

Linear Regression Results

Thayer Adsit, Matthew Chen, Cindy Huynh, James Leung

March 1, 2015

- 1 Linear Regression Results**
- 2 Log Linear Regression Results**

Table 1: All riders

| | <i>Dependent variable:</i> |
|-------------------------|-----------------------------|
| | count |
| factor(season)2 | −2.465 (5.398) |
| factor(season)3 | −37.082*** (6.902) |
| factor(season)4 | 65.159*** (4.541) |
| holiday | −9.442 (9.177) |
| workingday | −2.705 (3.283) |
| factor(weather)2 | 14.020*** (3.600) |
| factor(weather)3 | −9.167 (6.053) |
| factor(weather)4 | 185.765 (154.207) |
| temp | 8.096*** (1.206) |
| atemp | 2.778*** (1.058) |
| humidity | −2.810*** (0.094) |
| windspeed | 0.596*** (0.199) |
| Constant | 121.079*** (9.042) |
| Observations | 10,886 |
| R ² | 0.277 |
| Adjusted R ² | 0.276 |
| Residual Std. Error | 154.137 (df = 10873) |
| F Statistic | 346.719*** (df = 12; 10873) |
| <i>Note:</i> | *p<0.1; **p<0.05; ***p<0.01 |

Table 2: Registered Riders

| | <i>Dependent variable:</i> |
|-------------------------|-----------------------------|
| | registered |
| factor(season)2 | −2.228 (4.704) |
| factor(season)3 | −23.547*** (6.016) |
| factor(season)4 | 58.545*** (3.958) |
| holiday | 3.026 (7.998) |
| workingday | 34.839*** (2.861) |
| factor(weather)2 | 10.248*** (3.138) |
| factor(weather)3 | −12.841** (5.275) |
| factor(weather)4 | 142.001 (134.398) |
| temp | 5.344*** (1.051) |
| atemp | 2.064** (0.922) |
| humidity | −1.950*** (0.082) |
| windspeed | 0.590*** (0.173) |
| Constant | 78.047*** (7.880) |
| Observations | 10,886 |
| R ² | 0.210 |
| Adjusted R ² | 0.209 |
| Residual Std. Error | 134.338 (df = 10873) |
| F Statistic | 240.566*** (df = 12; 10873) |
| <i>Note:</i> | *p<0.1; **p<0.05; ***p<0.01 |

Table 3: Casual Riders

| | <i>Dependent variable:</i> |
|-------------------------|-----------------------------|
| | casual |
| factor(season)2 | −0.236 (1.298) |
| factor(season)3 | −13.535*** (1.659) |
| factor(season)4 | 6.614*** (1.092) |
| holiday | −12.468*** (2.206) |
| workingday | −37.543*** (0.789) |
| factor(weather)2 | 3.772*** (0.866) |
| factor(weather)3 | 3.674** (1.455) |
| factor(weather)4 | 43.763 (37.075) |
| temp | 2.753*** (0.290) |
| atemp | 0.715*** (0.254) |
| humidity | −0.860*** (0.022) |
| windspeed | 0.006 (0.048) |
| Constant | 43.032*** (2.174) |
| Observations | 10,886 |
| R ² | 0.450 |
| Adjusted R ² | 0.450 |
| Residual Std. Error | 37.058 (df = 10873) |
| F Statistic | 742.573*** (df = 12; 10873) |
| <i>Note:</i> | *p<0.1; **p<0.05; ***p<0.01 |

Table 4: All riders log

| | <i>Dependent variable:</i> |
|-------------------------|-----------------------------|
| | log(count) |
| factor(season)2 | −0.101** (0.044) |
| factor(season)3 | −0.369*** (0.057) |
| factor(season)4 | 0.543*** (0.037) |
| holiday | −0.108 (0.075) |
| workingday | −0.123*** (0.027) |
| factor(weather)2 | 0.218*** (0.030) |
| factor(weather)3 | 0.028 (0.050) |
| factor(weather)4 | 2.380* (1.267) |
| temp | 0.062*** (0.010) |
| atemp | 0.027*** (0.009) |
| humidity | −0.025*** (0.001) |
| windspeed | 0.007*** (0.002) |
| Constant | 4.098*** (0.074) |
| Observations | 10,886 |
| R ² | 0.277 |
| Adjusted R ² | 0.277 |
| Residual Std. Error | 1.266 (df = 10873) |
| F Statistic | 347.880*** (df = 12; 10873) |
| <i>Note:</i> | *p<0.1; **p<0.05; ***p<0.01 |

Table 5: Registered Riders Log

| | <i>Dependent variable:</i> |
|-------------------------|-----------------------------|
| | log(count) |
| factor(season)2 | −0.101** (0.044) |
| factor(season)3 | −0.369*** (0.057) |
| factor(season)4 | 0.543*** (0.037) |
| holiday | −0.108 (0.075) |
| workingday | −0.123*** (0.027) |
| factor(weather)2 | 0.218*** (0.030) |
| factor(weather)3 | 0.028 (0.050) |
| factor(weather)4 | 2.380* (1.267) |
| temp | 0.062*** (0.010) |
| atemp | 0.027*** (0.009) |
| humidity | −0.025*** (0.001) |
| windspeed | 0.007*** (0.002) |
| Constant | 4.098*** (0.074) |
| Observations | 10,886 |
| R ² | 0.277 |
| Adjusted R ² | 0.277 |
| Residual Std. Error | 1.266 (df = 10873) |
| F Statistic | 347.880*** (df = 12; 10873) |
| <i>Note:</i> | *p<0.1; **p<0.05; ***p<0.01 |

Table 6: Casual Riders Log

| | <i>Dependent variable:</i> |
|-------------------------|-----------------------------|
| | log(count) |
| factor(season)2 | −0.101** (0.044) |
| factor(season)3 | −0.369*** (0.057) |
| factor(season)4 | 0.543*** (0.037) |
| holiday | −0.108 (0.075) |
| workingday | −0.123*** (0.027) |
| factor(weather)2 | 0.218*** (0.030) |
| factor(weather)3 | 0.028 (0.050) |
| factor(weather)4 | 2.380* (1.267) |
| temp | 0.062*** (0.010) |
| atemp | 0.027*** (0.009) |
| humidity | −0.025*** (0.001) |
| windspeed | 0.007*** (0.002) |
| Constant | 4.098*** (0.074) |
| Observations | 10,886 |
| R ² | 0.277 |
| Adjusted R ² | 0.277 |
| Residual Std. Error | 1.266 (df = 10873) |
| F Statistic | 347.880*** (df = 12; 10873) |
| <i>Note:</i> | *p<0.1; **p<0.05; ***p<0.01 |