Lyft Case Study for Toledo

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Background

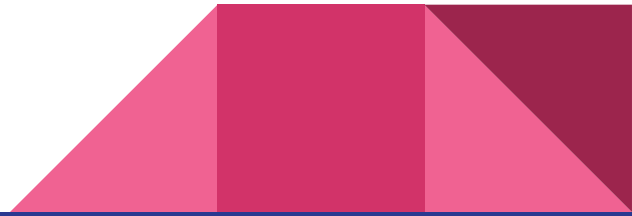
- The case study is set in Toledo, Ohio
- The prevailing rate for rides from the airport to downtown is $25
- The prevailing wage that drivers are used to earning for this trip is $19
- The match rate is only 60%
- CAC for new drivers is roughly $500
- CAC for new riders is on the order of $10 to $20

- Drivers drive roughly 100 rides/month, while rider requests 1 ride/month on average.

Case study question

Problem Statement

Maximize net revenue for Lyft's ride-scheduling feature in Toledo, Ohio within the first 12 months of launch by optimizing pricing strategy for the airport to downtown route.



Assumptions- Case 1

For calculation purposes following assumptions have been made:

1. CAC for rider: $15
2. Number of ride requests in a month: 1667
3. As a driver is expected to complete 100 rides/month. The total number of rides completed(calculated based on match rate) is divided by 100 to calculate the number of drivers required.
4. For Scenario B i.e. when Lyft's payout is reduced from $6 to $3, the CAC and churn rate have been taken as same as the ones taken in scenario A.

Data and Analysis- Case 1

- A pricing experiment was conducted where Lyft's take was reduced from $6 to $3 per ride, resulting in a increase in match rate from 60% to 93%

- Let’s compare the 2 scenarios:
  - **Scenario A**- Lyft take: $6, Driver payout: $19
  - **Scenario B**- Lyft take: $3, Driver payout: $22

Data and Analysis- Case 1

Calculation Model

Scenario A(Prevailing Rate):
Driver payout is $19, Lyft's take is $6
Assumption: 1000 rides/month(1667 ride requests); based on 60% match rate

Revenue from rides/yr: (12 months) * (1000 rides/month) * ($25 per ride) = **$300,000**

Rider acquisition cost/yr: If there are 1667 riders requesting rides in a month, 1000 riders (60%) have a churn rate of 10% per month, and 667 riders have a churn rate of 33% per month due to "failed to find driver" events.

Based on this criteria, the total number of riders lost in a month would be:

For 1000 riders with a 10% churn rate: 1000 * 10% = 100 riders

For 667 riders with a 33% churn rate: 667 * 33% = 221 riders

Rider acquisition cost= (12 months) * (Riders lost) * (CAC of $15)= (12)*(321)*($15)= **$57,780**

Data and Analysis- Case 1

Driver acquisition cost/yr:

Drivers lost: If the total number of drivers is 10 and the churn rate is 20%, then the number of drivers lost would be 2.

Driver acquisition cost= (12 months) * (Drivers lost) * (CAC of $500 per driver) = (12)*(2)*($500)= **$12,000**

Driver pay-out/yr: (12)*(Number of rides/month)*(19)= (12)*(1000)*(19)= **$228,000**

Yearly Net revenue for Scenario A: **Revenue from rides - Rider acquisition cost - Driver acquisition cost - Driver pay-out =** $300,000 - $57,780 - $12,000 - $228,000 = **$2220**

Data and Analysis- Case 1

Scenario B:
Driver payout is $22, Lyft's take is $3
Assumption: 1550 rides/month(1667 ride requests); based on 93% match rate

Revenue from rides/yr: (12 months) * (1550 rides/month) * ($25 per ride) = **$465,000**

Rider acquisition cost/yr: If there are 1667 riders in a month,1550 riders (93%) have a churn rate of 10% per month, and 117 riders have a churn rate of 33% per month due to "failed to find driver" events.

Based on this criteria, the total number of riders lost in a month would be:

For 1550 riders with a 10% churn rate: 1550 * 10% = 155 riders

For 117 riders with a 33% churn rate: 117* 33% = 39 riders

Rider acquisition cost= (12 months) * (Riders lost) * (CAC of $15)= (12)*(194)*($15)= **$34,920**

Data and Analysis- Case 1

Driver acquisition cost/yr:

Drivers lost: If the total number of drivers is 16 and the churn rate is 20%, then the number of drivers lost would be 3.

Driver acquisition cost= (12 months) * (Drivers lost) * (CAC of $500 per driver) = (12)*(3)*($500)= **$18,000**

Driver pay-ou/yrt: (12)*(Number of rides/month)*(22)= (12)*(1550)*(22)= **$409,200**

Yearly Net revenue for Scenario B: **Revenue from rides - Rider acquisition cost - Driver acquisition cost - Driver pay-out =** $465,000 - $34,920 - $18,000 - $409,200 = **$2880**

Results- Case 1

Costs/Revenue Stream per year	Scenario A	Scenario B
Revenue from rides	$300,000	$465,000
Rider acquisition cost	-$57,600	-$34,920
Driver acquisition cost	-$12,000	-$18,000
Driver payout	-$228,000	-$409,200
Total Net Revenue	$2,400	$2880

Observations- Case 1

- Increasing the driver payout immediately improves the match rate and hence as compared to Scenario A:
  1. Increases the revenue coming from rides by **~55%**
  2. Decreases the cost of acquiring new riders by **~40%**
  3. Increases the amount spent to acquire new drivers by **~50%**.

- The total revenue of Scenario B is greater than scenario A.

Assumptions- Case 2

In previous case, CAC and churn rate for riders and drivers were assumed to be constant, which is unlikely in reality.

When match rate increases, CAC and churn rate for drivers and riders is likely to decrease. To reflect this, let's make following assumptions for Scenario B while keeping Scenario A(i.e. Prevailing rate) same:

CAC for driver: $425

CAC for rider: $12

Churn rate for driver: 15%

Churn rate for riders: 30% for riders which experienced failed requests and 8% for riders who didn't

Data and Analysis- Case 2

Scenario A(Prevailing Rate): Driver payout is $19, Lyft's take is $6
Assumption: 1000 rides/month(1667 ride requests); based on 60% match rate

Revenue from rides: (12 months) * (1000 rides/month) * ($25 per ride) = **$300,000**

Rider acquisition cost: (12 months) * (Riders lost) * (CAC of $15)= (12)*((1000 * 10%)+(667*33%))*($15)= **$57,780**

Driver acquisition cost: (12 months) * (Drivers lost) * (CAC of $500 per driver) = (12)*(20%*10)*($500)= **$12,000**

Driver pay-out: (12)*(Number of rides/month)*(19)= (12)*(1000)*(19)= **$228,000**

Net revenue for Scenario A: **Revenue from rides - Rider acquisition cost - Driver acquisition cost - Driver pay-out = $300,000 - $57,780 - $12,000 - $228,000 = $2220**

Data and Analysis- Case 2

Scenario B: Driver payout is $22, Lyft's take is $3
Assumption: 1550 rides/month(1667 ride requests); based on 93% match rate

Revenue from rides: (12 months) * (1550 rides/month) * ($25 per ride) = **$465,000**

Rider acquisition cost: (12 months) * (Riders lost) * (CAC of $15)= (12)*((1550 * 8%)+(667*30%))*($12)= **$22,896**

Driver acquisition cost: (12 months) * (Drivers lost) * (CAC of $500 per driver) = (12)*(20%*10)*($425)= **$10,200**

Driver pay-out: (12)*(Number of rides/month)*(19)= (12)*(1000)*(19)= **$409,200**

Net revenue for Scenario A: **Revenue from rides - Rider acquisition cost - Driver acquisition cost - Driver pay-out = $465,000 - $22,896 - $10,200 - $409,200 = $22,704**

Results- Case 2

Costs/Revenue Stream per year	Scenario A	Scenario B
Revenue from rides	$300,000	$465,000
Rider acquisition cost	-$57,600	-$22,896
Driver acquisition cost	-$12,000	-$10,200
Driver payout	-$228,000	-$409,200
Total Net Revenue	$2,400	$22,704

Observations- Case 2

- Increasing the driver payout immediately improves the match rate and hence as compared to Scenario A:
  1. Increases the revenue coming from rides by **~55%**
  2. Decreases the cost of acquiring new riders by **~60%**
  3. Decreases the amount spent to acquire new drivers by **~15%**.

- The total revenue of Scenario B is significantly greater than scenario A.

Key Takeaways

1. Increasing driver payout and match rate can lead to a significant increase in net revenue, as seen from the calculations in the case study.
2. Realistic assumptions for costs and churn rates for drivers and riders can further support the conclusion that increasing driver payout and match rate can lead to improved revenue.
3. It is important to consider other factors such as pricing strategy and the overall market conditions while making business decisions. Additionally, more data and analysis may be needed to make accurate predictions and identify potential challenges.

Conclusion

Reducing Lyft's take and increasing driver's payout is the optimal solution for maximizing revenue for the first 12 months after launch in Toledo. However, additional research and experiments can be done to further optimize the pricing strategy.