# Pyber Observable Trends

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* [According to the USDA](#Usdalink)\* "Metro/urban areas can be defined using several criteria. Once this is done, nonmetro/rural is then defined by exclusion -- any area that is not metro/urban is nonmetro/rural”, “The Census Bureau’s urban areas represent densely developed territory, and encompass residential, commercial, and other non-residential urban land uses.” From this we can infer that our fares are likely based on distance between destinations. Rural areas take fewer rides (population density), with rides of a greater fare (greater distance between destinations). If we increased the ride duration bias within our fare calculations, we may be able to squeeze higher fares from urban customers. This may be a good strategy in urban locations during periods when driver count does not support demand. This would subsidize drivers losing rides, due the drive time over short distances resulting from traffic in urban areas.
* In our bubble plot, each bubble is a city with the bubble size defined by the driver count in that city. Looking at the urban city bubbles we can observe that each city has roughly the same driver count as other cities with the same total ride count. Looking at the suburban cities, we see that some cities are completing the same number of rides with much smaller driver pools. The comparison of bubble size across urban and suburban cities may indicate underutilization of drivers in urban cities. However, cities with larger driver pools in general have greater total ride counts. It’s possible that there is a driver shortage in the suburban locations. We may be able to increase the total ride count in those areas by increasing the driver count. However, we need more data for this hypothesis to be conclusive. For example: data on the utilization of drivers in urban cities through collection of ride request/acceptance data, may either confirm or deny this trend.
* There does not seem to be a definitive relationship between total rides and drive count. The only relationship that can be abstracted from the data with relative confidence is Population Density v Total Ride Count. As the density increases from rural to urban cities, the total ride count increases accordingly.

\*USDA statements regarding classification of populated areas (<https://www.nal.usda.gov/ric/what-is-rural>)