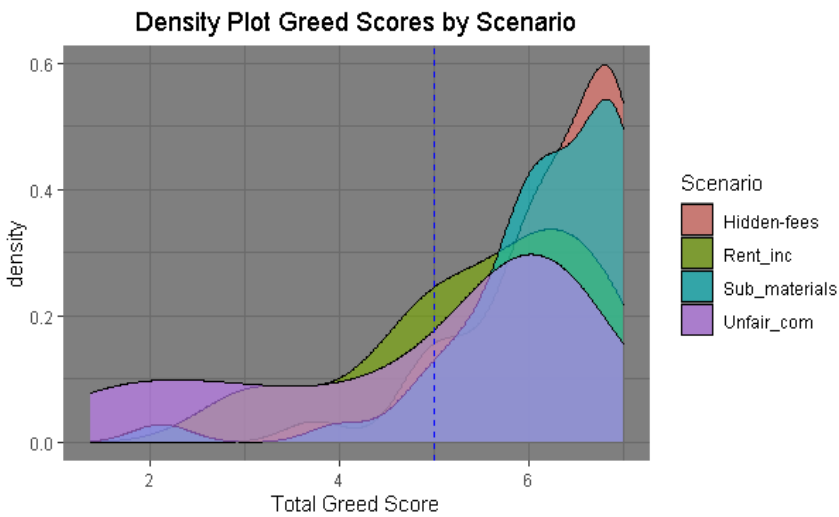
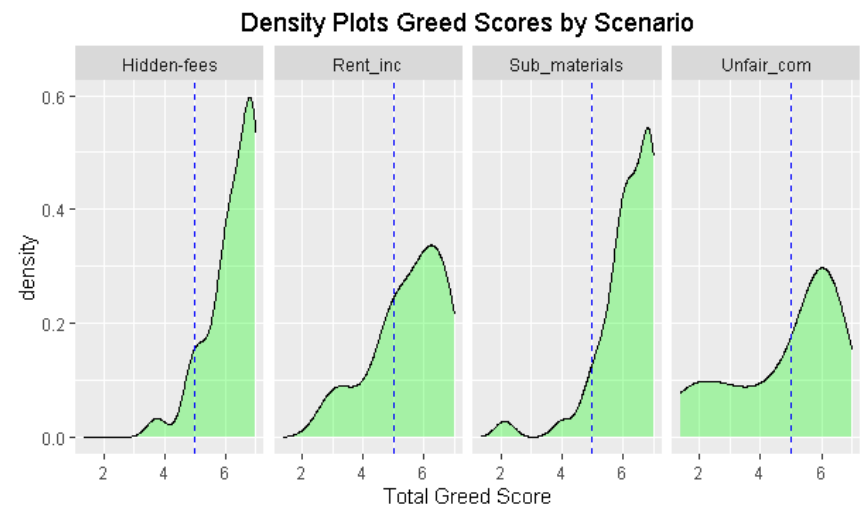


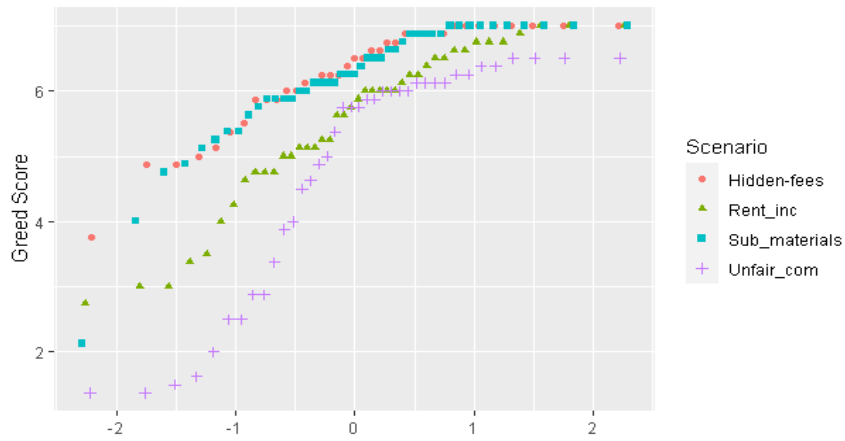
Consumers biases in the perception of organizational greed

Supplementary Material: Statistical Outputs

- 1. Pretest
 - 1.1. Normality testing
 - 1.1.1. Density plots



- 1.1.2. Q-Plot



1.1.3. Shapiro-Wilk Test

Shapiro-Wilk Scores Per Group

| Scenario | W | P.value |
|---------------|----------|--------------|
| Hidden-fees | 0.855940 | 2.172521e-04 |
| Sub_materials | 0.797006 | 2.045124e-06 |
| Rent_inc | 0.920218 | 6.146394e-03 |
| Unfair_com | 0.821954 | 3.022747e-05 |

1.2. Mean Differences

Descriptives

Descriptives per group

\$`Hidden-fees`

| Min. | 1st Qu. | Median | Mean | 3rd Qu. | Max. |
|-------|---------|--------|-------|---------|-------|
| 3.750 | 5.875 | 6.500 | 6.260 | 6.875 | 7.000 |

\$Rent_inc

| Min. | 1st Qu. | Median | Mean | 3rd Qu. | Max. |
|-------|---------|--------|-------|---------|-------|
| 2.750 | 4.812 | 5.812 | 5.497 | 6.469 | 7.000 |

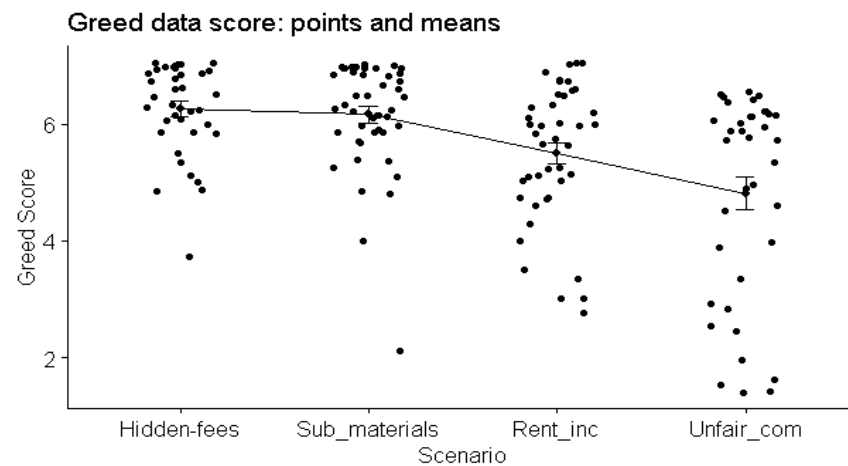
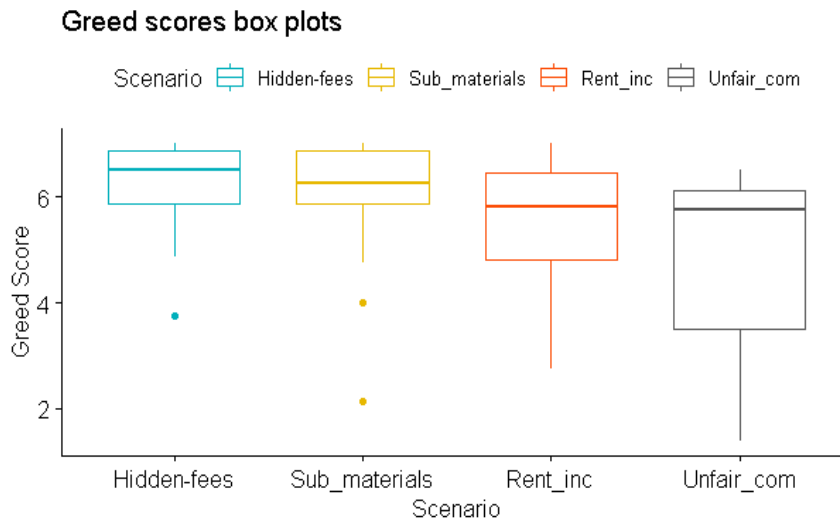
\$Sub_materials

| Min. | 1st Qu. | Median | Mean | 3rd Qu. | Max. |
|-------|---------|--------|-------|---------|-------|
| 2.125 | 5.875 | 6.250 | 6.161 | 6.875 | 7.000 |

\$Unfair_com

| Min. | 1st Qu. | Median | Mean | 3rd Qu. | Max. |
|-------|---------|--------|-------|---------|-------|
| 1.375 | 3.500 | 5.750 | 4.816 | 6.125 | 6.500 |

1.2.1. Plots



1.2.2. Kruskal Wallis

Kruskal-Wallis rank sum test

data: Greed_Score by Scenario

Kruskal-Wallis chi-squared = 28.73, df = 3, p-value = 2.552e-06

1.2.3. Post-hoc: Dunn's Test

| Comparison | Z | P.unadj | P.adj |
|-----------------------------|-----------|--------------|--------------|
| Hidden-fees - Rent_inc | 3.1020371 | 1.921939e-03 | 3.843877e-03 |
| Hidden-fees - Sub_materials | 0.3687707 | 7.122987e-01 | 7.122987e-01 |

| | | | |
|----------------------------|------------|--------------|--------------|
| Rent_inc - Sub_materials | -2.8784742 | 3.996040e-03 | 5.994060e-03 |
| Hidden-fees - Unfair_com | 4.4347013 | 9.220002e-06 | 5.532001e-05 |
| Rent_inc - Unfair_com | 1.4508504 | 1.468215e-01 | 1.761858e-01 |
| Sub_materials - Unfair_com | 4.2775567 | 1.889558e-05 | 5.668675e-05 |

2. Study 1

2.1. Preliminary CFA: Questionnaire Validity and Reliability

2.1.1. Multivariate normality (for greed)

2.1.1.1. Henze-Zirkler test.

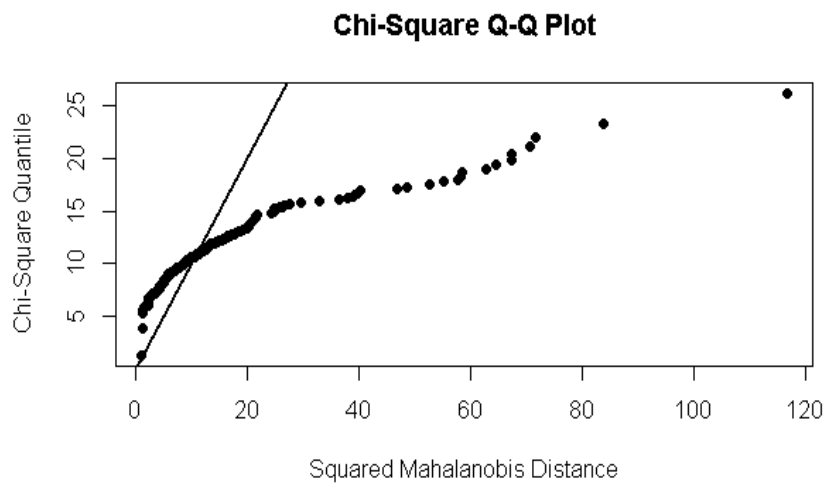
\$multivariateNormality

| Test | HZ | p value | MVN |
|-----------------|----------|---------|-----|
| 1 Henze-Zirkler | 41.35528 | 0 | NO |

\$univariateNormality

| Test | Variable | Statistic | p value | Normality |
|--------------------|----------|-----------|---------|-----------|
| 1 Anderson-Darling | Dir1 | 61.5129 | <0.001 | NO |
| 2 Anderson-Darling | Dir2 | 57.9632 | <0.001 | NO |
| 3 Anderson-Darling | Dir3 | 50.2573 | <0.001 | NO |
| 4 Anderson-Darling | Dir4 | 72.1320 | <0.001 | NO |
| 5 Anderson-Darling | Ind1 | 79.8461 | <0.001 | NO |
| 6 Anderson-Darling | Ind2 | 74.3423 | <0.001 | NO |
| 7 Anderson-Darling | Ind3 | 35.0848 | <0.001 | NO |
| 8 Anderson-Darling | Ind4 | 49.3167 | <0.001 | NO |

2.1.1.2. QQ plot



2.1.2. CFA model Summary (fit indices, validity and reliability values).

2.1.2.1. Model Summary

lavaan 0.6-10 ended normally after 60 iterations

| | |
|----------------------------|--------|
| Estimator | ML |
| Optimization method | NLMINB |
| Number of model parameters | 53 |
| Number of observations | 496 |

Model Test User Model:

| | Standard | Robust |
|----------------------------|----------|---------|
| Test Statistic | 410.932 | 216.924 |
| Degrees of freedom | 137 | 137 |
| P-value (Chi-square) | 0.000 | 0.000 |
| Scaling correction factor | | 1.894 |
| Satorra-Bentler correction | | |

Model Test Baseline Model:

| | | |
|---------------------------|----------|----------|
| Test statistic | 4354.445 | 1868.484 |
| Degrees of freedom | 171 | 171 |
| P-value | 0.000 | 0.000 |
| Scaling correction factor | | 2.330 |

User Model versus Baseline Model:

| | | |
|------------------------------------|-------|-------|
| Comparative Fit Index (CFI) | 0.935 | 0.953 |
| Tucker-Lewis Index (TLI) | 0.918 | 0.941 |
| Robust Comparative Fit Index (CFI) | | 0.962 |
| Robust Tucker-Lewis Index (TLI) | | 0.952 |

Loglikelihood and Information Criteria:

| | | |
|---------------------------------------|------------|------------|
| Loglikelihood user model (H0) | -11851.019 | -11851.019 |
| Loglikelihood unrestricted model (H1) | -11645.553 | -11645.553 |
| Akaike (AIC) | 23808.037 | 23808.037 |
| Bayesian (BIC) | 24030.986 | 24030.986 |
| Sample-size adjusted Bayesian (BIC) | 23862.762 | 23862.762 |

Root Mean Square Error of Approximation:

| | | |
|--|-------|-------|
| RMSEA | 0.063 | 0.034 |
| 90 Percent confidence interval - lower | 0.056 | 0.028 |
| 90 Percent confidence interval - upper | 0.071 | 0.040 |
| P-value RMSEA \leq 0.05 | 0.001 | 1.000 |
| Robust RMSEA | | 0.047 |
| 90 Percent confidence interval - lower | | 0.035 |

| | |
|--|-------|
| 90 Percent confidence interval - upper | 0.059 |
|--|-------|

Standardized Root Mean Square Residual:

| | | |
|------|-------|-------|
| SRMR | 0.041 | 0.041 |
|------|-------|-------|

Parameter Estimates:

| | |
|----------------------------------|------------|
| Standard errors | Robust.sem |
| Information | Expected |
| Information saturated (h1) model | Structured |

Latent Variables:

| | Estimate | Std.Err | z-value | P(> z) | Std.lv | Std.all |
|-------------|----------|---------|---------|---------|--------|---------|
| Greed =~ | | | | | | |
| Dir1 | 1.000 | | | 0.598 | 0.796 | |
| Dir2 | 1.155 | 0.091 | 12.638 | 0.000 | 0.691 | 0.794 |
| Dir3 | 0.737 | 0.102 | 7.238 | 0.000 | 0.441 | 0.569 |
| Dir4 | 1.019 | 0.125 | 8.119 | 0.000 | 0.609 | 0.429 |
| Ind1 | 0.871 | 0.059 | 14.740 | 0.000 | 0.521 | 0.710 |
| Ind2 | 0.915 | 0.105 | 8.675 | 0.000 | 0.547 | 0.569 |
| Ind3 | 1.374 | 0.111 | 12.354 | 0.000 | 0.821 | 0.608 |
| Ind4 | 1.326 | 0.111 | 11.894 | 0.000 | 0.793 | 0.719 |
| Equality =~ | | | | | | |
| Eq1 | 1.000 | | | 1.157 | 0.923 | |
| Eq2 | 0.939 | 0.067 | 14.074 | 0.000 | 1.086 | 0.776 |
| Need =~ | | | | | | |
| N1 | 1.000 | | | 0.972 | 0.669 | |
| N2 | 0.830 | 0.070 | 11.781 | 0.000 | 0.806 | 0.812 |
| Equity =~ | | | | | | |
| Des1 | 1.000 | | | 0.750 | 0.730 | |

| | | | | | | |
|-----------|-------|-------|--------|-------|-------|-------|
| Des2 | 1.256 | 0.090 | 14.027 | 0.000 | 0.943 | 0.815 |
| Depriv =~ | | | | | | |
| Dep1 | 1.000 | | | 0.694 | 0.769 | |
| Dep2 | 1.226 | 0.106 | 11.516 | 0.000 | 0.851 | 0.831 |
| Blame =~ | | | | | | |
| Bla1 | 1.000 | | | 0.643 | 0.529 | |
| Bla2 | 1.147 | 0.151 | 7.589 | 0.000 | 0.737 | 0.738 |
| Bla3 | 1.008 | 0.144 | 6.979 | 0.000 | 0.648 | 0.663 |

Covariances:

| | Estimate | Std.Err | z-value | P(> z) | Std.lv | Std.all |
|-------------|----------|---------|---------|---------|--------|---------|
| Greed ~~ | | | | | | |
| Equality | 0.386 | 0.056 | 6.931 | 0.000 | 0.558 | 0.558 |
| Need | 0.492 | 0.061 | 8.050 | 0.000 | 0.847 | 0.847 |
| Equity | 0.362 | 0.060 | 6.088 | 0.000 | 0.808 | 0.808 |
| Depriv | 0.309 | 0.053 | 5.865 | 0.000 | 0.746 | 0.746 |
| Blame | 0.258 | 0.054 | 4.797 | 0.000 | 0.670 | 0.670 |
| Equality ~~ | | | | | | |
| Need | 0.485 | 0.073 | 6.651 | 0.000 | 0.431 | 0.431 |
| Equity | 0.564 | 0.089 | 6.358 | 0.000 | 0.649 | 0.649 |
| Depriv | 0.360 | 0.054 | 6.686 | 0.000 | 0.449 | 0.449 |
| Blame | 0.331 | 0.083 | 3.992 | 0.000 | 0.446 | 0.446 |
| Need ~~ | | | | | | |
| Equity | 0.531 | 0.073 | 7.292 | 0.000 | 0.729 | 0.729 |
| Depriv | 0.504 | 0.074 | 6.768 | 0.000 | 0.748 | 0.748 |
| Blame | 0.416 | 0.072 | 5.754 | 0.000 | 0.666 | 0.666 |
| Equity ~~ | | | | | | |
| Depriv | 0.385 | 0.067 | 5.763 | 0.000 | 0.739 | 0.739 |
| Blame | 0.345 | 0.081 | 4.262 | 0.000 | 0.716 | 0.716 |
| Depriv ~~ | | | | | | |
| Blame | 0.302 | 0.057 | 5.321 | 0.000 | 0.678 | 0.678 |

Variances:

| | Estimate | Std.Err | z-value | P(> z) | Std.lv | Std.all |
|----------|----------|---------|---------|---------|--------|---------|
| .Dir1 | 0.207 | 0.031 | 6.756 | 0.000 | 0.207 | 0.366 |
| .Dir2 | 0.280 | 0.048 | 5.840 | 0.000 | 0.280 | 0.370 |
| .Dir3 | 0.405 | 0.051 | 7.970 | 0.000 | 0.405 | 0.676 |
| .Dir4 | 1.643 | 0.253 | 6.485 | 0.000 | 1.643 | 0.816 |
| .Ind1 | 0.266 | 0.067 | 4.002 | 0.000 | 0.266 | 0.495 |
| .Ind2 | 0.624 | 0.142 | 4.405 | 0.000 | 0.624 | 0.676 |
| .Ind3 | 1.148 | 0.140 | 8.188 | 0.000 | 1.148 | 0.630 |
| .Ind4 | 0.586 | 0.107 | 5.489 | 0.000 | 0.586 | 0.483 |
| .Eq1 | 0.234 | 0.107 | 2.187 | 0.029 | 0.234 | 0.149 |
| .Eq2 | 0.777 | 0.171 | 4.548 | 0.000 | 0.777 | 0.397 |
| .N1 | 1.164 | 0.192 | 6.068 | 0.000 | 1.164 | 0.552 |
| .N2 | 0.337 | 0.079 | 4.241 | 0.000 | 0.337 | 0.341 |
| .Des1 | 0.492 | 0.130 | 3.775 | 0.000 | 0.492 | 0.466 |
| .Des2 | 0.448 | 0.118 | 3.796 | 0.000 | 0.448 | 0.335 |
| .Dep1 | 0.333 | 0.077 | 4.331 | 0.000 | 0.333 | 0.409 |
| .Dep2 | 0.325 | 0.076 | 4.248 | 0.000 | 0.325 | 0.310 |
| .Bla1 | 1.065 | 0.214 | 4.975 | 0.000 | 1.065 | 0.721 |
| .Bla2 | 0.455 | 0.111 | 4.086 | 0.000 | 0.455 | 0.456 |
| .Bla3 | 0.535 | 0.146 | 3.655 | 0.000 | 0.535 | 0.561 |
| Greed | 0.358 | 0.060 | 5.911 | 0.000 | 1.000 | 1.000 |
| Equality | 1.338 | 0.169 | 7.929 | 0.000 | 1.000 | 1.000 |
| Need | 0.944 | 0.131 | 7.213 | 0.000 | 1.000 | 1.000 |
| Equity | 0.563 | 0.107 | 5.244 | 0.000 | 1.000 | 1.000 |
| Depriv | 0.482 | 0.092 | 5.242 | 0.000 | 1.000 | 1.000 |
| Blame | 0.413 | 0.113 | 3.659 | 0.000 | 1.000 | 1.000 |

R-Square:

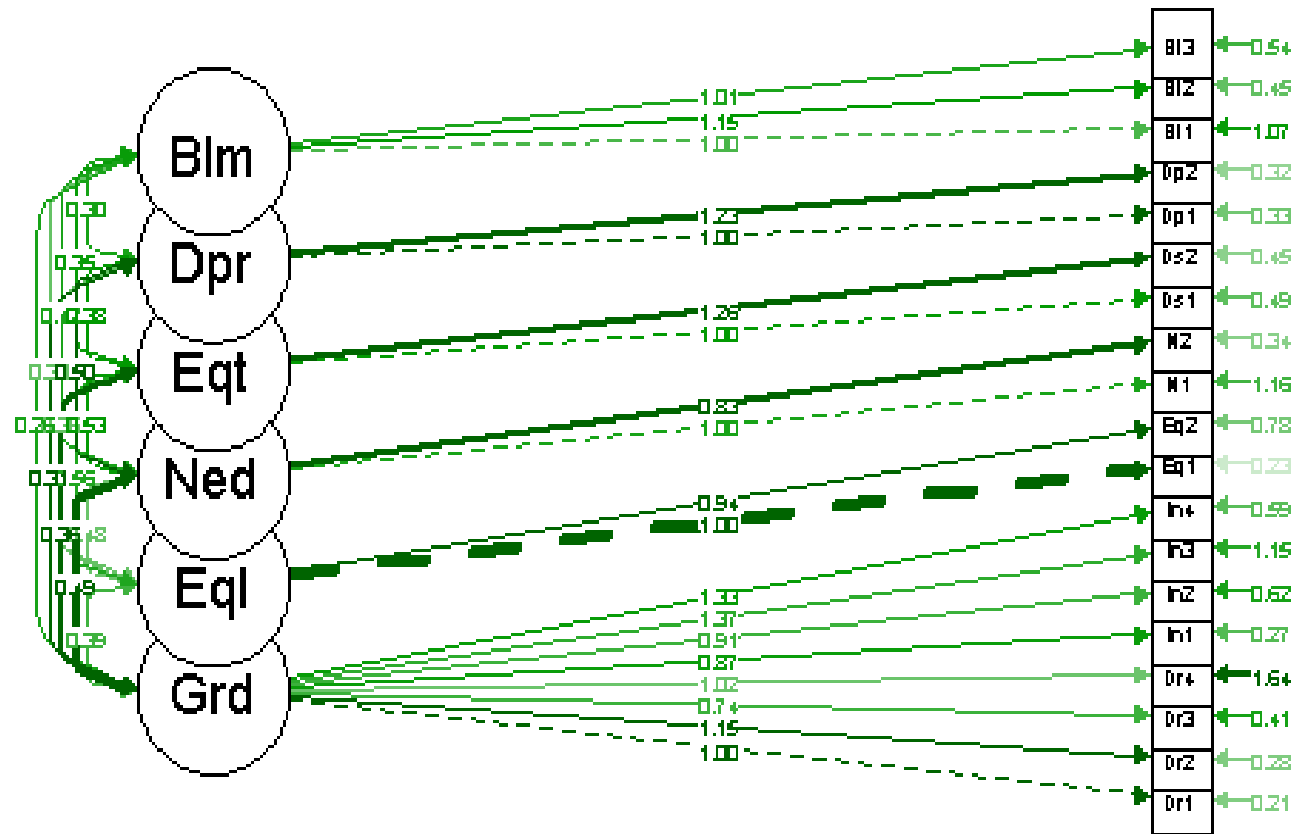
Estimate

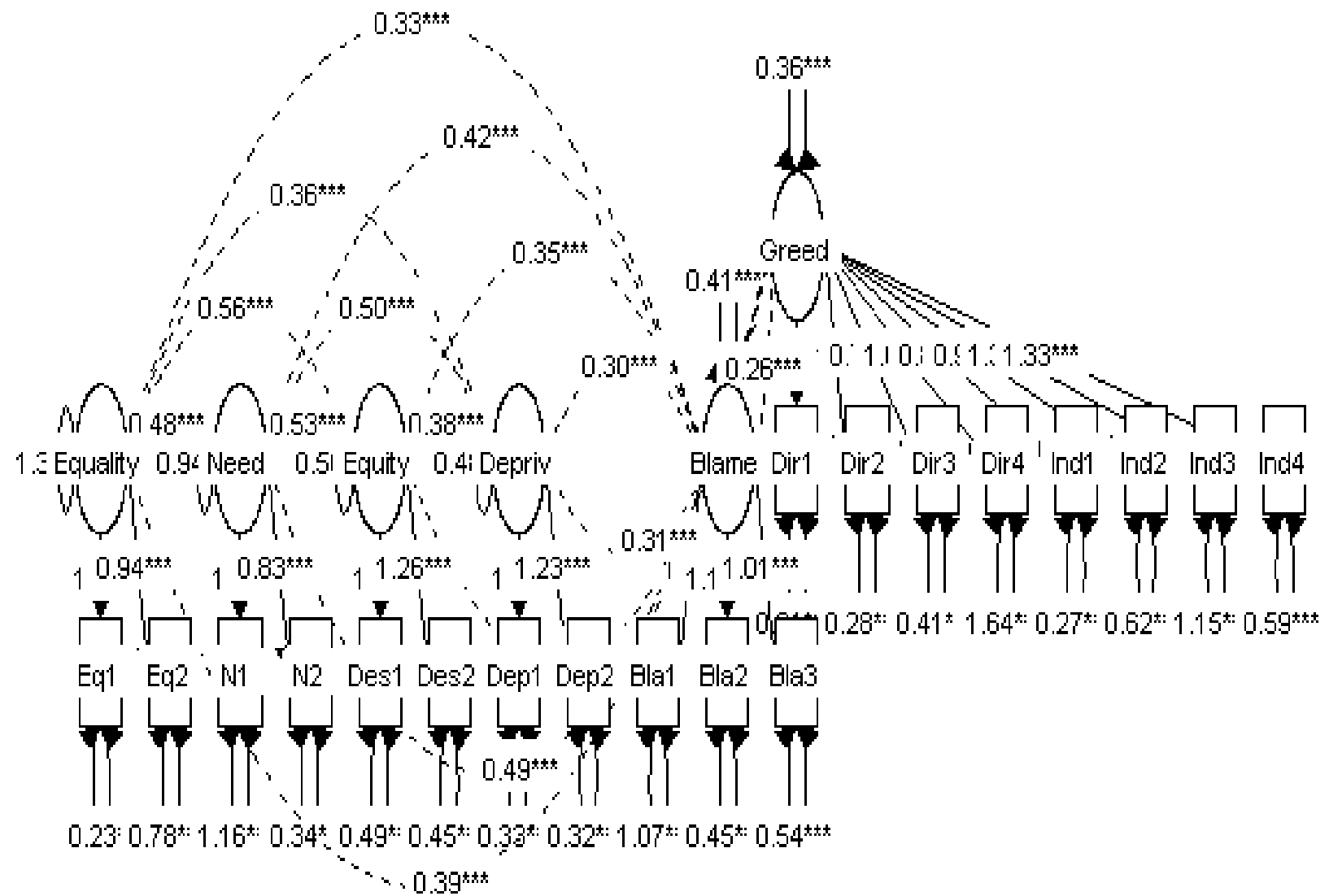
| | |
|------|-------|
| Dir1 | 0.634 |
| Dir2 | 0.630 |
| Dir3 | 0.324 |
| Dir4 | 0.184 |
| Ind1 | 0.505 |
| Ind2 | 0.324 |
| Ind3 | 0.370 |
| Ind4 | 0.517 |
| Eq1 | 0.851 |
| Eq2 | 0.603 |
| N1 | 0.448 |
| N2 | 0.659 |
| Des1 | 0.534 |
| Des2 | 0.665 |
| Dep1 | 0.591 |
| Dep2 | 0.690 |
| Bla1 | 0.279 |
| Bla2 | 0.544 |
| Bla3 | 0.439 |

Reliability Values

| | Greed | Equality | Need | Equity | Depriv | Blame |
|--------|-----------|-----------|-----------|-----------|-----------|-----------|
| alpha | 0.8222220 | 0.8318252 | 0.6722986 | 0.7433037 | 0.7759187 | 0.6636203 |
| omega | 0.8301294 | 0.8326559 | 0.6781627 | 0.7530120 | 0.7839984 | 0.6666654 |
| omega2 | 0.8301294 | 0.8326559 | 0.6781627 | 0.7530120 | 0.7839984 | 0.6666654 |
| omega3 | 0.8387320 | 0.8326557 | 0.6781626 | 0.7530118 | 0.7839975 | 0.6680051 |
| avevar | 0.3882466 | 0.7134947 | 0.5151962 | 0.6069248 | 0.6470797 | 0.4009812 |

2.1.2.2. Plots (see next pages: Plot functionalities are not ideal in R, compared to software such as AMOS).





2.2. Main Analysis (General linear model: ANCOVA).

2.2.1. Group Descriptives and Chi-Square Tests

Gender

| | Small-Local | Small-Foreign | Large-Local | Large-Foreign |
|--------|-------------|---------------|-------------|---------------|
| Male | 53 | 55 | 61 | 69 |
| Female | 76 | 68 | 61 | 53 |

Pearson's Chi-squared test

data: gender

X-squared = 6.7777, df = 3, p-value = 0.07933

Age

| | Small-Local | Small-Foreign | Large-Local | Large-Foreign |
|-------|-------------|---------------|-------------|---------------|
| 18-24 | 0 | 9 | 6 | 8 |
| 25-34 | 42 | 43 | 30 | 40 |
| 35-44 | 43 | 33 | 34 | 34 |
| 45-54 | 21 | 18 | 29 | 24 |
| 55+ | 23 | 20 | 23 | 16 |

Pearson's Chi-squared test

data: age

X-squared = 17.102, df = 12, p-value = 0.1458

Education

| | Small-Local | Small-Foreign | Large-Local | Large-Foreign |
|-----------------------|-------------|---------------|-------------|---------------|
| Less than high school | 1 | 0 | 3 | 0 |
| High School | 22 | 30 | 31 | 28 |
| Technical/Diploma | 14 | 18 | 14 | 13 |
| University degree | 75 | 62 | 57 | 62 |
| Postgraduate | 17 | 13 | 17 | 19 |

Pearson's Chi-squared test

data: education

X-squared = 12.435, df = 12, p-value = 0.4114

Income

| | Small-Local | Small-Foreign | Large-Local | Large-Foreign |
|---------------|-------------|---------------|-------------|---------------|
| Less than 25k | 23 | 31 | 31 | 38 |
| 25k-<45k | 36 | 38 | 31 | 25 |
| 45k-<85k | 53 | 41 | 47 | 42 |
| 85k+ | 17 | 13 | 13 | 17 |

Pearson's Chi-squared test

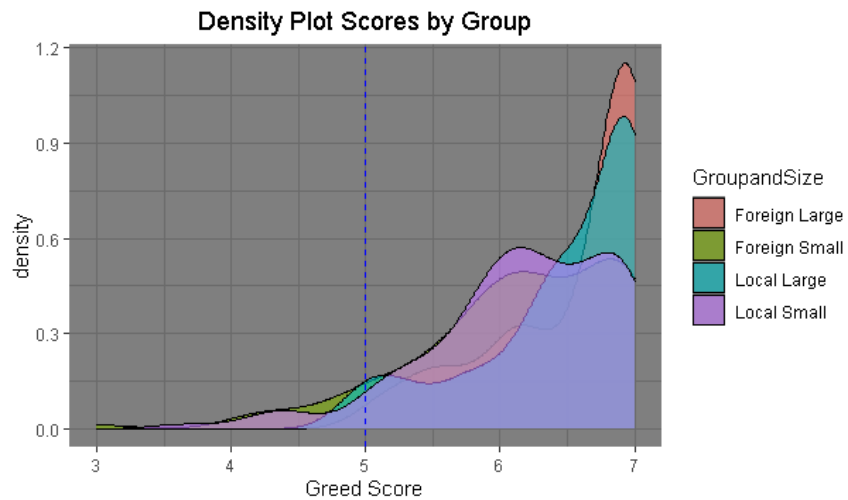
data: income

X-squared = 9.4976, df = 9, p-value = 0.3927

2.2.2. ANCOVA assumptions

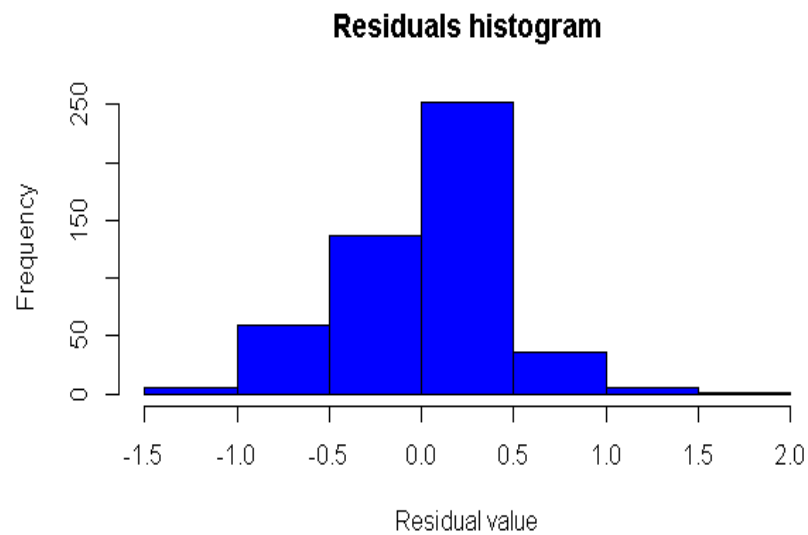
2.2.2.1. Normality

Greed Scores Skewed (for reference only: not assumption of ANCOVA)

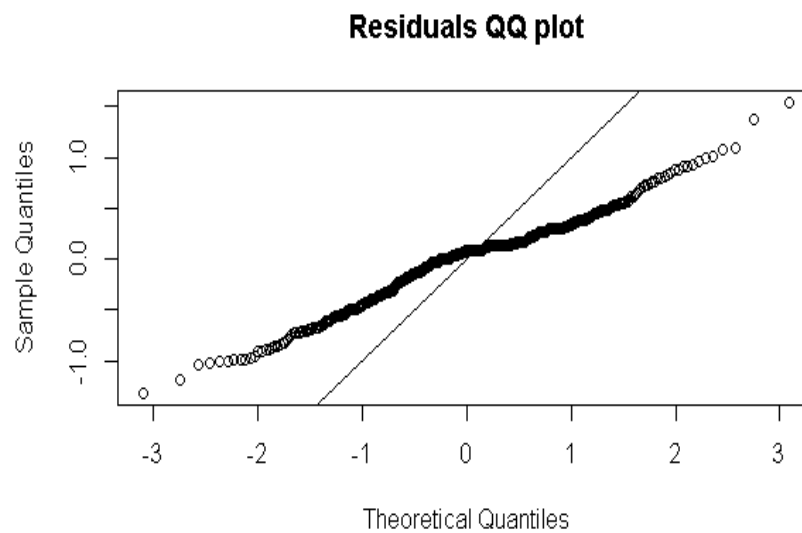


Normality of residuals plot

Histogram



QQ-Plot



Shapiro-Wilk

| variable | statistic | p.value |
|-------------------------|-----------|------------|
| <chr> | <dbl> | <dbl> |
| 1 model.metrics\$.resid | 0.979 | 0.00000166 |

2.2.2.2. Covariates correlation matrix.

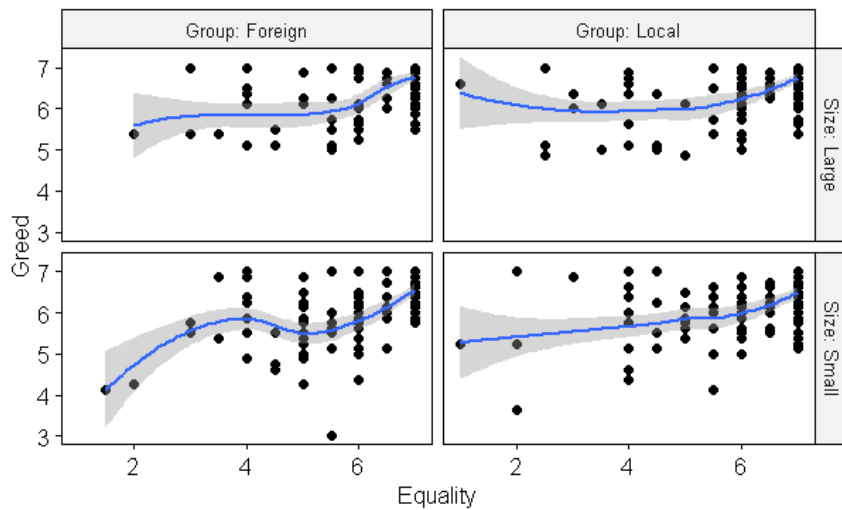
| | Equality | Need | Equity | Deprivation | Blame |
|-------------|-----------|-----------|-----------|-------------|-----------|
| Equality | 1.0000000 | 0.3484629 | 0.5164137 | 0.3676890 | 0.3369462 |
| Need | 0.3484629 | 1.0000000 | 0.5299498 | 0.5406528 | 0.4254201 |
| Equity | 0.5164137 | 0.5299498 | 1.0000000 | 0.5659309 | 0.5195713 |
| Deprivation | 0.3676890 | 0.5406528 | 0.5659309 | 1.0000000 | 0.4848400 |
| Blame | 0.3369462 | 0.4254201 | 0.5195713 | 0.4848400 | 1.0000000 |

2.2.2.3. Homoscedasticity. Homogeneity of variance of residuals between groups.

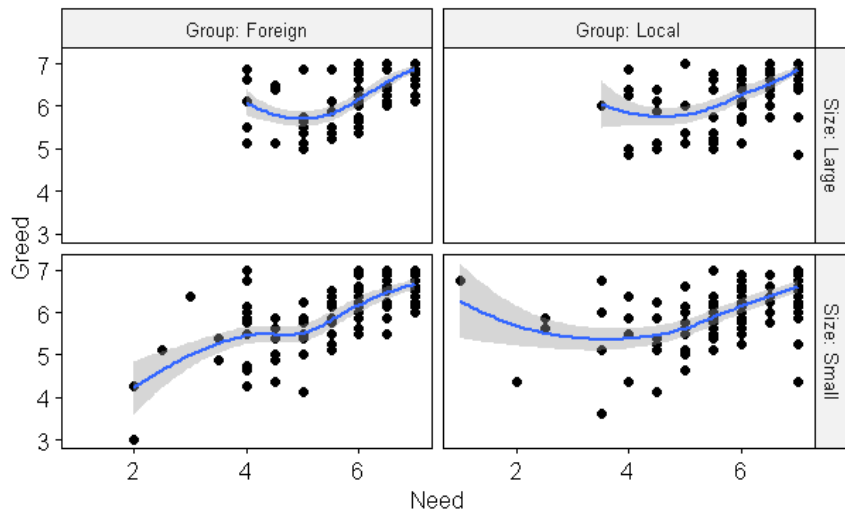
| df1 | df2 | statistic | p |
|-------|-------|-----------|-----------|
| <int> | <int> | <dbl> | <dbl> |
| 1 | 3 492 | 8.35 | 0.0000200 |

2.2.2.4. Linearity of the relationship between covariates and dependent variable (Greed Scores). Visual method: Plots.

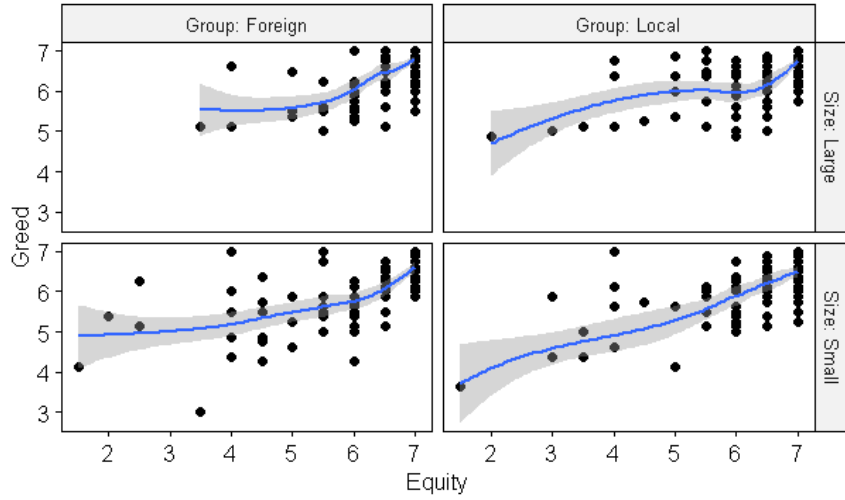
Equality and Greed



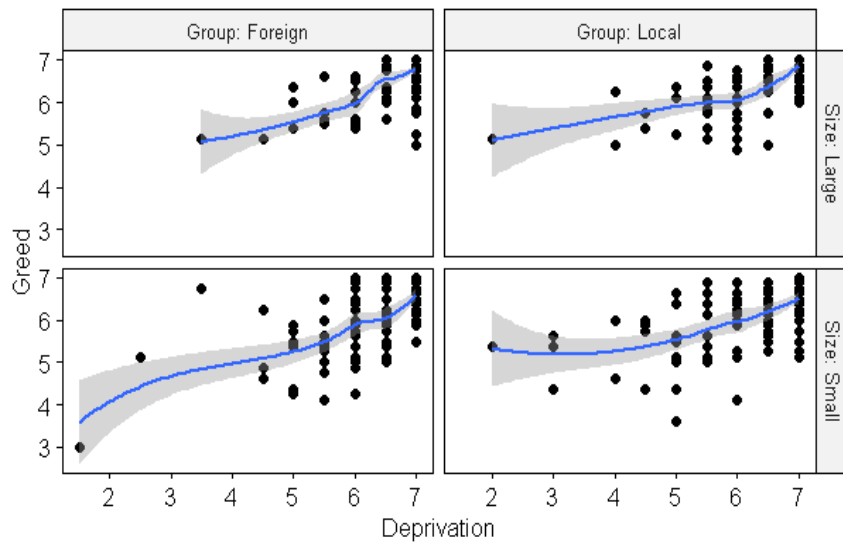
Need and Greed



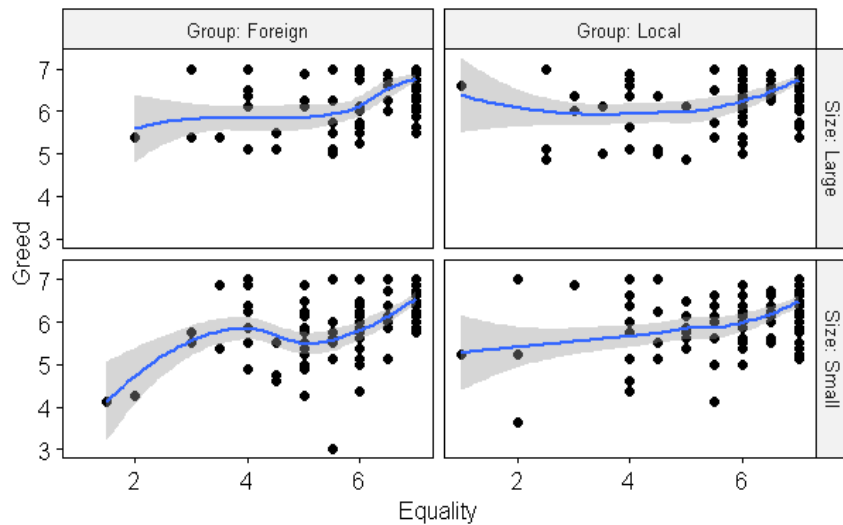
Equity and Greed



Deprivation and Greed



Blame and Greed



2.2.2.5. Homogeneity of regression slopes

Equality

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|-----------------------|-----|-----|---------|----------|---------|
| 1 | sizeandgroup | 3 | 488 | 10.163 | 1.67e-06 | * 0.059 |
| 2 | Equality | 1 | 488 | 145.700 | 1.54e-29 | * 0.230 |
| 3 | sizeandgroup:Equality | 3 | 488 | 0.687 | 5.61e-01 | 0.004 |

Need

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|--------------|-----|-----|---------|----------|---------|
| 1 | sizeandgroup | 3 | 488 | 4.786 | 3.00e-03 | * 0.029 |
| 2 | Need | 1 | 488 | 323.344 | 7.66e-56 | * 0.399 |

| | | | | | |
|---------------------|---|-----|-------|----------|-------|
| 3 sizeandgroup:Need | 3 | 488 | 2.246 | 8.20e-02 | 0.014 |
|---------------------|---|-----|-------|----------|-------|

Equity

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|---------------------|-----|-----|---------|----------|---------|
| 1 | sizeandgroup | 3 | 488 | 8.168 | 2.58e-05 | * 0.048 |
| 2 | Equity | 1 | 488 | 328.425 | 1.66e-56 | * 0.402 |
| 3 | sizeandgroup:Equity | 3 | 488 | 0.649 | 5.84e-01 | 0.004 |

Deprivation

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|--------------------------|-----|-----|---------|----------|---------|
| 1 | sizeandgroup | 3 | 488 | 10.853 | 6.51e-07 | * 0.063 |
| 2 | Deprivation | 1 | 488 | 307.733 | 8.91e-54 | * 0.387 |
| 3 | sizeandgroup:Deprivation | 3 | 488 | 2.458 | 6.20e-02 | 0.015 |

Blame

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|-----------------------|-----|-----|---------|----------|---------|
| 1 | sizeandgroup | 3 | 488 | 10.163 | 1.67e-06 | * 0.059 |
| 2 | Equality | 1 | 488 | 145.700 | 1.54e-29 | * 0.230 |
| 3 | sizeandgroup:Equality | 3 | 488 | 0.687 | 5.61e-01 | 0.004 |

2.2.3. General linear model, ANCOVA: 2*2 (Size (Small vs Big) * Group (Local vs Foreign)). Covariates: Equality, Need, Equity, Deprivation, Blame.

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------|-----|--------|---------|---------|--------------|
| Size | 1 | 14.97 | 14.97 | 83.325 | < 2e-16 *** |
| Group | 1 | 0.09 | 0.09 | 0.506 | 0.47734 |
| Equality | 1 | 50.14 | 50.14 | 279.126 | < 2e-16 *** |
| Need | 1 | 53.64 | 53.64 | 298.638 | < 2e-16 *** |
| Equity | 1 | 15.45 | 15.45 | 86.008 | < 2e-16 *** |
| Deprivation | 1 | 8.72 | 8.72 | 48.522 | 1.06e-11 *** |
| Blame | 1 | 2.46 | 2.46 | 13.694 | 0.00024 *** |
| Size:Group | 1 | 0.02 | 0.02 | 0.086 | 0.76932 |
| Residuals | 487 | 87.48 | 0.18 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

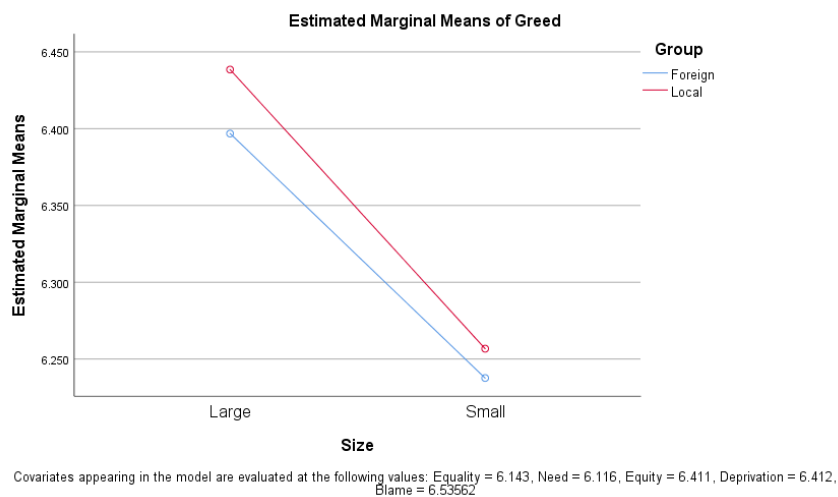
Etas

eta.sq

eta.sq.part

| | | |
|-------------|--------------|--------------|
| Size | 1.484471e-02 | 0.0380288124 |
| Group | 4.769121e-04 | 0.0012684289 |
| Equality | 1.476853e-02 | 0.0378410430 |
| Need | 5.061220e-02 | 0.1187740285 |
| Equity | 2.075200e-02 | 0.0523694411 |
| Deprivation | 2.825466e-02 | 0.0699781213 |
| Blame | 1.028481e-02 | 0.0266587803 |
| Size:Group | 6.639103e-05 | 0.0001767713 |

Plot



Robust to rank transformation of the data

Analysis of Variance of Aligned Rank Transformed Data

Table Type: Anova Table (Type III tests)

Model: No Repeated Measures (lm)

Response: art(Greed)

| | Df | Df.res | F value | Pr(>F) |
|-------------------|----|--------|-----------|----------------|
| 1 as.factor(Size) | 1 | 492 | 36.855301 | 2.5449e-09 *** |

```

2 as.factor(Group)          1  492 0.159829  0.68949
3 as.factor(Size):as.factor(Group) 1  492 0.013666  0.90699
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

3. Study 2

3.1. Descriptives and Chi Square Tests

Gender

| | White_S | Black_S |
|--------|---------|---------|
| Male | 47 | 52 |
| Female | 71 | 59 |

Pearson's Chi-squared test with Yates' continuity correction

data: gender2

X-squared = 0.87923, df = 1, p-value = 0.3484

Age

| | White_S | Black_S |
|-------|---------|---------|
| 18-24 | 4 | 5 |
| 25-34 | 33 | 38 |
| 35-44 | 31 | 34 |
| 45-54 | 21 | 16 |
| 55+ | 29 | 18 |

Pearson's Chi-squared test

data: age2

X-squared = 3.6413, df = 4, p-value = 0.4567

Education

| | White_S | Black_S |
|-----------------------|---------|---------|
| Less than high school | 0 | 0 |
| High School | 26 | 33 |
| Technical/Diploma | 18 | 11 |
| University degree | 59 | 51 |
| Postgraduate | 15 | 16 |

Pearson's Chi-squared test

data: education2

X-squared = 2.9229, df = 4, p-value = 0.4036

Income

| | White_S | Black_S |
|---------------|---------|---------|
| Less than 25k | 23 | 27 |
| 25k-<45k | 37 | 29 |
| 45k-<85k | 40 | 33 |
| 85k+ | 18 | 22 |

Pearson's Chi-squared test

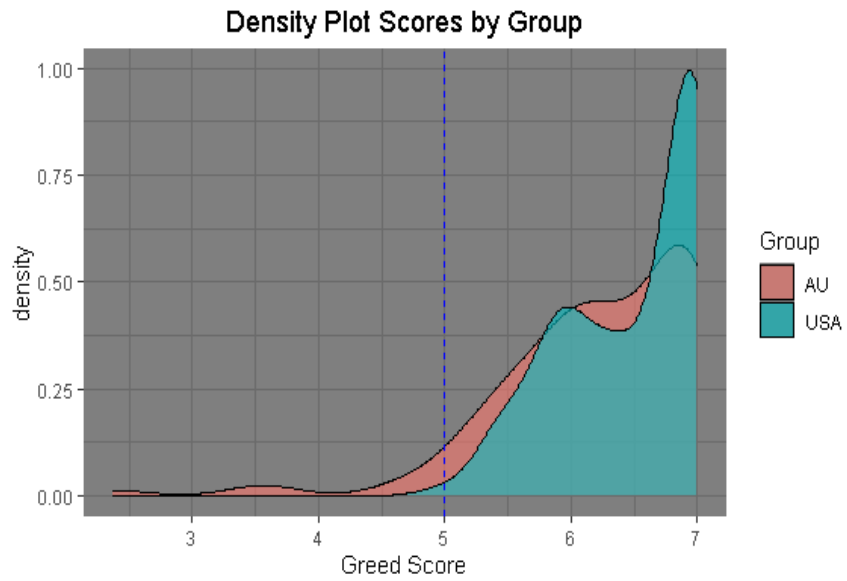
data: income2

X-squared = 2.149, df = 3, p-value = 0.5421

3.2. Assumptions ANCOVA

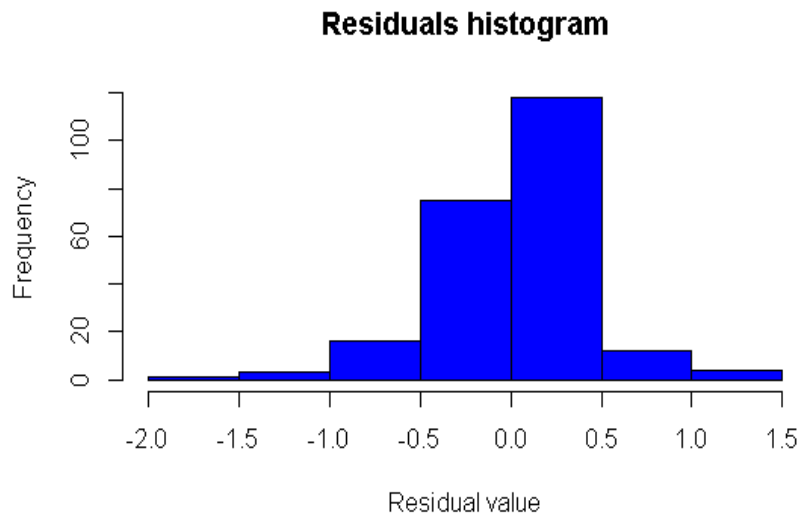
3.2.1. Normality

Greed Scores Skewed (for reference only: not assumption of ANCOVA. AU: White Sheep group, USA: Black Sheep group)

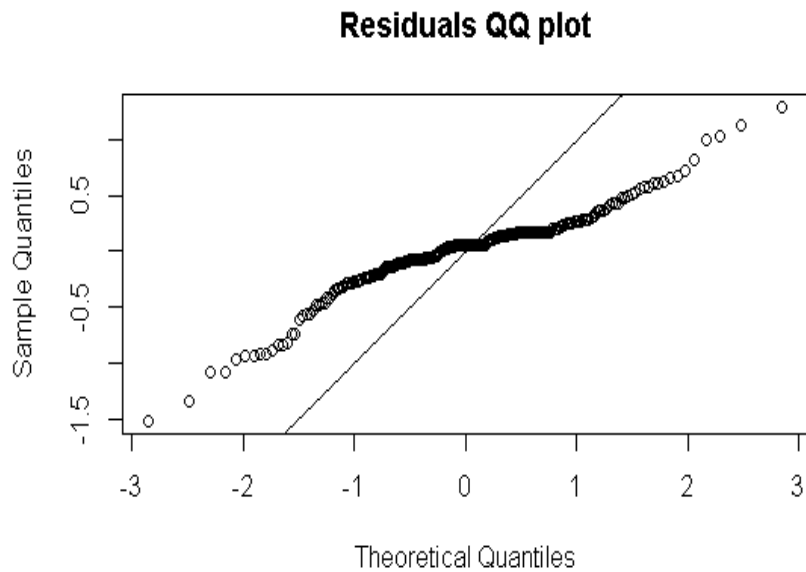


Normality of residuals

Histogram



QQ Plot



Shapiro-Wilk

| variable | statistic | p.value |
|-------------------------|-----------|---------------|
| <chr> | <dbl> | <dbl> |
| 1 model_metrics\$.resid | 0.933 | 0.00000000972 |

3.2.2. Correlation between covariates.

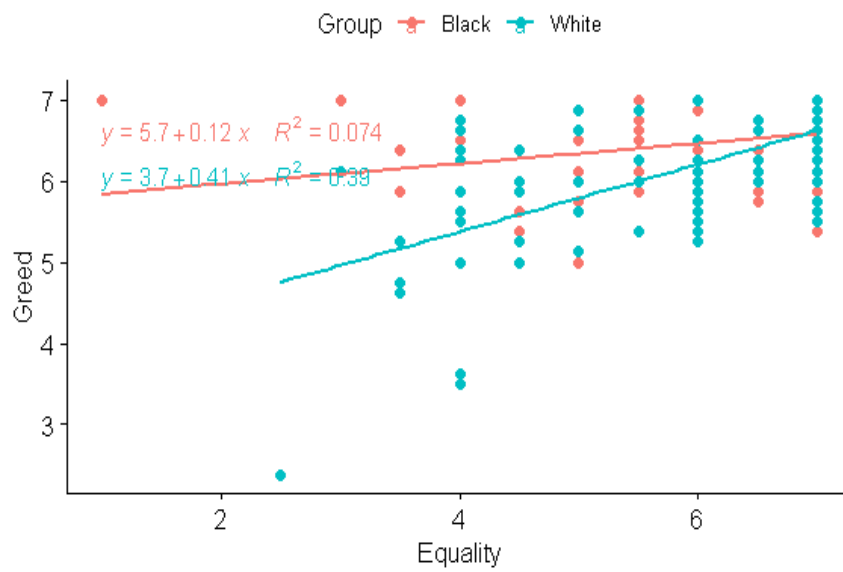
| | Equality | Need | Equity | Deprivation | Blame |
|-------------|-----------|-----------|-----------|-------------|-----------|
| Equality | 1.0000000 | 0.4950931 | 0.5403028 | 0.3524802 | 0.3815949 |
| Need | 0.4950931 | 1.0000000 | 0.6185381 | 0.5719933 | 0.4883695 |
| Equity | 0.5403028 | 0.6185381 | 1.0000000 | 0.6539513 | 0.6467422 |
| Deprivation | 0.3524802 | 0.5719933 | 0.6539513 | 1.0000000 | 0.5695575 |
| Blame | 0.3815949 | 0.4883695 | 0.6467422 | 0.5695575 | 1.0000000 |

3.2.3. Homoscedasticity of residuals, Levene's test.

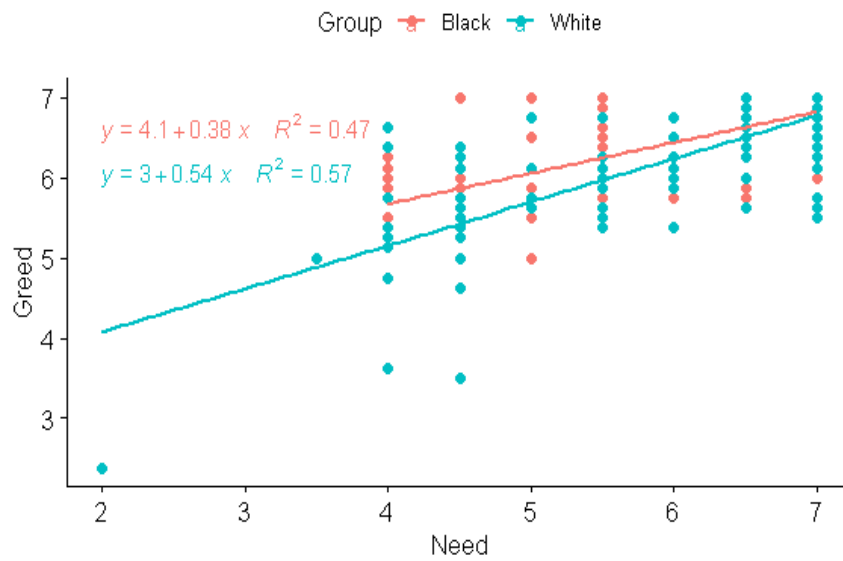
| df1 | df2 | statistic | p |
|-------|-------|-----------|--------|
| <int> | <int> | <dbl> | <dbl> |
| 1 | 1 | 227 | 3.57 |
| | | | 0.0602 |

3.2.4. Linearity of relationship between covariates and DV per group.

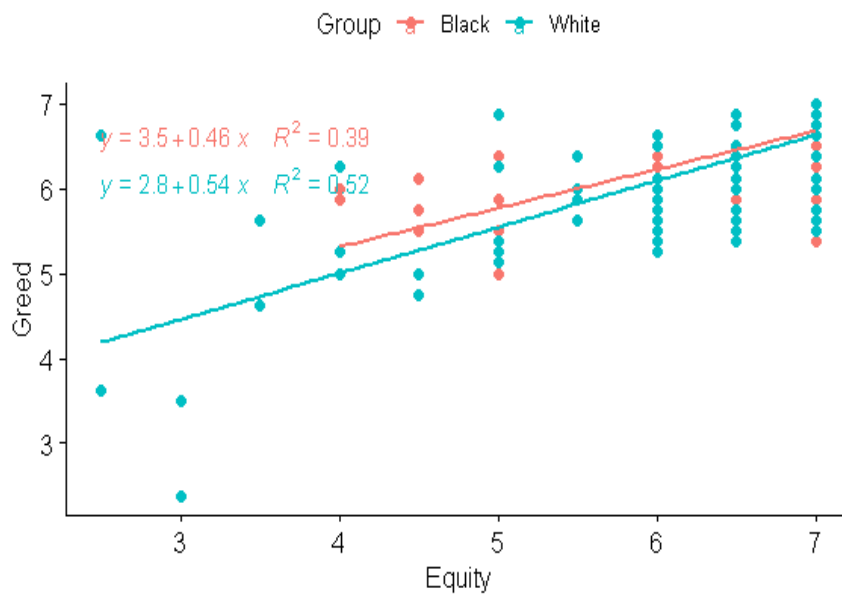
Equality and Greed



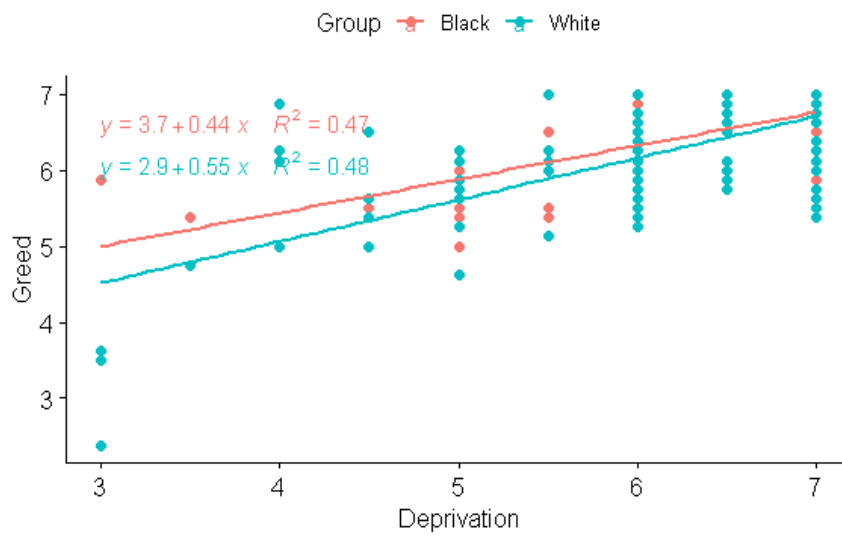
Need and Greed



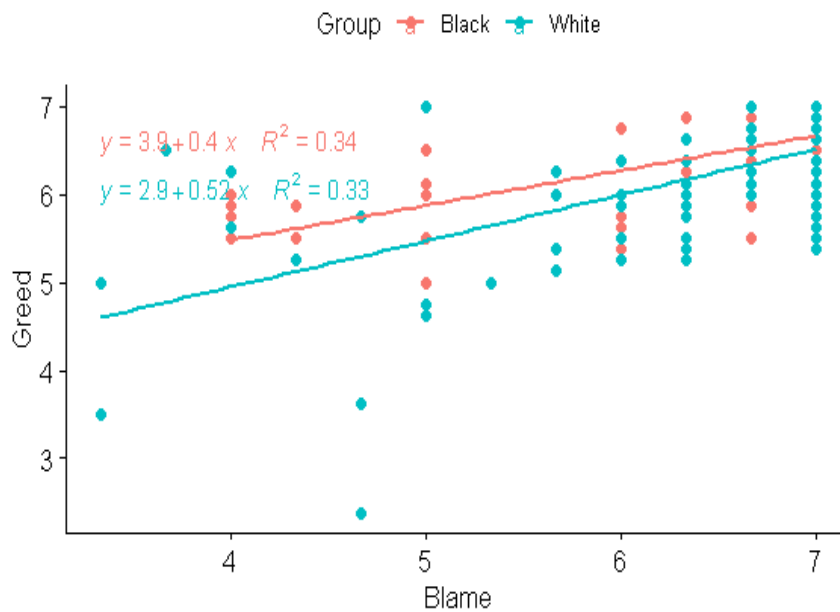
Equity and Greed



Deprivation and Greed



Blame and Greed



3.2.5. Homogeneity of regression slopes.

Equality

| Effect | DFn | DFd | F | p p<.05 | ges |
|------------------|-----|-----|--------|----------|---------|
| 1 Group | 1 | 225 | 8.507 | 4.00e-03 | * 0.036 |
| 2 Equality | 1 | 225 | 73.851 | 1.43e-15 | * 0.247 |
| 3 Group:Equality | 1 | 225 | 20.371 | 1.03e-05 | * 0.083 |

Need

| Effect | DFn | DFd | F | p p<.05 | ges |
|--------------|-----|-----|---------|----------|---------|
| 1 Group | 1 | 225 | 9.570 | 2.00e-03 | * 0.041 |
| 2 Need | 1 | 225 | 258.194 | 3.29e-39 | * 0.534 |
| 3 Group:Need | 1 | 225 | 6.933 | 9.00e-03 | * 0.030 |

Equity

| Effect | DFn | DFd | F | p p<.05 | ges |
|----------------|-----|-----|---------|----------|---------|
| 1 Group | 1 | 225 | 1.953 | 1.64e-01 | 0.009 |
| 2 Equity | 1 | 225 | 210.119 | 4.56e-34 | * 0.483 |
| 3 Group:Equity | 1 | 225 | 1.324 | 2.51e-01 | 0.006 |

Deprivation

| Effect | DFn | DFd | F | p p<.05 | ges |
|---------------|-----|-----|---------|----------|---------|
| 1 Group | 1 | 225 | 4.108 | 4.40e-02 | * 0.018 |
| 2 Deprivation | 1 | 225 | 204.245 | 2.12e-33 | * 0.476 |

| | | | | | |
|---------------------|---|-----|-------|----------|-------|
| 3 Group:Deprivation | 1 | 225 | 2.187 | 1.41e-01 | 0.010 |
|---------------------|---|-----|-------|----------|-------|

Blame

| Effect | DFn | DFd | F | p | p<.05 | ges |
|---------------|-----|-----|---------|----------|-------|-------|
| 1 Group | 1 | 225 | 8.092 | 5.00e-03 | * | 0.035 |
| 2 Blame | 1 | 225 | 109.091 | 4.47e-21 | * | 0.327 |
| 3 Group:Blame | 1 | 225 | 1.989 | 1.60e-01 | | 0.009 |

3.3. General linear model, One-way ANCOVA (Black_sheep vs White_sheep). Covariates: Equality, Need, Equity, Deprivation, Blame.

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------|-----|--------|---------|---------|--------------|
| Equality | 1 | 25.58 | 25.58 | 165.207 | < 2e-16 *** |
| Need | 1 | 34.38 | 34.38 | 222.091 | < 2e-16 *** |
| Equity | 1 | 9.56 | 9.56 | 61.731 | 1.68e-13 *** |
| Deprivation | 1 | 5.24 | 5.24 | 33.829 | 2.08e-08 *** |
| Blame | 1 | 0.26 | 0.26 | 1.706 | 0.1929 |
| Group | 1 | 0.72 | 0.72 | 4.671 | 0.0317 * |
| Residuals | 222 | 34.37 | 0.15 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Etas

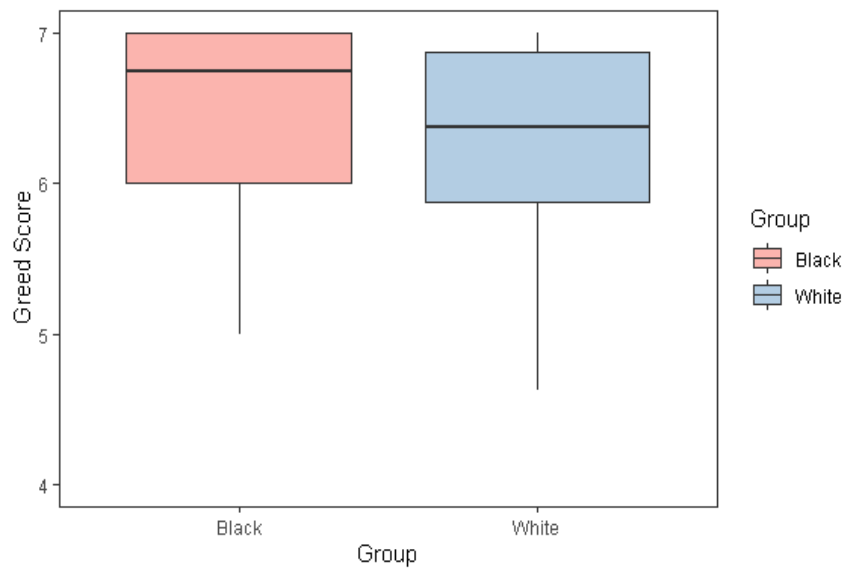
| | eta.sq | eta.sq.part |
|-------------|-------------|-------------|
| Equality | 0.002462145 | 0.007826384 |
| Need | 0.072562543 | 0.188623158 |
| Equity | 0.014007117 | 0.042948118 |
| Deprivation | 0.038728388 | 0.110380786 |
| Blame | 0.002994204 | 0.009501563 |
| Group | 0.006567578 | 0.020607342 |

Robust to rank transformation of the data

| | Df | Df.res | F value | Pr(>F) |
|--------------------|----|--------|---------|------------|
| 1 as.factor(Group) | 1 | 227 | 5.8646 | 0.016234 * |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Plot



4. Study 3

4.1. Descriptives and Chi Square Tests

Gender

| | Common | Uncommon |
|--------|--------|----------|
| Male | 48 | 55 |
| Female | 77 | 69 |

Pearson's Chi-squared test

data: gender3

X-squared = 0.68113, df = 1, p-value = 0.4092

Age

| | Common | Uncommon |
|-------|--------|----------|
| 18-24 | 3 | 9 |
| 25-34 | 31 | 38 |
| 35-44 | 33 | 28 |
| 45-54 | 32 | 20 |

55+ 26 29

Pearson's Chi-squared test

data: age3

X-squared = 7.0489, df = 4, p-value = 0.1333

Education

| | Common | Uncommon |
|-----------------------|--------|----------|
| Less than high school | 1 | 1 |
| High School | 27 | 30 |
| Technical/Diploma | 21 | 15 |
| University degree | 47 | 58 |
| Postgraduate | 29 | 20 |

Pearson's Chi-squared test

data: education3

X-squared = 3.9594, df = 4, p-value = 0.4115

Income

| | Common | Uncommon |
|---------------|--------|----------|
| Less than 25k | 30 | 35 |
| 25k-<45k | 36 | 39 |
| 45k-<85k | 41 | 37 |
| 85k+ | 18 | 13 |

Pearson's Chi-squared test

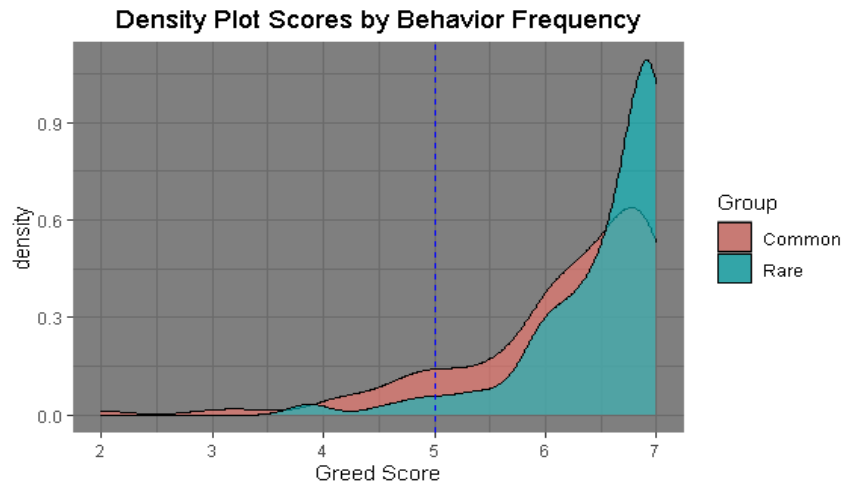
data: income3

X-squared = 1.5122, df = 3, p-value = 0.6795

4.2. Assumptions ANCOVA.

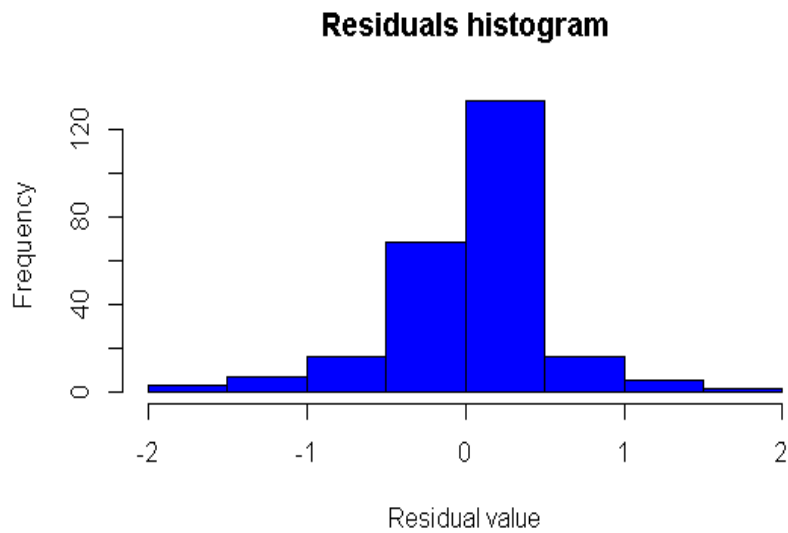
4.2.1. Normality.

Greed Scores Skewed (for reference only: not assumption of ANCOVA).

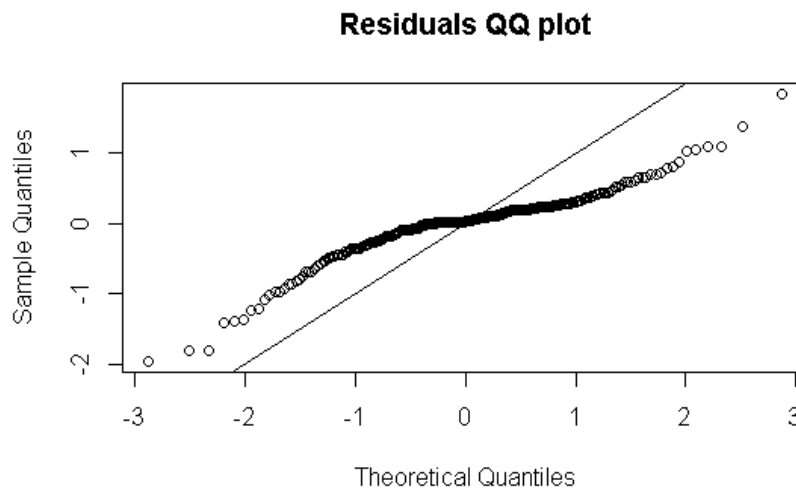


Normality of residuals

Histogram



QQ plot



Shapiro-Wilk

| variable | statistic | p.value |
|--------------------------|-----------|----------|
| <chr> | <dbl> | <dbl> |
| 1 model_metrics3\$.resid | 0.915 | 1.01e-10 |

4.2.2. Correlation between covariates.

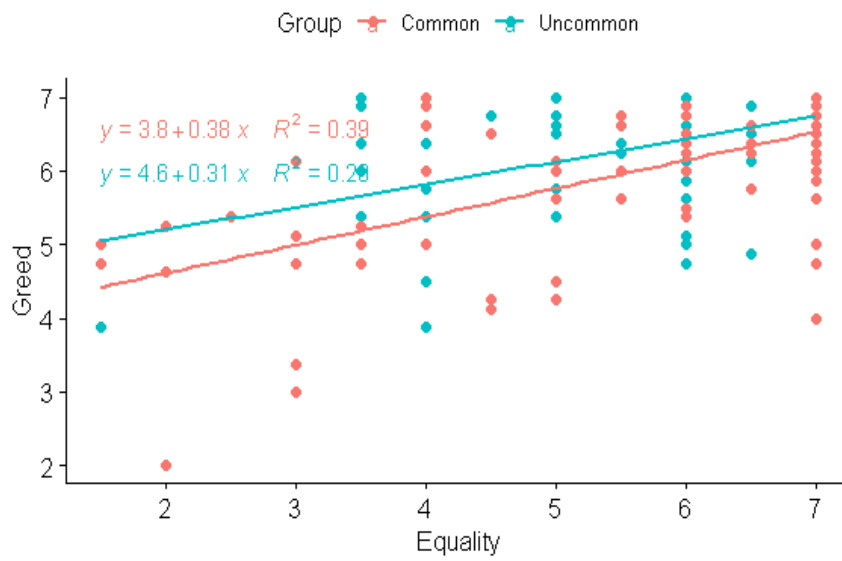
| | Equality | Need | Equity | Deprivation | Blame |
|-------------|-----------|-----------|-----------|-------------|-----------|
| Equality | 1.0000000 | 0.4826596 | 0.6426038 | 0.4299515 | 0.3754204 |
| Need | 0.4826596 | 1.0000000 | 0.5966472 | 0.5560741 | 0.4208977 |
| Equity | 0.6426038 | 0.5966472 | 1.0000000 | 0.5153777 | 0.5396162 |
| Deprivation | 0.4299515 | 0.5560741 | 0.5153777 | 1.0000000 | 0.4900813 |
| Blame | 0.3754204 | 0.4208977 | 0.5396162 | 0.4900813 | 1.0000000 |

4.2.3. Homoscedasticity of residuals, Levene's test.

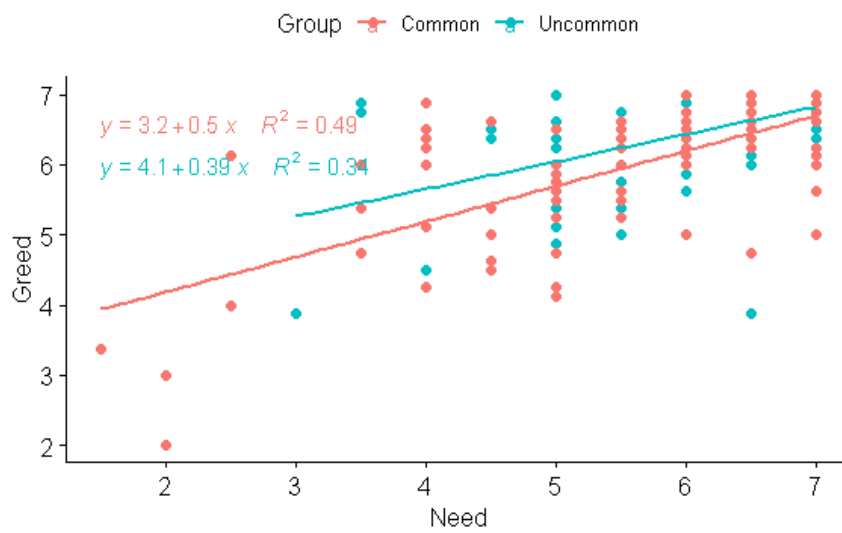
| df1 | df2 | statistic | p |
|-------|-------|-----------|--------|
| <int> | <int> | <dbl> | <dbl> |
| 1 | 1 247 | 2.97 | 0.0861 |

4.2.4. Linearity of relationship between covariates and DV per group.

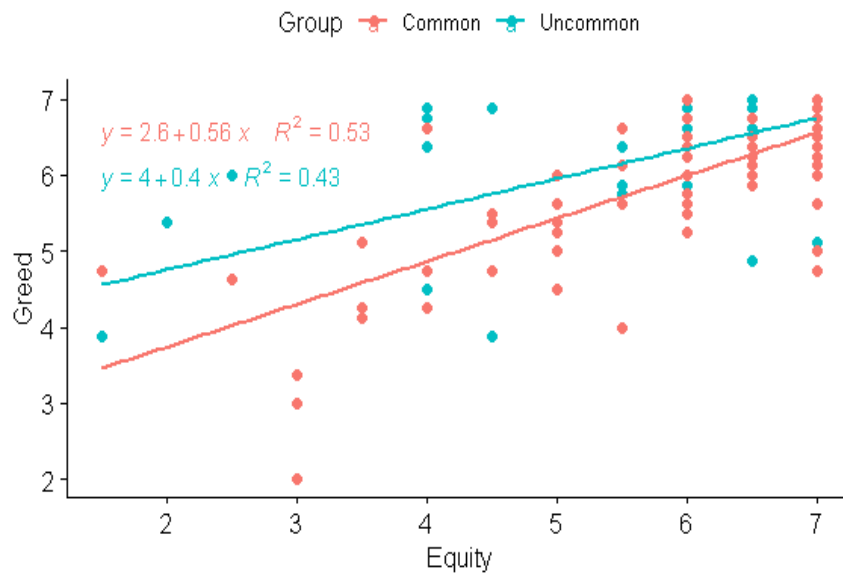
Equality and Greed



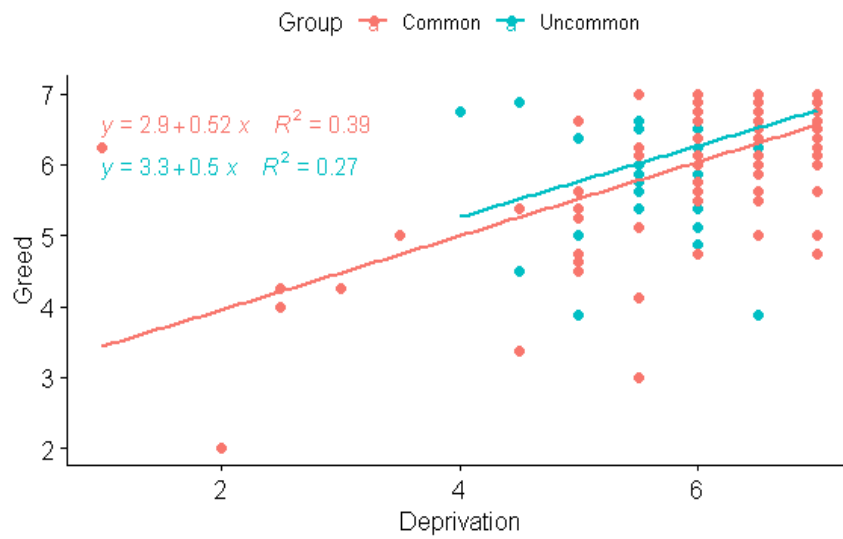
Need and Greed



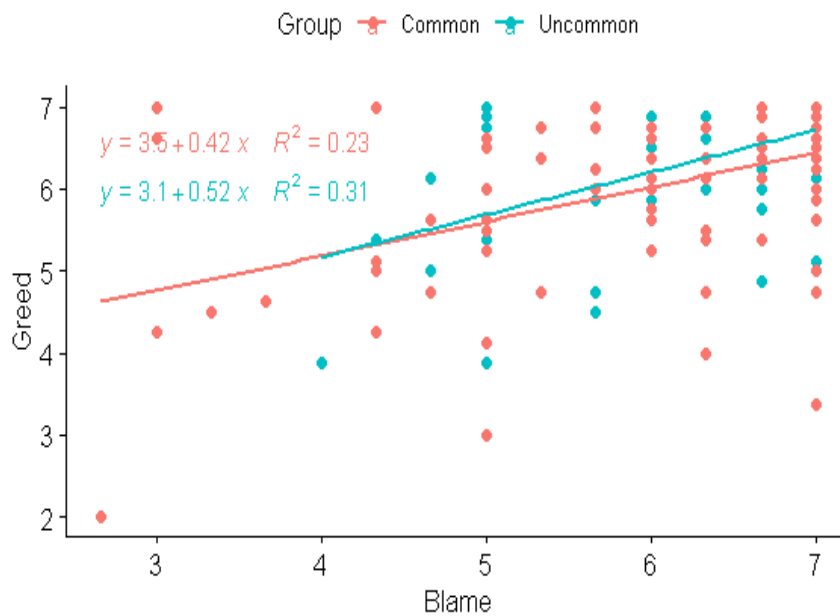
Equity and Greed



Deprivation and Greed



Blame and Greed



4.2.5. Homogeneity of regression slopes.

Equality

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|----------------|-----|-----|---------|----------|---------|
| 1 | Group | 1 | 245 | 11.143 | 9.75e-04 | * 0.044 |
| 2 | Equality | 1 | 245 | 132.868 | 7.58e-25 | * 0.352 |
| 3 | Group:Equality | 1 | 245 | 1.390 | 2.40e-01 | 0.006 |

Need

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|------------|-----|-----|---------|----------|---------|
| 1 | Group | 1 | 245 | 8.655 | 4.00e-03 | * 0.034 |
| 2 | Need | 1 | 245 | 188.411 | 3.45e-32 | * 0.435 |
| 3 | Group:Need | 1 | 245 | 2.542 | 1.12e-01 | 0.010 |

Equity

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|--------------|-----|-----|---------|----------|---------|
| 1 | Group | 1 | 245 | 17.486 | 4.03e-05 | * 0.067 |
| 2 | Equity | 1 | 245 | 239.058 | 4.28e-38 | * 0.494 |
| 3 | Group:Equity | 1 | 245 | 6.584 | 1.10e-02 | * 0.026 |

Deprivation

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|--------|-----|-----|-------|----------|------------|
| 1 | Group | 1 | 245 | 6.859 | 9.00e-03 | * 0.027000 |

| | | | | | | |
|---|-------------------|---|-----|---------|----------|------------|
| 2 | Deprivation | 1 | 245 | 131.509 | 1.18e-24 | * 0.349000 |
| 3 | Group:Deprivation | 1 | 245 | 0.037 | 8.47e-01 | 0.000152 |

Blame

| | Effect | DFn | DFd | F | p p<.05 | ges |
|---|-------------|-----|-----|--------|----------|---------|
| 1 | Group | 1 | 245 | 6.656 | 1.00e-02 | * 0.026 |
| 2 | Blame | 1 | 245 | 82.096 | 4.24e-17 | * 0.251 |
| 3 | Group:Blame | 1 | 245 | 0.797 | 3.73e-01 | 0.003 |

4.2.6. General linear model, One-way ANCOVA (Common vs Uncommon behavior). Covariates: Equality, Need, Equity, Deprivation, Blame.

| | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
|-------------|-----|--------|---------|---------|--------------|
| Equality | 1 | 59.00 | 59.00 | 248.207 | < 2e-16 *** |
| Need | 1 | 30.69 | 30.69 | 129.117 | < 2e-16 *** |
| Equity | 1 | 9.74 | 9.74 | 40.965 | 7.97e-10 *** |
| Deprivation | 1 | 5.04 | 5.04 | 21.209 | 6.66e-06 *** |
| Blame | 1 | 1.16 | 1.16 | 4.893 | 0.02790 * |
| Group | 1 | 1.84 | 1.84 | 7.725 | 0.00588 ** |
| Residuals | 242 | 57.52 | 0.24 | | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Etas

| | eta.sq | eta.sq.part |
|-------------|------------|-------------|
| Equality | 0.01583363 | 0.04344186 |
| Need | 0.03873878 | 0.10000106 |
| Equity | 0.03247300 | 0.08520460 |
| Deprivation | 0.01919902 | 0.05219337 |
| Blame | 0.00478300 | 0.01353317 |
| Group | 0.01112866 | 0.03093241 |

Robust to rank transformation of the data

Analysis of Variance of Aligned Rank Transformed Data

Table Type: Anova Table (Type III tests)

Model: No Repeated Measures (lm)

Response: art(Greed)

| | Df | Df.res | F value | Pr(>F) |
|--------------------|----|--------|---------|----------------|
| 1 as.factor(Group) | 1 | 247 | 15.553 | 0.00010453 *** |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Plot

