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Northwestern University Data Science Boot Camp

Homework 5 – Pyber

In reviewing the results of my analysis of the Pyber ride sharing data, all of my conclusions show that the underlying law of supply and demand holds true. Ride-share services are needed most where there are many people, particularly people who do not have their own vehicles. Urban areas therefore make up the greatest share of business both in terms of number of rides and in total fares paid.

Rural markets make up the smallest portion of our business by all metrics: driver count, fare count, and total revenues. Rural areas by definition are more spread out and have a lower population density. While this means that rural cities have the fewest fares and drivers, they also have the highest average fare per trip. This may be due to the trips being longer-distance, less competition between drivers allowing higher fares, or a combination of the two factors. This is shown in our breakdown of overall metrics, where rural drivers make up only 2.6% of the workforce but bring in 6.8% of the total fares.

Conversely, urban markets have a much higher total number of rides but a lower average fare per ride. These markets also have many more drivers, to the point where some cities have more drivers than they had total rides during the recording period. This abundance of drivers means that customers pay lower fares but that each driver makes less money.

Suburban markets form the middle ground between rural and urban markets in all metrics, which is to be expected as suburban areas are a middle ground between rural and urban municipalities in terms of population density and sprawl.