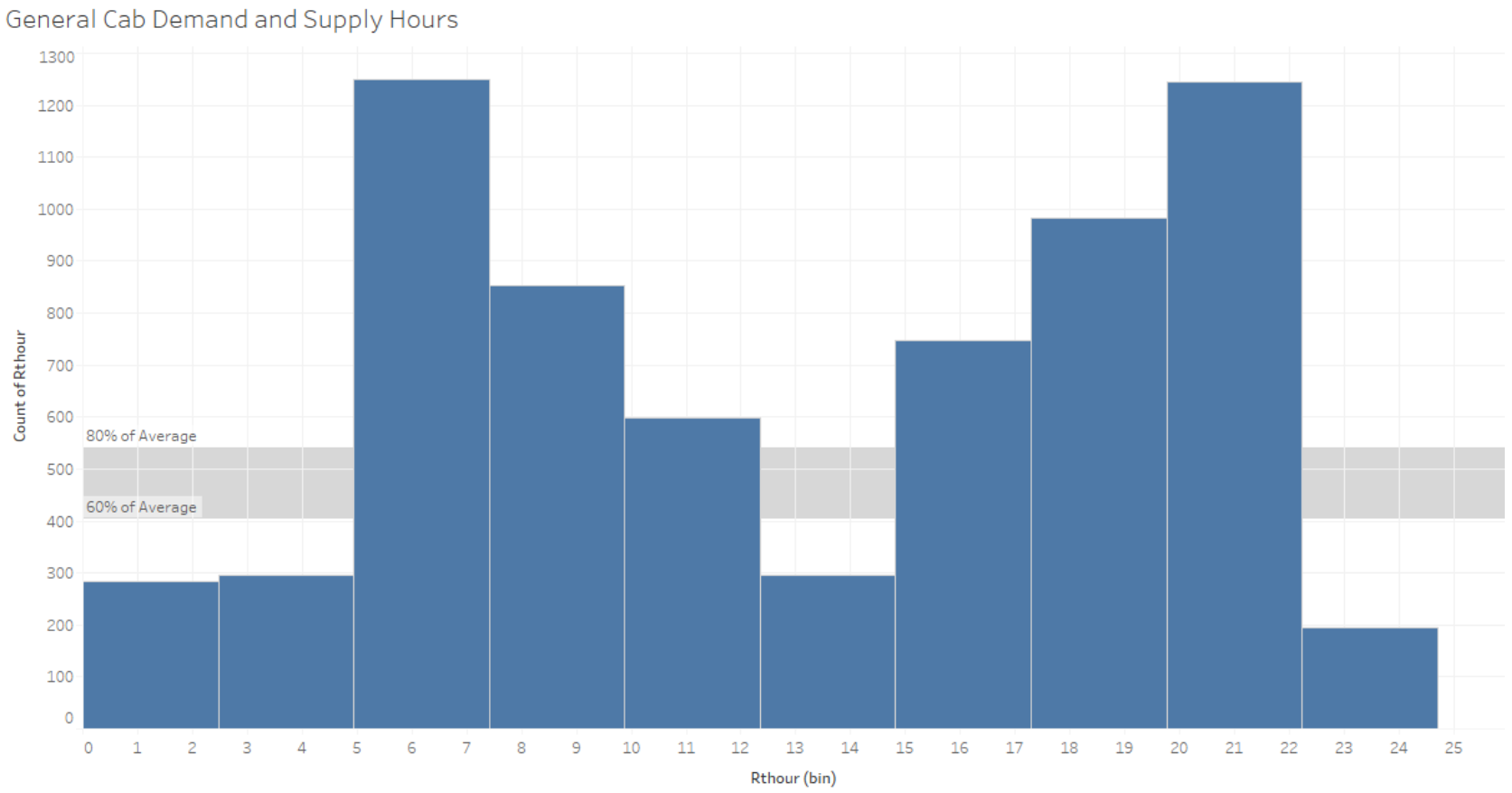
Uber Demand And Supply

The data set provided are the cab bookings between city to airport and airport to city. It consists of Requset ID's, DriverID , Cab Status , Time of booking, Pickup Point and Drop Time.

We have to check on the demand and supply of cab bookings during the peak hours and provide a solution accordingly.

Demand on Time Intervals

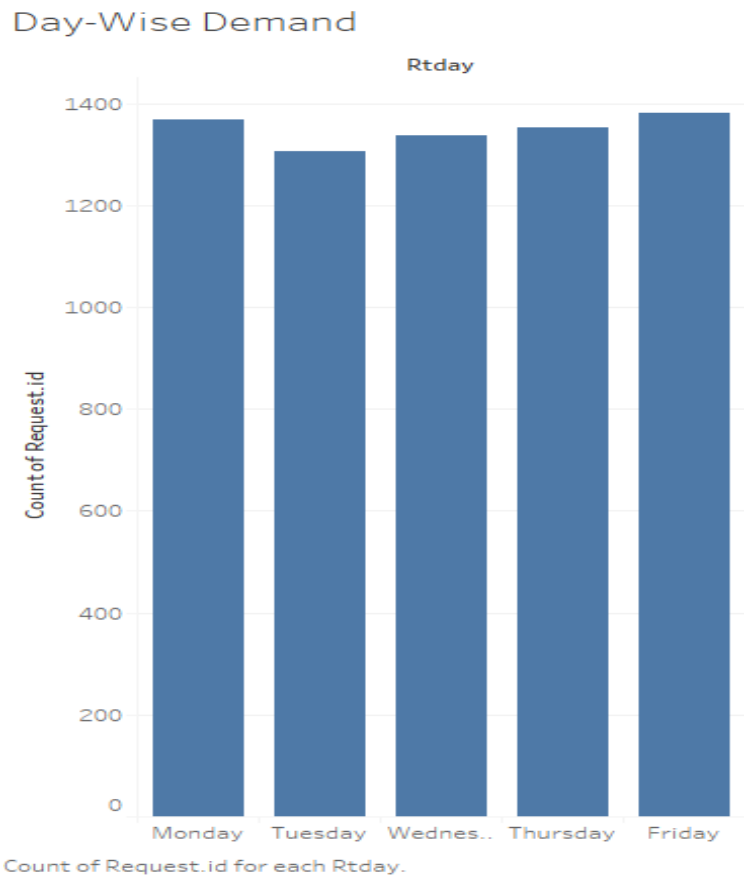


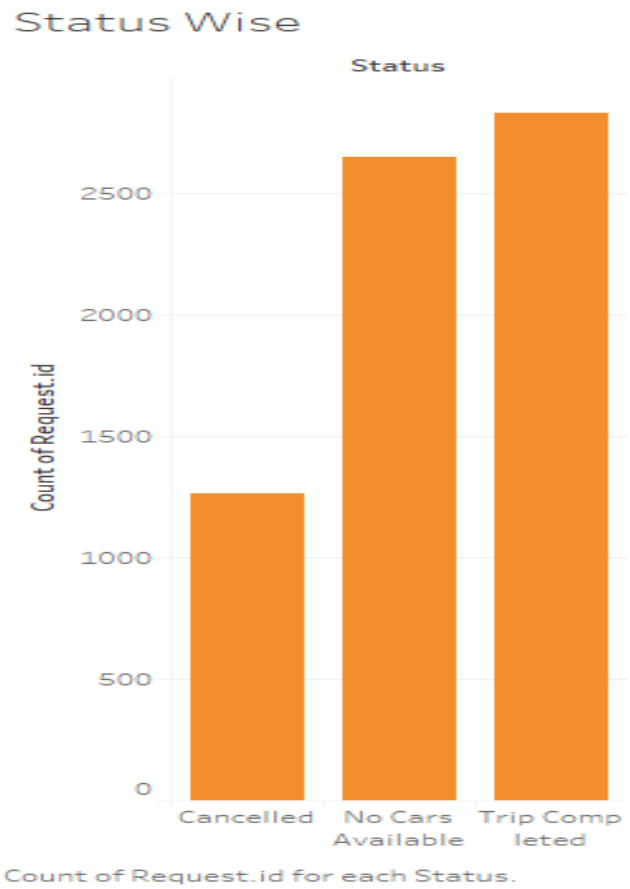
The trend of count of Rthour for Rthour (bin).

The graphical interpretation of Uber Cab booking requests:

- High demands at 5AM-12 PM
- High demands at 3 PM-10 PM
- With Maximum Bookings reaching at 5AM-7AM Morning and 8PM-10PM at night.
- With Moderate Values reaching at 8AM-12 PM Morning and 3PM-8 PM.
- Low Bookings at 12AM-5AM and 12 PM-3 PM

Day-Wise and Status-Wise Demand





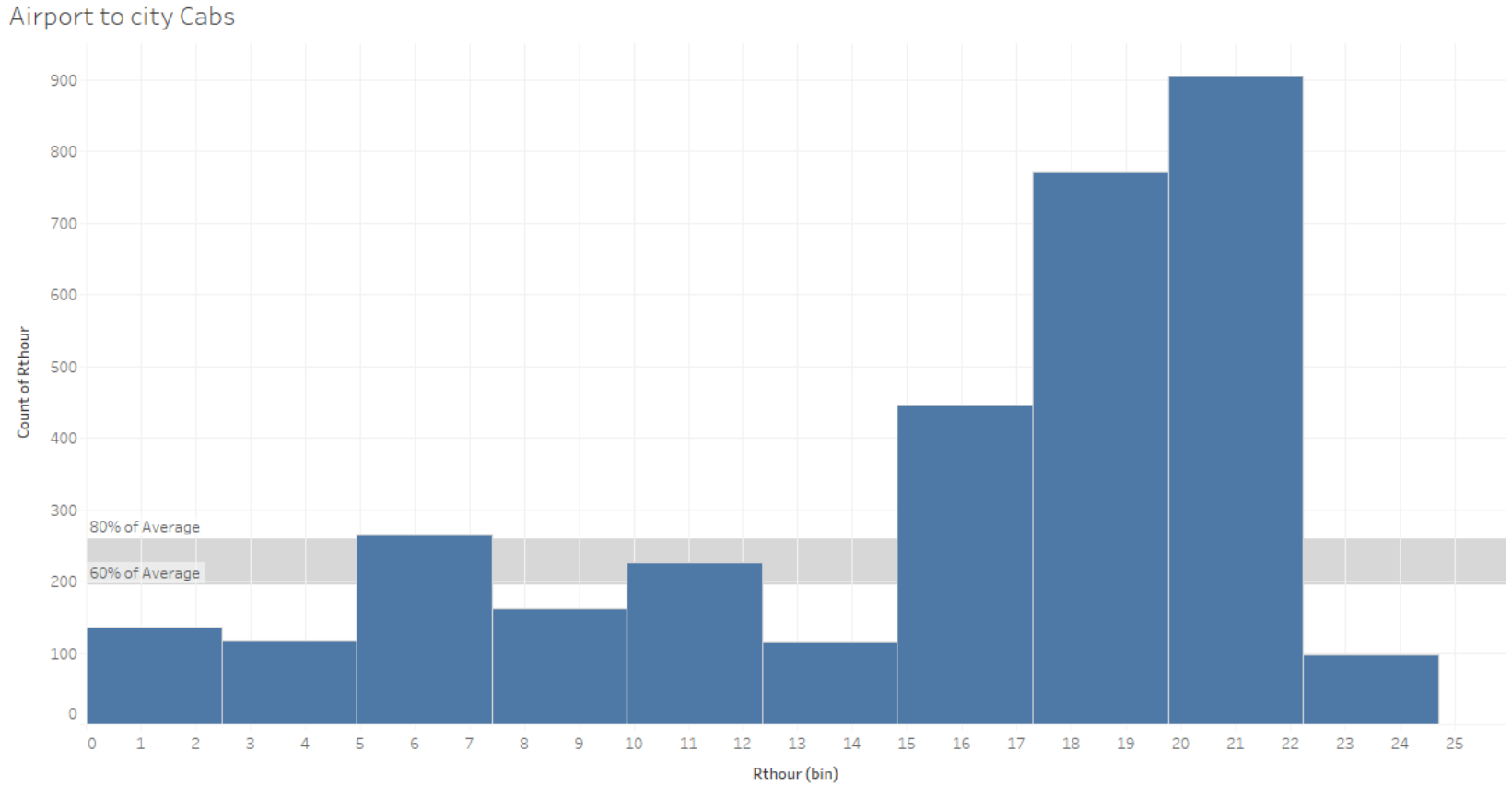
Day Wise Demand

- Every Weekday is showing approximately the same amount of bookings

Status Wise Distribution

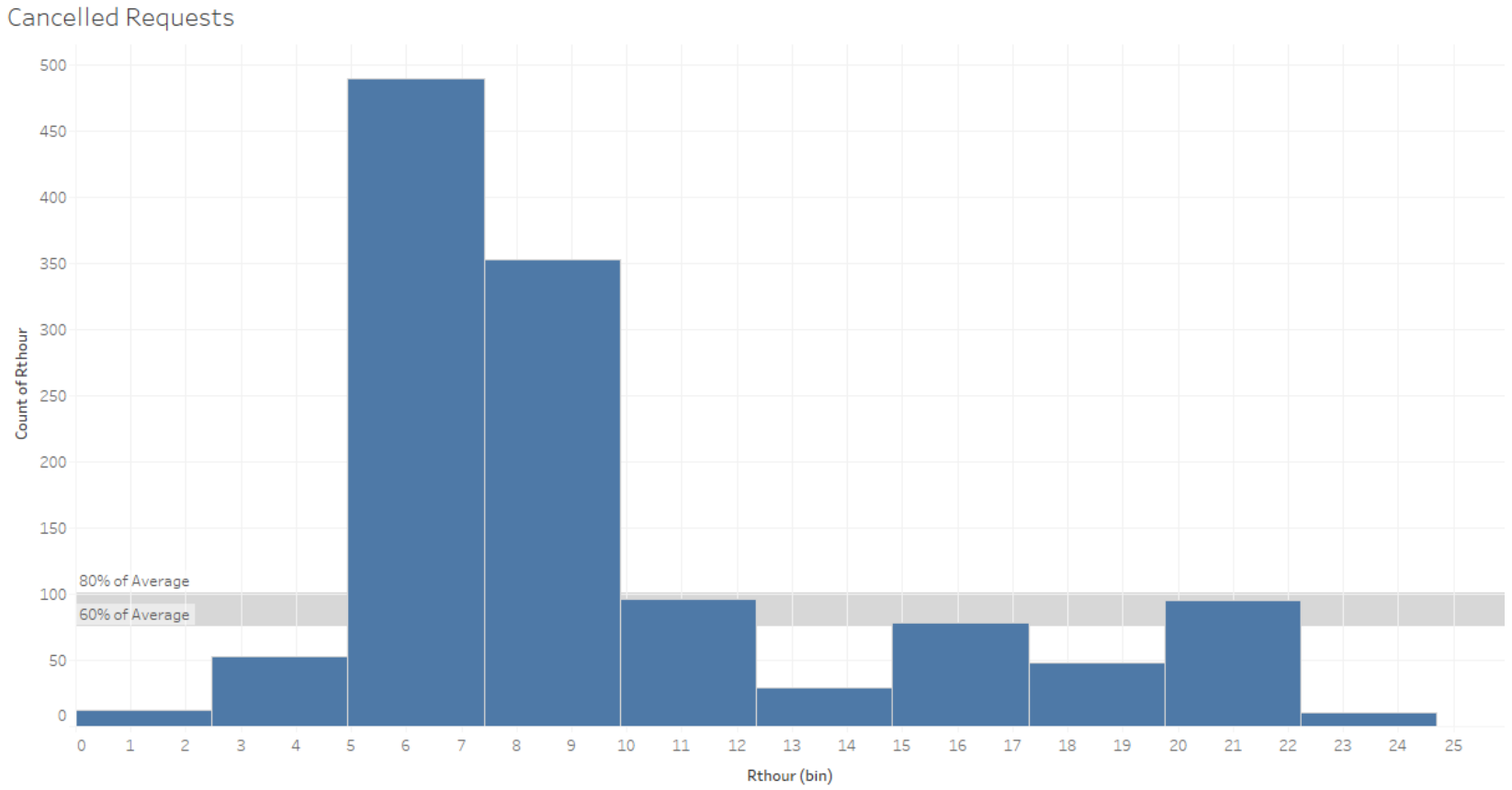
- The amount of trip completed for the bookings is approximately equal to No cars available.
- Which means bookings requests are done by the customers but they don't get the cab availability.
- Which means Uber is loosing business on the requests initiated by the customers which they are not able to fulfill because of low supply of cabs.

Airport to City Cabs



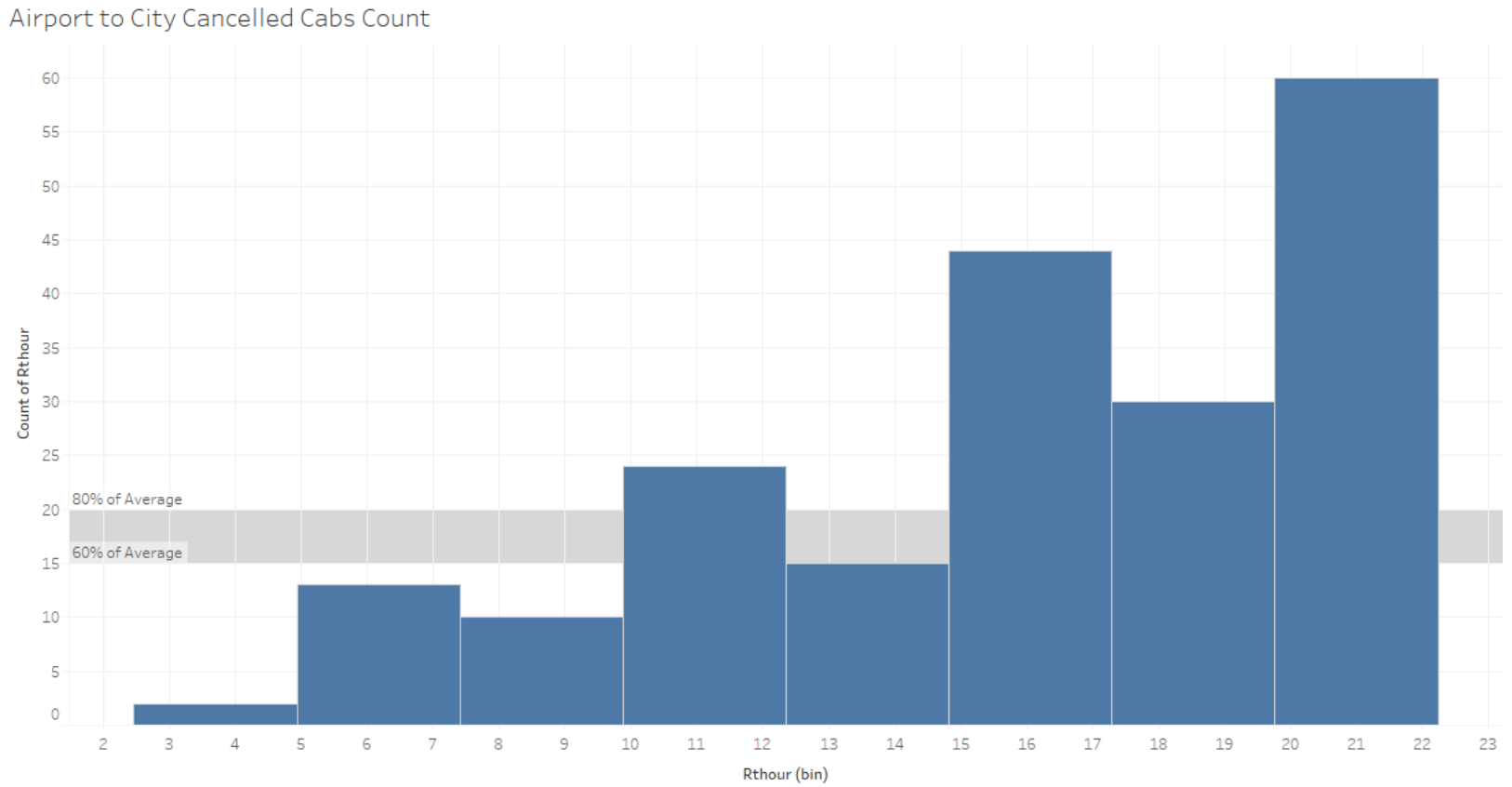
More number of Requests at 15-22 hours

Hourly Cancelled Cab Distribution at both Directions



More Cancelled requests are between 5AM-10AM Morning.

Hourly Cancelled Cab Distribution Airport to City



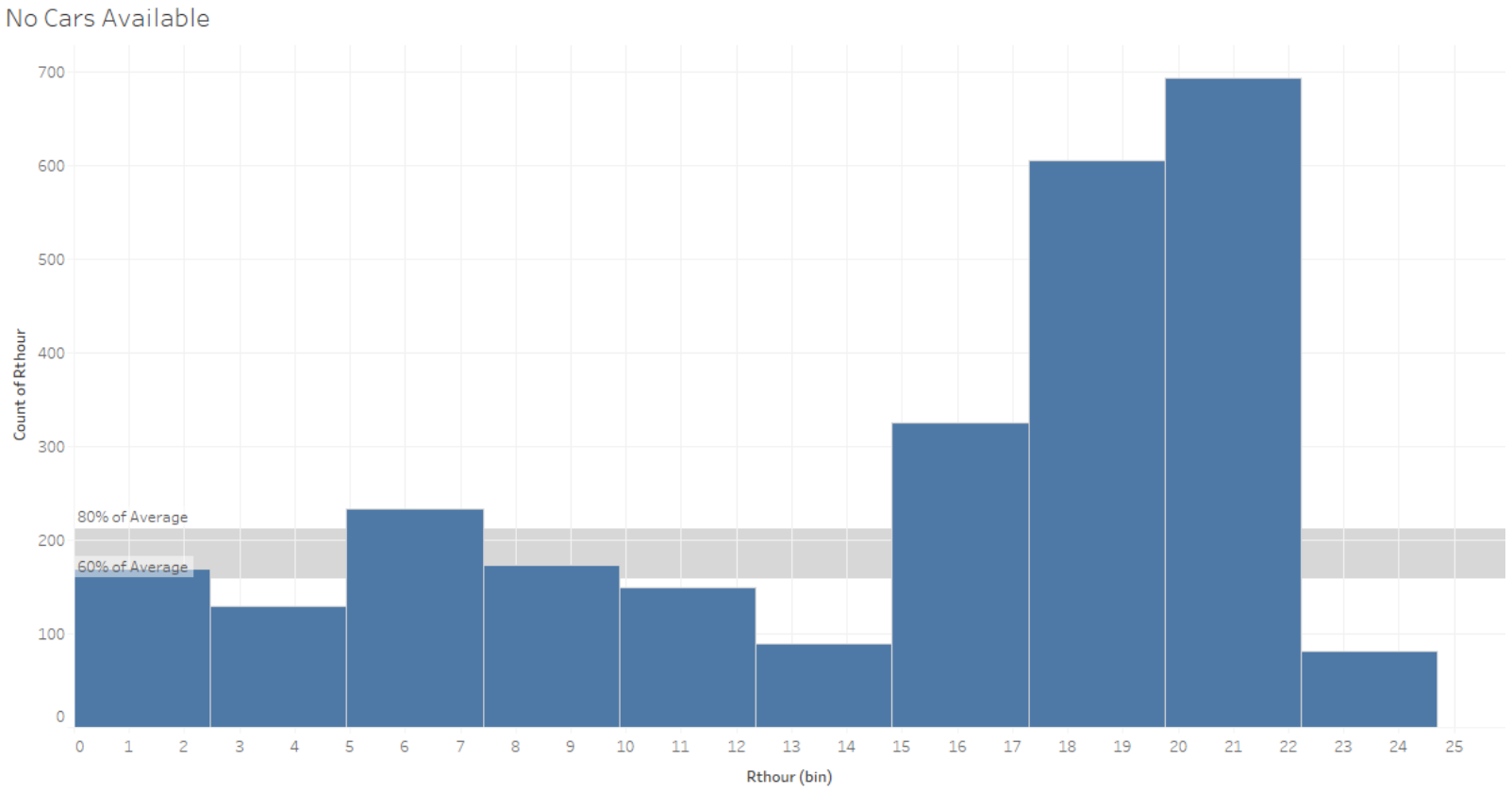
More Cancellation at 15-22 hours between airport to city.

Inference for Airport to City Cancellations.

- More number of Booking Requests at 3PM-10PM hours from airport to city.
- Most Cancelled requests are between 5AM-10AM Morning cumulatively at both directions.
- Most Cancellation between 3PM-10PM from airport to city.

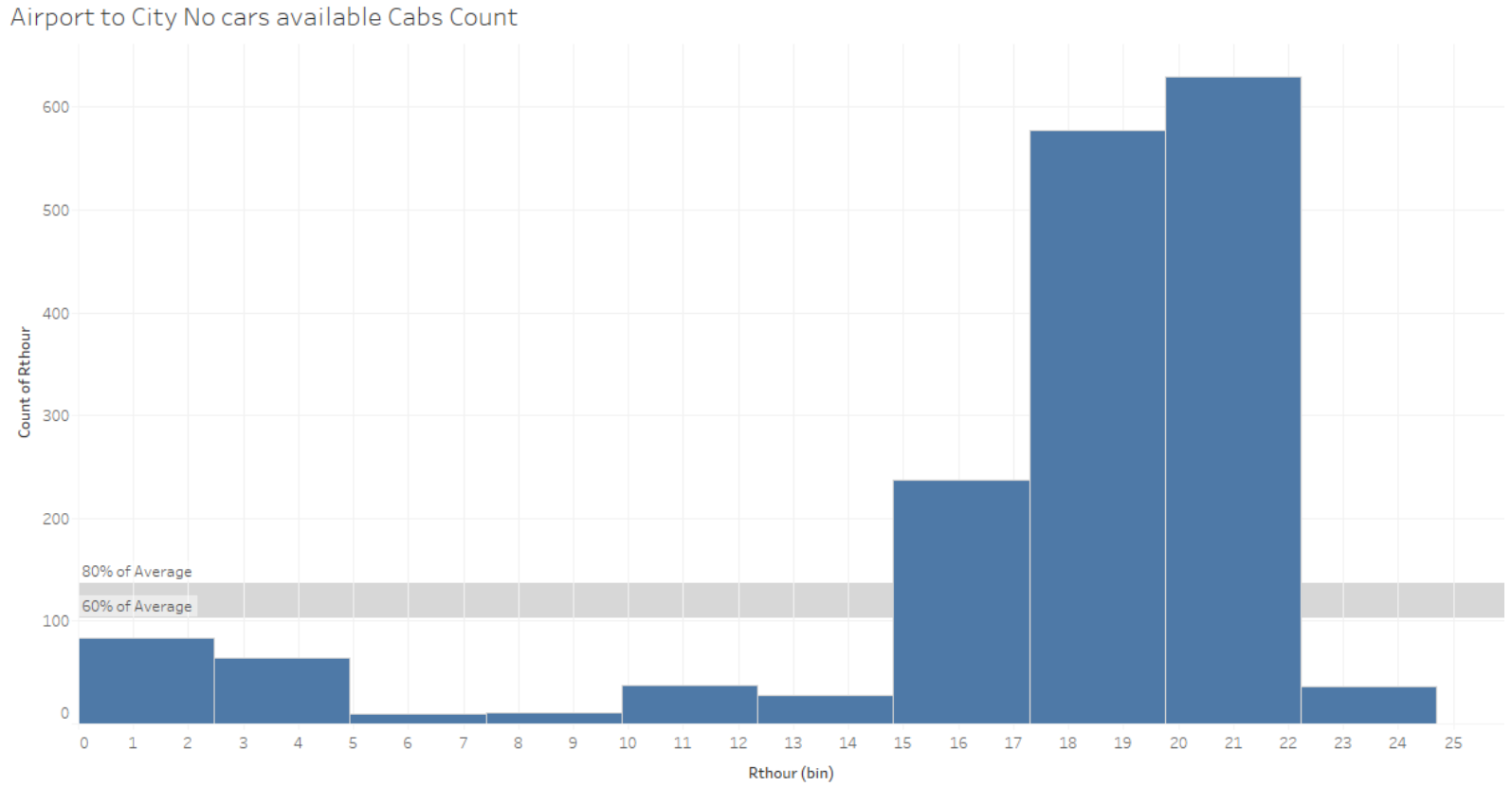
Inference: Despite of most booking requests at 3PM-10PM between airport to city Uber has maximum cancellation during this time interval between airport to city.

Hourly No Car Available Distribution at both Directions



Most No Car Available distribution between 15-22 hours.

Hourly No Car Available Distribution from Airport to City



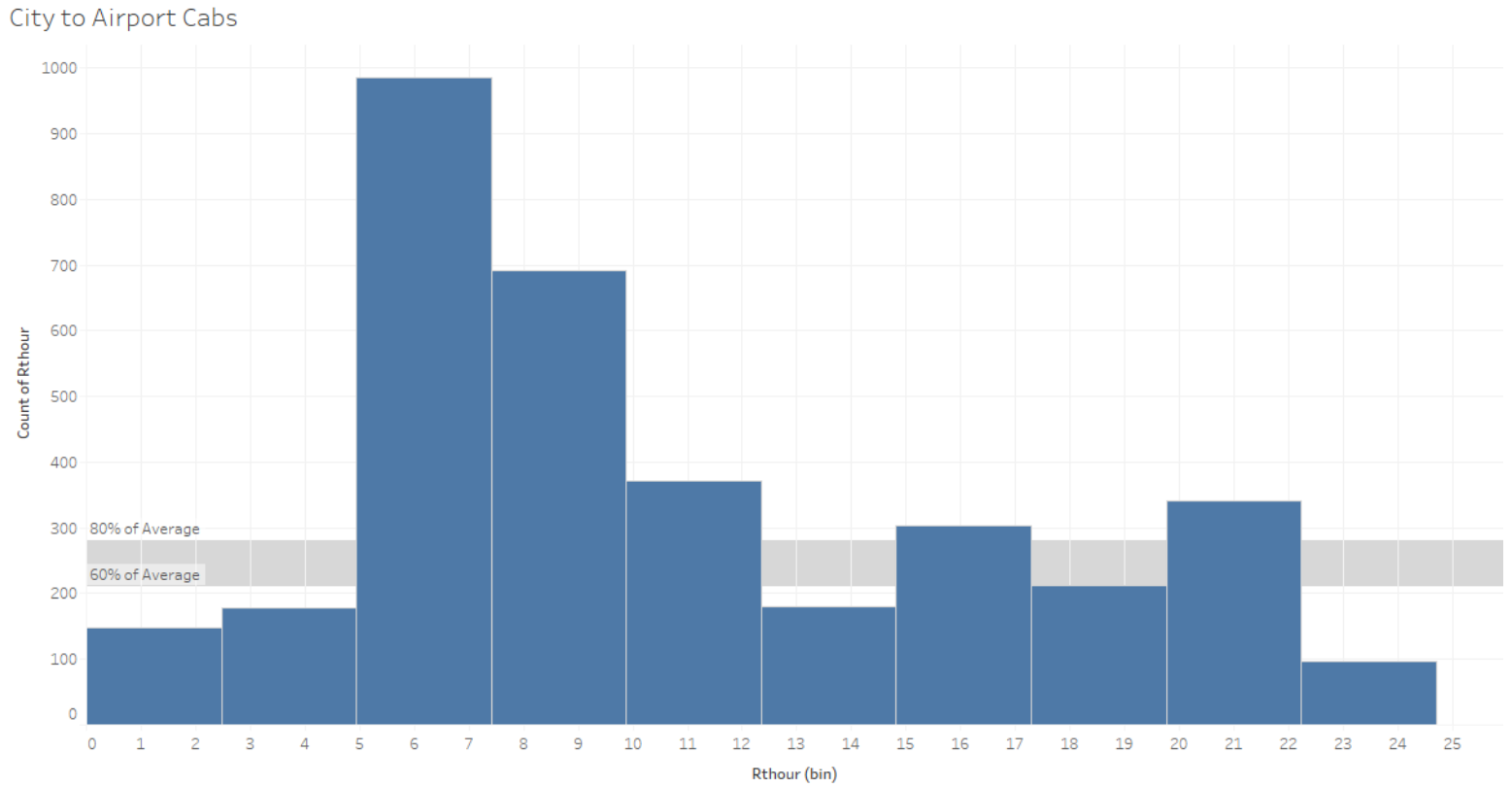
Most No Car Available distribution between 15-22 hours.

Inference for Airport to City No Cars Available

- More number of Booking Requests at 15-22 hours.
- Most No Car Available distribution between 15-22 hours at both directions
- Most No Car Available distribution between 15-22 hours from airport to city.

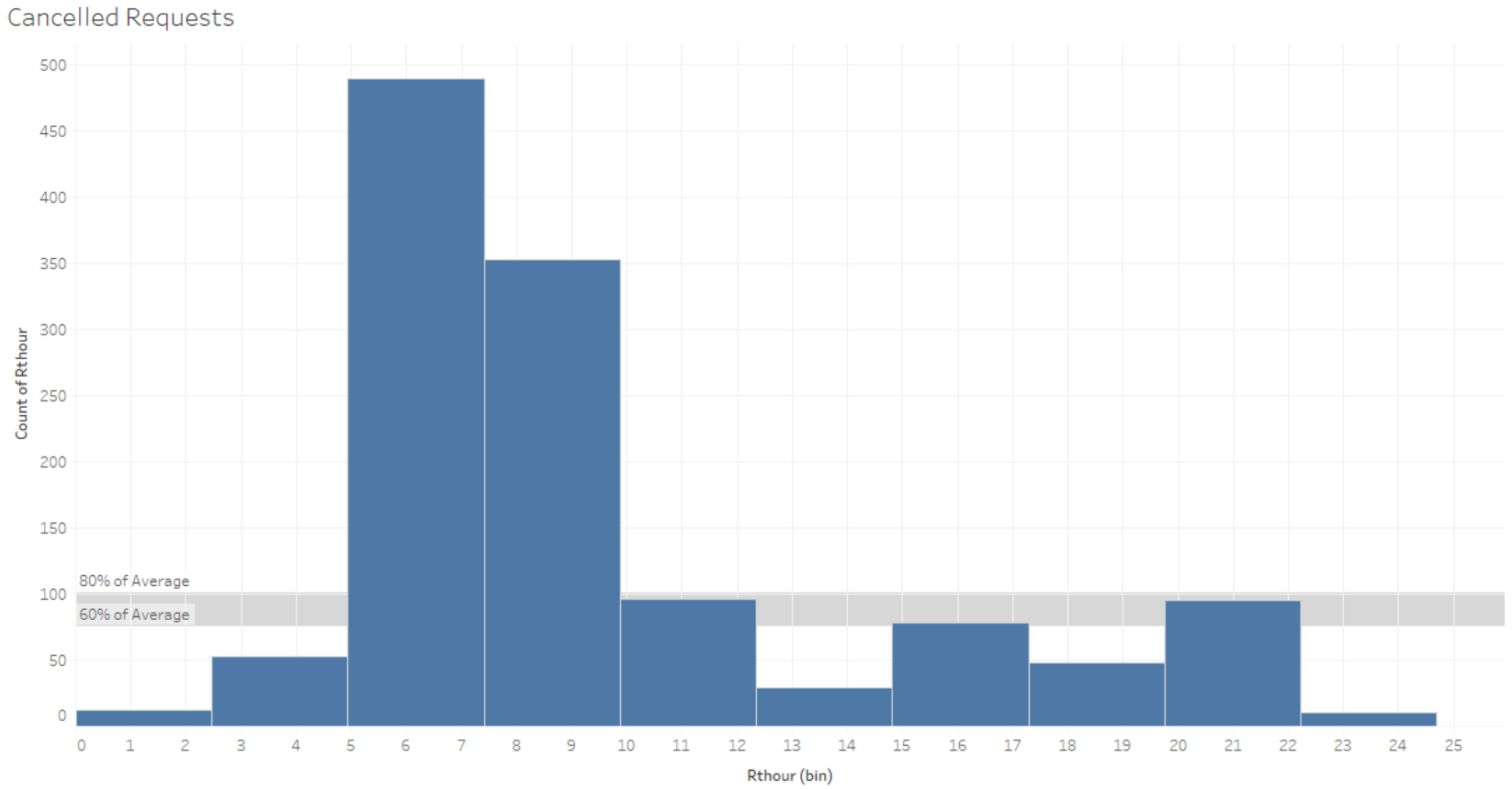
Inference: Despite of most booking requests at 15-22 hours between airport to city Uber has maximum no cars available during this time interval between airport to city.

City to Airport Cabs



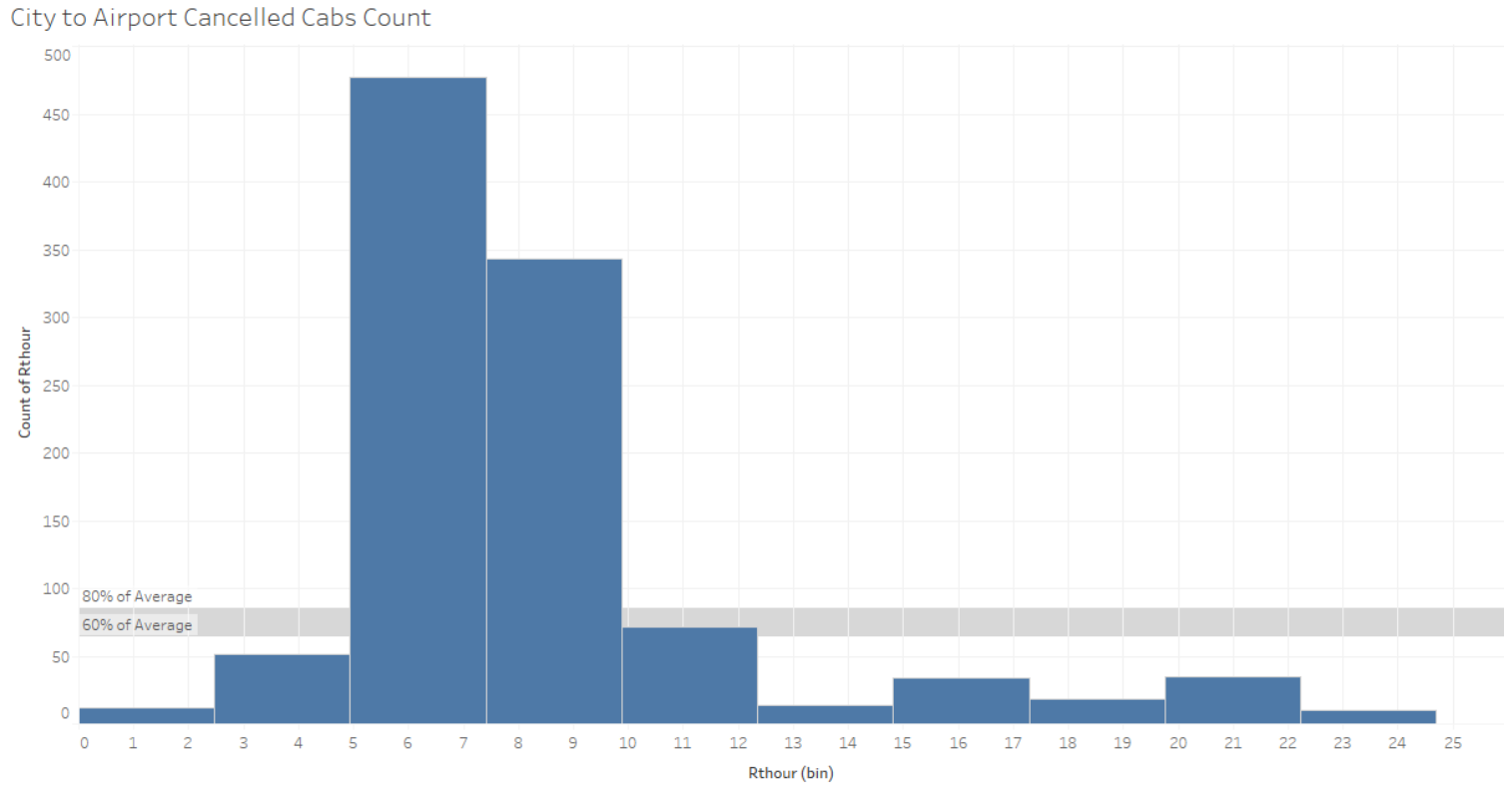
More number of Requests at 5-12 hours.

Hourly Cancelled Cab Distribution at both Directions



More Cancelled requests are between 5AM-10AM Morning.

Hourly Cancelled Cab Distribution City to Airport



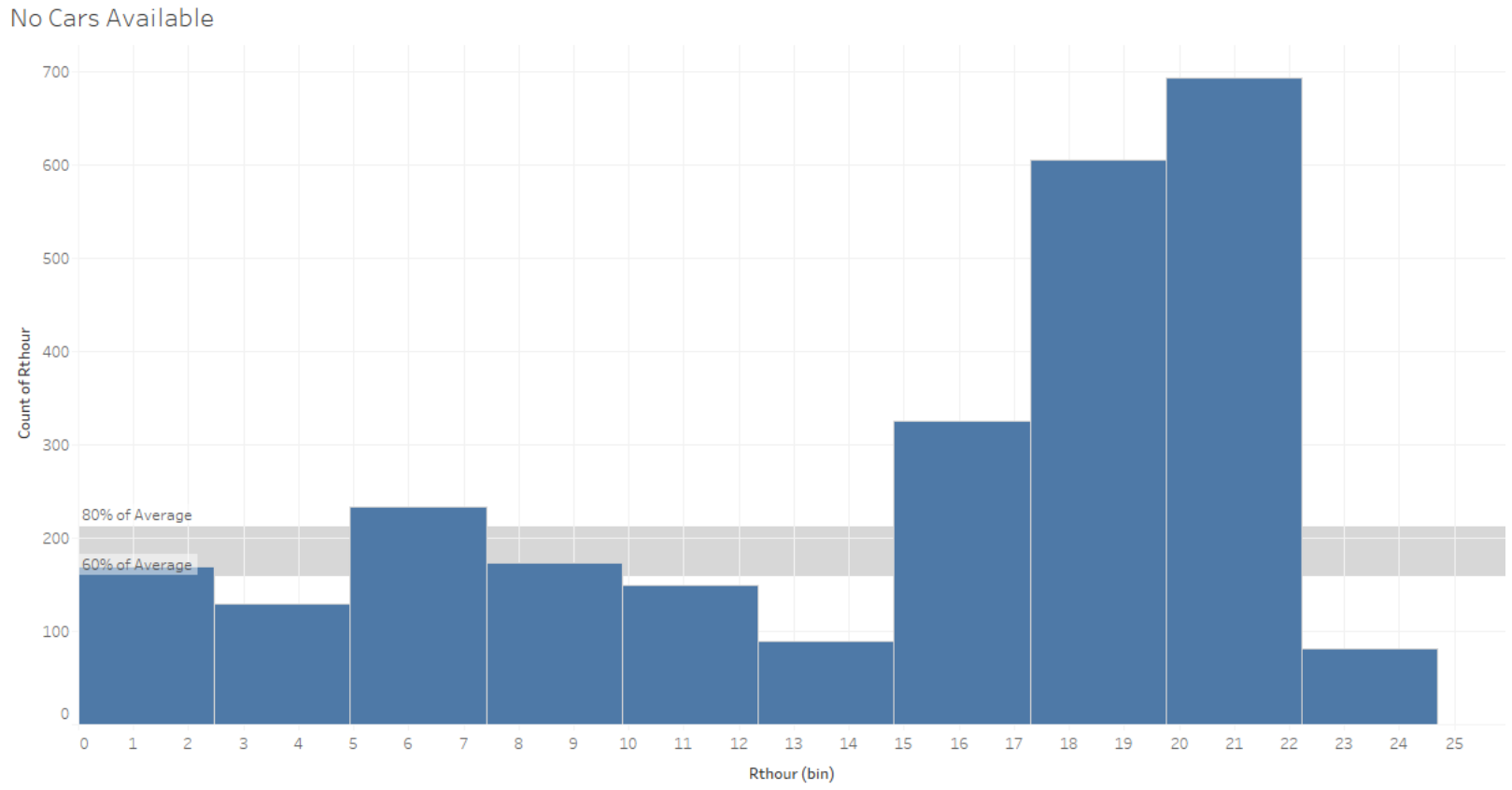
More number of cancelled cabs at 5-10 hours

Inference for City to Airport Cancellations.

- More number of Requests at 5-12 hours between city to airport.
- More Cancelled requests are between 5AM-10AM Morning at both directions.
- More number of cancelled cabs at 5-10 hours.

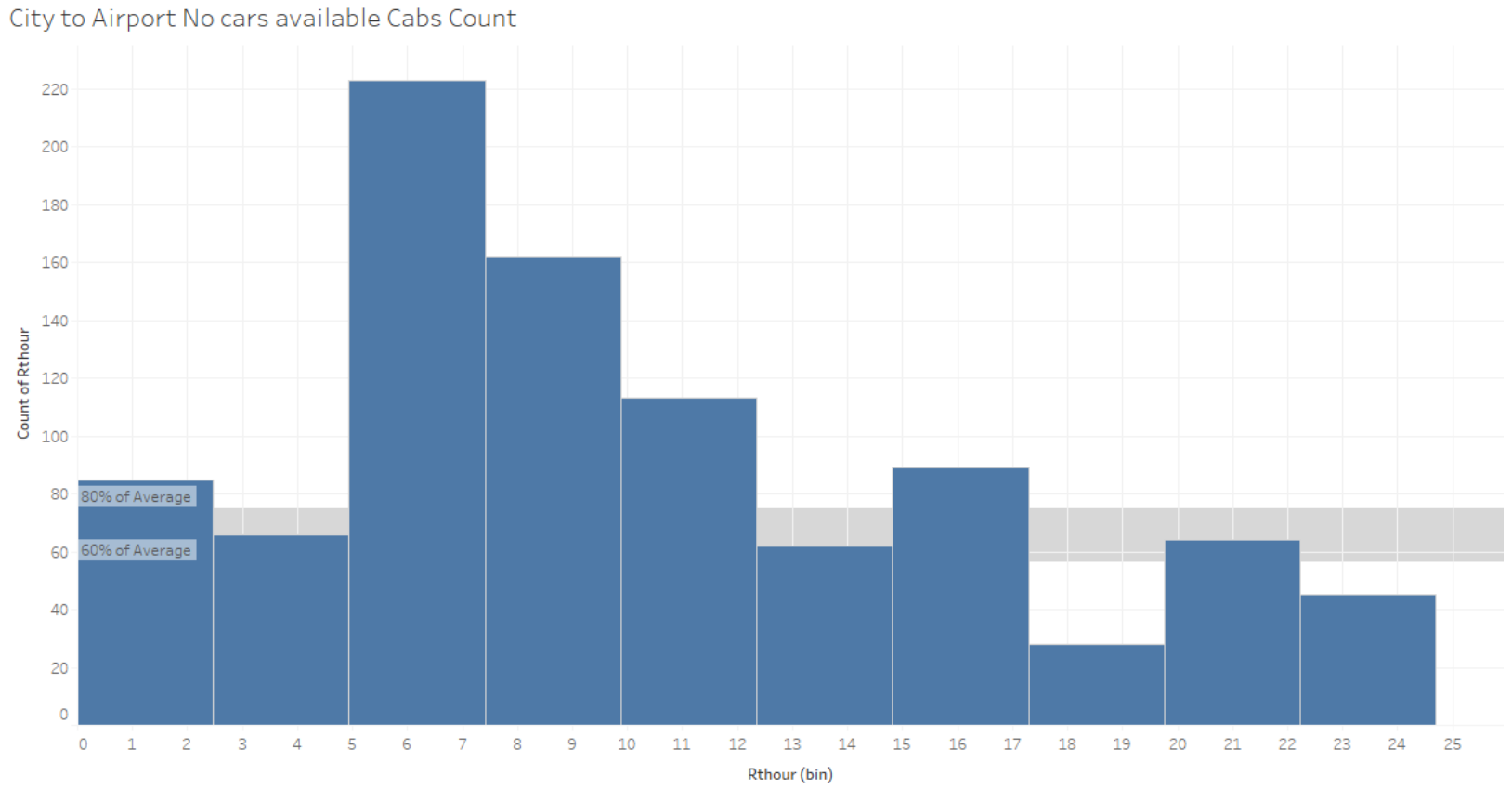
Inference: Despite of most booking requests at 5AM-10AM between city to airport Uber has maximum cancellation during this time interval between city to airport.

Hourly No Car Available Cab Distribution at both Directions



Most No Car Available distribution between 15-22 hours.

Hourly No Car Available Distribution from City to Airport.



Most No Car Available distribution between 5AM-12PM hours.

Inference for City to Airport No Cars Available

- More number of Requests at 5-12 hours between city to airport.
- Most No Car Available distribution between 15-22 hours. at both directions
- Most No Car Available distribution between 5AM-12PM hours city to airport.

Inference: Despite of most booking requests at 5-12 hours from city to airport Uber has maximum no cars available during this time interval between city to airport.

Conclusion

- DESPITE OF MOST BOOKING REQUESTS AT 3PM-10PM UBER HAS MAXIMUM CANCELLATION DURING THIS TIME INTERVAL BETWEEN AIRPORT TO CITY.
- DESPITE OF MOST BOOKING REQUESTS AT 3PM-10PM BETWEEN AIRPORT TO CITY UBER HAS MAXIMUM NO CARS AVAILABLE DURING THIS TIME INTERVAL BETWEEN AIRPORT TO CITY.
- DESPITE OF MOST BOOKING REQUESTS AT 5AM-10AM BETWEEN CITY TO AIRPORT UBER HAS MAXIMUM CANCELLATION DURING THIS TIME INTERVAL BETWEEN CITY TO AIRPORT.
- DESPITE OF MOST BOOKING REQUESTS AT 5AM-12PM FROM CITY TO AIRPORT UBER HAS MAXIMUM NO CARS AVAILABLE DURING THIS TIME INTERVAL BETWEEN CITY TO AIRPORT.

Discrete Conclusion

City to Airport

IF WE LOOK IN GENERAL TERMS FOR CITY TO AIRPORT MAXIMUM NUMBER OF REQUESTS ARE AT 5AM-12PM BUT WE HAVE MAXIMUM CANCELATIONS OVERALL DURING THIS TIME PERIOD HOWEVER NO CARS AVAILABLE IS STILL LOW.

SO WE HAVE A HIGH DEMAND AT 5AM-12PM BETWEEN CITY TO AIRPORT BUT DUE TO CANCELLATIONS UBER IS NOT ABLE TO MEET THE SUPPLY REQUESTS FOR CABS

Airport to City

For Airport to City Cabs Maximum number of Requests are at 3PM-10PM and we have maximum No CAR Available overall during this time period. However cancellations are still low.

So we have a high demand at 3PM-10PM between Airport to city but due to no cars available UBER is not able to meet the supply requests for cab.

Resolution

- AS 5AM-12 PM IS PEAK TIME FOR CITY TO AIRPORT BOOKINGS UBER CAN KEEP TRACK ON CANCELLATION REQUESTS AND PENALIZE THE DRIVE FOR CANCELLING.
- AS 3PM-10PM IS PEAK TIME FOR AIRPORT TO CITY BOOKINGS UBER CAN SUPPLY MORE CABS AT THE AIRPORT SO THAT CUSTOMERS DON'T GET NO CAR AVAILABILITY ISSUE.