**Do taxi drivers respond to incentives?**

It has been theorized that taxi drivers have a daily or weekly monetary quota they seek to hit. Once the taxi driver hits that quota, they stop driving regardless of whether economic conditions are in favor for them to keep driving. This goes against rational economic behavior. Rational economic behavior dictates that a cab driver should keep operating if it is in his best economic interests, such as there is an increased demand for taxis and therefore the cab driver could be commanding a higher hourly wage versus when in a period of lower demand, most likely cab drivers would be earning less.

First, this report takes a look into the overview of trips taken in the city. It looks at the weekly distribution of when trips are taken, when taxis are on the road, hourly wages, as well as a taxi utilization metric. The taxi utilization metric is a taxi turnover rate – how many trips does each taxi take per hour. This analysis confirms some obvious assumptions and raises some questions. The report found that:

* Taxis are most in demand during the morning and night rush hour periods, as well as Friday nights into Saturday mornings and Saturday nights into Sunday mornings
* Taxis respond to this demand by operating the most during these time periods
* Average hourly rate does not follow any discernable pattern – some notable periods of increased wages include:
  + Late weekday nights, around 10:00 PM
  + Thursday nights between 4:00 PM and 11:00 PM
  + Saturday and Sunday early morning between 1:00 AM and 3:00 AM
  + Sunday night from 5:00 PM to Monday morning 1:00 AM
  + Monday morning between 5:00 AM and 6:00 AM
* Taxi utilization is highest:
  + Weekday mornings between 7:00 AM and 9:00 AM
  + Friday night into Saturday morning as well as Saturday night into Sunday morning – 11:00 PM to 3:00 AM

The report then approximates a supply curve of taxis on the road to see if there are more taxis on the road when the hourly wage rate for taxis is higher. The supply curve does behave as expected – linearly increasing – until around $35 dollars an hour, when it starts to taper off and decrease after. This could be due to having less data points for higher hourly wages, since for taxis, earning over $40 per hour is less common than $30-$35 per hour.

The report then looks the supply of taxis during certain time periods across the week. This is to see if the aggregate supply curve remains intact across slices of the data. The analysis shows that most of these time periods show a typical supply curve – as the hourly wage increases, the number of taxis on the road increase.