# Results

## Descriptives

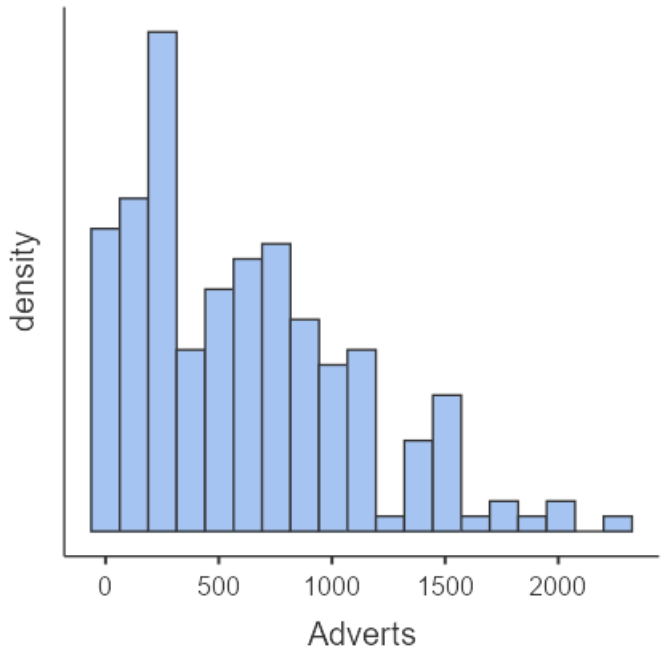
Descriptives

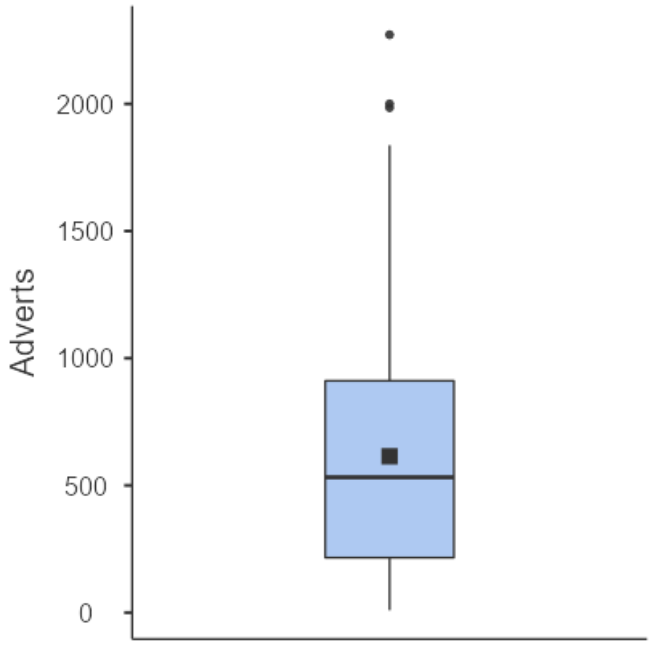
| | Adverts | Sales | Airplay | Image |
|---|---|---|---|---|
| N | 200 | 200 | 200 | 200 |
| Missing | 0 | 0 | 0 | 0 |
| Mean | 614 | 193 | 27.5 | 6.77 |
| Median | 532 | 200 | 28.0 | 7.00 |
| Mode | 103 [a] | 230 | 28.0 | 7.00 |
| Standard deviation | 486 | 80.7 | 12.3 | 1.40 |
| Variance | 235861 | 6512 | 151 | 1.95 |
| IQR | 695 | 113 | 16.3 | 2.00 |
| Minimum | 9.10 | 10.0 | 0.00 | 1.00 |
| Maximum | 2272 | 360 | 63.0 | 10.0 |
| Skewness | 0.853 | 0.0439 | 0.0597 | -1.29 |
| Std. error skewness | 0.172 | 0.172 | 0.172 | 0.172 |
| Kurtosis | 0.236 | -0.680 | -0.0342 | 3.74 |
| Std. error kurtosis | 0.342 | 0.342 | 0.342 | 0.342 |
| Shapiro-Wilk W | 0.925 | 0.985 | 0.993 | 0.877 |
| Shapiro-Wilk p | < .001 | 0.030 | 0.408 | < .001 |

[a] More than one mode exists, only the first is reported

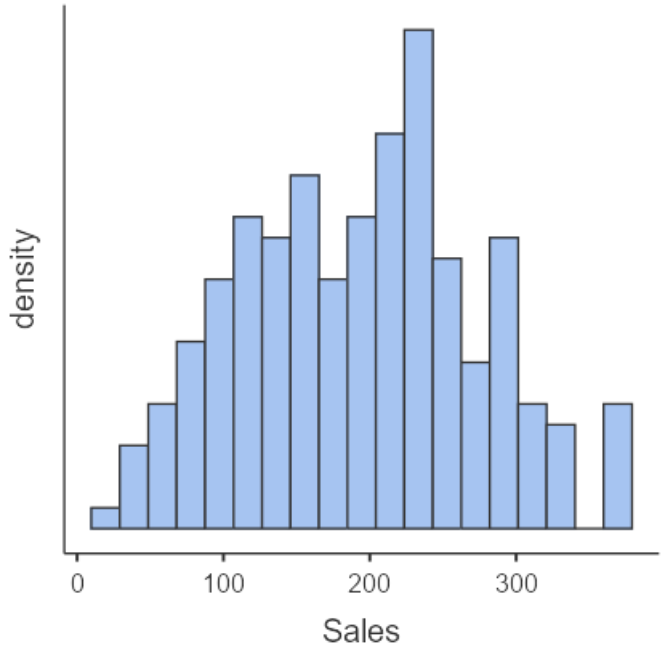
## Plots

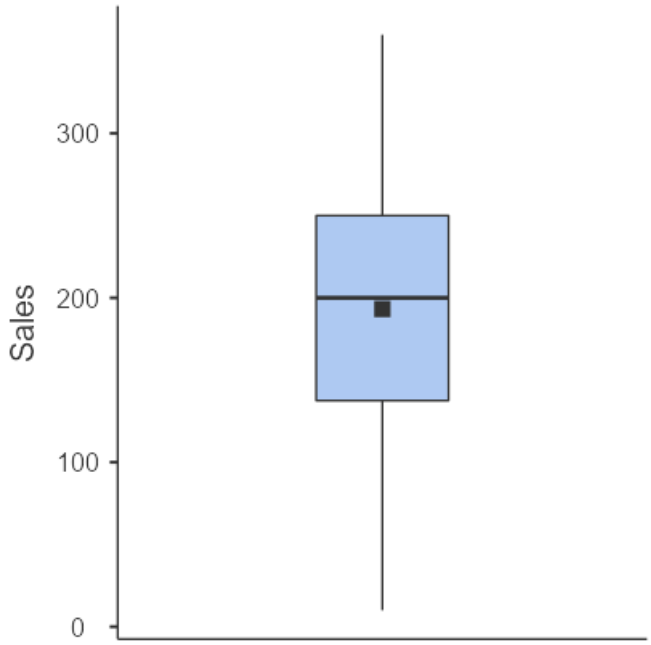
**Adverts**



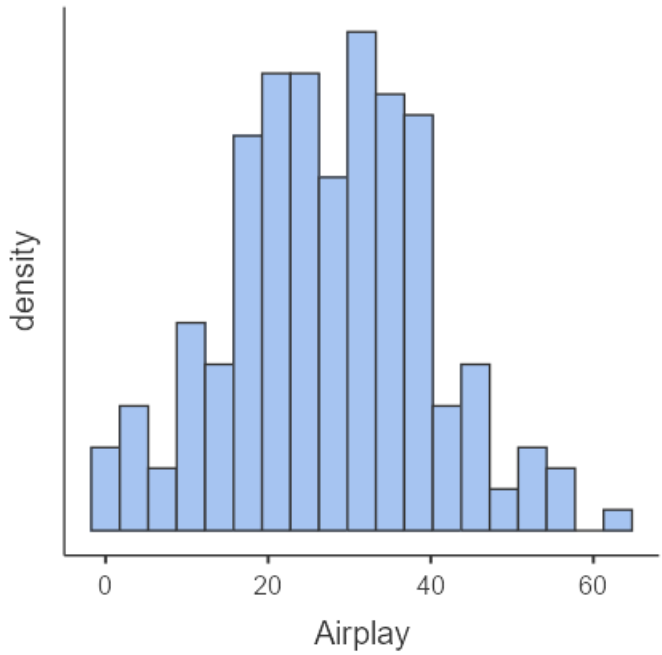


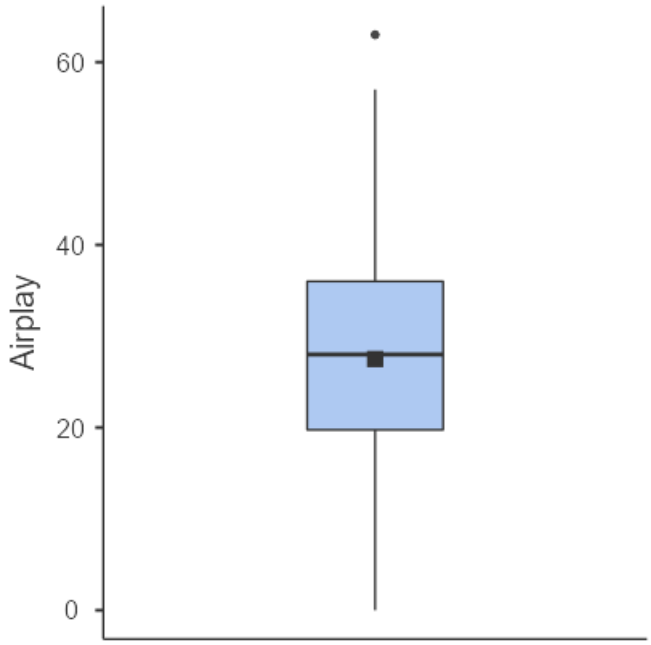

**Sales**



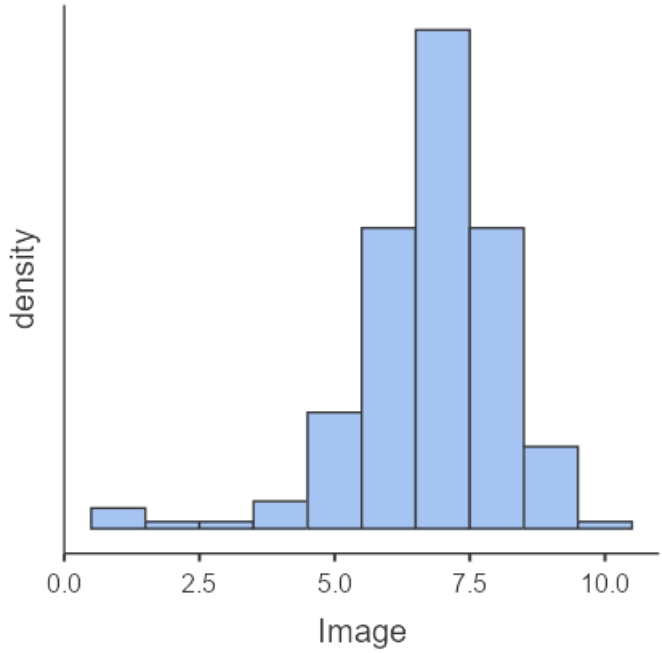


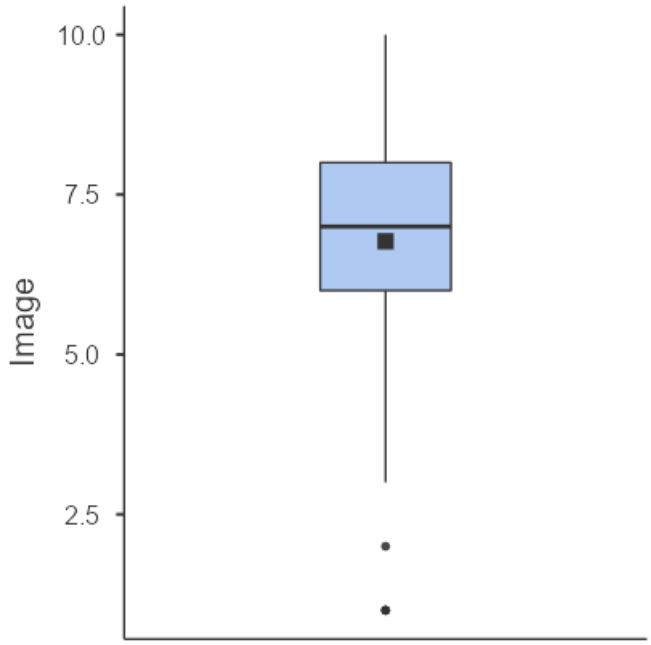

**Airplay**



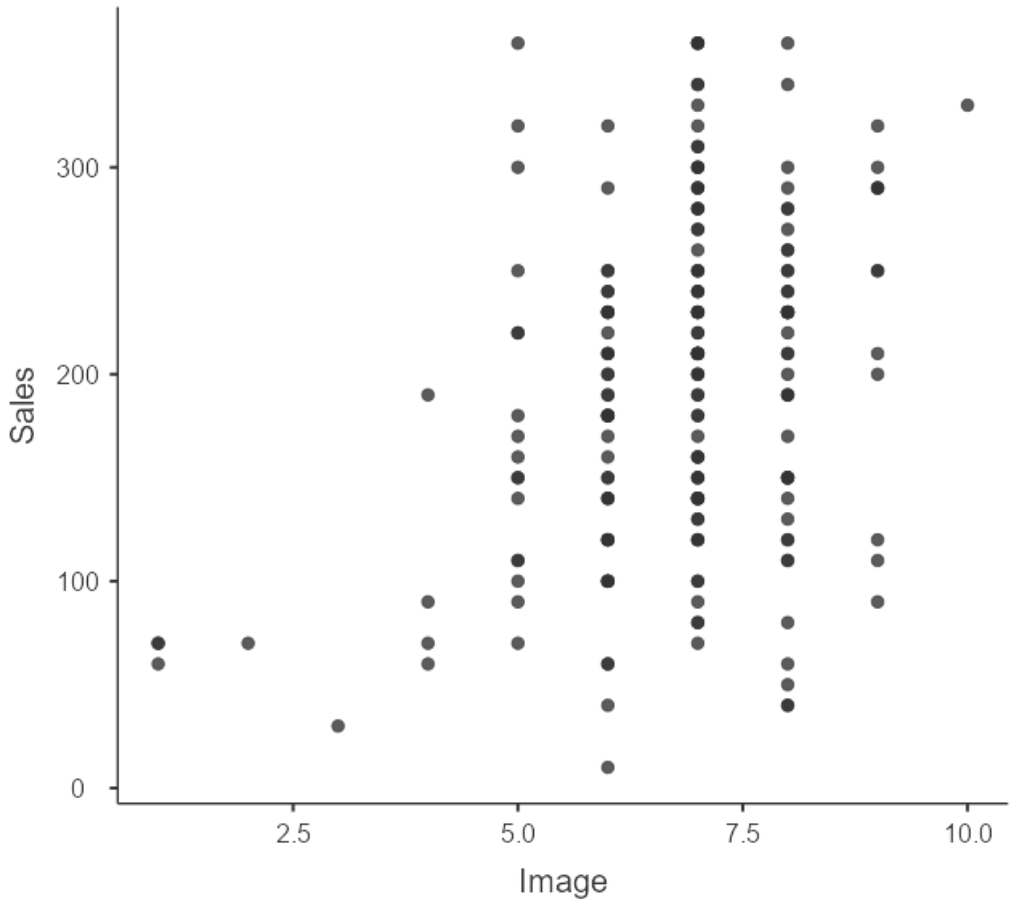



**Image**

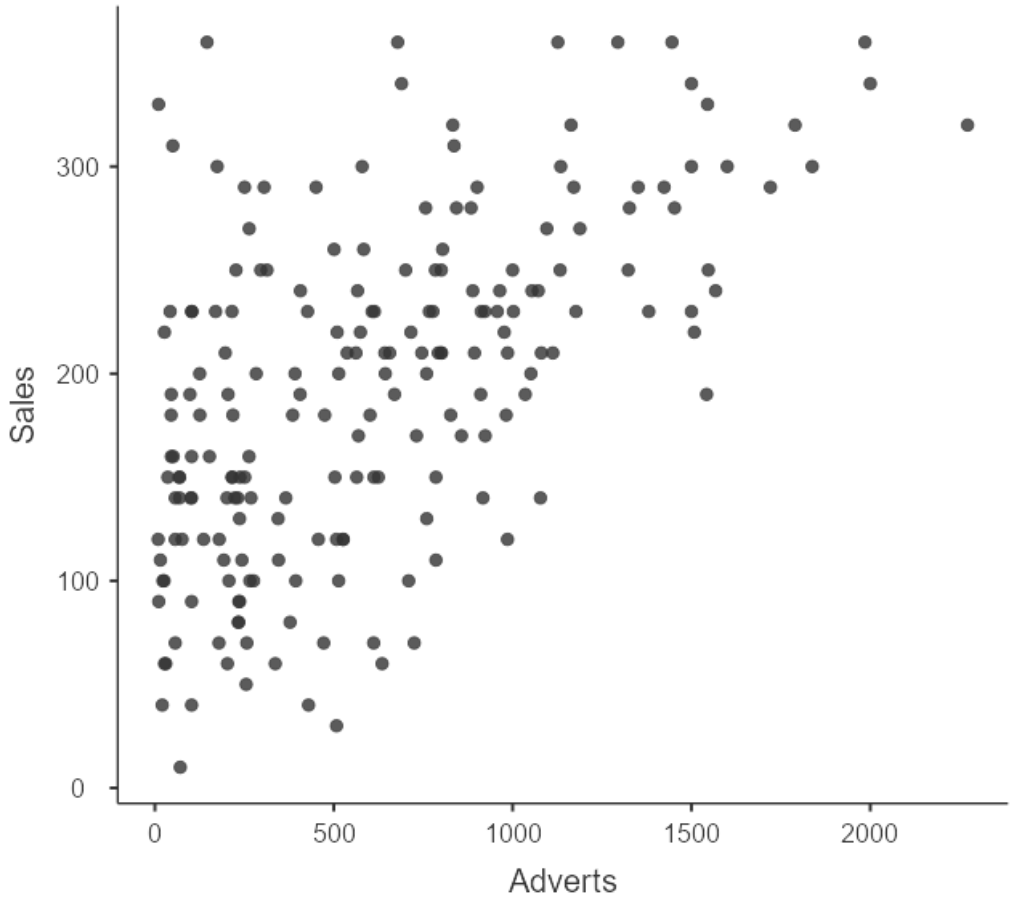




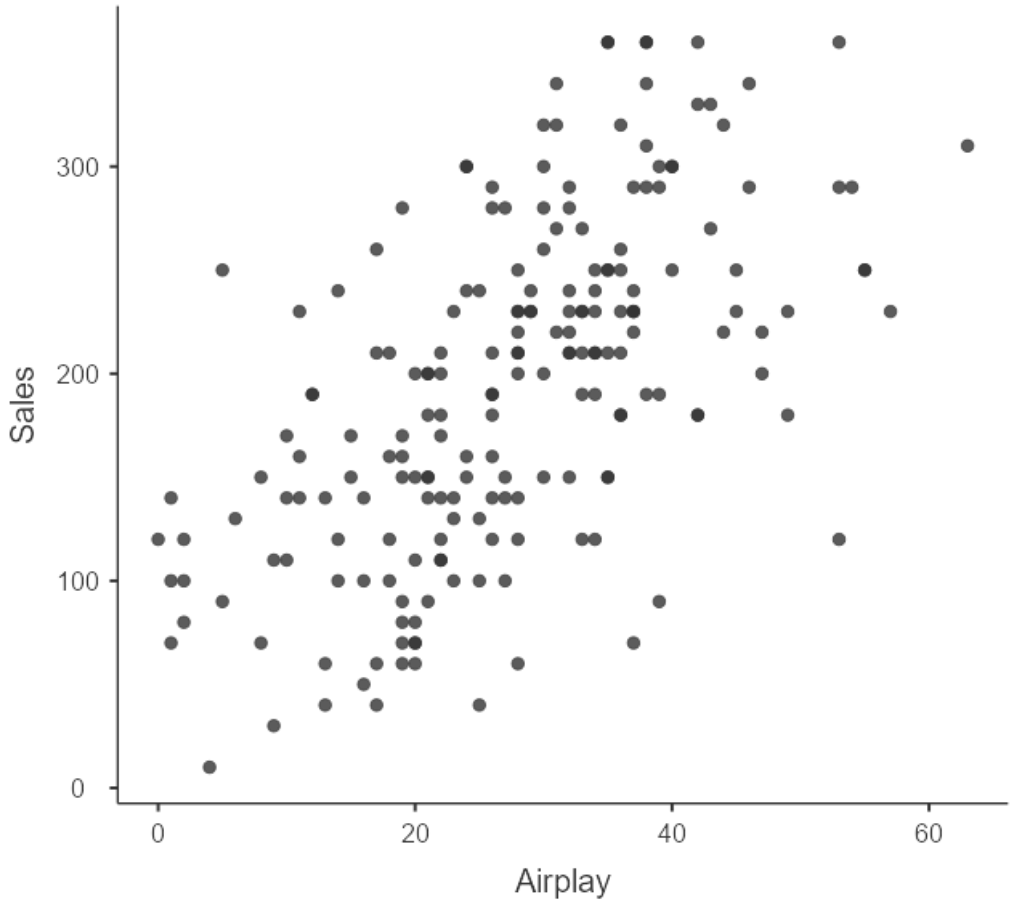

## Scatterplot




## Scatterplot




## Scatterplot

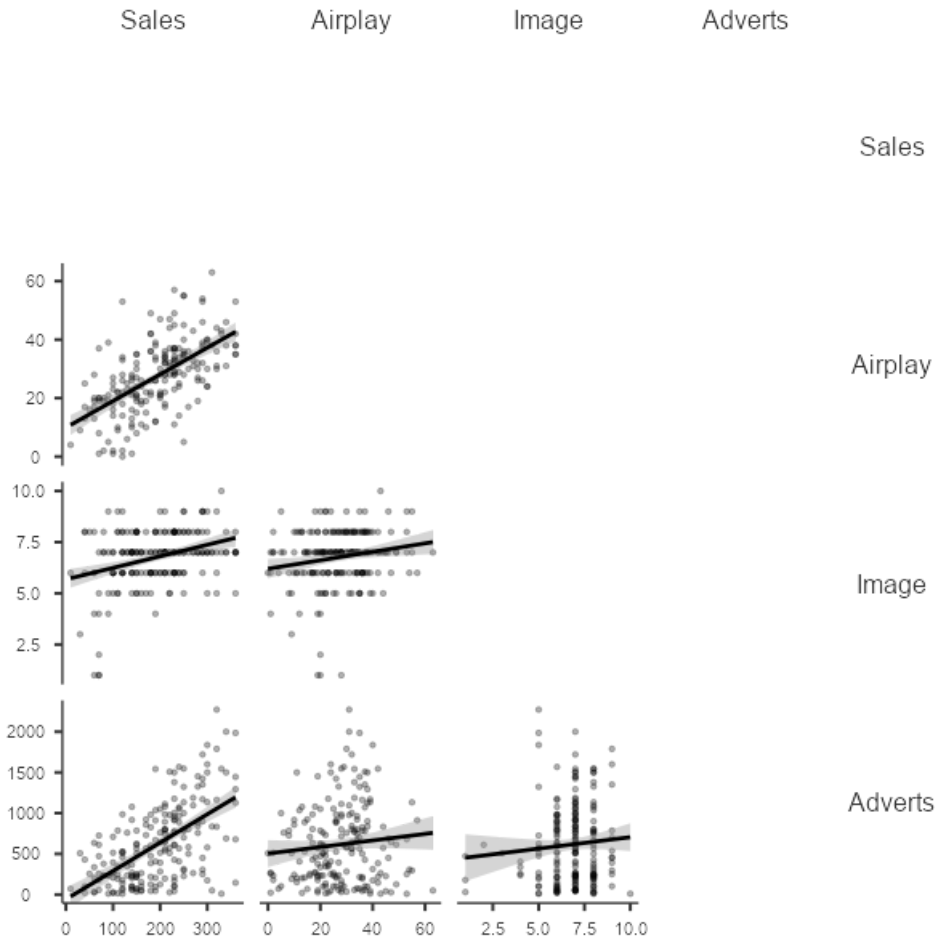



## Correlation Matrix

Correlation Matrix

| | | Sales | Airplay | Image | Adverts |
|---|---|---|---|---|---|
| Sales | Pearson's r | — | | | |
| | p-value | — | | | |
| | 95% CI Upper | — | | | |
| | 95% CI Lower | — | | | |
| | N | — | | | |
| Airplay | Pearson's r | 0.599 | — | | |
| | p-value | < .001 | — | | |
| | 95% CI Upper | 0.681 | — | | |
| | 95% CI Lower | 0.502 | — | | |
| | N | 200 | — | | |
| Image | Pearson's r | 0.326 | 0.182 | — | |
| | p-value | < .001 | 0.010 | — | |
| | 95% CI Upper | 0.445 | 0.313 | — | |
| | 95% CI Lower | 0.196 | 0.044 | — | |
| | N | 200 | 200 | — | |
| Adverts | Pearson's r | 0.578 | 0.102 | 0.081 | — |
| | p-value | < .001 | 0.151 | 0.256 | — |
| | 95% CI Upper | 0.664 | 0.237 | 0.217 | — |
| | 95% CI Lower | 0.478 | -0.037 | -0.059 | — |
| | N | 200 | 200 | 200 | — |

## Plot



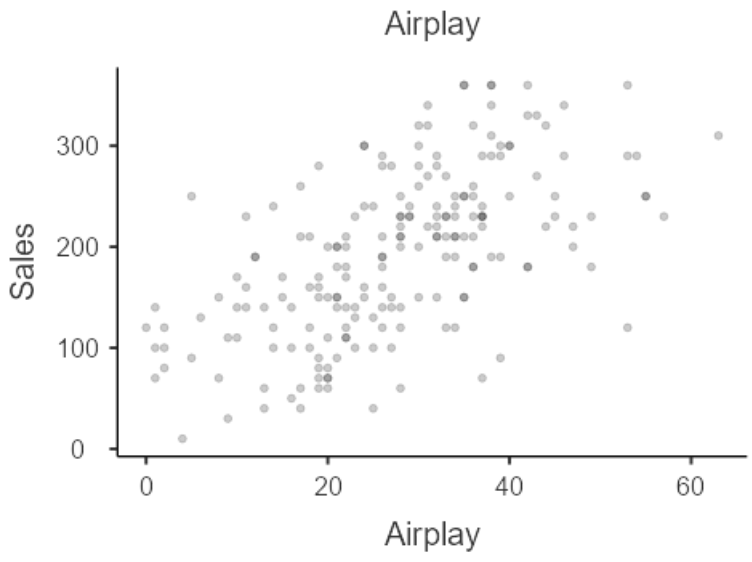

## Relationships, Prediction, and Group Comparisons

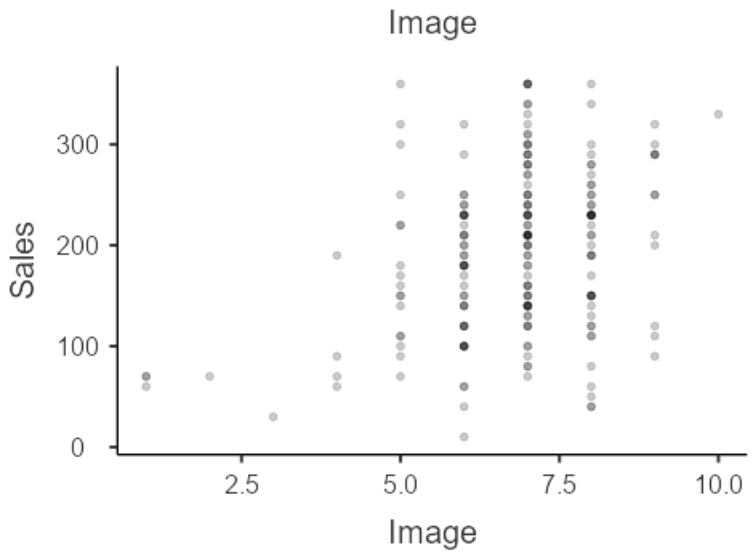
You have entered a numeric dependent variable and several numeric independent variables. Hence, linear regression analysis seems to be a good option for you! In order to run this analysis in jamovi, go to: Regression > Linear Regression

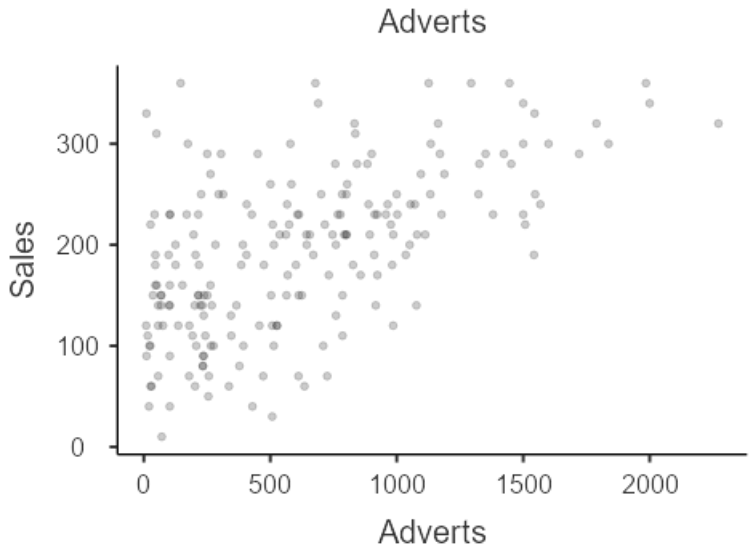
- Drop your dependent variable in the box below Dependent Variable
- Drop your independent variables in the box below Covariates

Click on the link to learn more about this method!

### Scatter Plots of Bivariate Relationships - Dependent/Independent Variables






## Linear Regression

Model Fit Measures

| | | | | | | | Overall Model Test | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Model** | **R** | **$R^2$** | **Adjusted $R^2$** | **AIC** | **BIC** | **RMSE** | **F** | **df1** | **df2** | **p** |
| 1 | 0.578 | 0.335 | 0.331 | 2247 | 2257 | 65.7 | 99.6 | 1 | 198 | < .001 |
| 2 | 0.815 | 0.665 | 0.660 | 2114 | 2131 | 46.6 | 129.5 | 3 | 196 | < .001 |

Model Comparisons

| Comparison | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Model** | | **Model** | **$\Delta R^2$** | **F** | **df1** | **df2** | **p** |
| 1 | - | 2 | 0.330 | 96.4 | 2 | 196 | < .001 |

### Model Specific ResultsModel 1Model 2

Omnibus ANOVA Test

| | Sum of Squares | df | Mean Square | F | p |
|---|---|---|---|---|---|
| Adverts | 433688 | 1 | 433688 | 99.6 | < .001 |
| Residuals | 862264 | 198 | 4355 | | |

*Note.* Type 3 sum of squares

**[3]**

Model Coefficients - Sales

| | | | 95% Confidence Interval | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|---|---|
| Predictor | Estimate | SE | Lower | Upper | t | p | Stand. Estimate | Lower | Upper |
| Intercept | 134.1399 | 7.53657 | 119.2777 | 149.002 | 17.80 | < .001 | | | |
| Adverts | 0.0961 | 0.00963 | 0.0771 | 0.115 | 9.98 | < .001 | 0.578 | 0.464 | 0.693 |

## Data Summary

Cook's Distance

| | | | Range | |
|---|---|---|---|---|
| Mean | Median | SD | Min | Max |
| 0.00442 | 0.00158 | 0.00741 | 3.15e-8 | 0.0572 |

## Assumption Checks

Durbin–Watson Test for Autocorrelation

| Autocorrelation | DW Statistic | p |
|---|---|---|
| -0.0439 | 2.03 | 0.826 |

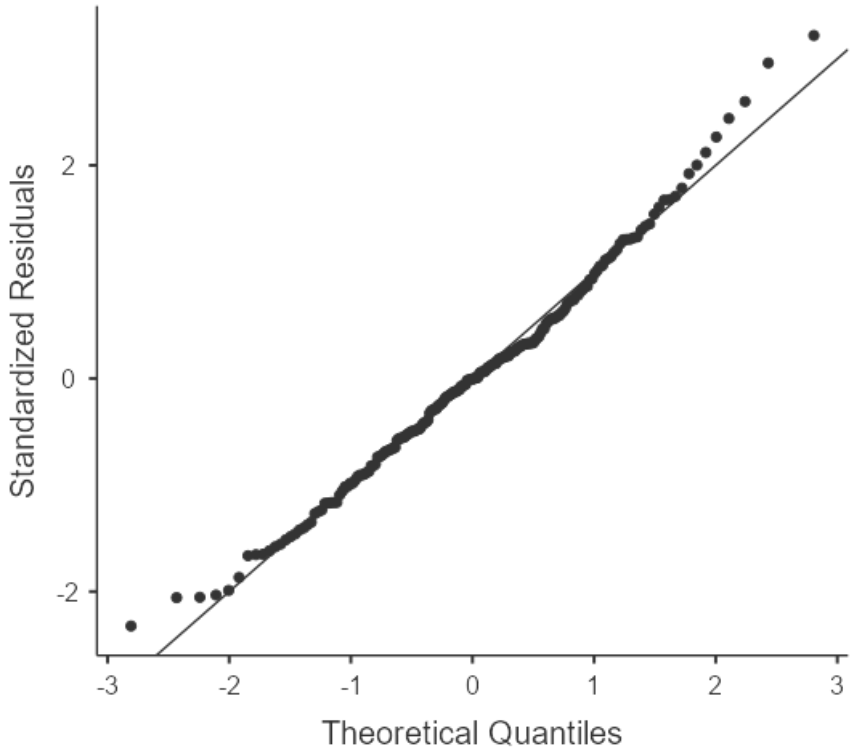
**[3]**

Collinearity Statistics

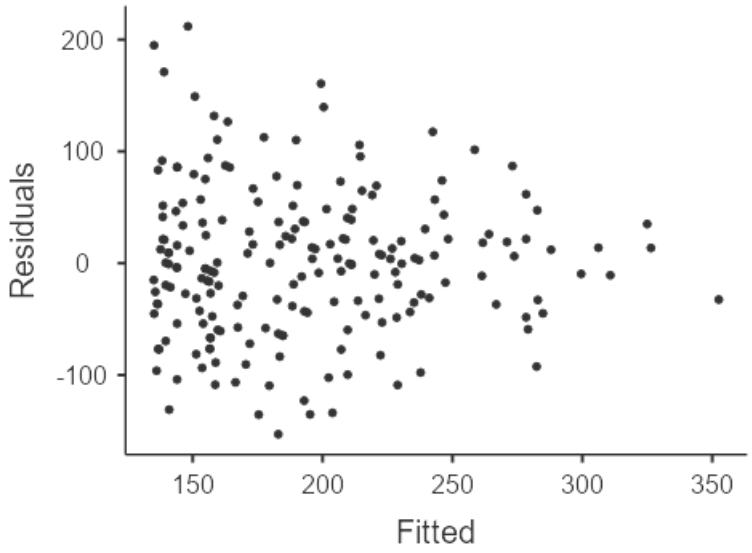
| | VIF | Tolerance |
|---|---|---|
| Adverts | 1.00 | 1.00 |

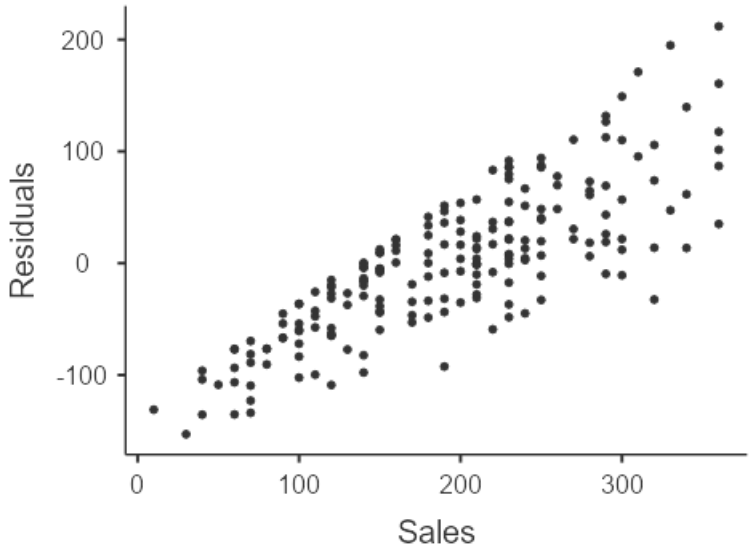
**[3]**

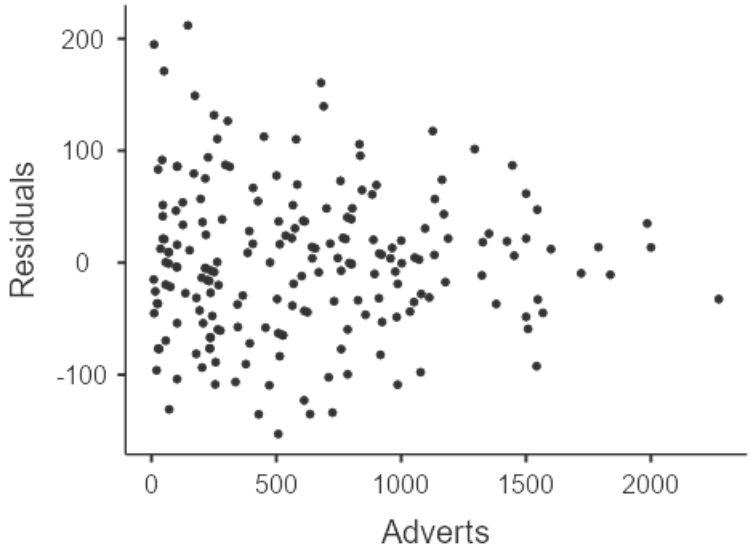
## Q-Q Plot




**Residuals Plots**






Omnibus ANOVA Test

| | Sum of Squares | df | Mean Square | F | p |
|---|---|---|---|---|---|
| Adverts | 333332 | 1 | 333332 | 150.3 | < .001 |
| Airplay | 325860 | 1 | 325860 | 147.0 | < .001 |
| Image | 45853 | 1 | 45853 | 20.7 | < .001 |
| Residuals | 434575 | 196 | 2217 | | |

*Note.* Type 3 sum of squares

**[3]**

Model Coefficients - Sales

| | | | 95% Confidence Interval | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|---|---|
| **Predictor** | **Estimate** | **SE** | **Lower** | **Upper** | **t** | **p** | **Stand. Estimate** | **Lower** | **Upper** |
| Intercept | -26.6130 | 17.35000 | -60.8296 | 7.6037 | -1.53 | 0.127 | | | |
| Adverts | 0.0849 | 0.00692 | 0.0712 | 0.0985 | 12.26 | < .001 | 0.511 | 0.429 | 0.593 |
| Airplay | 3.3674 | 0.27777 | 2.8196 | 3.9152 | 12.12 | < .001 | 0.512 | 0.429 | 0.595 |
| Image | 11.0863 | 2.43785 | 6.2786 | 15.8941 | 4.55 | < .001 | 0.192 | 0.109 | 0.275 |

## Data Summary

Cook's Distance

| | | | Range | |
|---|---|---|---|---|
| **Mean** | **Median** | **SD** | **Min** | **Max** |
| 0.00520 | 0.00166 | 0.00962 | 4.05e-7 | 0.0708 |

## Assumption Checks

Durbin–Watson Test for Autocorrelation

| **Autocorrelation** | **DW Statistic** | **p** |
|---|---|---|
| 0.00270 | 1.95 | 0.720 |

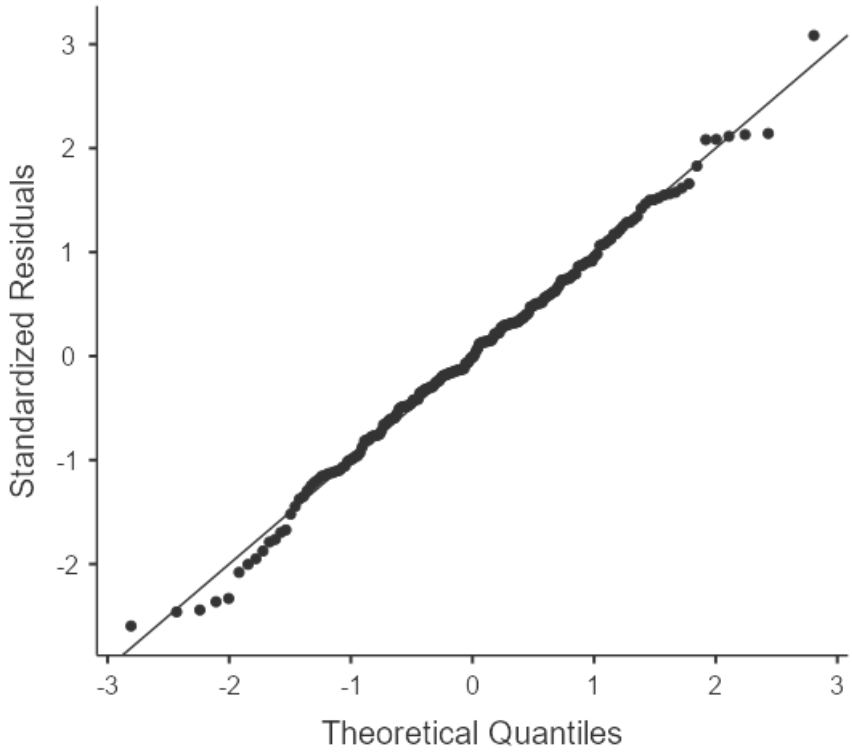
**[3]**

Collinearity Statistics

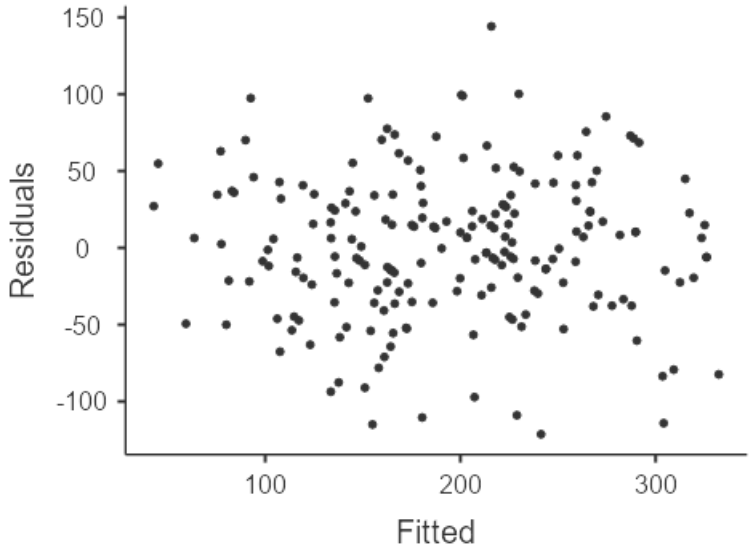
| | **VIF** | **Tolerance** |
|---|---|---|
| Adverts | 1.01 | 0.986 |
| Airplay | 1.04 | 0.959 |
| Image | 1.04 | 0.963 |

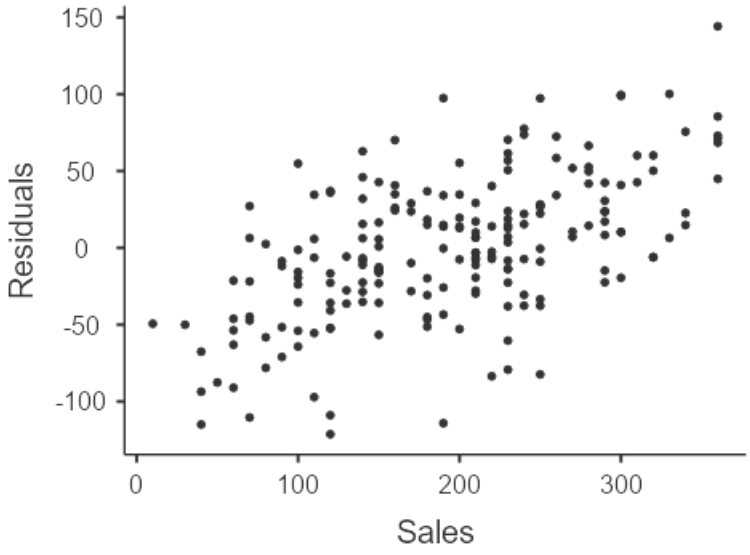
**[3]**

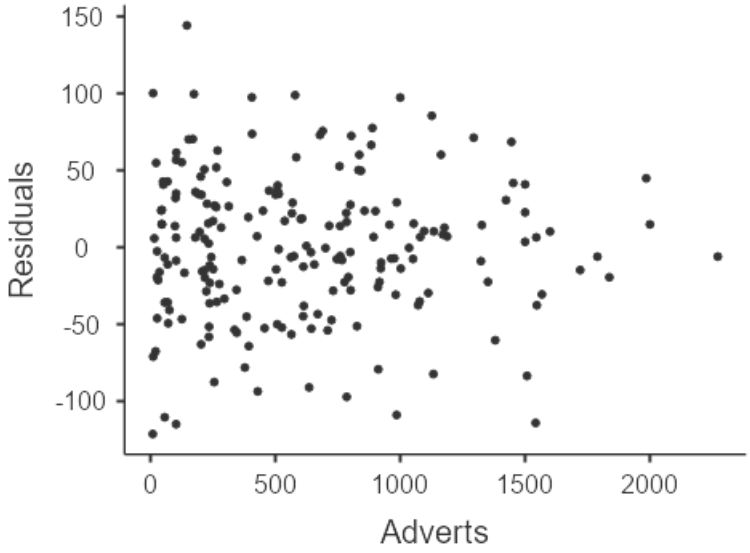
## Q-Q Plot

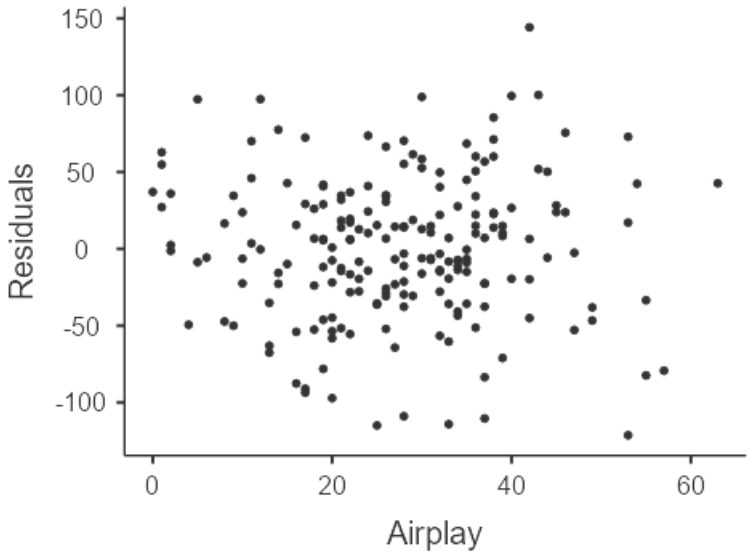


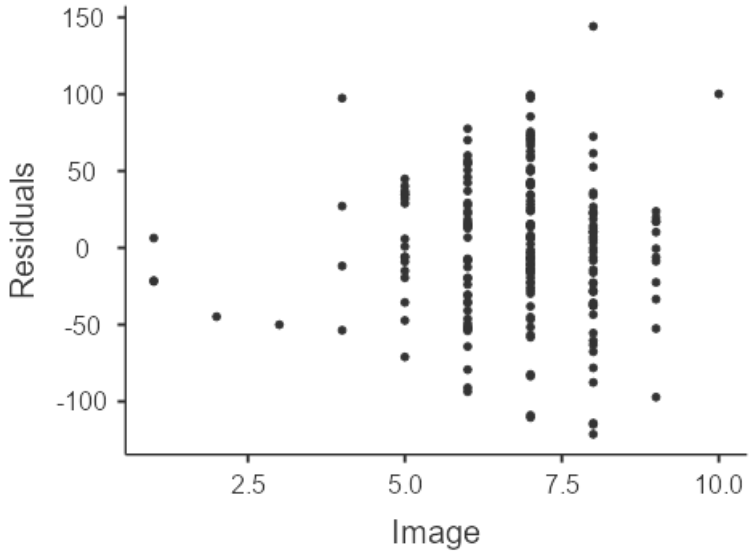

**Residuals Plots**




Residuals
150
100
50
0
-50
-100
0
100
200
300
Sales


Residuals
150
100
50
0
-50
-100
0
500
1000
1500
2000
Adverts


Residuals
150
100
50
0
-50
-100
0
20
40
60
Airplay




## References

**[1]** The jamovi project (2021). *jamovi*. (Version 1.6) [Computer Software]. Retrieved from https://www.jamovi.org.

**[2]** R Core Team (2020). *R: A Language and environment for statistical computing*. (Version 4.0) [Computer software]. Retrieved from https://cran.r-project.org. (R packages retrieved from MRAN snapshot 2020-08-24).

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