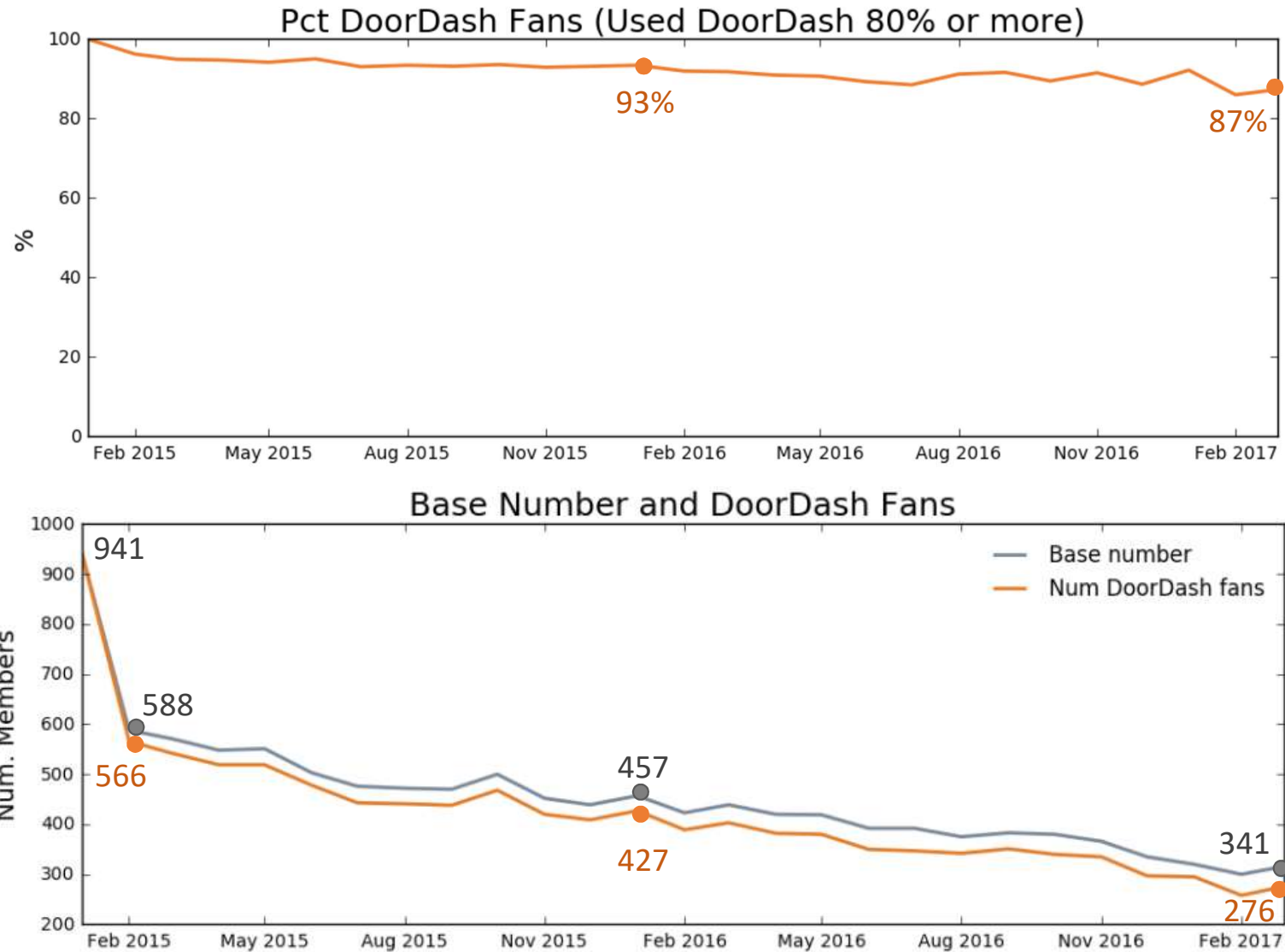
- Calculated the number of orders from each company for each month for each of the 941 DoorDash fans.
- Divided the number of DoorDash order by the total number of order to find DoorDash order rate.
(DoorDash rate = Num. DoorDash orders/Num. of orders from either company)
- Excluded members who did not order from either company.

Example

member_id	month	DoorDash	Grubhub	num_order	DoorDash_rate
014ad2aba953f6e2fe442cd6620d4072	2015-08	3	0	3	1.000000
014ad2aba953f6e2fe442cd6620d4072	2015-09	5	2	7	0.714286
014ad2aba953f6e2fe442cd6620d4072	2015-10	2	3	5	0.400000

Results (Num. Order ≥ 1)

- Members who predominantly used DoorDash in Jan 2015 continued to use DoorDash predominantly among the 2 companies.
- However, many of them did not order every month after Jan. 2015.
- Most of them stuck with their favorite food delivery service, if they ordered through either company at all.



Results 2 (Num. Order ≥ 3)

- Limited to members who ordered at least 3 times in Jan 2015.
- The behavior was the same. Members who predominantly used DoorDash in Jan 2015 continued to use DoorDash predominantly, if they had ordered from either company.

