# Pyber Analysis

## Project Overview

summarizes how the data differs by city type and how those differences can be used by decision-makers at PyBer.

The purpose of the project is to analyze ridesharing data accumulated at PyBer to determine whether actions can be taken to improve access to ride sharing services and better determine rideshare affordability for underserved neighborhoods.

The Pyber data includes total rides, total drivers, total fares, average fare per ride and driver, and total fare. The data is filterable by city type: Urban, Suburban, and Rural. As the data is proprietary, it is assumed to be accurate.

## Results

Chart, line chart

Description automatically generated

The chart above illustrates, as expected, that Urban Total Fares are greater throughout the period reviewed. As we analyze fares with respect to the number of drivers and rides in each city type, we can determine the differences in ride-sharing data among the different city types.

The pie charts below reflect the proportion of city types for Total Rides, Total Drivers, and Total Fares.

Chart, pie chart

Description automatically generated Chart, pie chart

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Urban Rides and Fares comprise about two-thirds of their respective categories. However, Urban drivers account for a larger proportion of total drivers. This would mean that each Urban driver gets a thinner slice of the ride and fare pies then their Suburban and Rural counterparts.

Table

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As the pie charts suggested, Average Fares per Ride and Driver for Urban drivers are smaller than for Rural drivers. Suburban Average Fares fall in between.

While

## Summary

summarizing three business recommendations to the CEO for addressing any disparities among the city types.

### Recommendations

1. Conduct a survey of drivers on their reasons for choosing ride sharing as a occupation.
2. Gather data on the number of hours driven
3. Gather data on wait times for riders and reasons for ride.
4. Conduct a survey of riders on their satisfaction with access to and the cost of ride sharing.

Chart, scatter chart

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NOTE: Circle size correlates with driver count per city

Cities – more rides for lower average fares

Omar has asked you to create a bubble chart that showcases the average fare versus the total number of rides with bubble size based on the average number of drivers for each city type: urban, suburban, and rural.

Chart, box and whisker chart

Description automatically generated

Looking at Urban box-and-whisker plot, we can see:

at least one outlier, which is close to 40. This our maximum data point, 39.

The minimum is 12.

The median is 24 or the 50th percentile.

The standard deviation is about 5 because the box upper and lower boundaries represent the upper and lower quartiles.

If we compare the average number of rides between each city type, we'll notice that the average number of rides in the rural cities is about 3.5 and 2.5 times lower than urban and suburban cities, respectively.

There is one outlier in the urban ride count data.

Chart, box and whisker chart

Description automatically generated

From the combined box-and-whisker plots, we see that there are no outliers. However, the average fare for rides in the rural cities is about $11 and $5 more per ride than the urban and suburban cities, respectively.

In rural cities, there are less rides, but on for greater distances when compared to suburban, and more so urban cities. This is likely because in urban areas, the population significantly exceeds that of suburban and rural cities. Furthermore, it is likely that urban riders are less prone to drive their own cars into the city, wanting to avoid parking fees and well as the stress on inner city driving.

Why do you think there is such a big difference? By looking at the number of riders for each city, can you get a sense of the overall revenue?

Chart, box and whisker chart

Description automatically generated

The average number of drivers in rural cities is nine to four times less per city than in urban and suburban cities, respectively. Considering that rural areas have nine time less drivers, but only 3.5 less rides with about 1.4 larger fares, it would appear the rural drivers generate more revenue per driver than urban drivers – perhaps as much as three times as much.

By looking at the driver count data and fare data, can you get a sense of the overall revenue?

Chart, pie chart

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Chart, line chart

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