New Market Launch

Executive Summary

Lyft is launching a ride-scheduling feature in Toledo, Ohio. The goal is to maximize the company's net revenue for this route in Toledo for the next 12 months. The initial project launched at $25 per ride, $19 driver wage, at $6 profit to Lyft. Based on subsequent experimentation data, the proposed solution to the question "how much more or less do you pay drivers per trip (by changing Lyft's take)" is $2 more than at the launch wage. Setting the prevailing rate to $25 per ride, $21 driver wage, at $4 profit maximizes both revenue over 12 months and reputation due to lower churn/higher match rate for both drivers and riders.

Introduction

It's important to understand how sensitive riders are to changes in price. Since we cannot charge riders more than the prevailing rate of $25, we need to analyze the impact of price changes within that limit. By conducting small-scale pricing experiments, we can observe how riders respond to different price points and estimate the price elasticity of demand.

The prevailing wage for drivers on this route is $19/ride. However, with a match rate of only 60%, many riders are not finding rides at this rate. To increase match rate, we may need to adjust driver incentives.

Churn rates play a significant role in the profitability of the route. Riders who experience "failed to find driver" events have a higher churn rate (33% monthly) compared to riders who don't (10% monthly). By improving the match rate and reducing the occurrence of failed rides, we can reduce rider churn and increase the potential for long-term revenue.

Background:

The prevailing rate that people are used to paying for rides from the airport to downtown (either direction, one way) is $25. The prevailing wage that drivers are used to earning for this trip is $19.

Lyft launches with exactly this price: $25 per ride charged to the rider, $19 per ride paid to the driver. Only 60 or so of every 100 rides requested are finding a driver at this price.

Here's the current unit economics for each side:

Drivers:

Customer acquisition cost (CAC) of a new working driver is between $400 - $600. CAC is sensitive to the rate of acquisition since channels are only so deep.

At the prevailing wage, drivers have a 5% monthly churn rate and complete 100 rides / month.

Riders:

CAC of a new rider is $10 to $20 (similar to driver CAC it's sensitive to the rate of acquisition, since existing marketing channels are only so deep).

Each rider requests 1 ride / month on average.

Churn:

Riders who don't experience a "failed to find driver" event churn at 10% monthly, but riders who experience one or more "failed to find driver" events churn at 33% monthly.

One pricing experiment so far: when Lyft reduced its take from $6/ride to $3/ride across the board for a few weeks, match rates rose nearly instantly from 60% to roughly 93%.

Analysis:

Based on the initial launch of $25 per ride, $19 driver wage, at $6 profit:

$25 - $19 = $6

60/100 matches (60%)

$6 * 60 = $360 we know we made this much. Assuming if matches continue at this rate we will make $360/m

CAC (Assuming this stays static every month)

Driver CAC $400-$600 assuming average of $500

5% churn * 100 = 5 drivers/month *$500 = ($2,500) loss/per month

Rider CAC $10-$20 assuming average of $15

40 riders no ride: 13 churned(lose CAC forever), 27 stayed but no ride(initial CAC lost and will never find a match)

40 * $15 = ($600) will always lose $600 from this group each month

60 riders who did ride: 6 still churned (lose CAC but made $6), 54 stayed and found a ride (lose CAC initially but should be retained as return riders)

60 * $15 = ($900) CAC

6 * $15 = ($90) + [6 * $6Profit] = ($54) lost $54 on this group, and they're gone

54 * 15 = ($810)CAC + [54 * $6]Profit = ($486) - ($54) = ($540) will always lose $540 from this group each month. (Not accounting for retained riders).

($540) + ($600) = ($1,140) CAC lost from both groups each month

12 Months

(Profit from matches - Rider CAC) * 12 months - Driver CAC = 12 Month Revenue

($360 - ($1,140)) * 12 - ($2,500) = ($11,860)

Using the above information and formulas, we solve for $2.80, $3, $4, $5, $6 and $7 in order of profitability:

$25 per ride, $21 driver wage, at $4 profit - ($9,352)

$25 per ride, $20 driver wage, at $5 profit - ($11,160)

$25 per ride, $22.20 driver wage, at $2.80 profit - ($11,280)

$25 per ride, $22 driver wage, at $3 profit - ($11,804)

$25 per ride, $19 driver wage, at $6 profit - ($11,860)

$25 per ride, $18 driver wage, at $7 profit - ($13,268)

Important aspects to consider:

At increased driver wage we can assume driver churn rate is lower since matches are higher and ride price is fixed. Assuming at $6 driver churn is 5% and $2.80 (the number we hit 100% match rate) the driver churn is 0%, then at roughly each dollar Lyft allocates in favor of driver wage, the driver churn decreases by 1.6%. Assuming this works in the opposite direction as well, for every additional dollar Lyft takes and driver wage decreases, the driver churn increases by 1.6%. This trend is in tandem with increments/decrements of 11% for match rates based on dollar take.

Anything after 2.80 is a diminishing return as that's the number that nets a 100% match rate.

Conclusion:

Setting the prevailing rate to $25 per ride, $21 driver wage, at $4 profit maximizes both revenue over 12 months and reputation due to lower churn rate/higher match rate for both drivers and riders.

Based on these considerations, the recommended approach would be to lower Lyft's take per ride to increase driver earnings and incentivize more drivers to accept rides. However, the specific amount of change would require further analysis and experimentation. Gradually reducing Lyft's take while monitoring the match rate, driver supply, and rider demand would allow us to find the optimal balance that maximizes net revenue over the next 12 months. It's important to strike a balance where driver earnings are attractive enough to ensure driver supply while keeping the price competitive for riders.