DV：

drivingscore : driving behavior scores (higher score means better performance)

log\_co2\_1 : carbon emissions/day

IV：

Ranking : whether to show a ranking of driving behavior scores to the driver

Alert : whether the driver can be alerted to dangerous driving

app\_usage : whether to check in on the APP

Speed\_KMH : average driving speed/day

tired\_driving : hours of tired driving/day

log\_gasoline\_1 : fuel consumption/day

log\_totalmile\_1 : total mile/day

log\_t\_1 : driving hours/day

log\_acc\_1 : # of rapid acceleration/day

log\_deacc\_1 : # of rapid deceleration/day

log\_turn\_1 : # of sharp turn/day

log\_night\_driving\_1 : night driving hours/day

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Random-effects GLS regression | | |  |  | Number of obs = 10,934 | |  |
| Group variable: nnnnnooooo | | |  |  | Number of groups = 63 | |  |
|  |  |  |  |  |  |  |  |
| R-sq: |  |  |  |  | Obs per group: | |  |
|  | within = 0.4431 | |  |  |  | min = 4 |  |
|  | between = 0.9444 | |  |  |  | avg = 173.6 |  |
|  | overall = 0.7043 | |  |  |  | max = 372 |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | Wald chi2(12) = 9632.92 | |  |
| corr(u\_i, X) = 0 (assumed) | | |  |  | Prob > chi2 = 0.0000 | |  |
|  |  |  |  |  |  |  |  |
| -------------------------------------------------------------------------------------------------------------------------------------------------- | | | | | | | |
| drivingscore | | | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] | |
| ---------------------------+---------------------------------------------------------------------------------------------------------------------- | | | | | | | |
| Ranking | | | 1.3301080 | 1.2096660 | 1.10 | 0.272 | -1.040793 | 3.701009 |
| Alert | | | 1.9642380 | 1.2108860 | 1.62 | 0.105 | -0.409056 | 4.337531 |
| app\_usage | | | -0.6484242 | 0.6888206 | -0.94 | 0.347 | -1.998488 | 0.701639 |
| Speed\_KMH | | | -0.1083854 | 0.0232578 | -4.66 | 0.000 | -0.153970 | -0.062801 |
| tired\_driving | | | -9.4137200 | 0.1872719 | -50.27 | 0.000 | -9.780766 | -9.046674 |
| log\_gasoline\_1 | | | -3.0504840 | 1.2081480 | -2.52 | 0.012 | -5.418412 | -0.682557 |
| log\_totalmile\_1 | | | 0.6746792 | 0.3015924 | 2.24 | 0.025 | 0.083569 | 1.265789 |
| log\_t\_1 | | | 7.0019980 | 1.2816930 | 5.46 | 0.000 | 4.489926 | 9.514070 |
| log\_acc\_1 | | | -6.5021430 | 0.5565223 | -11.68 | 0.000 | -7.592907 | -5.411380 |
| log\_deacc\_1 | | | -10.5449500 | 0.5947283 | -17.73 | 0.000 | -11.710590 | -9.379303 |
| log\_turn\_1 | | | -3.0181910 | 0.3508734 | -8.60 | 0.000 | -3.705890 | -2.330492 |
| log\_night\_driving\_1 | | | -7.6816490 | 0.3517439 | -21.84 | 0.000 | -8.371054 | -6.992243 |
| \_cons | | | 96.9145100 | 1.7643650 | 54.93 | 0.000 | 93.456420 | 100.372600 |
| ---------------------------+---------------------------------------------------------------------------------------------------------------------- | | | | | | | |
| sigma\_u | | | 4.5070922 |  |  |  |  |  |
| sigma\_e | | | 13.10595 |  |  |  |  |  |
| rho | | | 0.10575749 | (fraction of variance due to u\_i) | | |  |  |
| -------------------------------------------------------------------------------------------------------------------------------------------------- | | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Random-effects GLS regression | | |  |  | Number of obs = 10,934 | | |
| Group variable: nnnnnooooo | | |  |  | Number of groups = 63 | | |
|  |  |  |  |  |  |  |  |
| R-sq: |  |  |  |  | Obs per group: | |  |
|  | within = 0.5190 | |  |  |  | min = 4 |  |
|  | between = 0.8224 | |  |  |  | avg = 173.6 |  |
|  | overall = 0.6397 | |  |  |  | max = 372 |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | Wald chi2(10) = 12066.10 | | |
| corr(u\_i, X) = 0 (assumed) | | |  |  | Prob > chi2 = 0.0000 | |  |
|  |  |  |  |  |  |  |  |
| ----------------------------------------------------------------------------------------------------------------------------------------------- | | | | | | | |
| log\_co2\_1 | | | Coef. | Std. Err. | z | P>|z| | [95% Conf. Interval] | |
| -----------------------------+----------------------------------------------------------------------------------------------------------------- | | | | | | | |
| Ranking | | | -0.0623132 | 0.0520893 | -1.20 | 0.232 | -0.1644064 | 0.0397801 |
| Alert | | | 0.0776133 | 0.0521301 | 1.49 | 0.137 | -0.0245599 | 0.1797866 |
| app\_usage | | | 0.0634468 | 0.0144486 | 4.39 | 0.000 | 0.0351282 | 0.0917655 |
| Speed\_KMH | | | 0.0241915 | 0.0003816 | 63.39 | 0.000 | 0.0234435 | 0.0249394 |
| tired\_driving | | | 0.0859261 | 0.0038063 | 22.57 | 0.000 | 0.0784659 | 0.0933863 |
| log\_gasoline\_1 | | | 0 | (omitted) |  |  |  |  |
| log\_totalmile\_1 | | | 0.0282179 | 0.0065051 | 4.34 | 0.000 | 0.0154682 | 0.0409676 |
| log\_acc\_1 | | | 0.1650360 | 0.0116821 | 14.13 | 0.000 | 0.1421394 | 0.1879325 |
| log\_deacc\_1 | | | 0.2854885 | 0.0122821 | 23.24 | 0.000 | 0.2614160 | 0.3095610 |
| log\_turn\_1 | | | 0.0346727 | 0.0074663 | 4.64 | 0.000 | 0.0200391 | 0.0493063 |
| log\_night\_driving\_1 | | | 0.1036578 | 0.0072803 | 14.24 | 0.000 | 0.0893887 | 0.1179268 |
| \_cons | | | -0.0149613 | 0.0559597 | -0.27 | 0.789 | -0.1246402 | 0.0947177 |
| -----------------------------+---------------------------------------------------------------------------------------------------------------- | | | | | | | |
| sigma\_u | | | 0.20261669 |  |  |  |  |  |
| sigma\_e | | | 0.27160355 |  |  |  |  |  |
| rho | | | 0.35754054 | (fraction of variance due to u\_i) | | |  |  |
| ----------------------------------------------------------------------------------------------------------------------------------------------- | | | | | | | |