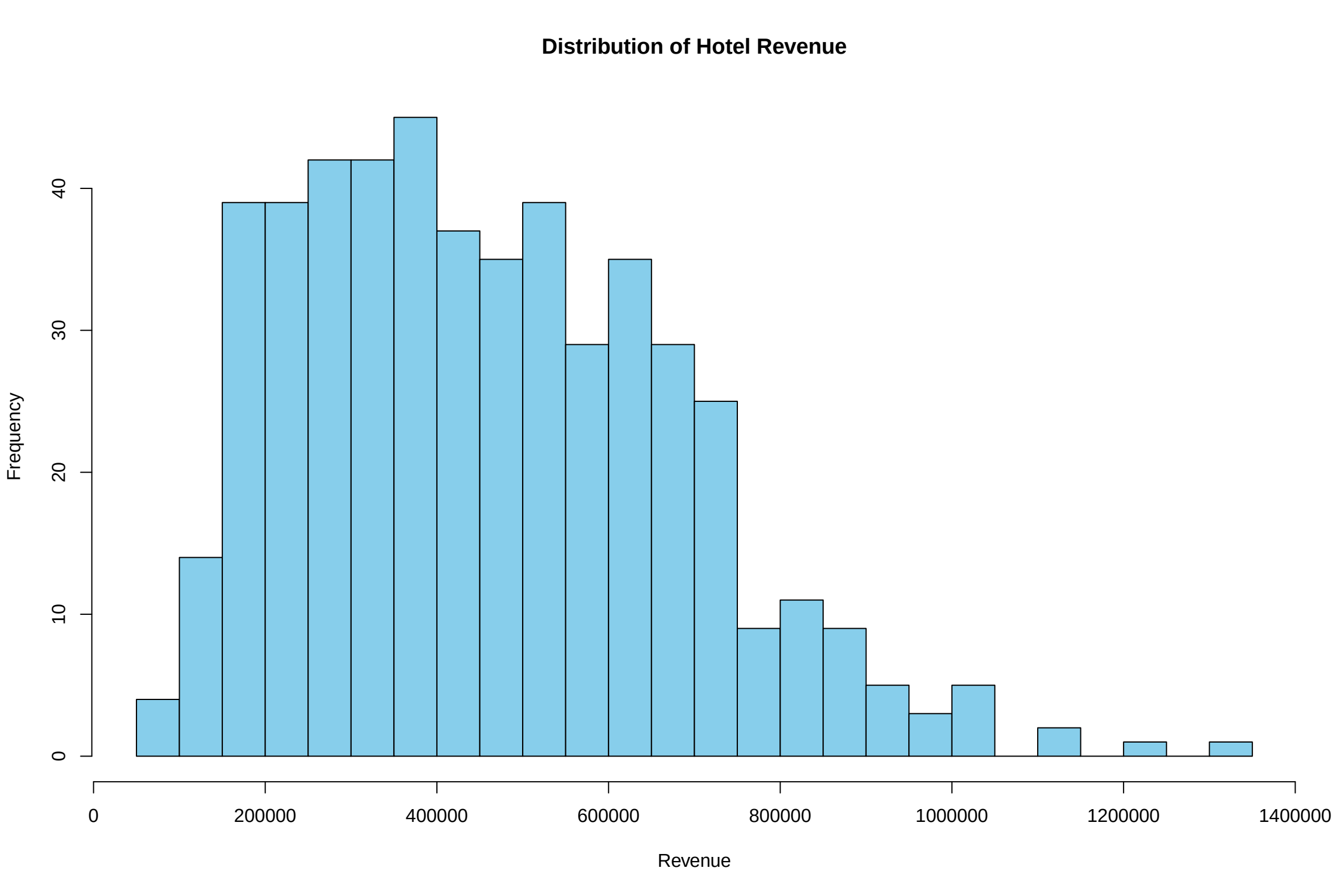
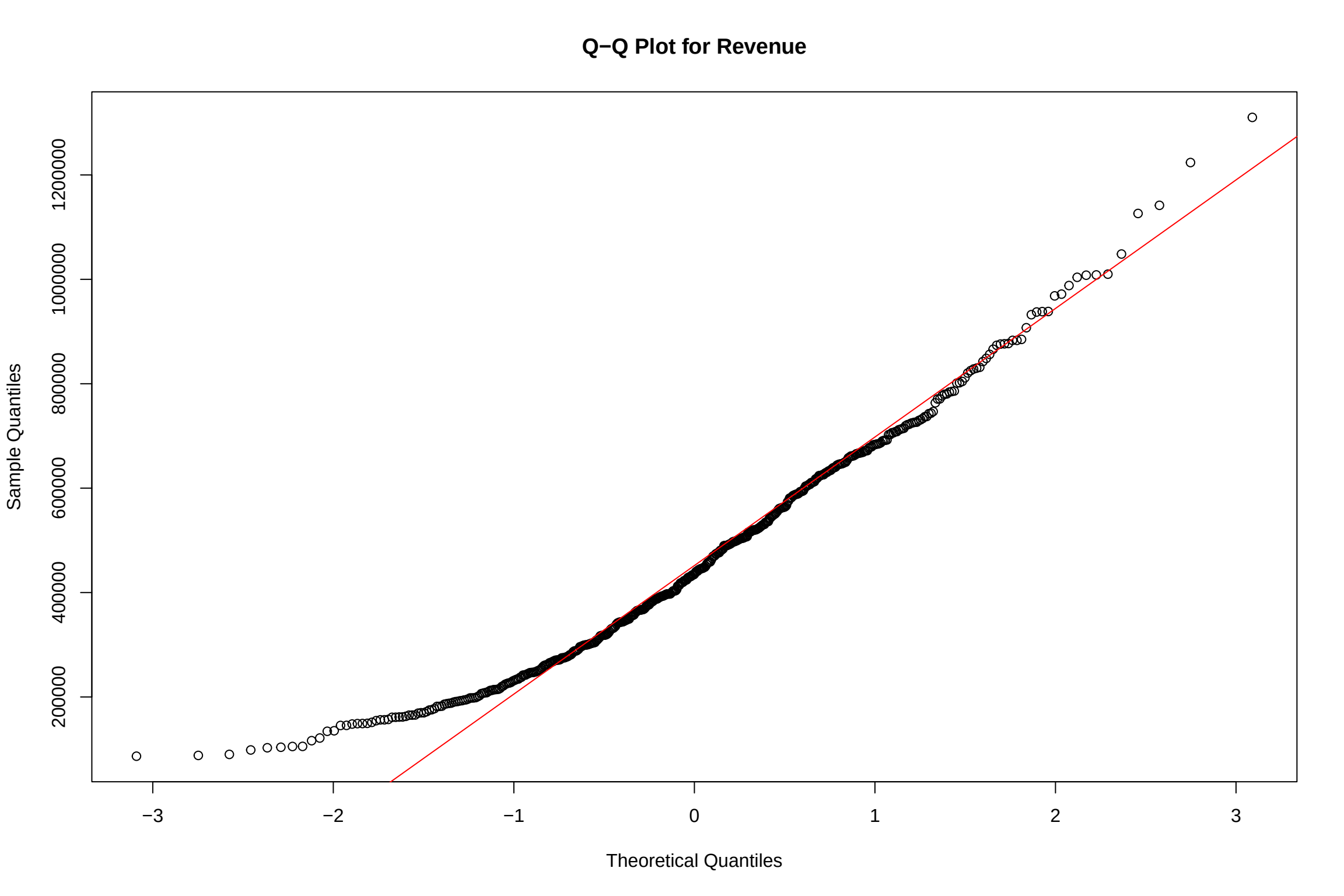
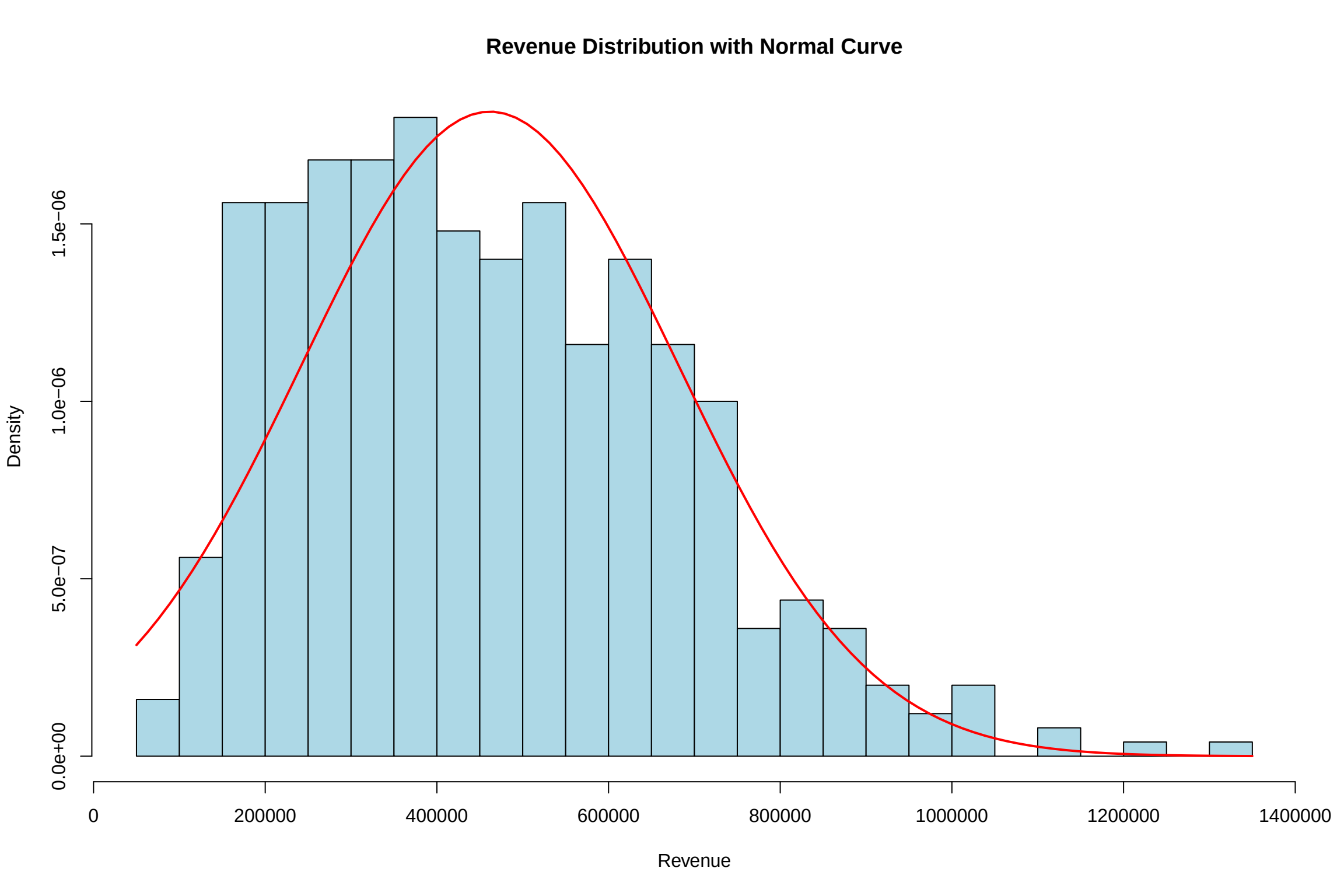
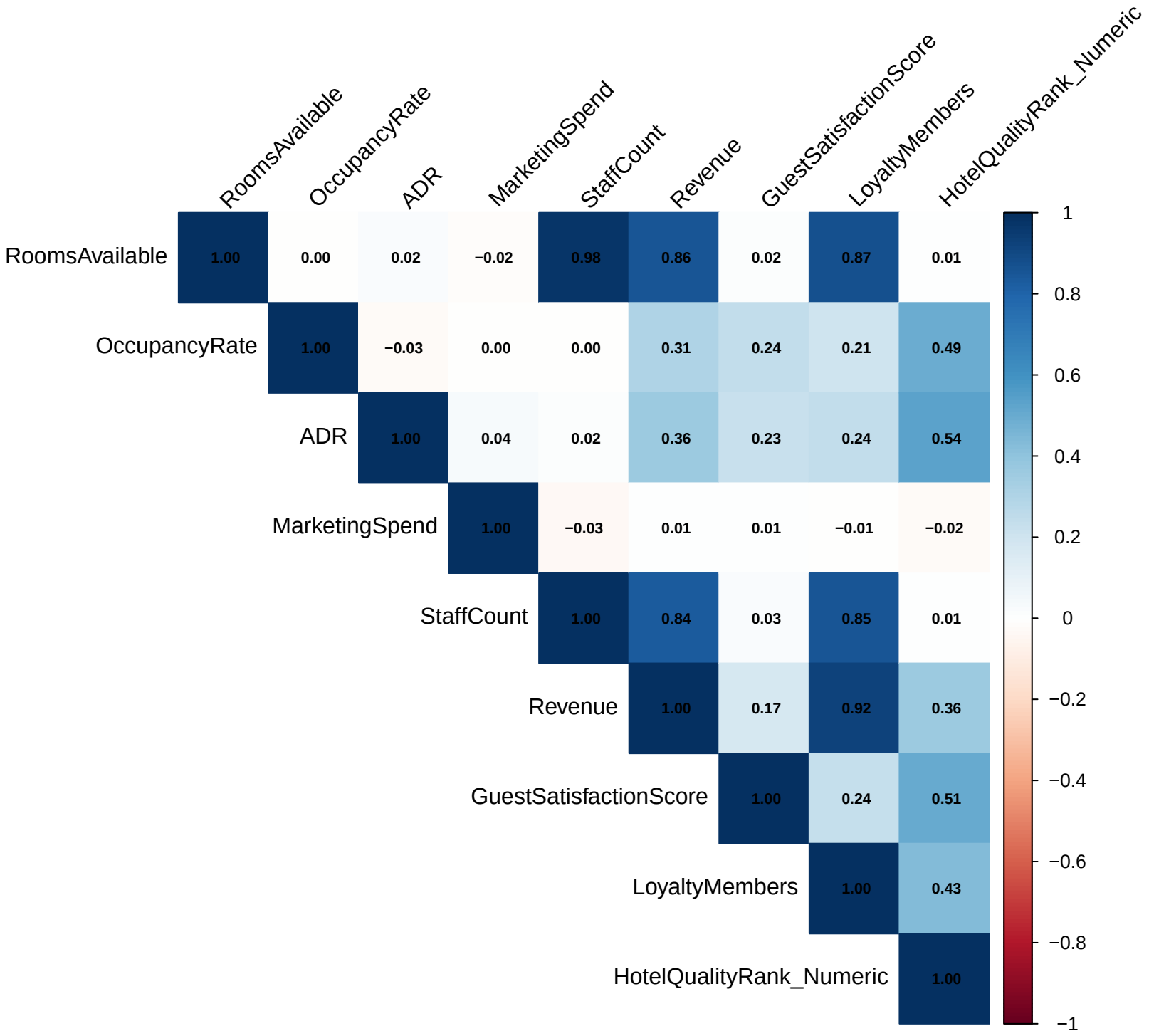
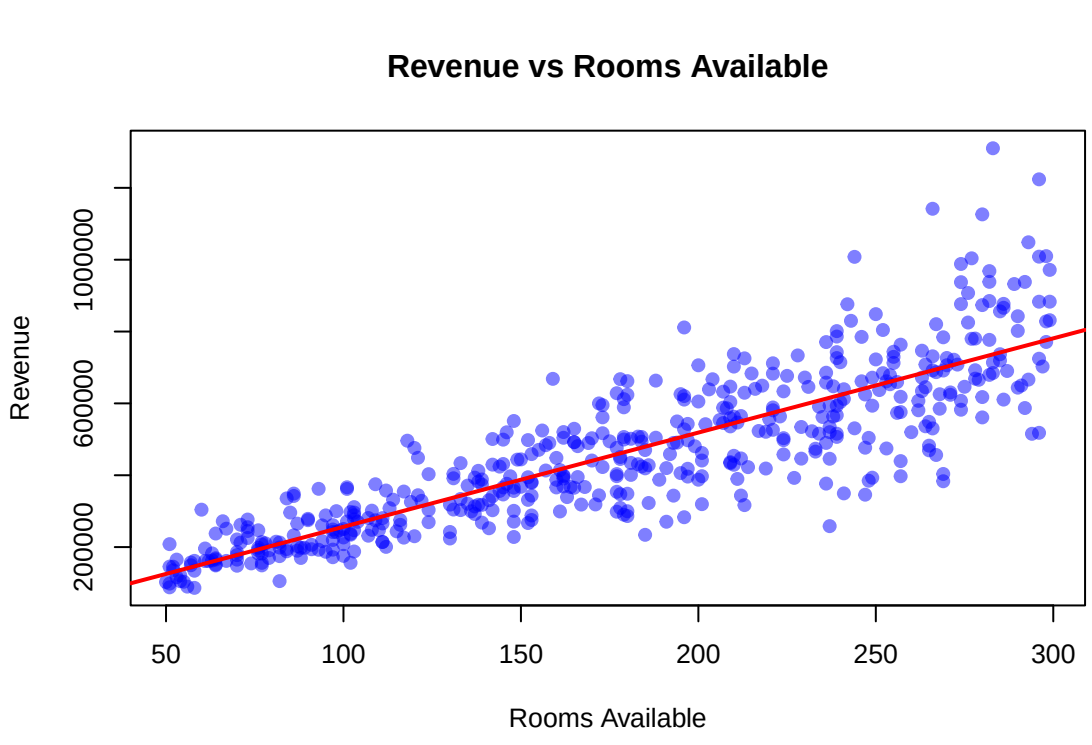
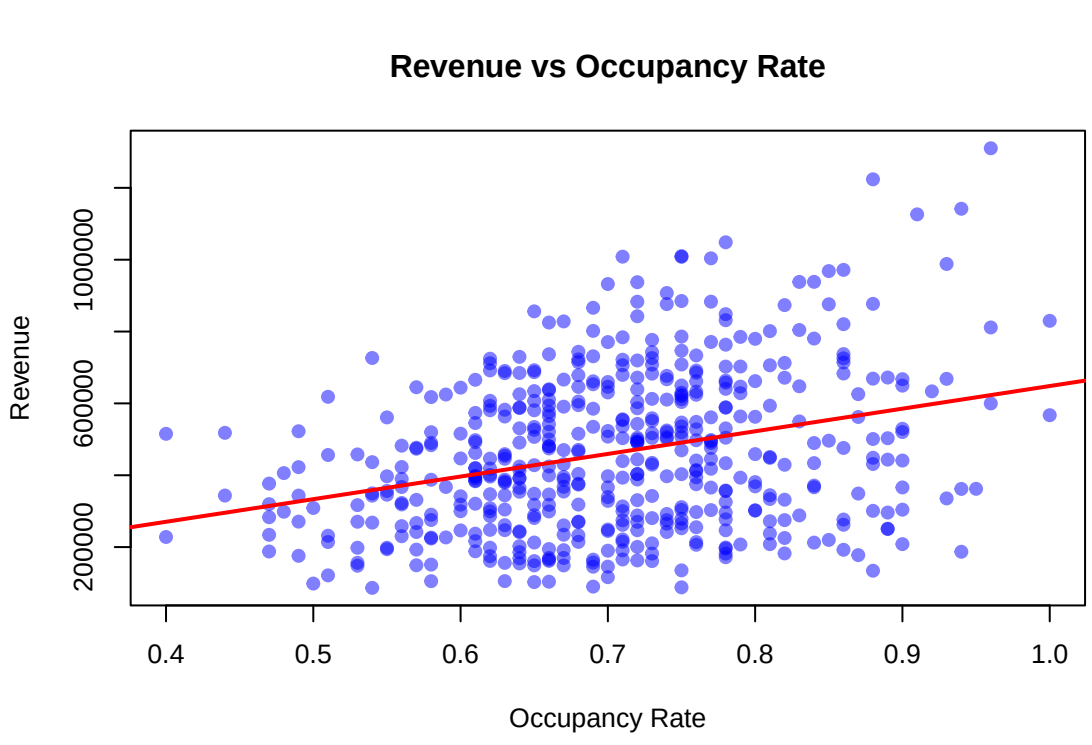

Distribution of Hotel Revenue
Frequency
0
10
20
30
40
0
200000
400000
600000
800000
1000000
1200000
1400000
Revenue

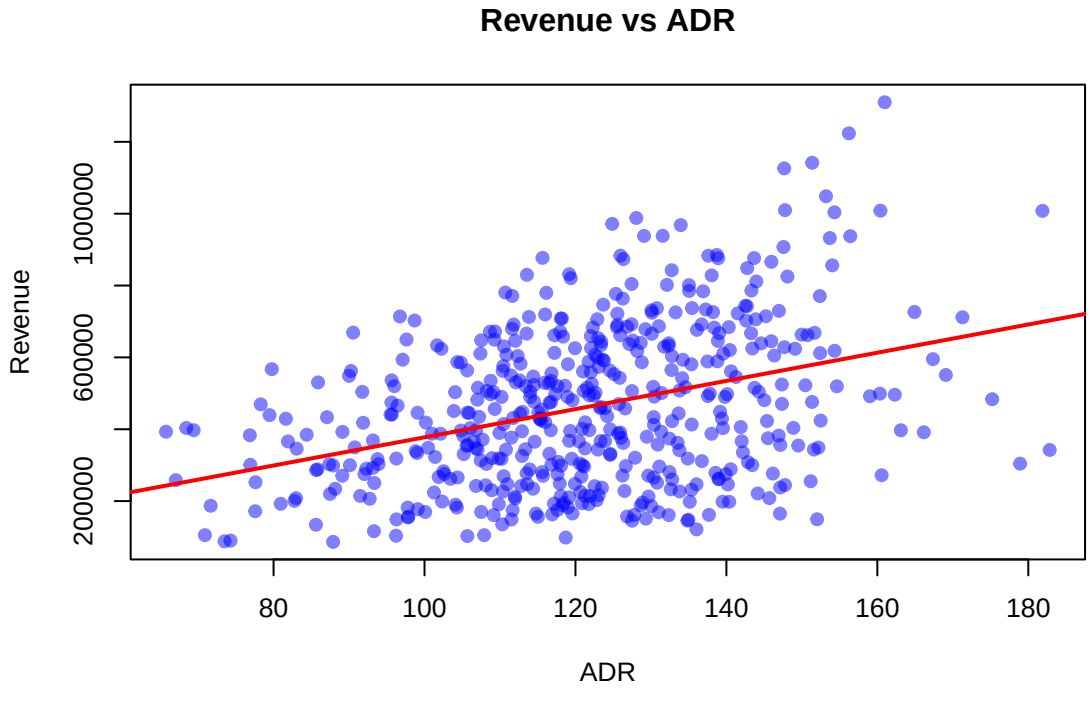

Q−Q Plot for Revenue
Sample Quantiles
200000
400000
600000
800000
1000000
1200000
−3
−2
−1
0
1
2
3
Theoretical Quantiles


Revenue Distribution with Normal Curve
Density
0.0e+00
5.0e−07
1.0e−06
1.5e−06
0
200000
400000
600000
800000
1000000
1200000
1400000
Revenue

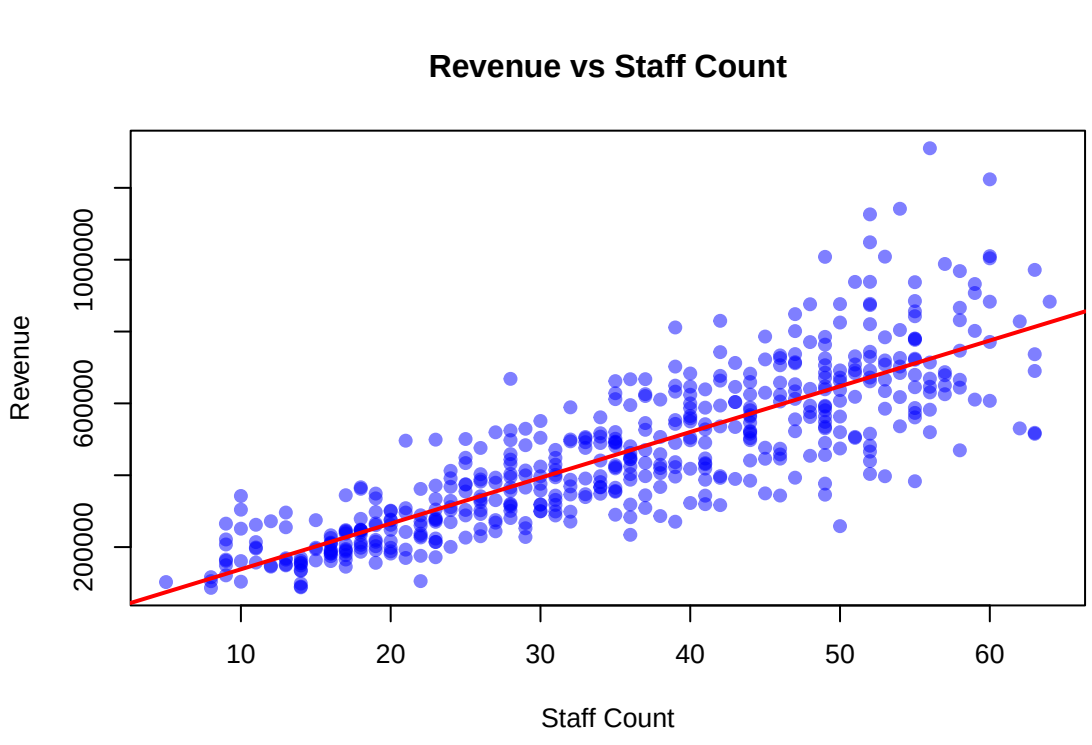

Correlation Matrix of Hotel Variables
RoomsAvailable
OccupancyRate
ADR
MarketingSpend
StaffCount
Revenue
GuestSatisfactionScore
LoyaltyMembers
HotelQualityRank_Numeric
1.00 0.00 0.02 −0.02 0.98 0.86 0.02 0.87 0.01
1.00 −0.03 0.00 0.00 0.31 0.24 0.21 0.49
1.00 0.04 0.02 0.36 0.23 0.24 0.54
1.00 −0.03 0.01 0.01 −0.01 −0.02
1.00 0.84 0.03 0.85 0.01
1.00 0.17 0.92 0.36
1.00 0.24 0.51
1.00 0.43
1.00
1
0.8
0.6
0.4
0.2
0
−0.2
−0.4
−0.6
−0.8
−1

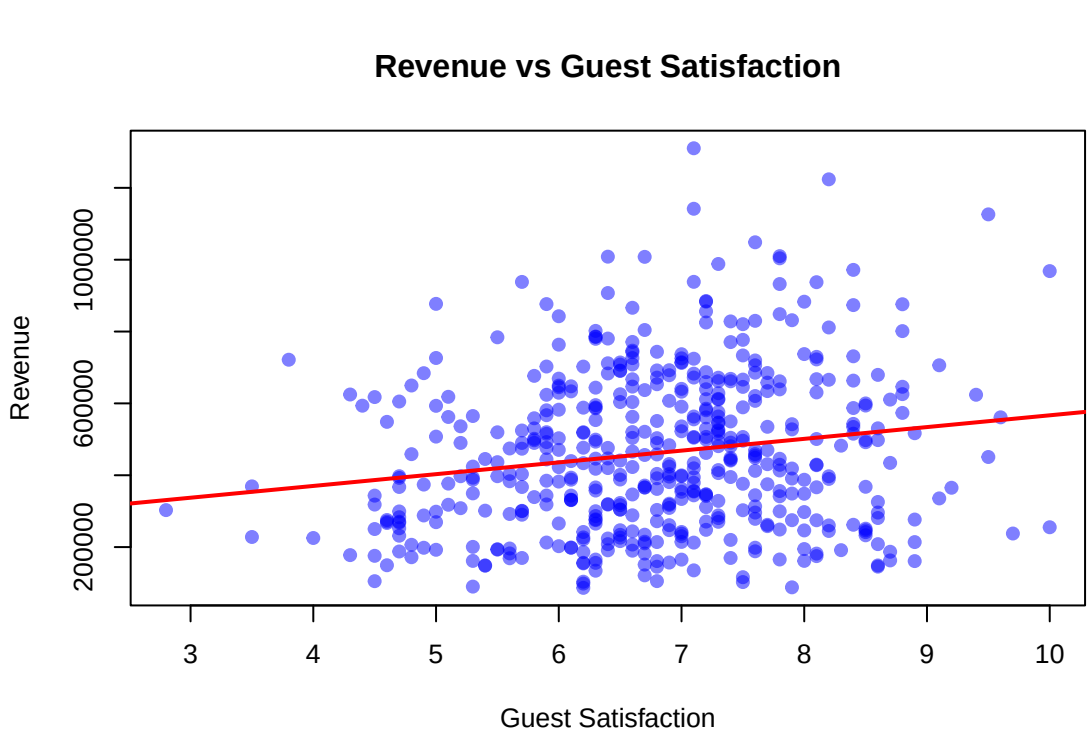

Revenue vs Rooms Available
Revenue
200000
600000
1000000
50
100
150
200
250
300
Rooms Available

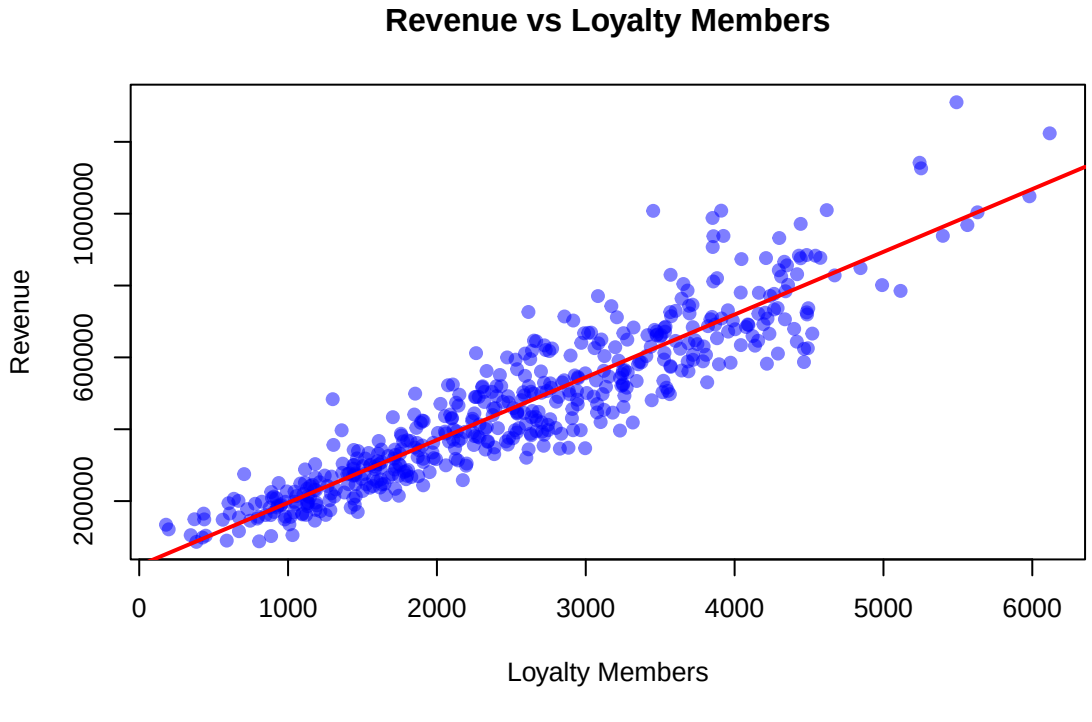

Revenue vs Occupancy Rate
Revenue
200000
600000
1000000
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Occupancy Rate

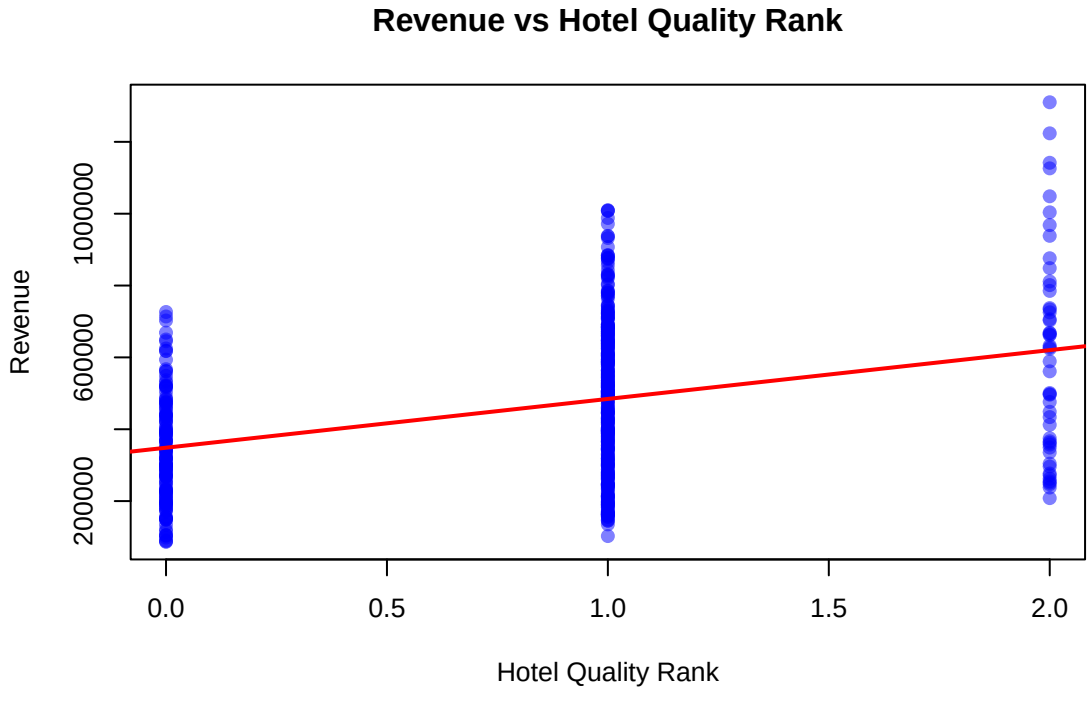

Revenue vs ADR
Revenue
200000
600000
1000000
80
100
120
140
160
180
ADR

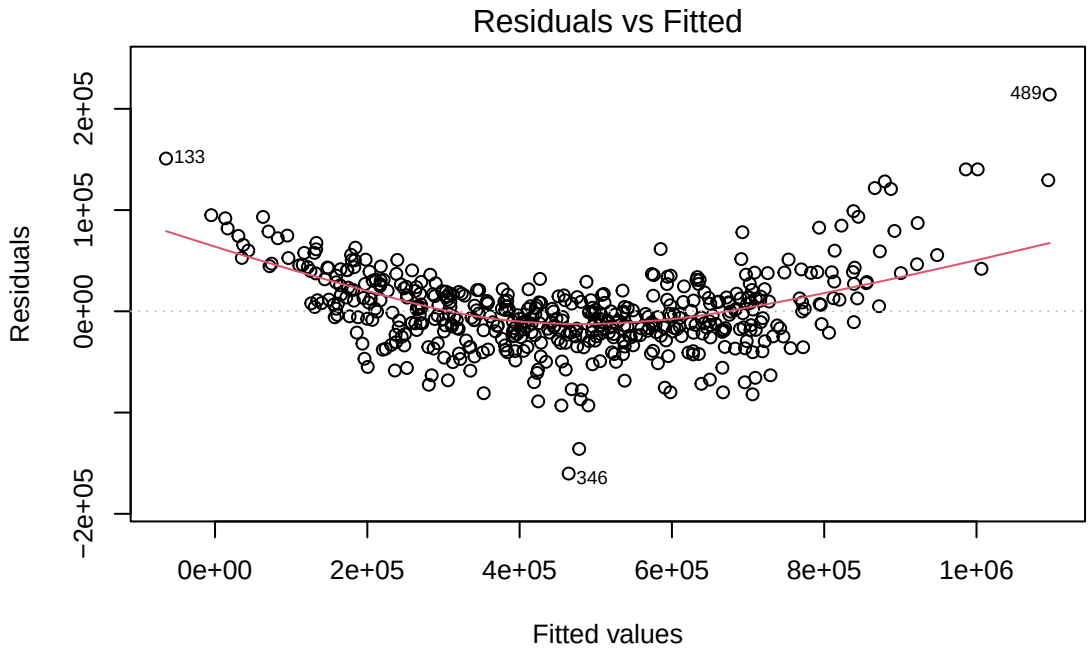
Revenue vs Marketing Spend
Revenue
200000
600000
1000000
5000
10000
15000
20000
25000
30000
Marketing Spend

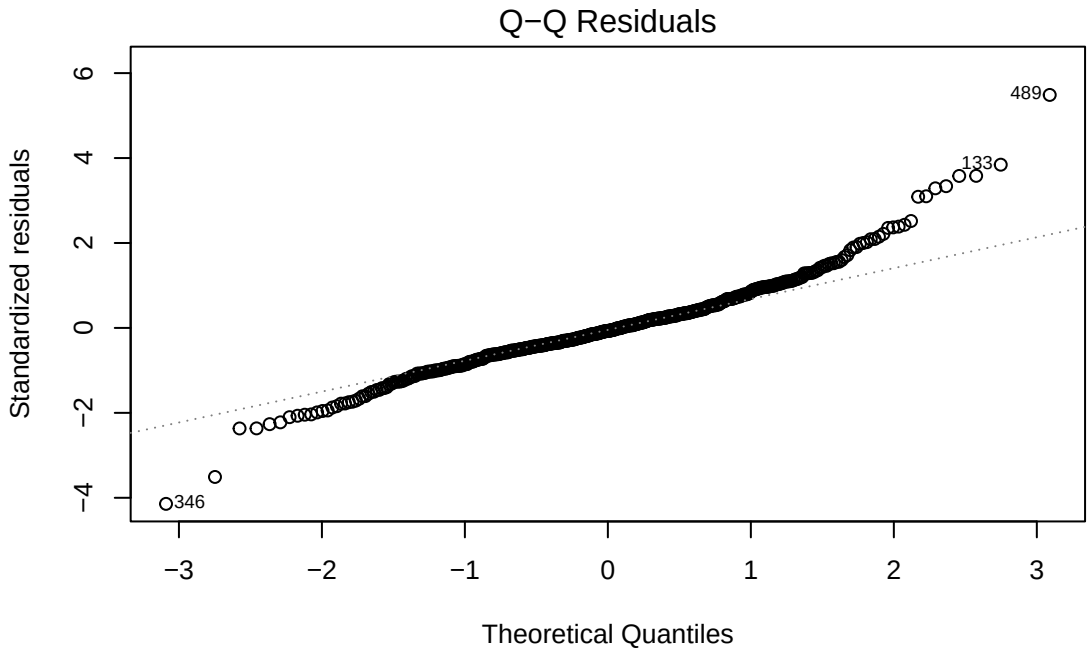

Revenue vs Staff Count
Revenue
200000
600000
1000000
10
20
30
40
50
60
Staff Count

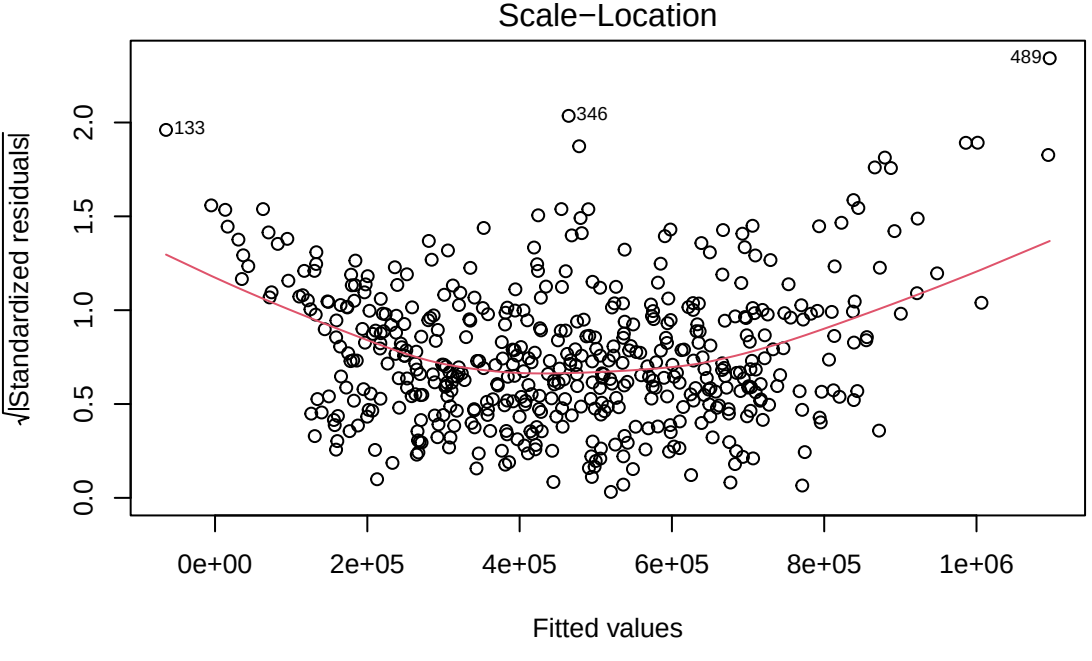

Revenue vs Guest Satisfaction
Revenue
200000
600000
1000000
3
4
5
6
7
8
9
10
Guest Satisfaction

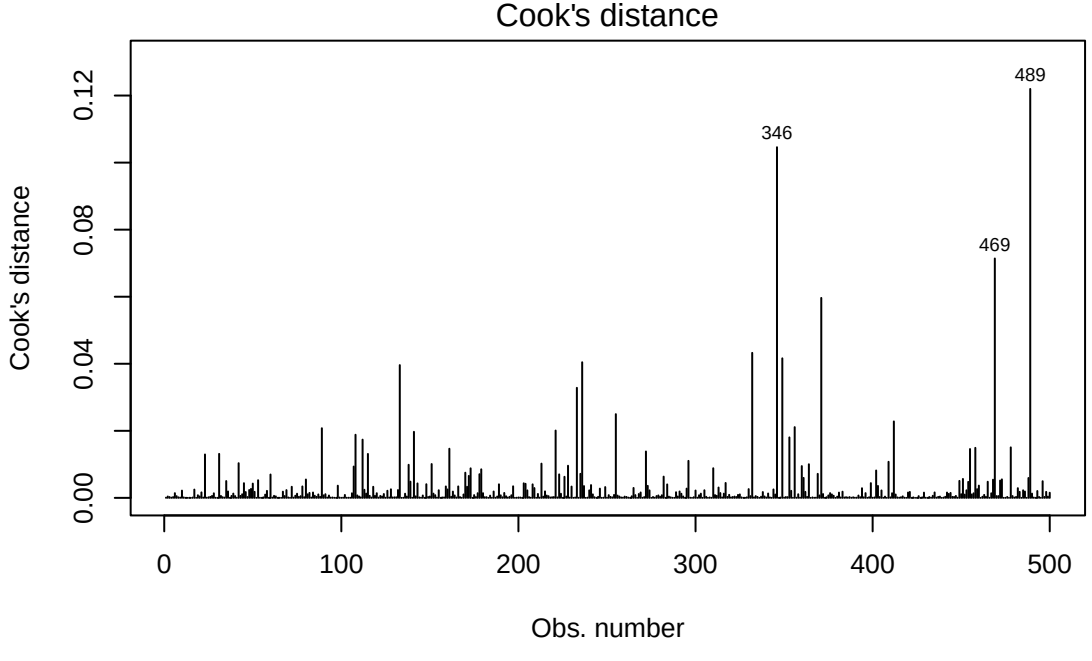

Revenue vs Loyalty Members
Revenue
200000
600000
1000000
0
1000
2000
3000
4000
5000
6000
Loyalty Members

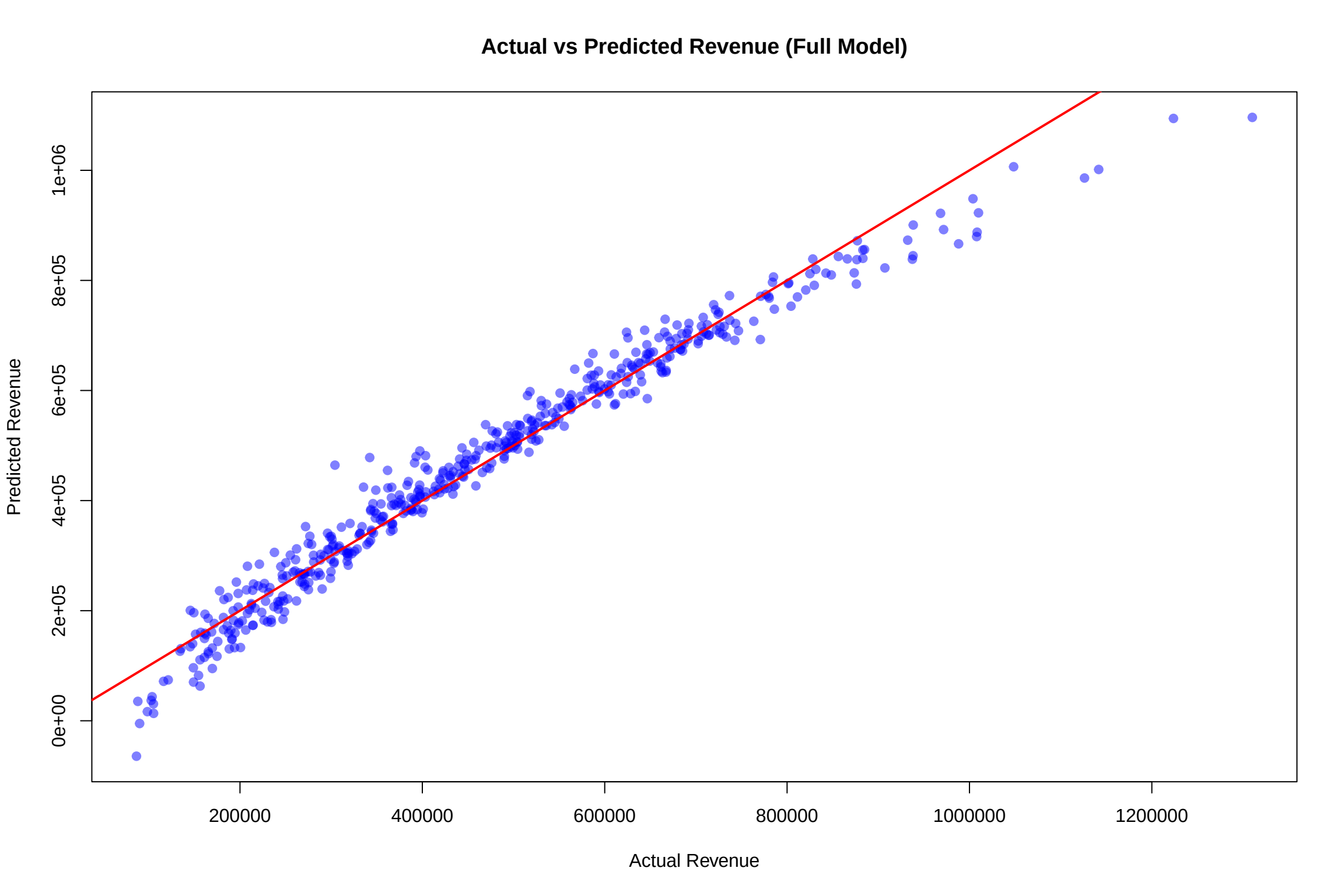

Revenue vs Hotel Quality Rank
Revenue
200000
600000
1000000
0.0
0.5
1.0
1.5
2.0
Hotel Quality Rank


Residuals vs Fitted
Residuals
Fitted values
133
346
489
−2e+05
0e+00
1e+05
2e+05
0e+00
2e+05
4e+05
6e+05
8e+05
1e+06


Q−Q Residuals
Standardized residuals
Theoretical Quantiles
133
346
489
−4
−2
0
2
4
6
−3
−2
−1
0
1
2
3


Scale−Location
√|Standardized residuals|
Fitted values
133
346
489
0.0
0.5
1.0
1.5
2.0
0e+00
2e+05
4e+05
6e+05
8e+05
1e+06


Cook's distance
Cook's distance
Obs. number
346
469
489
0.00
0.04
0.08
0.12
0
100
200
300
400
500


Actual vs Predicted Revenue (Full Model)
Predicted Revenue
0e+00
2e+05
4e+05
6e+05
8e+05
1e+06
200000
400000
600000
800000
1000000
1200000
Actual Revenue