**SUC**

1. **Abandoned** –

Call:

lm(formula = average ~ before\_after + grid, data = questiononeSUC1)

Residuals:

Min 1Q Median 3Q Max

-19.763 -6.106 0.142 6.175 34.794

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 12.0551 1.4306 8.426 2.92e-15 \*\*\*

before\_aftersecond -0.6766 1.1981 -0.565 0.5727

gridNE 4.4999 1.8054 2.493 0.0133 \*

gridNW -4.3125 2.0215 -2.133 0.0339 \*

gridSE 9.1192 1.7187 5.306 2.49e-07 \*\*\*

gridSW 5.4254 2.1298 2.547 0.0115 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 9.547 on 248 degrees of freedom

Multiple R-squared: 0.1944, Adjusted R-squared: 0.1781

F-statistic: 11.97 on 5 and 248 DF, p-value: 2.174e-10

1. **Extensive**

Call:

lm(formula = average ~ before\_after + grid, data = questiononeSUC2)

Residuals:

Min 1Q Median 3Q Max

-1.7863 -0.6008 -0.0452 0.4987 7.2595

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 1.76204 0.16026 10.995 <2e-16 \*\*\*

before\_aftersecond -0.14156 0.13587 -1.042 0.2985

gridNE -0.20004 0.20515 -0.975 0.3305

gridNW -0.38681 0.23111 -1.674 0.0955 .

gridSE -0.02214 0.19261 -0.115 0.9086

gridSW 0.14423 0.23990 0.601 0.5483

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 1.061 on 238 degrees of freedom

Multiple R-squared: 0.02721, Adjusted R-squared: 0.006773

F-statistic: 1.331 on 5 and 238 DF, p-value: 0.2516

1. **Intensive**

Call:

lm(formula = average ~ before\_after + grid, data = questiononeSUC3)

Residuals:

Min 1Q Median 3Q Max

-43331 -16465 3477 12559 59844

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 30078.8 3111.6 9.667 < 2e-16 \*\*\*

before\_aftersecond 2777.8 2628.1 1.057 0.29154

gridNE 590.8 3954.2 0.149 0.88136

gridNW -5667.1 4436.1 -1.277 0.20260

gridSE 10475.6 3738.4 2.802 0.00547 \*\*

gridSW 13138.6 4677.3 2.809 0.00536 \*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 21110 on 252 degrees of freedom

Multiple R-squared: 0.09214, Adjusted R-squared: 0.07412

F-statistic: 5.115 on 5 and 252 DF, p-value: 0.0001738

**EUA**

1. **Abandoned**

Call:

lm(formula = average ~ before\_after + grid, data = questiononeEUA1)

Residuals:

Min 1Q Median 3Q Max

-17.396 -6.572 -1.000 5.389 37.117

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 17.6958 1.4668 12.064 < 2e-16 \*\*\*

before\_aftersecond -5.1925 1.2357 -4.202 3.7e-05 \*\*\*

gridNE -0.4393 1.8495 -0.238 0.812463

gridNW -7.1018 2.1250 -3.342 0.000961 \*\*\*

gridSE -1.8703 1.7546 -1.066 0.287494

gridSW -3.2336 2.1848 -1.480 0.140138

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 9.827 on 247 degrees of freedom

Multiple R-squared: 0.1114, Adjusted R-squared: 0.09339

F-statistic: 6.192 on 5 and 247 DF, p-value: 1.987e-05

1. **Extensive**

Call:

lm(formula = average ~ before\_after + grid, data = questiononeEUA2)

Residuals:

Min 1Q Median 3Q Max

-1.17417 -0.49000 -0.08893 0.31024 2.80077

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 1.25893 0.10897 11.553 < 2e-16 \*\*\*

before\_aftersecond -0.02476 0.09049 -0.274 0.78459

gridNE -0.44271 0.13647 -3.244 0.00135 \*\*

gridNW -0.46553 0.15352 -3.032 0.00270 \*\*

gridSE -0.29562 0.13020 -2.271 0.02407 \*

gridSW -0.16591 0.16057 -1.033 0.30252

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.7051 on 237 degrees of freedom

Multiple R-squared: 0.05726, Adjusted R-squared: 0.03737

F-statistic: 2.879 on 5 and 237 DF, p-value: 0.01522

1. **Intensive**

Call:

lm(formula = average ~ before\_after + grid, data = questiononeEUA3)

Residuals:

Min 1Q Median 3Q Max

-31225 -10963 246 10790 41889

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 18882.9 2307.6 8.183 1.38e-14 \*\*\*

before\_aftersecond 9097.0 1949.0 4.667 4.96e-06 \*\*\*

gridNE -241.9 2932.5 -0.082 0.934

gridNW -5393.6 3289.8 -1.639 0.102

gridSE 3246.5 2772.4 1.171 0.243

gridSW 5691.2 3468.7 1.641 0.102

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 15650 on 252 degrees of freedom

Multiple R-squared: 0.116, Adjusted R-squared: 0.09847

F-statistic: 6.614 on 5 and 252 DF, p-value: 8.339e-06

**Q2**  **1. A to I SUC**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoSUC1)

Residuals:

Min 1Q Median 3Q Max

-13.3932 -4.5573 -0.3359 3.9728 31.1868

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 8.0910 1.0347 7.820 1.69e-13 \*\*\*

before\_aftersecond -2.4103 0.8619 -2.796 0.00559 \*\*

gridNE 3.0702 1.3000 2.362 0.01900 \*

gridNW -3.2037 1.5068 -2.126 0.03452 \*

gridSE 6.2322 1.2345 5.048 8.83e-07 \*\*\*

gridSW 4.1622 1.5211 2.736 0.00668 \*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 6.745 on 239 degrees of freedom

(13 observations deleted due to missingness)

Multiple R-squared: 0.2067, Adjusted R-squared: 0.1901

F-statistic: 12.45 on 5 and 239 DF, p-value: 9.502e-11

**2. A to I EUA**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoEUA1)

Residuals:

Min 1Q Median 3Q Max

-10.7540 -3.9276 -0.6732 3.0309 26.2584

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 11.1290 0.9113 12.212 < 2e-16 \*\*\*

before\_aftersecond -3.6969 0.7758 -4.765 3.39e-06 \*\*\*

gridNE -0.4226 1.1558 -0.366 0.7150

gridNW -5.3537 1.3223 -4.049 7.10e-05 \*\*\*

gridSE -2.5279 1.0863 -2.327 0.0209 \*

gridSW -2.6786 1.3970 -1.917 0.0565 .

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 5.864 on 224 degrees of freedom

(28 observations deleted due to missingness)

Multiple R-squared: 0.163, Adjusted R-squared: 0.1443

F-statistic: 8.726 on 5 and 224 DF, p-value: 1.408e-07

**3. E to I SUC**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoSUC4)

Residuals:

Min 1Q Median 3Q Max

-0.58625 -0.18125 -0.05826 0.14915 0.99554

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.63125 0.04969 12.704 <2e-16 \*\*\*

before\_aftersecond -0.06773 0.04239 -1.598 0.1116

gridNE -0.13628 0.06313 -2.159 0.0320 \*

gridNW -0.12608 0.07448 -1.693 0.0920 .

gridSE -0.03679 0.06003 -0.613 0.5407

gridSW 0.17701 0.07618 2.324 0.0211 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.3104 on 209 degrees of freedom

(43 observations deleted due to missingness)

Multiple R-squared: 0.1001, Adjusted R-squared: 0.0786

F-statistic: 4.651 on 5 and 209 DF, p-value: 0.0004784

1. **E to I EUA**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoEUA4)

Residuals:

Min 1Q Median 3Q Max

-0.37172 -0.16327 -0.02827 0.10828 0.88428

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.36052 0.03936 9.160 <2e-16 \*\*\*

before\_aftersecond 0.05620 0.03676 1.529 0.128

gridNE -0.07581 0.05256 -1.442 0.151

gridNW -0.05723 0.05950 -0.962 0.338

gridSE -0.07345 0.04901 -1.499 0.136

gridSW 0.01151 0.06237 0.185 0.854

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.232 on 163 degrees of freedom

(89 observations deleted due to missingness)

Multiple R-squared: 0.03441, Adjusted R-squared: 0.004796

F-statistic: 1.162 on 5 and 163 DF, p-value: 0.3302

1. **I to E SUC**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoSUC6)

Residuals:

Min 1Q Median 3Q Max

-0.5702 -0.2232 -0.0476 0.1550 1.9704

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.60635 0.05871 10.327 <2e-16 \*\*\*

before\_aftersecond 0.01825 0.04859 0.376 0.7076

gridNE -0.14200 0.07367 -1.927 0.0553 .

gridNW -0.15939 0.08408 -1.896 0.0594 .

gridSE 0.02385 0.06985 0.341 0.7332

gridSW 0.02471 0.08670 0.285 0.7760

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.3602 on 214 degrees of freedom

(38 observations deleted due to missingness)

Multiple R-squared: 0.0494, Adjusted R-squared: 0.02719

F-statistic: 2.224 on 5 and 214 DF, p-value: 0.05306

1. **I to E EUA**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoEUA6)

Residuals:

Min 1Q Median 3Q Max

-0.31590 -0.12568 -0.04067 0.10727 0.77371

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.2912920 0.0320288 9.095 2.45e-16 \*\*\*

before\_aftersecond 0.0425775 0.0294024 1.448 0.149

gridNE -0.0630091 0.0415119 -1.518 0.131

gridNW -0.0544551 0.0451391 -1.206 0.229

gridSE -0.0008109 0.0405450 -0.020 0.984

gridSW 0.0420286 0.0480291 0.875 0.383

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1873 on 170 degrees of freedom

(82 observations deleted due to missingness)

Multiple R-squared: 0.04759, Adjusted R-squared: 0.01958

F-statistic: 1.699 on 5 and 170 DF, p-value: 0.1374

1. **I to A SUC**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoSUC5)

Residuals:

Min 1Q Median 3Q Max

-17.366 -4.707 -0.548 3.899 32.724

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 10.523 1.196 8.801 2.72e-16 \*\*\*

before\_aftersecond -5.291 0.999 -5.297 2.67e-07 \*\*\*

gridNE 4.354 1.502 2.899 0.0041 \*\*

gridNW -2.584 1.744 -1.482 0.1397

gridSE 7.660 1.426 5.373 1.83e-07 \*\*\*

gridSW 2.442 1.760 1.387 0.1666

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 7.834 on 240 degrees of freedom

(12 observations deleted due to missingness)

Multiple R-squared: 0.2481, Adjusted R-squared: 0.2324

F-statistic: 15.84 on 5 and 240 DF, p-value: 1.774e-13

1. **I to A EUA**

Call:

lm(formula = average ~ before\_after + grid, data = questiontwoEUA5)

Residuals:

Min 1Q Median 3Q Max

-9.1864 -3.9135 -0.1284 3.1510 23.9565

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 8.6554 0.8622 10.039 < 2e-16 \*\*\*

before\_aftersecond 0.3796 0.7595 0.500 0.617748

gridNE 0.3546 1.1427 0.310 0.756590

gridNW -4.5898 1.2524 -3.665 0.000314 \*\*\*

gridSE 0.9259 1.0426 0.888 0.375539

gridSW -1.0376 1.3949 -0.744 0.457790

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 5.553 on 208 degrees of freedom

(44 observations deleted due to missingness)

Multiple R-squared: 0.1016, Adjusted R-squared: 0.07996

F-statistic: 4.702 on 5 and 208 DF, p-value: 0.0004328