# Results

# Linear Regression

Model Fit Measures

| | | | Overall Model Test | | | |
|---|---|---|---|---|---|---|
| **Model** | **R** | **$R^2$** | **F** | **df1** | **df2** | **p** |
| 1 | 0.19355 | 0.03746 | 15.43738 | 3 | 1190 | < .00001 |

Model Coefficients - log_VOL

| **Predictor** | **Estimate** | **SE** | **t** | **p** |
|---|---|---|---|---|
| Intercept | -1.64521 | 0.03744 | -43.93714 | < .00001 |
| EPS | -0.00259 | 0.00062 | -4.17810 | 0.00003 |
| SPS | -0.00098 | 0.00075 | -1.30520 | 0.19208 |
| GPS | 0.00122 | 0.00058 | 2.11210 | 0.03489 |

### Assumption Checks

Durbin–Watson Test for Autocorrelation

| **Autocorrelation** | **DW Statistic** | **p** |
|---|---|---|
| -0.01085 | 2.02068 | 0.71800 |

**[3]**

Collinearity Statistics

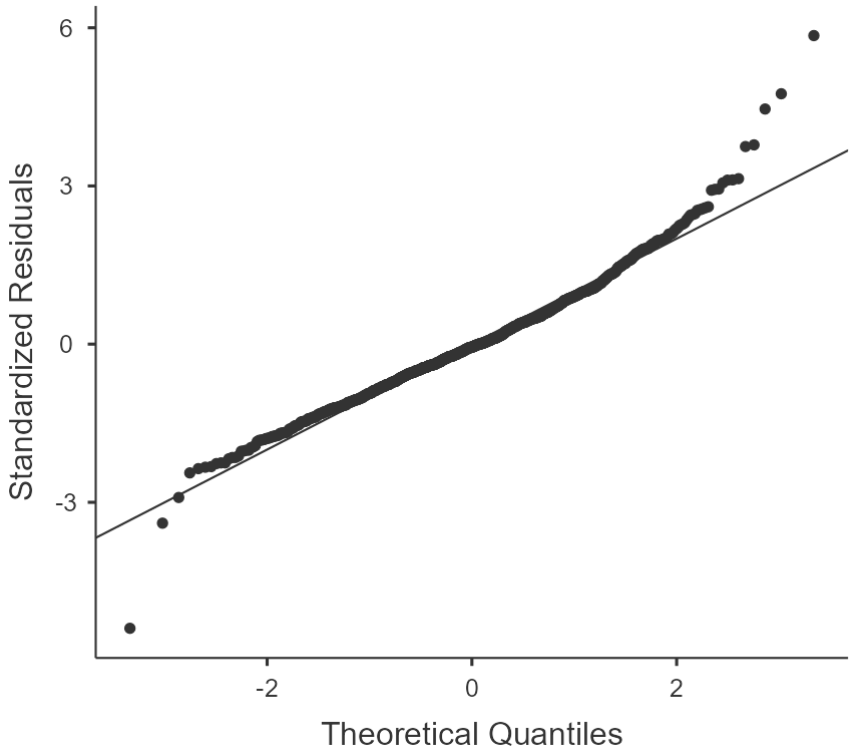
| | **VIF** | **Tolerance** |
|---|---|---|
| EPS | 2.09054 | 0.47834 |
| SPS | 2.13073 | 0.46932 |
| GPS | 1.26773 | 0.78881 |

**[3]**

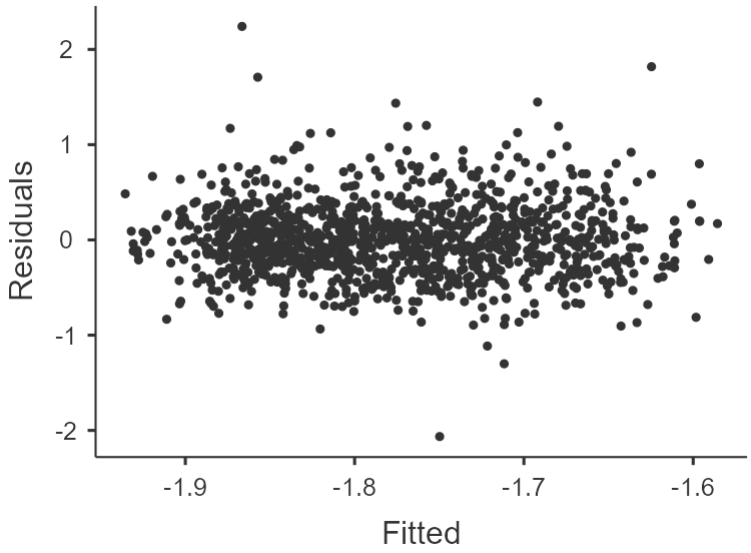
Normality Test (Shapiro-Wilk)

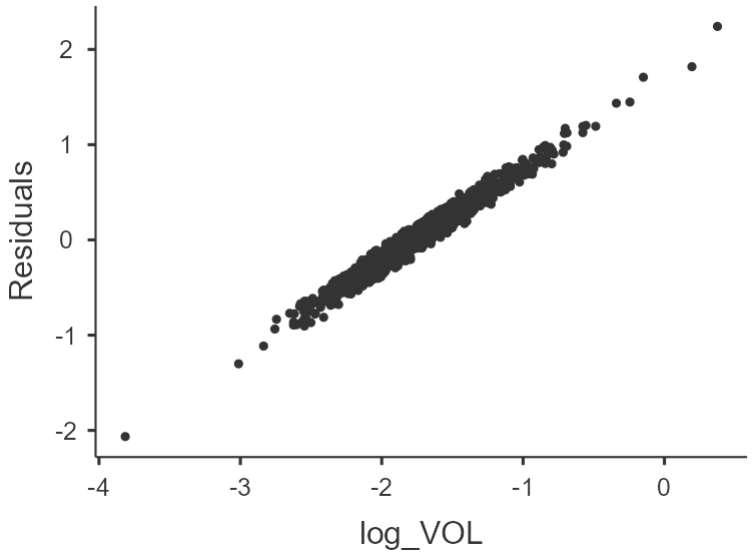
| **Statistic** | **p** |
|---|---|
| 0.97434 | < .00001 |

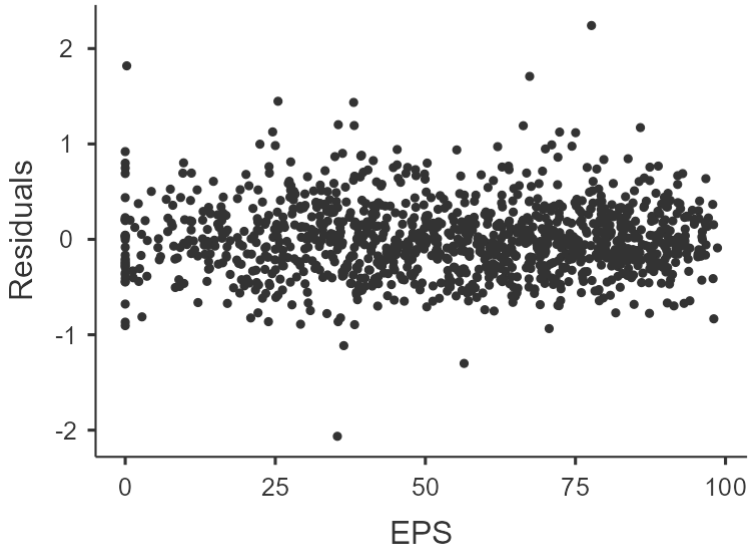
### Q-Q Plot

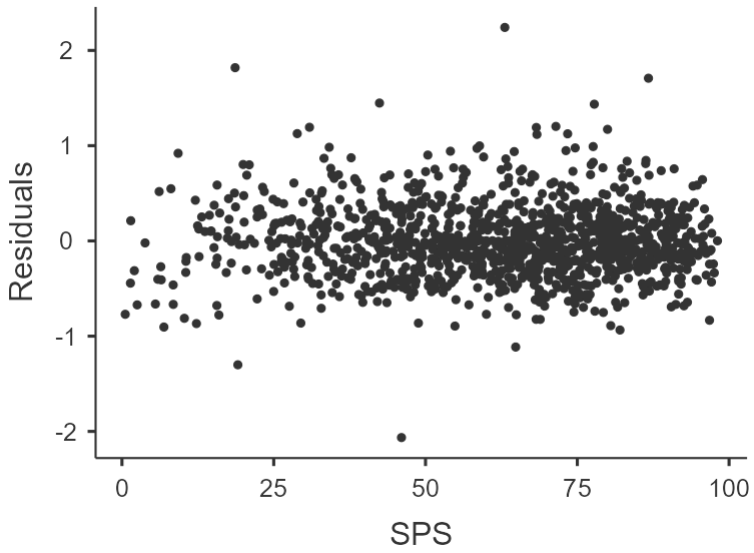


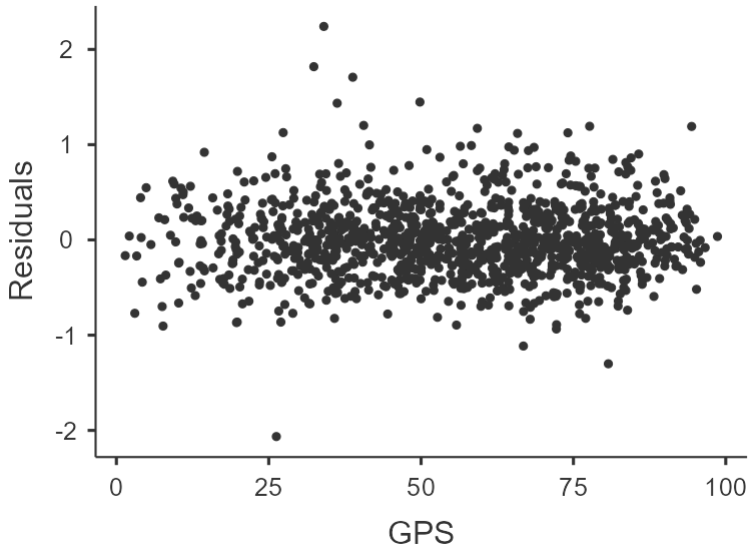

**Residuals Plots**




Residuals
2
1
0
-1
-2
-4
-3
-2
-1
0
log_VOL


Residuals
2
1
0
-1
-2
0
25
50
75
100
EPS


Residuals
2
1
0
-1
-2
0
25
50
75
100
SPS




## References

**[1]** The jamovi project (2022). *jamovi*. (Version 2.3) [Computer Software]. Retrieved from https://www.jamovi.org.

**[2]** R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2022-01-01).

**[3]** Fox, J., & Weisberg, S. (2020). *car: Companion to Applied Regression*. [R package]. Retrieved from https://cran.r-project.org/package=car.