Appendix A: Prediction Results

(distance tolerance = 400 meters , wait time tolerance = 30 seconds, Prediction = none)

```
Estimated Coefficients:
                               Estimate        SE        tStat        pValue

    (Intercept)                -0.026063     0.010258     -2.5407      0.011126
    Number__of__nodes          1.0874e-05    7.6323e-06    1.4247      0.15436
    Avg__betweenness__centrality   3.196     0.94927       3.3667      0.00077247
    Avg__closeness__centrality  -0.00025104  1.3216e-05   -18.994      3.9737e-75
    Avg__degree                -0.012254     0.0037849    -3.2377      0.0012212
    Avg__eigenvalue__centrality  1.7564      0.39193       4.4813      7.7627e-06
    Number__of_edges           1.3273e-05    3.8399e-06    3.4566      0.00055645


Number of observations: 2440, Error degrees of freedom: 2433
Root Mean Squared Error: 0.00307
R-squared: 0.589,  Adjusted R-Squared 0.588
F-statistic vs. constant model: 581, p-value = 0

ANOVA_ANALYSIS =

                SumSq       DF      MeanSq       F       pValue

    Total       0.055862    2439    2.2904e-05
    Model       0.032903       6    0.0054838    581.12     0
    Residual    0.022959    2433    9.4367e-06
```
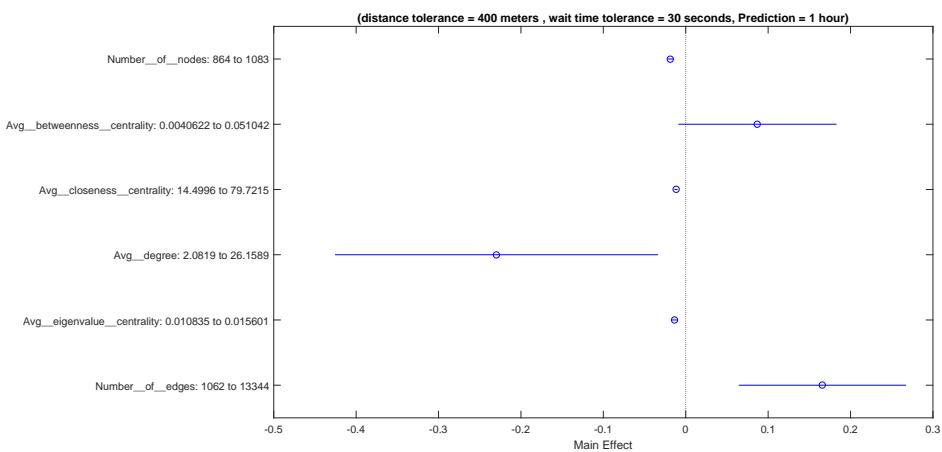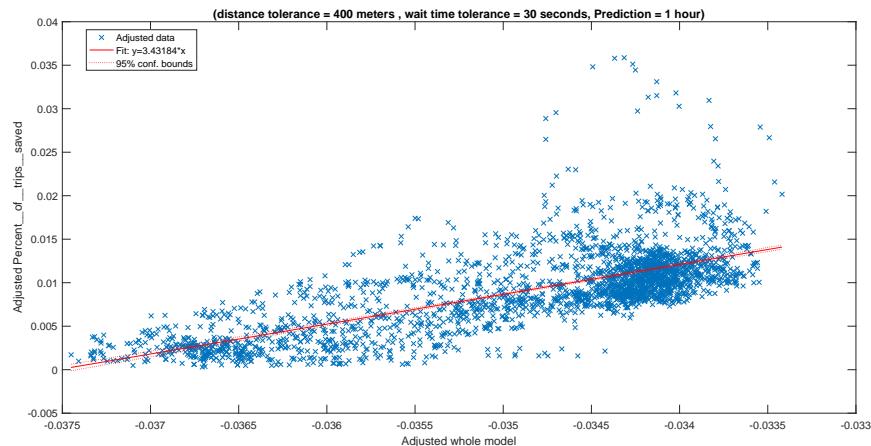
Fig. 17. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 1.

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**(distance tolerance = 400 meters , wait time tolerance = 30 seconds, Prediction = 1 hour)**

(distance tolerance = 400 meters , wait time tolerance = 30 seconds, Prediction = 1 hour)

Estimated Coefficients:

	Estimate	SE	tStat	pValue
(Intercept)	0.12878	0.011271	11.426	1.7369e-29
Number__of__nodes	-8.5893e-05	8.3765e-06	-10.254	3.4997e-24
Avg__betweenness__centrality	1.8516	1.0415	1.7777	0.075571
Avg__closeness__centrality	-0.00018101	1.4562e-05	-12.431	1.9343e-34
Avg__degree	-0.0095375	0.0041534	-2.2963	0.021741
Avg__eigenvalue__centrality	-2.8895	0.43166	-6.6939	2.6888e-11
Number__of__edges	1.3508e-05	4.2145e-06	3.2052	0.0013673

Number of observations: 2437, Error degrees of freedom: 2430
Root Mean Squared Error: 0.00337
R-squared: 0.493, Adjusted R-Squared 0.492
F-statistic vs. constant model: 394, p-value = 0
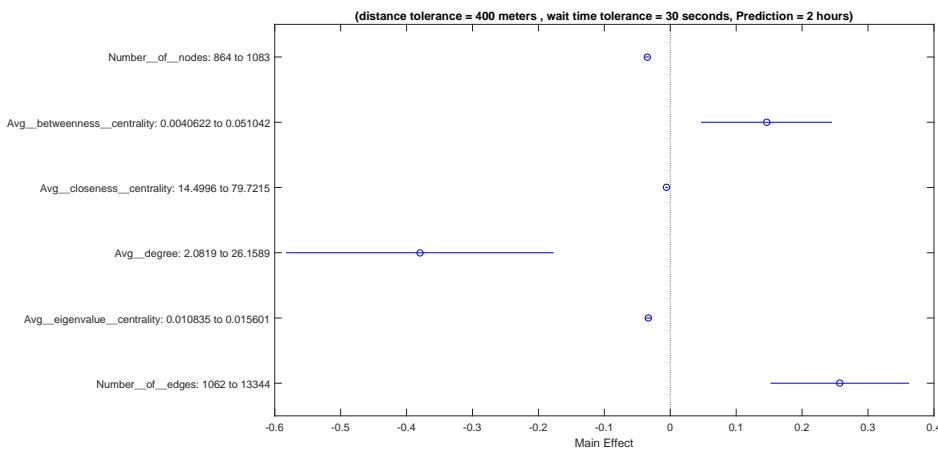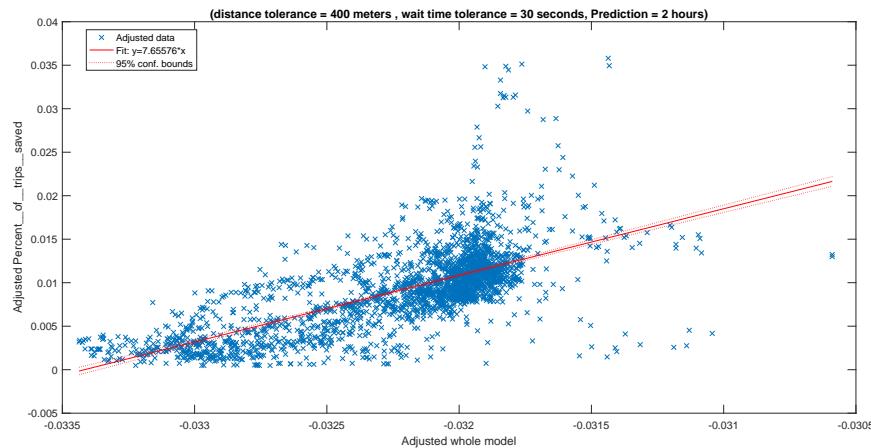
ANOVA_ANALYSIS =

	SumSq	DF	MeanSq	F	pValue
Total	0.054512	2436	2.2378e-05		
Model	0.026891	6	0.0044818	394.29	0
Residual	0.027621	2430	1.1367e-05		

Fig. 18. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 2.

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(distance tolerance = 400 meters , wait time tolerance = 30 seconds, Prediction = 2 hours)

(distance tolerance = 400 meters , wait time tolerance = 30 seconds, Prediction = 2 hours)
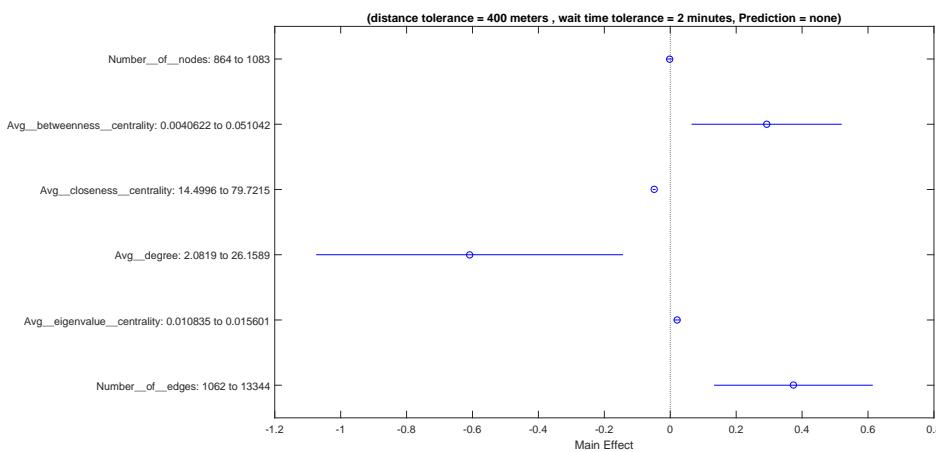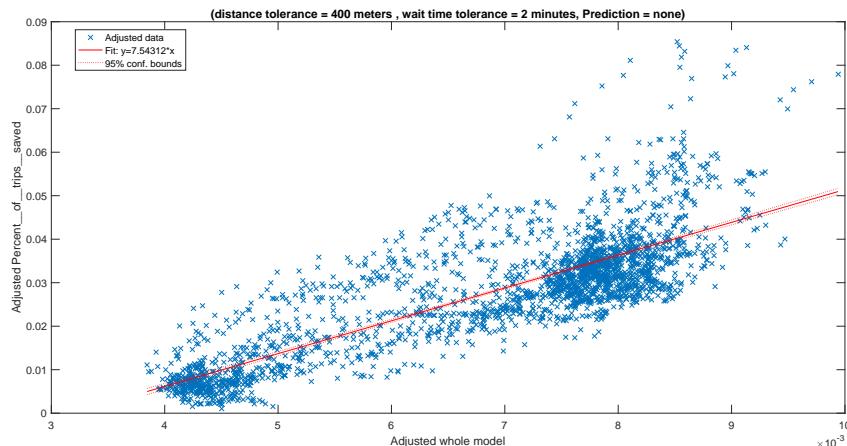
```
Estimated Coefficients:

                                   Estimate        SE          tStat       pValue

    (Intercept)                    0.25583         0.011669     21.924      2.3641e-97
    Number__of__nodes             -0.00016059      8.6769e-06  -18.507      1.2197e-71
    Avg__betweenness__centrality   3.1095          1.0789        2.8821     0.0039851
    Avg__closeness__centrality    -8.4426e-05      1.5012e-05   -5.6241     2.0791e-08
    Avg__degree                   -0.015776        0.0043026    -3.6666     0.00025105
    Avg__eigenvalue__centrality   -6.9958          0.44458     -15.736      3.3485e-53
    Number__of__edges              2.0941e-05      4.3658e-06    4.7966     1.7113e-06


Number of observations: 2434, Error degrees of freedom: 2427
Root Mean Squared Error: 0.00349
R-squared: 0.46,  Adjusted R-Squared 0.459
F-statistic vs. constant model: 345, p-value = 2.42e-320

ANOVA_ANALYSIS =

                SumSq      DF      MeanSq        F        pValue

    Total       0.054816   2433    2.253e-05
    Model       0.025219   6       0.0042032     344.68   2.4165e-320
    Residual    0.029596   2427    1.2195e-05
```

Fig. 19. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 3.

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(distance tolerance = 400 meters , wait time tolerance = 2 minutes, Prediction = none)

(distance tolerance = 400 meters , wait time tolerance = 2 minutes, Prediction = none)

Estimated Coefficients:

|	Estimate	SE	tStat	pValue
(Intercept)	-0.024022	0.026666	-0.90085	0.36776
Number__of__nodes	-8.6047e-06	1.9866e-05	-0.43314	0.66495
Avg__betweenness__centrality	6.227	2.4724	2.5187	0.011844
Avg__closeness__centrality	-0.00075145	3.4186e-05	-21.981	6.9988e-98
Avg__degree	-0.025278	0.0098607	-2.5635	0.010422
Avg__eigenvalue__centrality	4.257	1.0088	4.22	2.5325e-05
Number__of__edges	3.0418e-05	1.0005e-05	3.0401	0.0023896

Number of observations: 2455, Error degrees of freedom: 2448
Root Mean Squared Error: 0.008
R-squared: 0.663, Adjusted R-Squared 0.662
F-statistic vs. constant model: 803, p-value = 0
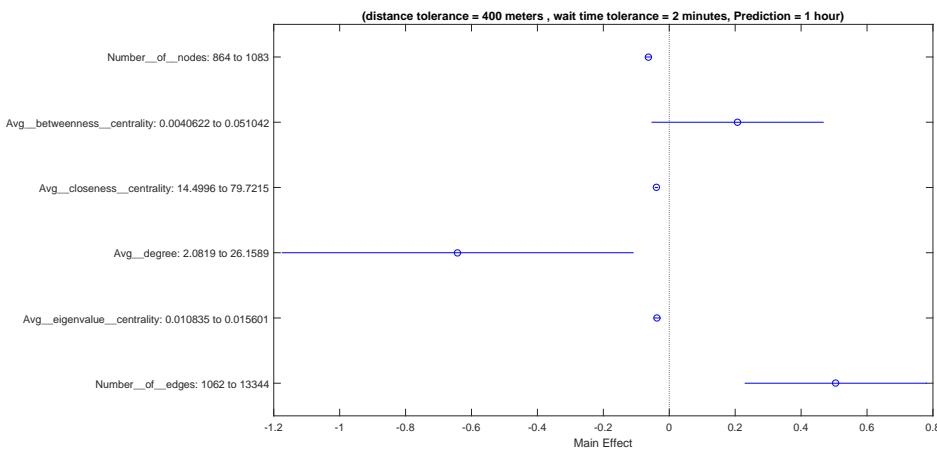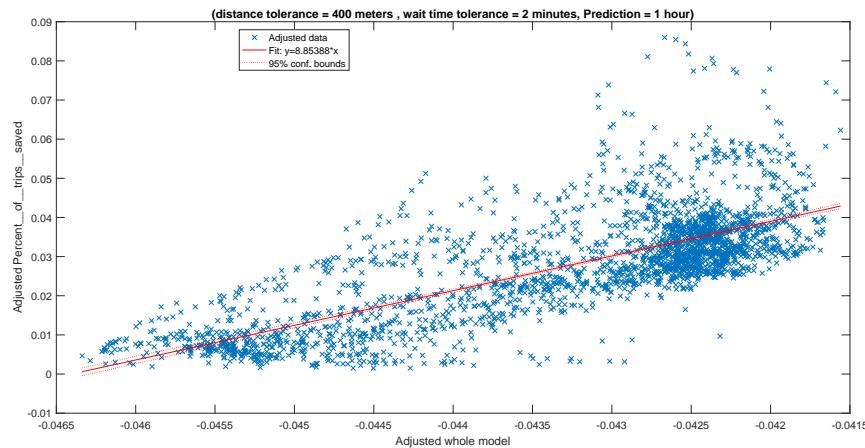
ANOVA_ANALYSIS =

	SumSq	DF	MeanSq	F	pValue
Total	0.46544	2454	0.00018966		
Model	0.30858	6	0.05143	802.64	0
Residual	0.15686	2448	6.4075e-05		

Fig. 20. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 4.

(distance tolerance = 400 meters , wait time tolerance = 2 minutes, Prediction = 1 hour)

(distance tolerance = 400 meters , wait time tolerance = 2 minutes, Prediction = 1 hour)

```
Estimated Coefficients:
                                        Estimate          SE        tStat        pValue
                                        _____       _____    _____     _____

        (Intercept)                      0.41087        0.030574     13.439     8.9037e-40
        Number__of__nodes             -0.00029226      2.2777e-05   -12.831     1.599e-36
        Avg__betweenness__centrality     4.4153         2.8347       1.5576     0.11946
        Avg__closeness__centrality    -0.00059769      3.9196e-05   -15.249     3.1646e-50
        Avg__degree                   -0.026662        0.011306     -2.3583     0.018437
        Avg__eigenvalue__centrality     -7.6743         1.1566      -6.6352     3.9763e-11
        Number__of__edges             4.1122e-05       1.1472e-05    3.5847     0.00034407


Number of observations: 2455, Error degrees of freedom: 2448
Root Mean Squared Error: 0.00918
R-squared: 0.557,  Adjusted R-Squared 0.556
F-statistic vs. constant model: 513, p-value = 0

ANOVA_ANALYSIS =

                 SumSq      DF      MeanSq        F        pValue
                _____    ____    _____    _____     _____

        Total    0.46549    2454    0.00018969
        Model    0.25929       6    0.043215    513.05       0
        Residual 0.2062     2448    8.4232e-05
```
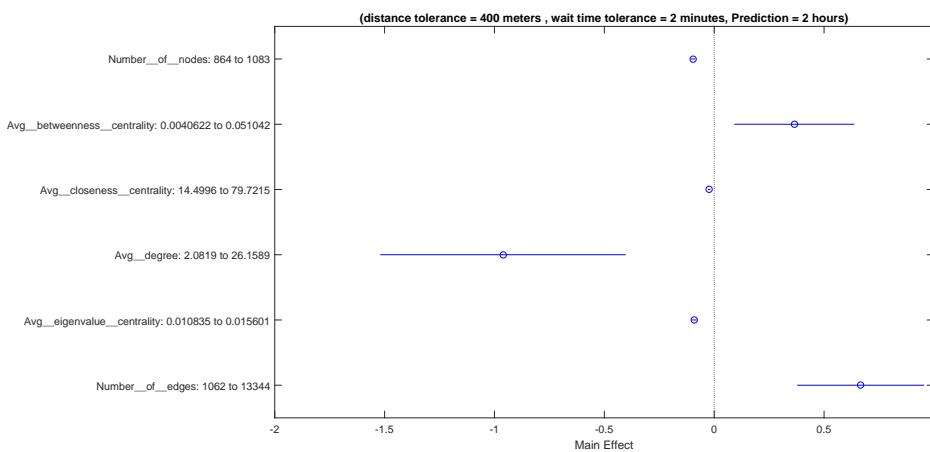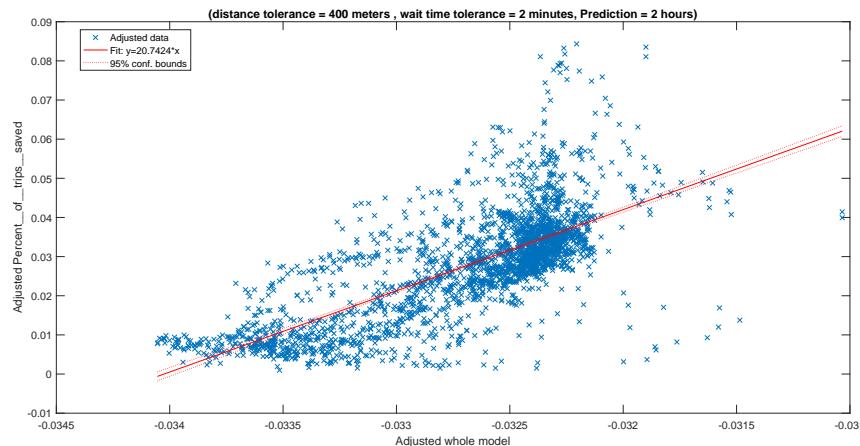
Fig. 21. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 5.

(distance tolerance = 400 meters , wait time tolerance = 2 minutes, Prediction = 2 hours)

(distance tolerance = 400 meters , wait time tolerance = 2 minutes, Prediction = 2 hours)

```
Estimated Coefficients:
                                  Estimate        SE          tStat      pValue
                                  _____     _____     _____    _____

    (Intercept)                    0.70576      0.031989       22.063    1.5528e-98
    Number__of__nodes             -0.00043985   2.3831e-05    -18.457    2.5497e-71
    Avg__betweenness__centrality   7.7561       2.9659         2.6151    0.0089749
    Avg__closeness__centrality    -0.00034689   4.101e-05     -8.4587    4.5808e-17
    Avg__degree                   -0.039914     0.011829      -3.3743    0.00075165
    Avg__eigenvalue__centrality   -19.238       1.2101       -15.897     3.1308e-54
    Number__of__edges              5.4288e-05   1.2002e-05     4.523     6.3871e-06


Number of observations: 2455, Error degrees of freedom: 2448
Root Mean Squared Error: 0.0096
R-squared: 0.516,  Adjusted R-Squared 0.515
F-statistic vs. constant model: 435, p-value = 0

ANOVA_ANALYSIS =
```
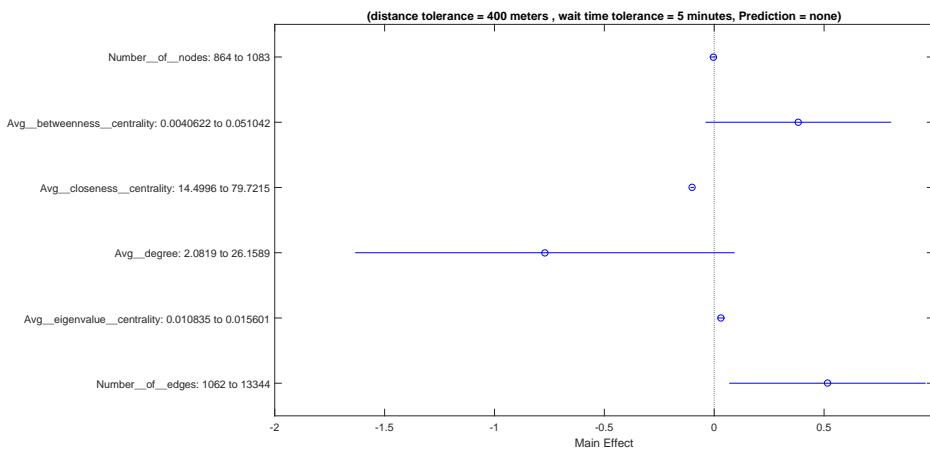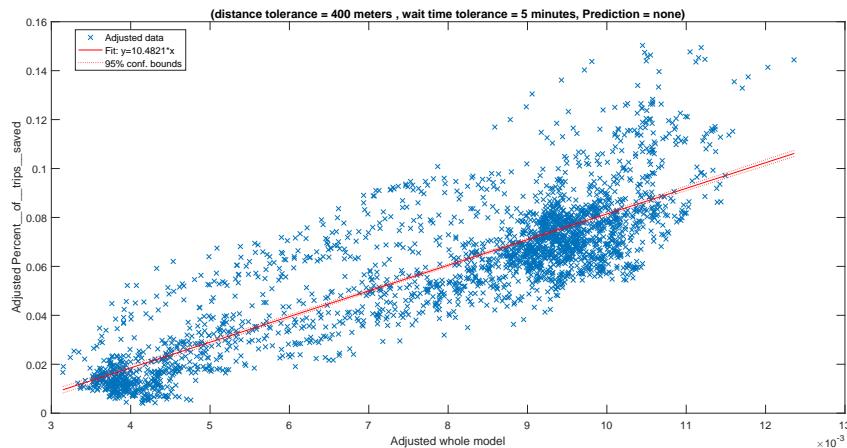
	SumSq	DF	MeanSq	F	pValue
Total	0.46627	2454	0.00019		
Model	0.24054	6	0.04009	434.77	0
Residual	0.22573	2448	9.221e-05		

Fig. 22. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 6.

```
Estimated Coefficients:
                                     Estimate        SE         tStat       pValue

    (Intercept)                    -0.023402     0.049455    -0.47319      0.63612
    Number__of__nodes              -1.933e-05    3.6844e-05   -0.52466      0.59987
    Avg__betweenness__centrality    8.1552       4.5853        1.7786       0.075438
    Avg__closeness__centrality     -0.0015276    6.3402e-05   -24.094       2.802e-115
    Avg__degree                    -0.031999     0.018288     -1.7498       0.080285
    Avg__eigenvalue__centrality     6.5853       1.8709        3.5199       0.00043966
    Number__of__edges               4.1957e-05   1.8556e-05    2.2611       0.023841

Number of observations: 2455, Error degrees of freedom: 2448
Root Mean Squared Error: 0.0148
R-squared: 0.73,  Adjusted R-Squared 0.729
F-statistic vs. constant model: 1.1e+03, p-value = 0

ANOVA_ANALYSIS =

                 SumSq      DF      MeanSq        F        pValue

    Total        1.9966     2454    0.00081362
    Model        1.4571        6    0.24285      1101.9        0
    Residual     0.53953    2448    0.0002204
```
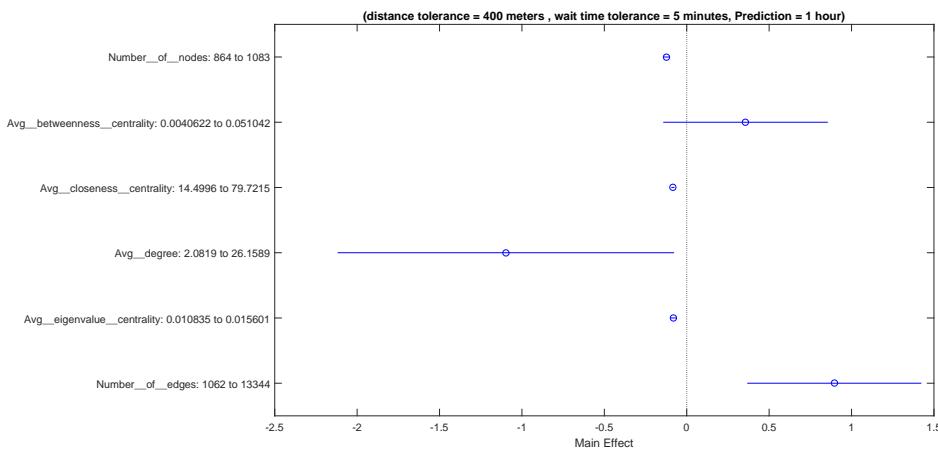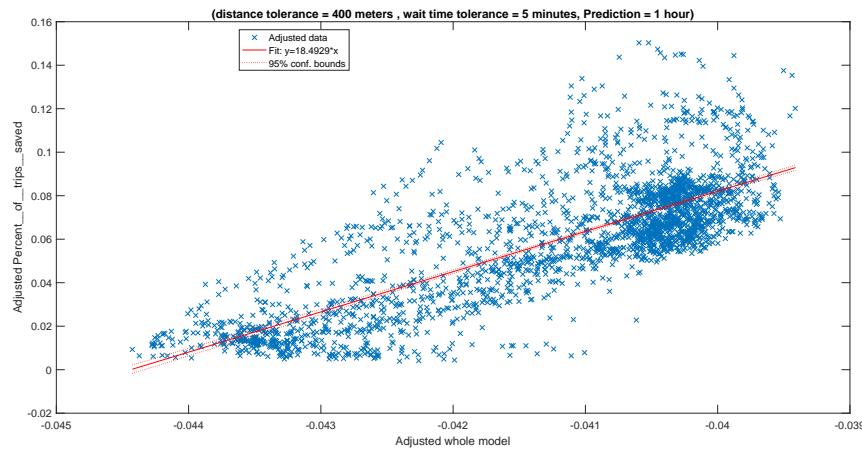
Fig. 23. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 7.
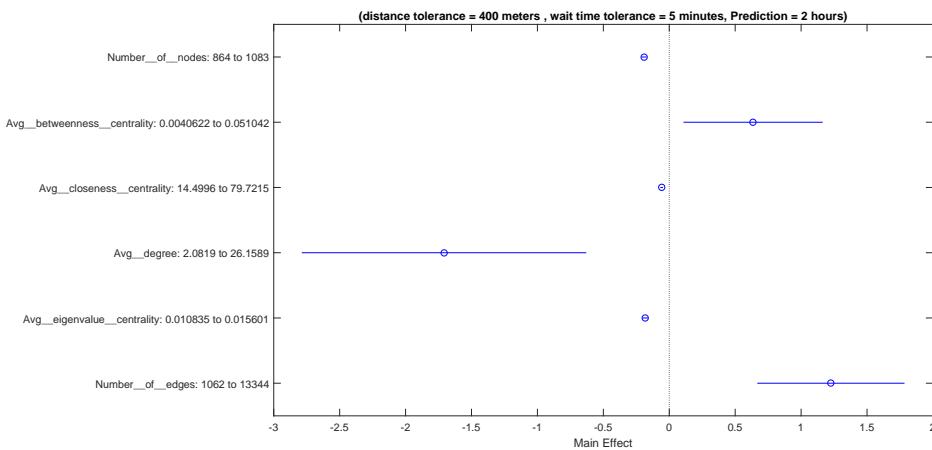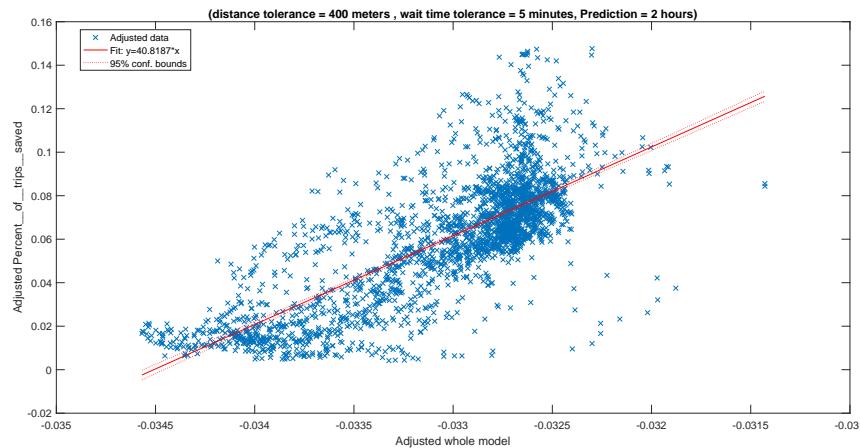
```
Estimated Coefficients:
                                    Estimate        SE          tStat       pValue

    (Intercept)                      0.82177      0.058462      14.056      3.2169e-43
    Number__of__nodes              -0.00056557    4.3554e-05   -12.985      2.4598e-37
    Avg__betweenness__centrality     7.5943       5.4204         1.401      0.16133
    Avg__closeness__centrality      -0.0012879     7.495e-05   -17.184      1.4197e-62
    Avg__degree                     -0.045583     0.021619      -2.1085     0.035088
    Avg__eigenvalue__centrality    -16.862        2.2117        -7.624      3.4958e-14
    Number__of__edges                7.2904e-05   2.1936e-05     3.3236     0.00090187


Number of observations: 2455, Error degrees of freedom: 2448
Root Mean Squared Error: 0.0175
R-squared: 0.624,   Adjusted R-Squared 0.624
F-statistic vs. constant model: 678, p-value = 0

ANOVA_ANALYSIS =

                SumSq      DF      MeanSq       F        pValue

    Total       2.0075    2454    0.00081805
    Model       1.2535       6    0.20892    678.35       0
    Residual    0.75396   2448    0.00030799
```

Fig. 24. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 8.

(distance tolerance = 400 meters , wait time tolerance = 5 minutes, Prediction = 2 hours)

Estimated Coefficients:

	Estimate	SE	tStat	pValue
(Intercept)	1.4086	0.0618	22.793	1.9116e-104
Number__of__nodes	-0.0008726	4.6041e-05	-18.952	7.4474e-75
Avg__betweenness__centrality	13.531	5.73	2.3614	0.018284
Avg__closeness__centrality	-0.00088309	7.9229e-05	-11.146	3.5287e-28
Avg__degree	-0.070953	0.022853	-3.1047	0.0019262
Avg__eigenvalue__centrality	-38.511	2.3379	-16.472	6.7669e-58
Number__of__edges	9.9818e-05	2.3188e-05	4.3047	1.738e-05

Number of observations: 2455, Error degrees of freedom: 2448
Root Mean Squared Error: 0.0186
R-squared: 0.578,   Adjusted R-Squared 0.577
F-statistic vs. constant model: 560, p-value = 0
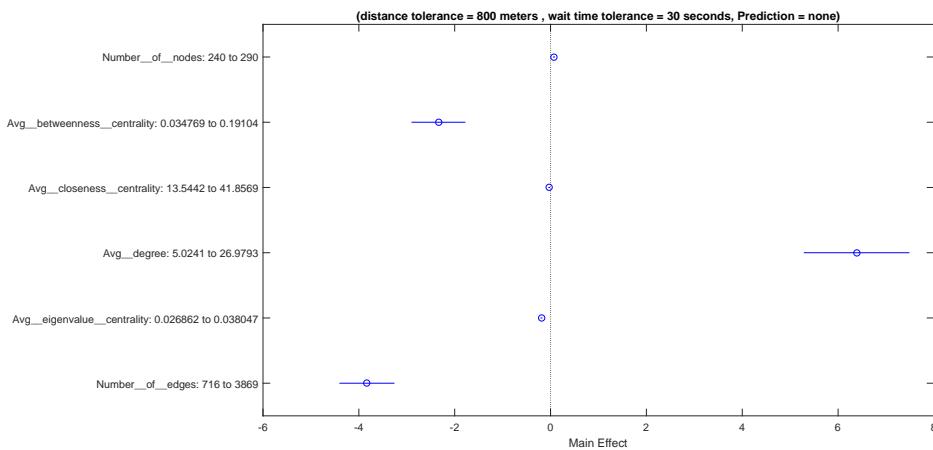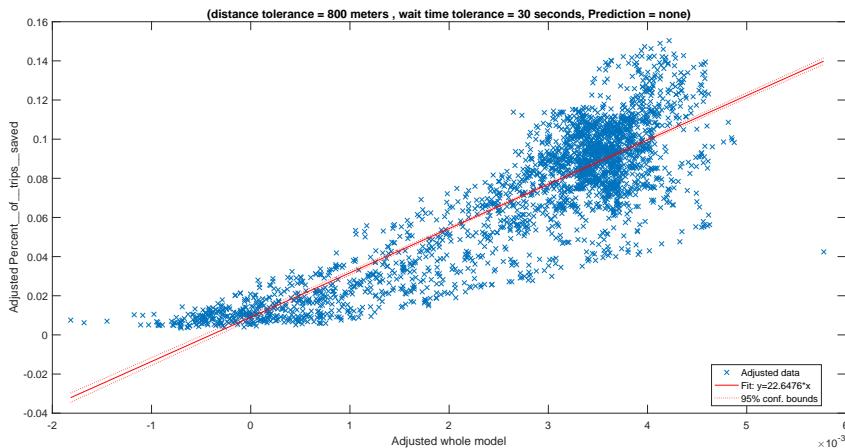
ANOVA_ANALYSIS =

|	SumSq	DF	MeanSq	F	pValue
Total	1.9988	2454	0.00081451		
Model	1.1563	6	0.19271	559.94	0
Residual	0.84252	2448	0.00034417		

Fig. 25. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 9.

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Estimated Coefficients:
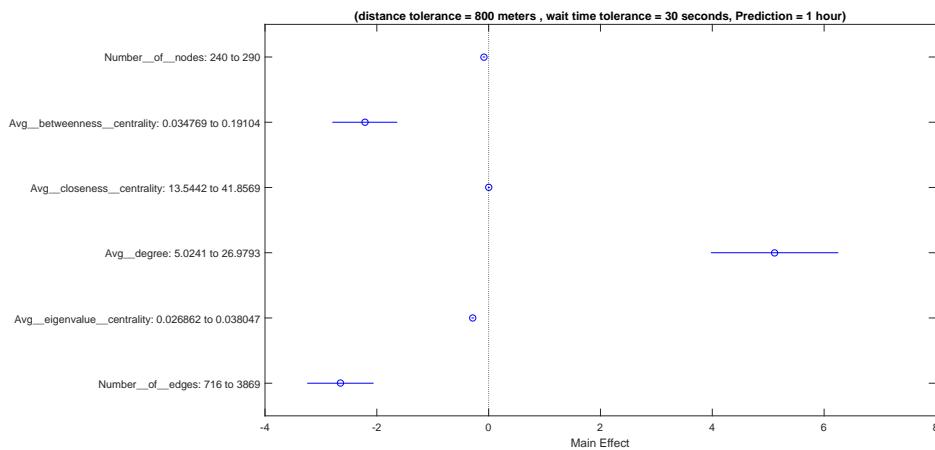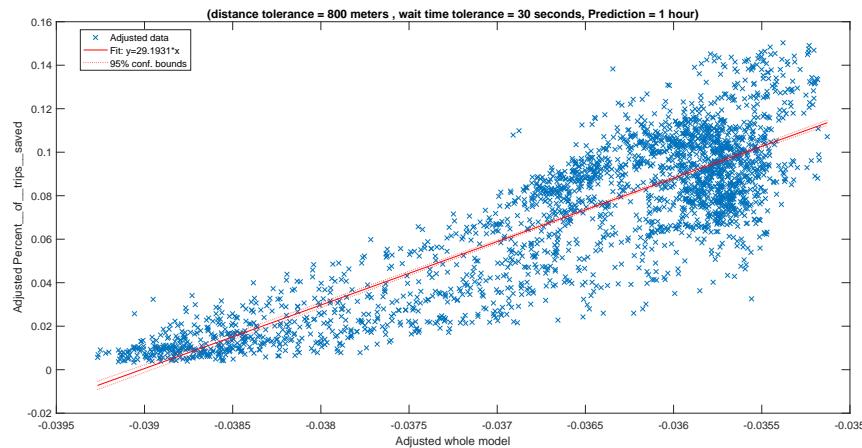
	Estimate	SE	tStat	pValue
(Intercept)	0.0090474	0.071194	0.12708	0.89889
Number__of__nodes	0.0014356	0.00021643	6.6332	4.0185e-11
Avg__betweenness__centrality	-14.963	1.8334	-8.1612	5.2123e-16
Avg__closeness__centrality	-0.0009661	0.00032024	-3.0168	0.0025803
Avg__degree	0.29089	0.025602	11.362	3.3613e-29
Avg__eigenvalue__centrality	-16.998	0.98392	-17.276	3.0715e-63
Number__of__edges	-0.0012151	9.2937e-05	-13.075	7.9079e-38

Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0177
R-squared: 0.761, Adjusted R-Squared 0.761
F-statistic vs. constant model: 1.32e+03, p-value = 0

ANOVA_ANALYSIS =

	SumSq	DF	MeanSq	F	pValue
Total	3.2576	2489	0.0013088		
Model	2.4805	6	0.41342	1320.9	0
Residual	0.77712	2483	0.00031298		

Fig. 26. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 10.

36

Estimated Coefficients:
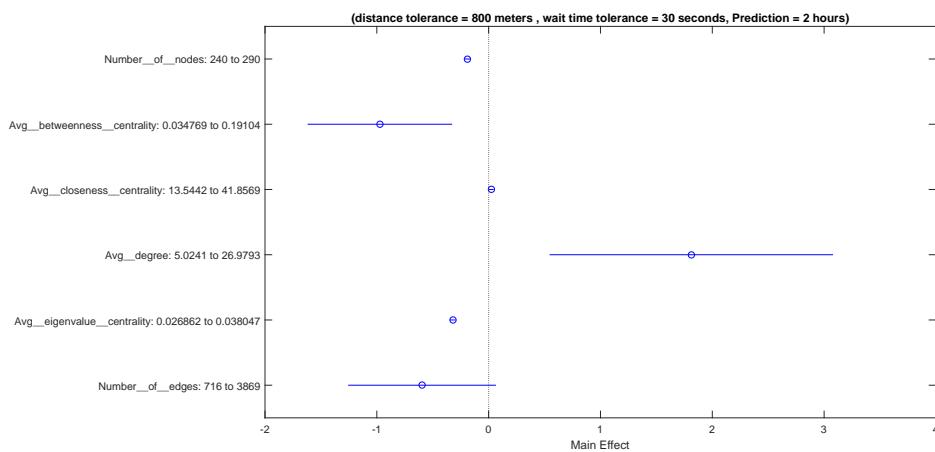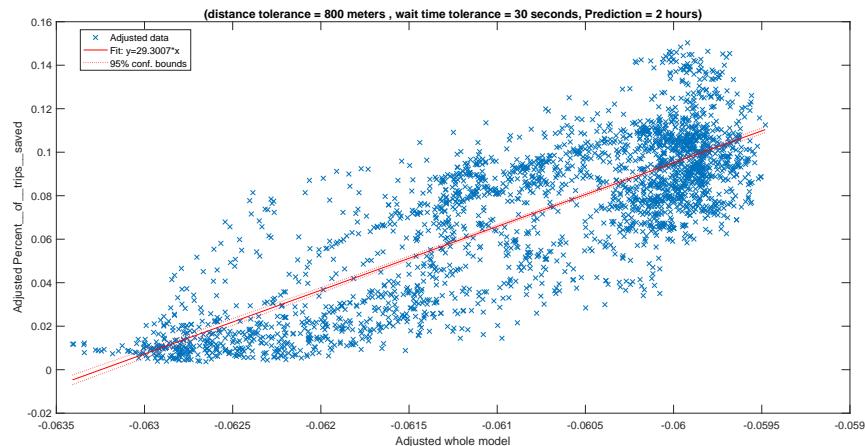
	Estimate	SE	tStat	pValue
(Intercept)	1.1391	0.073557	15.485	1.0529e-51
Number__of__nodes	-0.0016839	0.00022362	-7.5302	7.0487e-14
Avg__betweenness__centrality	-14.176	1.8943	-7.4833	1.0001e-13
Avg__closeness__centrality	0.0001357	0.00033087	0.41015	0.68173
Avg__degree	0.23293	0.026452	8.8058	2.3867e-18
Avg__eigenvalue__centrality	-25.519	1.0166	-25.103	4.0157e-124
Number__of__edges	-0.00084118	9.6022e-05	-8.7603	3.5338e-18

Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0183
R-squared: 0.746, Adjusted R-Squared 0.745
F-statistic vs. constant model: 1.21e+03, p-value = 0

ANOVA_ANALYSIS =

	SumSq	DF	MeanSq	F	pValue
Total	3.2621	2489	0.0013106		
Model	2.4325	6	0.40541	1213.5	0
Residual	0.82957	2483	0.0003341		

Fig. 27. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 11.
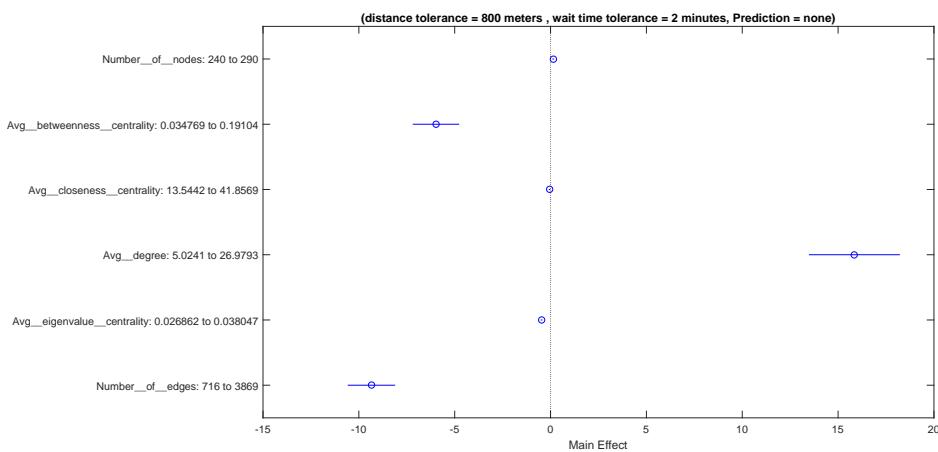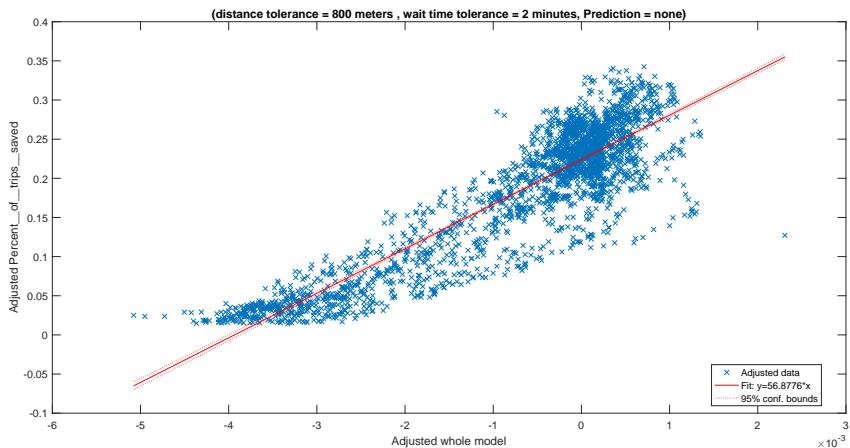
```
Estimated Coefficients:
                                    Estimate        SE          tStat       pValue

    (Intercept)                      1.8532       0.081866      22.637      2.6549e-103
    Number__of__nodes               -0.0037658    0.00024888   -15.131      1.5281e-49
    Avg__betweenness__centrality    -6.2244       2.1083       -2.9524      0.003183
    Avg__closeness__centrality       0.00084982   0.00036824    2.3078      0.021093
    Avg__degree                      0.082561      0.02944       2.8044      0.0050799
    Avg__eigenvalue__centrality    -28.632        1.1314       -25.306      6.7398e-126
    Number__of__edges               -0.00018889   0.00010687   -1.7675      0.07726


Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0203
R-squared: 0.677,   Adjusted R-Squared 0.676
F-statistic vs. constant model: 866, p-value = 0

ANOVA_ANALYSIS =

                 SumSq      DF      MeanSq        F        pValue

    Total        3.1783     2489    0.0012769
    Model        2.1507        6    0.35846     866.17        0
    Residual     1.0276     2483    0.00041384
```

Fig. 28. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties
12.

Estimated Coefficients:
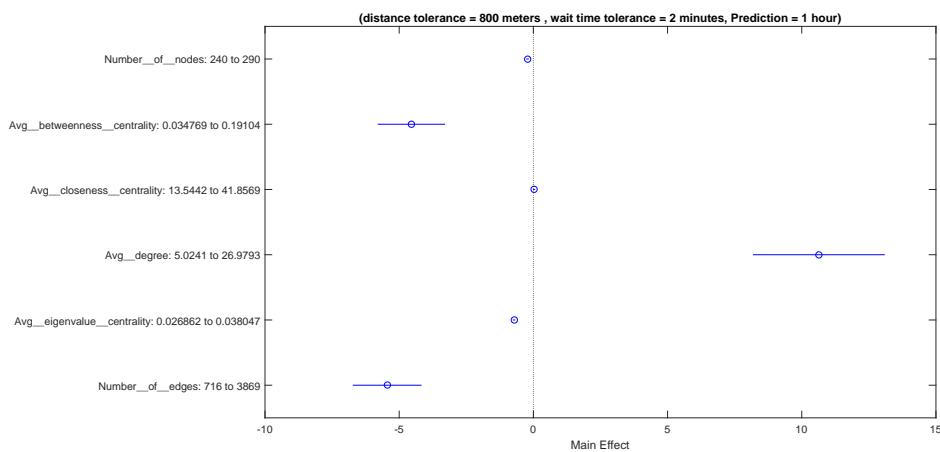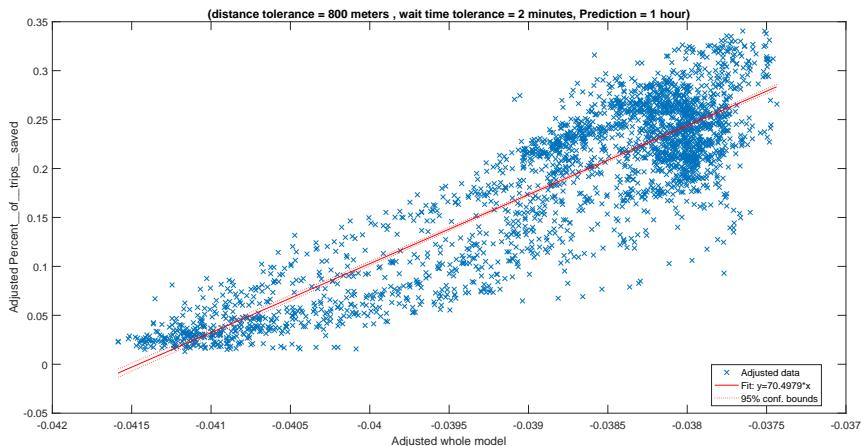
	Estimate	SE	tStat	pValue
(Intercept)	0.22375	0.15331	1.4595	0.14455
Number__of__nodes	0.0028521	0.00046607	6.1195	1.0873e-09
Avg__betweenness__centrality	-38.255	3.9481	-9.6895	8.0908e-22
Avg__closeness__centrality	-0.001842	0.00068959	-2.6712	0.0076081
Avg__degree	0.72187	0.055131	13.094	6.2587e-38
Avg__eigenvalue__centrality	-42.084	2.1188	-19.863	1.3341e-81
Number__of__edges	-0.0029629	0.00020013	-14.805	1.3708e-47

Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0381
R-squared: 0.804, Adjusted R-Squared 0.804
F-statistic vs. constant model: 1.7e+03, p-value = 0

ANOVA_ANALYSIS =

	SumSq	DF	MeanSq	F	pValue
Total	18.405	2489	0.0073946		
Model	14.802	6	2.4669	1699.8	0
Residual	3.6036	2483	0.0014513		

Fig. 29. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 13.

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```
Estimated Coefficients:
                                  Estimate        SE        tStat       pValue

    (Intercept)                     2.9227     0.15873      18.413     4.496e-71
    Number__of__nodes             -0.004423  0.00048255    -9.1658     1.002e-19
    Avg__betweenness__centrality   -29.097      4.0878     -7.1181     1.4262e-12
    Avg__closeness__centrality    0.00086988  0.00071399    1.2183      0.22321
    Avg__degree                    0.48447     0.057081      8.4874     3.5786e-17
    Avg__eigenvalue__centrality    -64.211      2.1937     -29.271    4.6691e-162
    Number__of__edges             -0.0017278  0.00020721    -8.3384     1.2315e-16


Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0394
R-squared: 0.788,  Adjusted R-Squared 0.787
F-statistic vs. constant model: 1.54e+03, p-value = 0

ANOVA_ANALYSIS =

                SumSq      DF     MeanSq       F        pValue

    Total       18.221    2489   0.0073206
    Model       14.358       6     2.393     1538.1       0
    Residual     3.863    2483   0.0015558
```
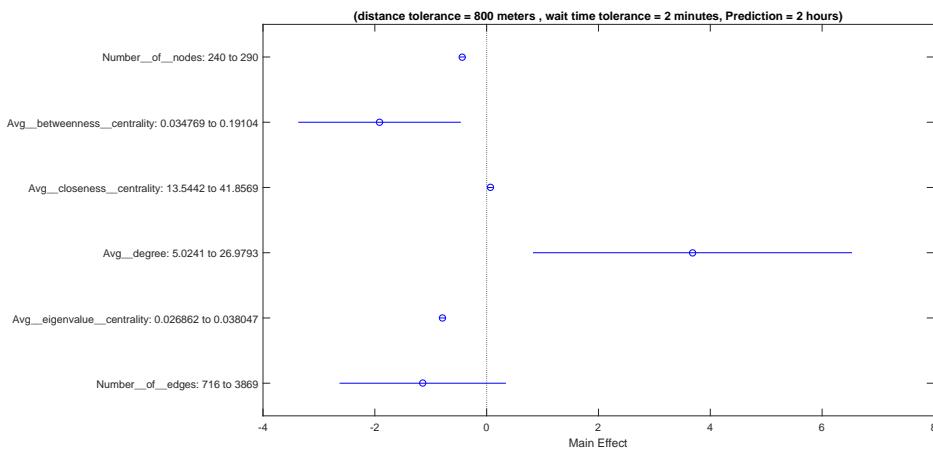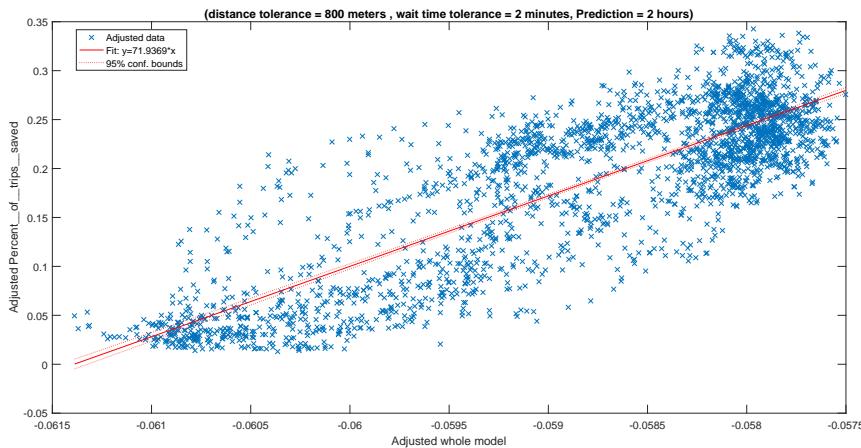
Fig. 30. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 14.
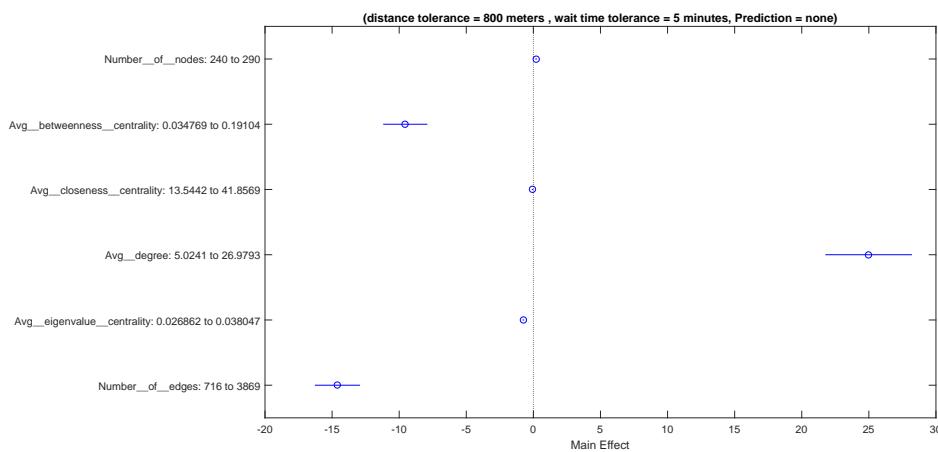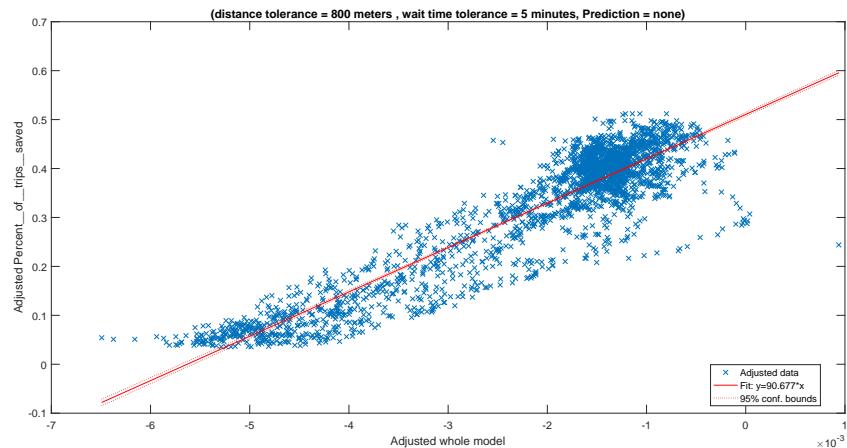
```
Estimated Coefficients:
                                      Estimate        SE          tStat       pValue
                                      _____     _____    _____   _____

    (Intercept)                         4.4163       0.18429       23.964    2.461e-114
    Number__of__nodes                -0.0087159    0.00056025     -15.557    3.8028e-52
    Avg__betweenness__centrality       -12.259        4.746       -2.5831    0.0098488
    Avg__closeness__centrality        0.0023073    0.00082895      2.7834    0.0054195
    Avg__degree                        0.16768       0.066272      2.5301    0.011463
    Avg__eigenvalue__centrality        -70.884        2.5469      -27.831    1.32e-148
    Number__of__edges              -0.00036267    0.00024057      -1.5075    0.1318


Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0458
R-squared: 0.708,  Adjusted R-Squared 0.707
F-statistic vs. constant model: 1e+03, p-value = 0

ANOVA_ANALYSIS =

                  SumSq      DF      MeanSq        F       pValue
                 _____    ____    _____    _____    _____

    Total         17.813    2489    0.0071568
    Model         12.606       6        2.101    1001.8      0
    Residual      5.2072    2483    0.0020972
```

Fig. 31. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 15.

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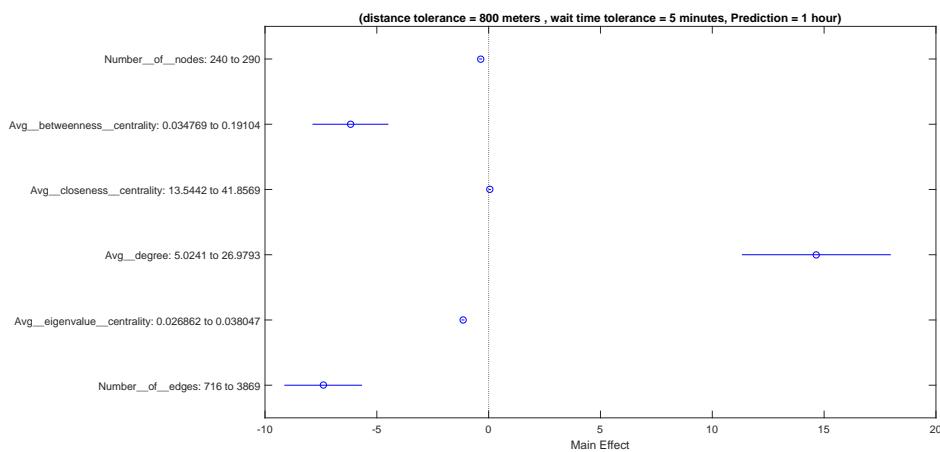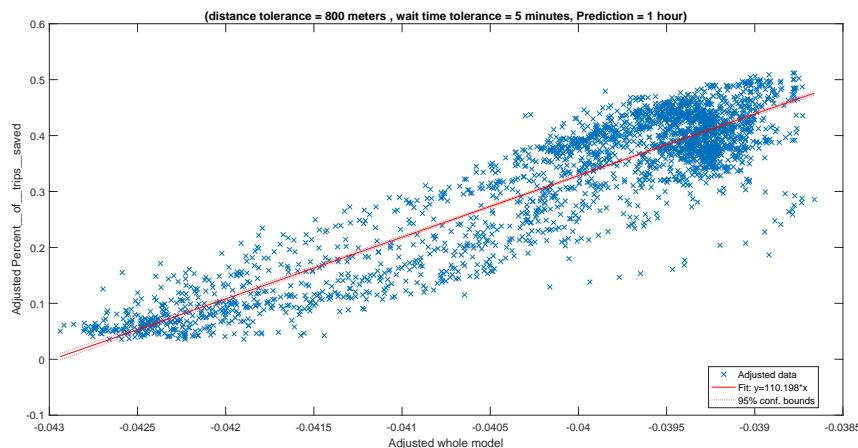
```
Estimated Coefficients:
                                  Estimate         SE        tStat        pValue

    (Intercept)                     0.5106     0.20836       2.4506       0.01433
    Number__of__nodes            0.0040236  0.00063342       6.3521    2.5174e-10
    Avg__betweenness__centrality   -61.095      5.3658      -11.386    2.5857e-29
    Avg__closeness__centrality  -0.0020481  0.00093721      -2.1853     0.028962
    Avg__degree                      1.138    0.074928       15.188    6.8953e-50
    Avg__eigenvalue__centrality    -66.996      2.8796      -23.266   1.7562e-108
    Number__of__edges           -0.0046299  0.00027199      -17.022    1.5195e-61


Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0518
R-squared: 0.848,  Adjusted R-Squared 0.848
F-statistic vs. constant model: 2.31e+03, p-value = 0

ANOVA_ANALYSIS =

                SumSq       DF      MeanSq        F        pValue

    Total       43.806     2489      0.0176
    Model        37.15        6      6.1917     2309.7        0
    Residual    6.6562     2483   0.0026807
```

**Fig. 32.** Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 16.

(distance tolerance = 800 meters , wait time tolerance = 5 minutes, Prediction = 1 hour)

(distance tolerance = 800 meters , wait time tolerance = 5 minutes, Prediction = 1 hour)
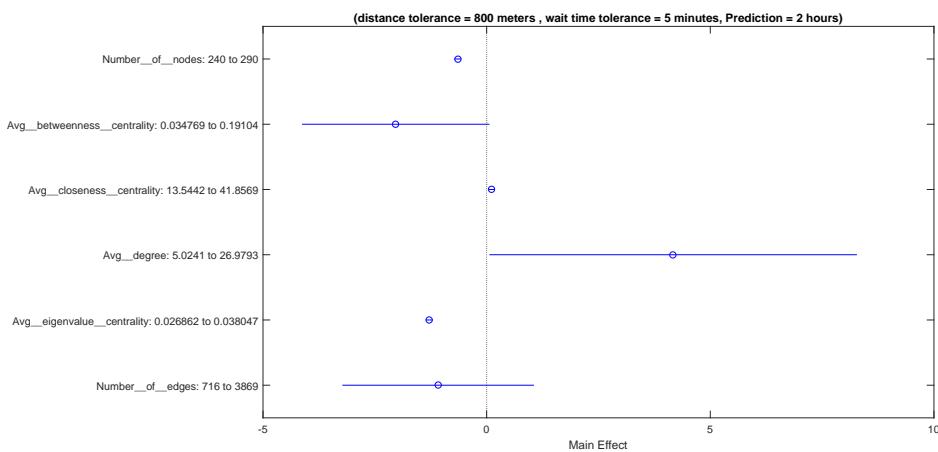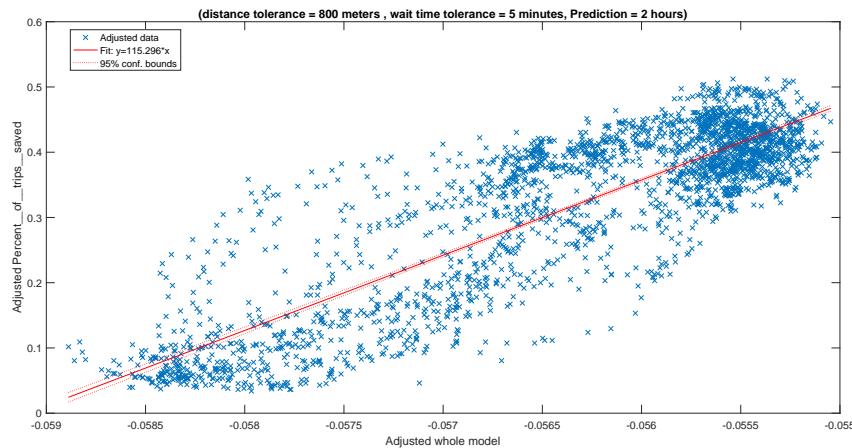
Estimated Coefficients:

	Estimate	SE	tStat	pValue
(Intercept)	4.7363	0.21495	22.035	1.9946e-98
Number__of__nodes	-0.0072379	0.00065345	-11.076	7.2563e-28
Avg__betweenness__centrality	-39.555	5.5355	-7.1457	1.1717e-12
Avg__closeness__centrality	0.0017503	0.00096685	1.8103	0.070375
Avg__degree	0.66746	0.077297	8.635	1.032e-17
Avg__eigenvalue__centrality	-102.85	2.9706	-34.623	1.1327e-214
Number__of__edges	-0.002347	0.00028059	-8.3642	9.9509e-17

Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0534
R-squared: 0.836, Adjusted R-Squared 0.835
F-statistic vs. constant model: 2.1e+03, p-value = 0

ANOVA_ANALYSIS =

	SumSq	DF	MeanSq	F	pValue
Total	43.093	2489	0.017313		
Model	36.009	6	6.0015	2103.6	0
Residual	7.0838	2483	0.0028529		

Fig. 33. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 17.

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(distance tolerance = 800 meters , wait time tolerance = 5 minutes, Prediction = 2 hours)

Legend:
- × Adjusted data
- Fit: y=115.296*x
- 95% conf. bounds

Y-axis: Adjusted Percent__of___trips__saved
X-axis: Adjusted whole model

(distance tolerance = 800 meters , wait time tolerance = 5 minutes, Prediction = 2 hours)

- Number__of__nodes: 240 to 290
- Avg__betweenness__centrality: 0.034769 to 0.19104
- Avg__closeness__centrality: 13.5442 to 41.8569
- Avg__degree: 5.0241 to 26.9793
- Avg__eigenvalue__centrality: 0.026862 to 0.038047
- Number__of__edges: 716 to 3869

X-axis: Main Effect

Estimated Coefficients:

	Estimate	SE	tStat	pValue
(Intercept)	6.814	0.26534	25.68	3.5345e-129
Number__of__nodes	-0.012945	0.00080667	-16.048	3.214e-55
Avg__betweenness__centrality	-13.006	6.8334	-1.9032	0.057124
Avg__closeness__centrality	0.0039826	0.0011935	3.3368	0.0008599
Avg__degree	0.18988	0.095421	1.99	0.046703
Avg__eigenvalue__centrality	-114.56	3.6671	-31.24	5.6128e-181
Number__of__edges	-0.00034396	0.00034638	-0.993	0.32081

Number of observations: 2490, Error degrees of freedom: 2483
Root Mean Squared Error: 0.0659
R-squared: 0.745, Adjusted R-Squared 0.744
F-statistic vs. constant model: 1.21e+03, p-value = 0
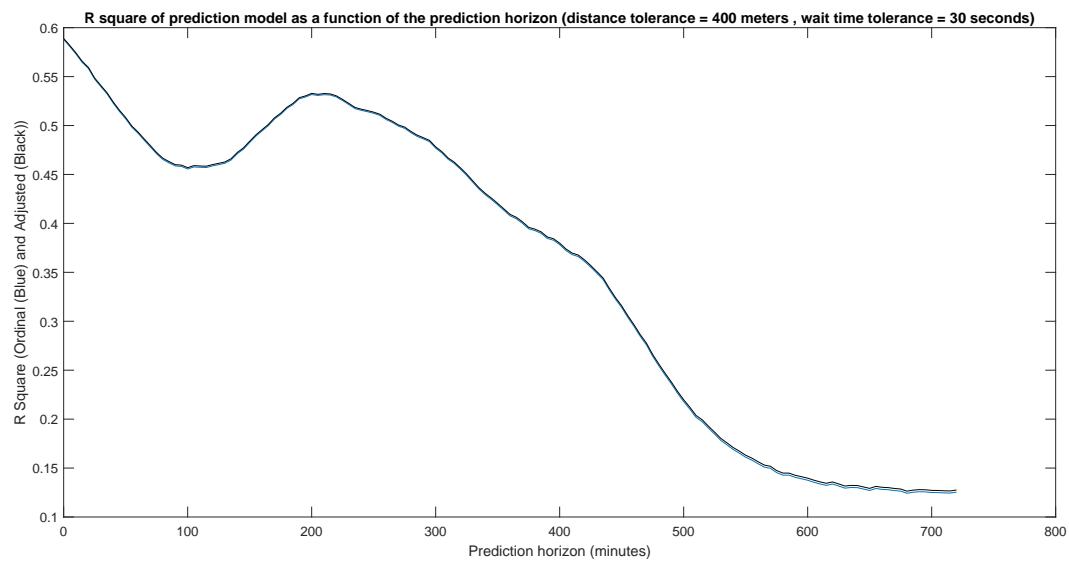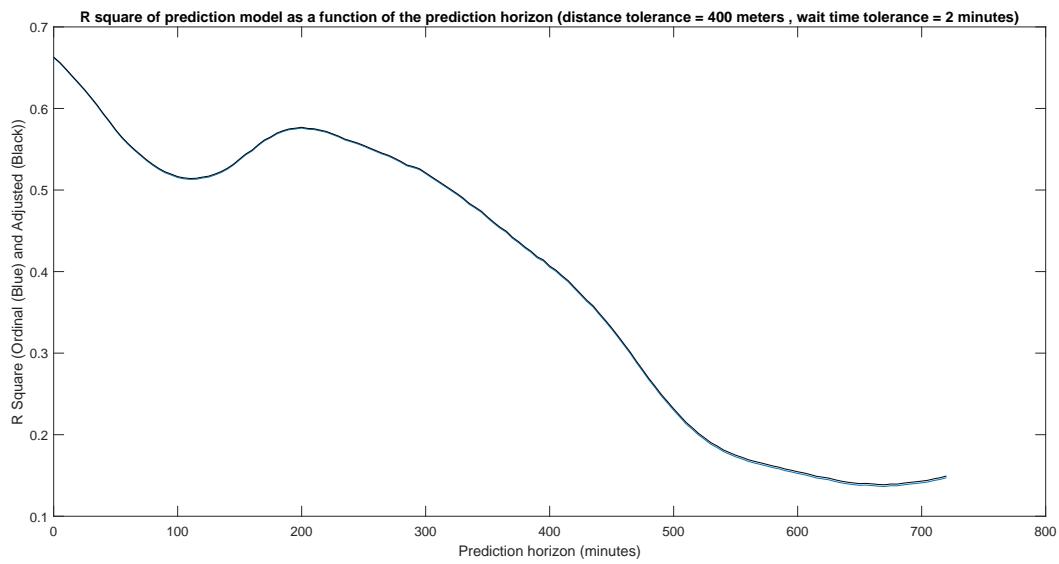
ANOVA_ANALYSIS =

	SumSq	DF	MeanSq	F	pValue
Total	42.302	2489	0.016995		
Model	31.507	6	5.2511	1207.8	0
Residual	10.795	2483	0.0043476		
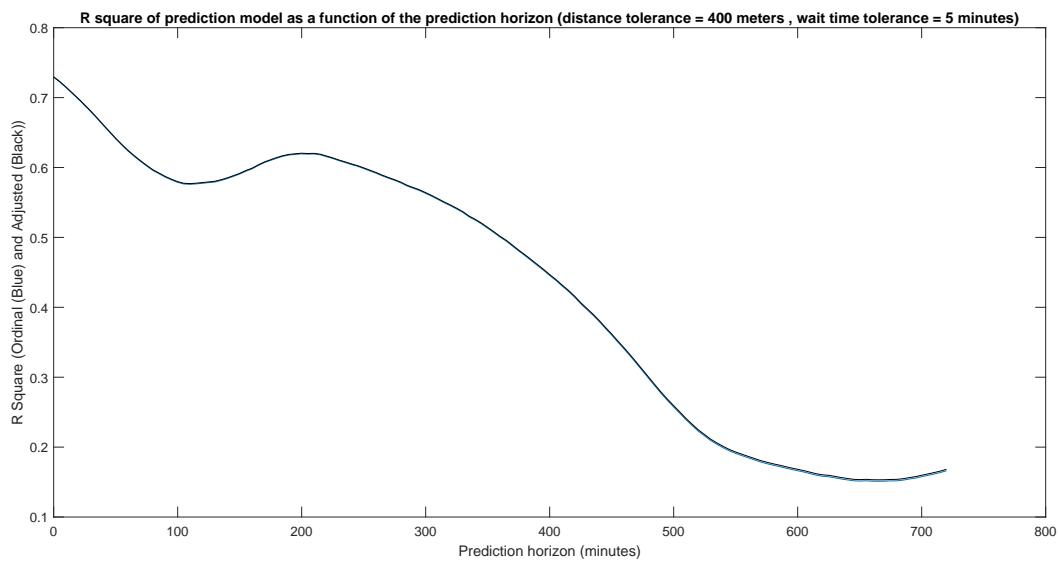
Fig. 34. Multilinear regression model, predicting the ride-sharing utilization using the dynamic network's properties 18.
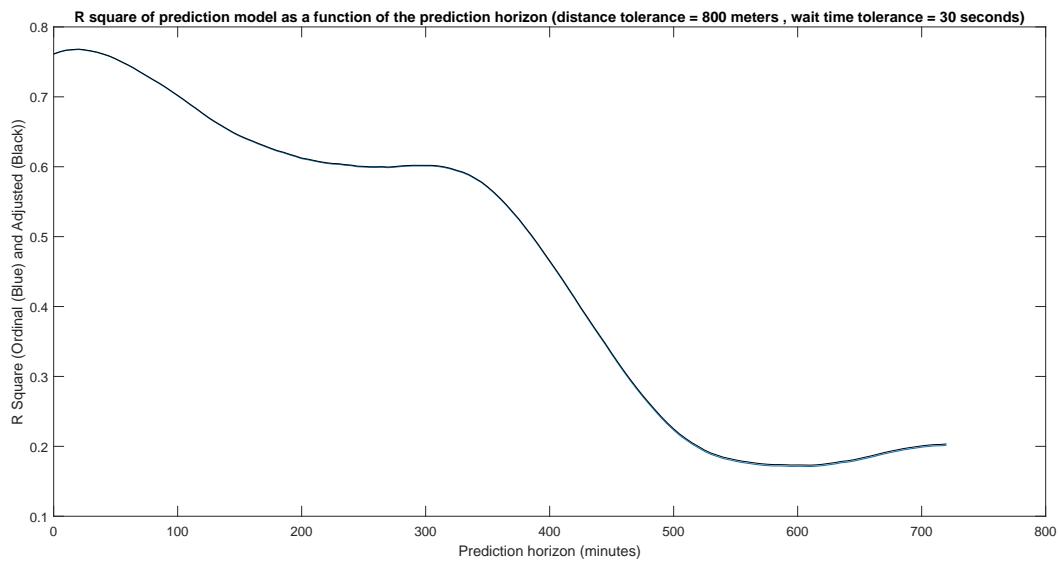
Fig. 35. The accuracy of the multilinear regression model, as measured by its R^2, as a function of the prediction horizon 1.
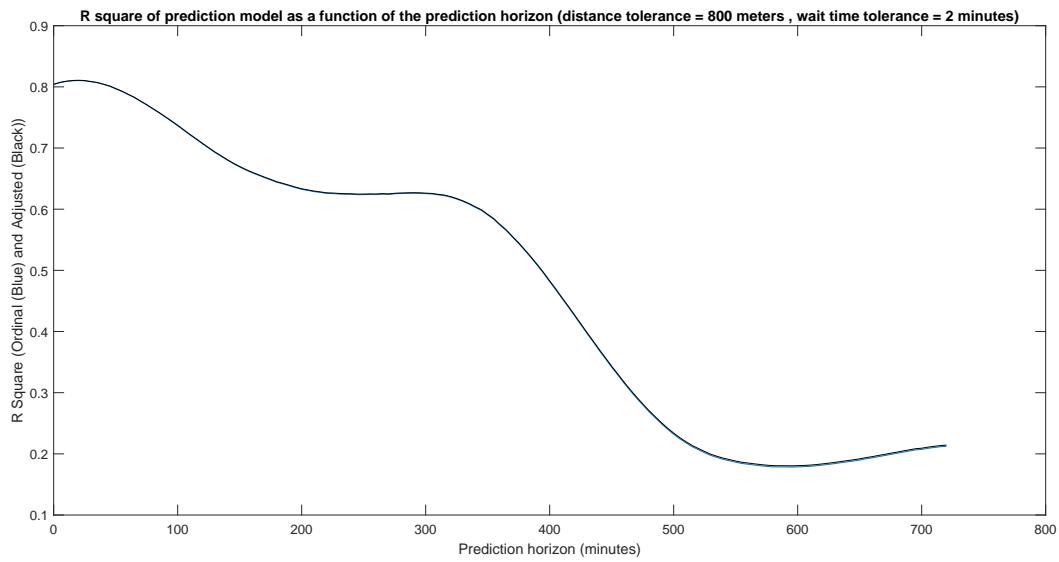
Fig. 36. The accuracy of the multilinear regression model, as measured by its R^2, as a function of the prediction horizon 2.
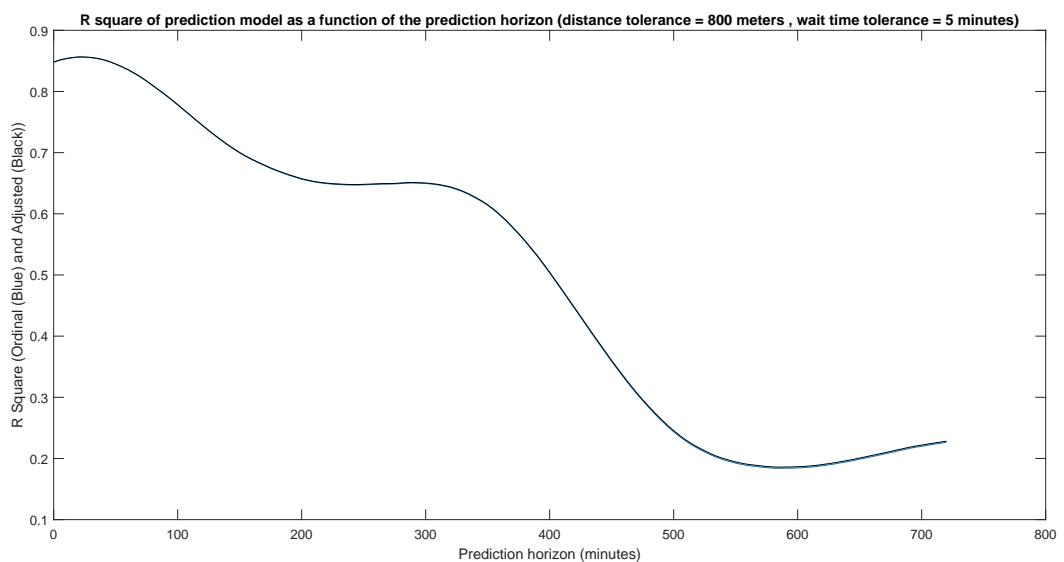

Fig. 37. The accuracy of the multilinear regression model, as measured by its R^2, as a function of the prediction horizon 3.
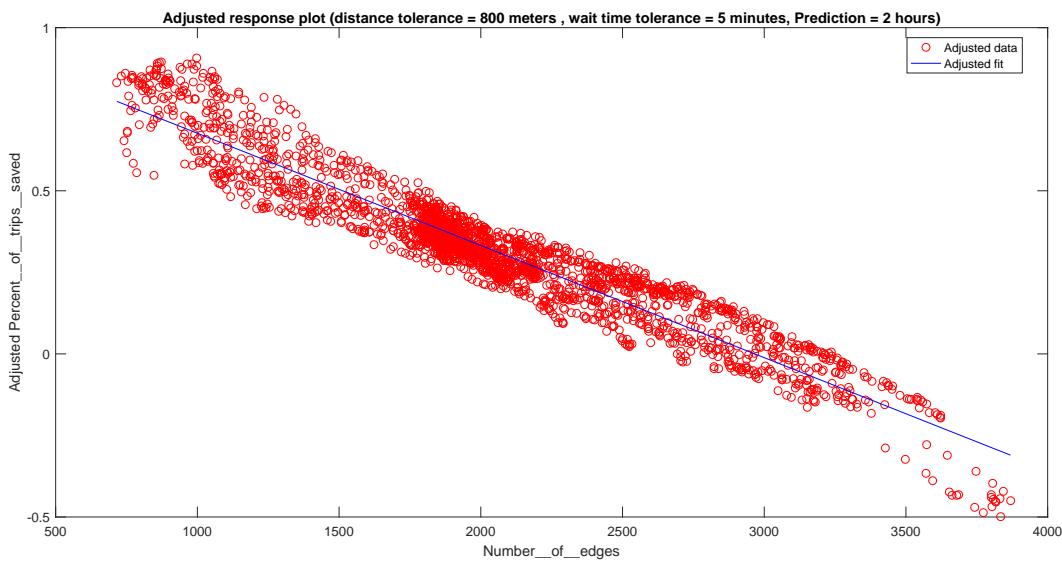
Fig. 38. The accuracy of the multilinear regression model, as measured by its R^2, as a function of the prediction horizon 4.
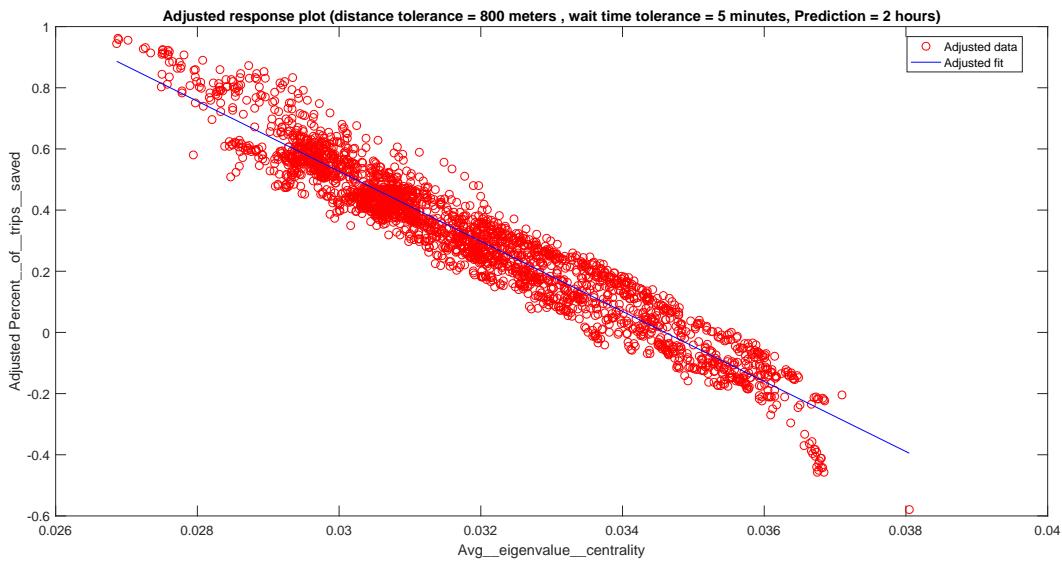
Fig. 39. The accuracy of the multilinear regression model, as measured by its R^2, as a function of the prediction horizon 5.
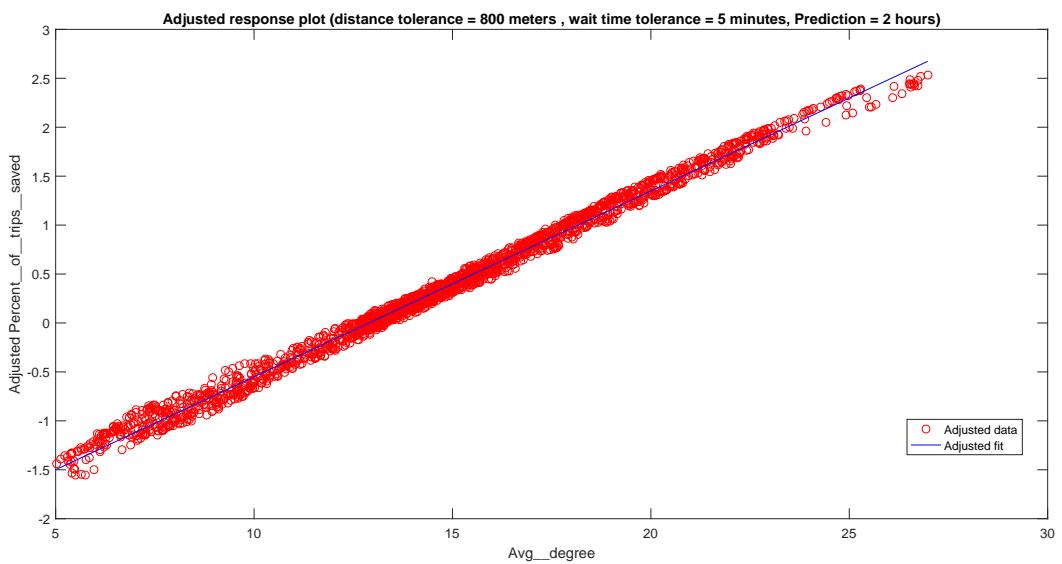
Fig. 40. The accuracy of the multilinear regression model, as measured by its R^2, as a function of the prediction horizon 6.
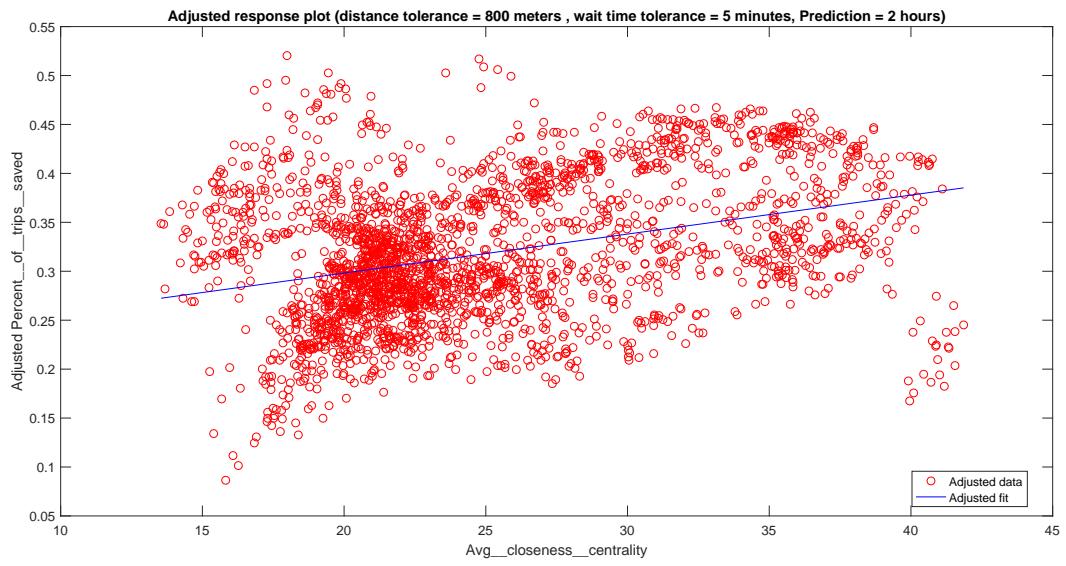
Fig. 41. The adjusted response plot for the number of edges of the dynamic network, created for distance tolerance = 800 meters , wait time tolerance = 5 minutes, prediction horizon = 2 hours.
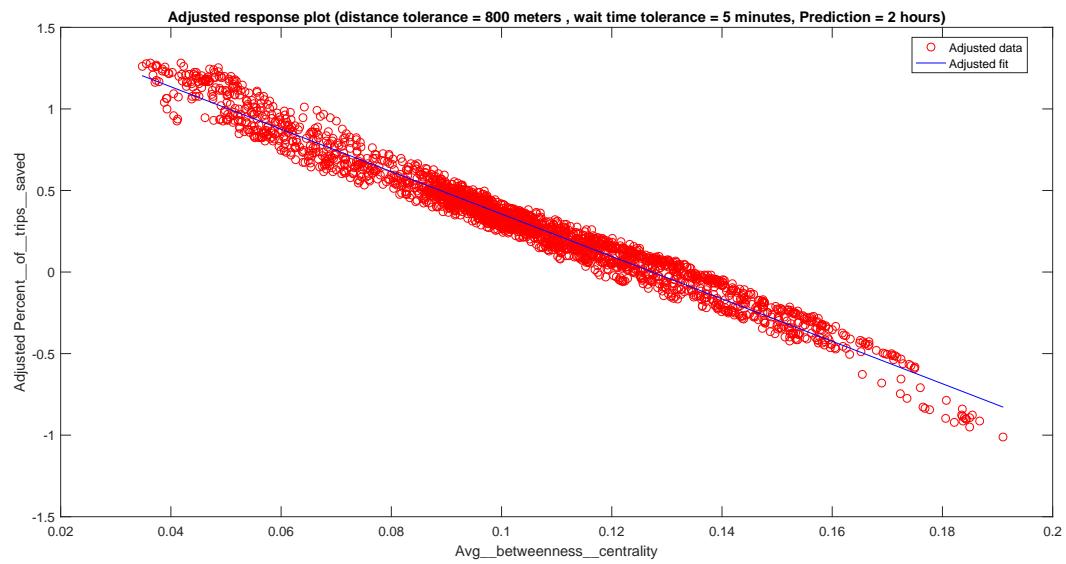
Fig. 42. The adjusted response plot for the average eigenvalue centrality of the dynamic network, created for distance tolerance = 800 meters , wait time tolerance = 5 minutes, prediction horizon = 2 hours.
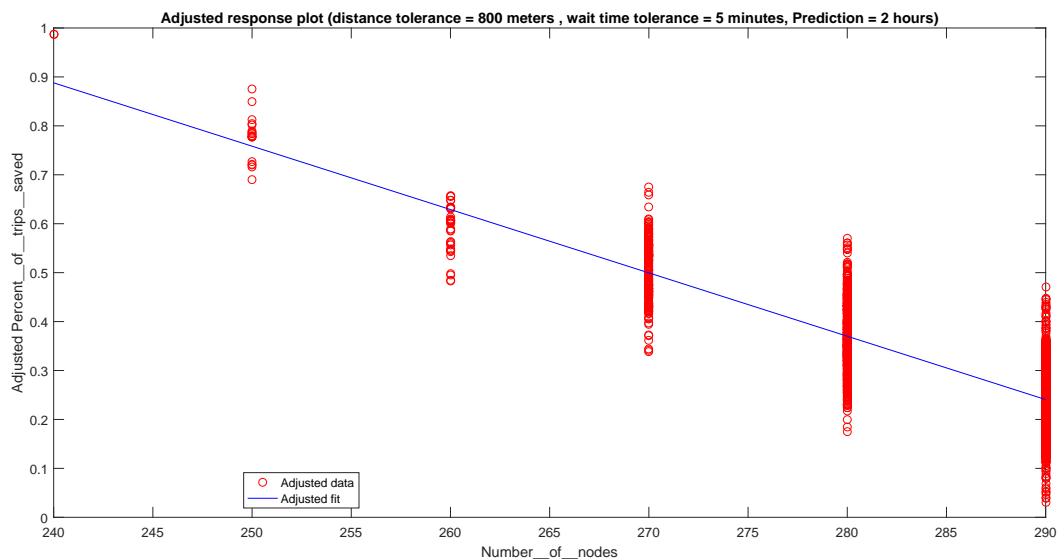
Fig. 43. The adjusted response plot for the average degree of the dynamic network, created for distance tolerance = 800 meters , wait time tolerance = 5 minutes, prediction horizon = 2 hours.

Fig. 44. The adjusted response plot for the average closeness centrality of the dynamic network, created for distance tolerance = 800 meters , wait time tolerance = 5 minutes, prediction horizon = 2 hours.

Fig. 45. The adjusted response plot for the average betweenness centrality of the dynamic network, created for distance tolerance = 800 meters , wait time tolerance = 5 minutes, prediction horizon = 2 hours.

Fig. 46. The adjusted response plot for the number of nodes of the dynamic network, created for distance tolerance = 800 meters , wait time tolerance = 5 minutes, prediction horizon = 2 hours.

Appendix B: Data Availability Statement

The taxi data used to support the findings of this study, encompassing a dataset of over 14 Million individual taxi trips taken in New York City, is accessible at the NYC Taxi repository [19].