Chapter 3: The original output from the R studio program

R version 4.1.0 (2021-05-18) -- "Camp Pontanezen"
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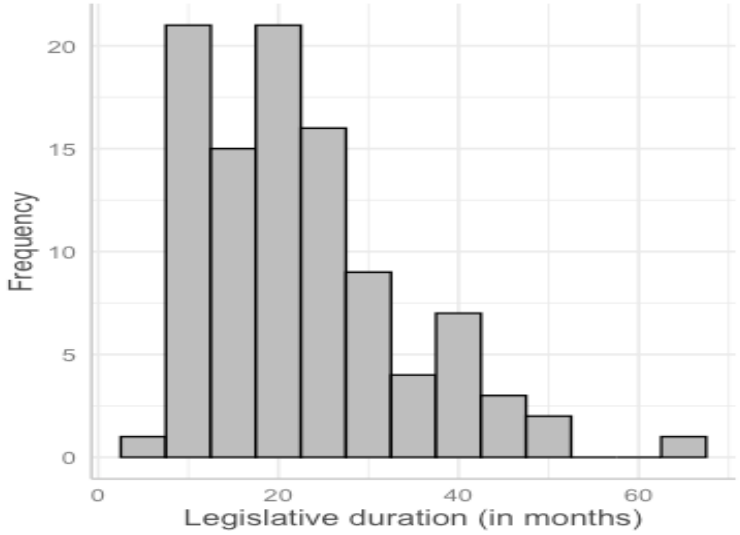
Platform: x86_64-apple-darwin17.0 (64-bit)

Chapter 3 The impact of interaction between stakeholders and member states on the decision-making duration of the European Union

1. Load the dataset:

#Displaying the distribution of legislative duration (Figure A1)



descriptive statistics (Table 3.1)

```
> # descriptive statistics (Table 3.1)
> summary(data3_0)
  deu_duration      duration1       duration2     intraconflict      aitems         bitems         aitem          bitem
 Min.   : 214.0   Min.   : 7.00   Min.   : 1.00   Min.   :0.00   Min.   :0.00   Min.   :0.00   Min.   :0.00   Min.   :0.00
 1st Qu.: 402.2   1st Qu.:13.75   1st Qu.: 4.75   1st Qu.:0.00   1st Qu.:0.00   1st Qu.:0.00   1st Qu.:0.00   1st Qu.:0.00
 Median : 590.5   Median :20.00   Median : 8.50   Median :0.00   Median :1.00   Median :1.00   Median :1.00   Median :1.00
 Mean   : 674.7   Mean   :22.53   Mean   :11.83   Mean   :0.22   Mean   :0.84   Mean   :0.89   Mean   :0.51   Mean   :0.65
 3rd Qu.: 847.5   3rd Qu.:28.00   3rd Qu.:18.25   3rd Qu.:0.00   3rd Qu.:1.00   3rd Qu.:1.00   3rd Qu.:1.00   3rd Qu.:1.00
 Max.   :1937.0   Max.   :65.00   Max.   :47.00   Max.   :1.00   Max.   :5.00   Max.   :3.00   Max.   :1.00   Max.   :1.00
   hetero.sta       sta.sup.num      sta.opp.num       sta.sup          sta.opp       interconflict    epconflict      saliency
 Min.   :-0.5400   Min.   :  5.00   Min.   :  3.00   Min.   :0.1000   Min.   :0.1000   Min.   :0.00   Min.   :0.00   Min.   : 24.0
 1st Qu.: 0.0150   1st Qu.: 19.75   1st Qu.: 26.25   1st Qu.:0.4800   1st Qu.:0.3250   1st Qu.:0.00   1st Qu.:0.00   1st Qu.: 93.0
 Median : 0.1450   Median : 32.50   Median : 44.00   Median :0.5450   Median :0.4100   Median :0.00   Median :0.00   Median :125.0
 Mean   : 0.1430   Mean   : 37.73   Mean   : 54.95   Mean   :0.5399   Mean   :0.4024   Mean   :0.12   Mean   :0.34   Mean   :155.8
 3rd Qu.: 0.3025   3rd Qu.: 52.25   3rd Qu.: 71.00   3rd Qu.:0.6400   3rd Qu.:0.4800   3rd Qu.:0.00   3rd Qu.:1.00   3rd Qu.:186.0
 Max.   : 0.7500   Max.   :139.00   Max.   :212.00   Max.   :0.8500   Max.   :0.7600   Max.   :1.00   Max.   :1.00   Max.   :414.0
  con.duration
 Min.   : 28.00
 1st Qu.: 57.75
 Median : 84.50
 Mean   : 82.80
 3rd Qu.: 98.00
 Max.   :261.00
```

```
> sd(data3_0$duration1)
[1] 11.30786
> sd(data3_0$duration1)
[1] 11.30786
> var(data3_0$duration1)
[1] 127.8678
> sd(data3_0$intraconflict)
[1] 0.4163332
> var(data3_0$intraconflict)
[1] 0.1733333
> sd(data3_0$aitems)
[1] 1.041755
> var(data3_0$aitems)
[1] 1.085253
> sd(data3_0$bitems)
[1] 0.8027101
> var(data3_0$bitems)
[1] 0.6443434
> sd(data3_0$hetero.sta)
[1] 0.2395471
> var(data3_0$hetero.sta)
[1] 0.05738283
> sd(data3_0$sta.sup)
[1] 0.1481024
> var(data3_0$sta.sup)
[1] 0.02193433
> sd(data3_0$sta.opp)
[1] 0.1332054
> var(data3_0$sta.opp)
[1] 0.01774368
> sd(data3_0$interconflict)
[1] 0.3265986
> var(data3_0$interconflict)
[1] 0.1066667
> sd(data3_0$epconflict)
[1] 0.4760952
> var(data3_0$epconflict)
[1] 0.2266667
> sd(data3_0$saliency)
[1] 93.55058
> var(data3_0$saliency)
[1] 8751.712
> sd(data3_0$con.duration)
[1] 37.43682
> var(data3_0$con.duration)
[1] 1401.515
```

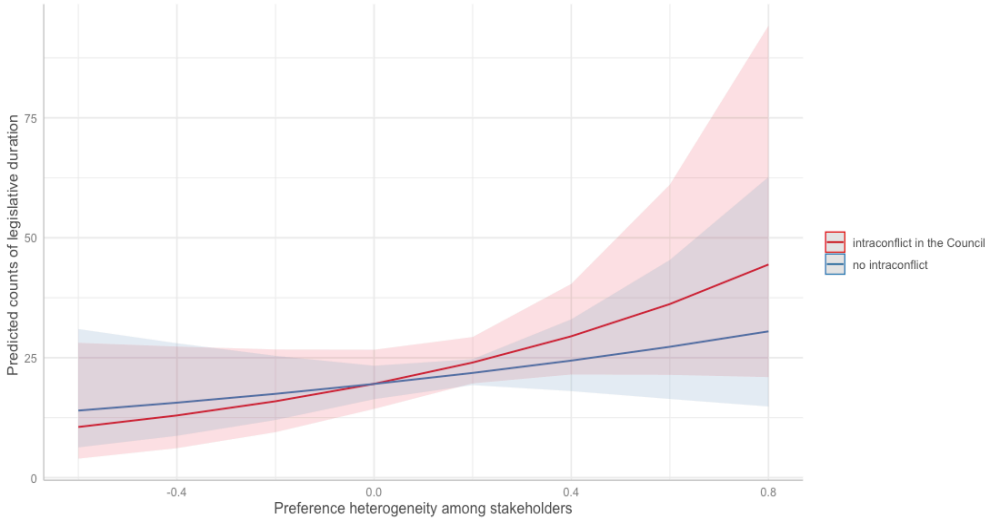
correlation matrix (Table A2)

```
> # correlation matrix (Table A2)
> cor(data3_0, method="pearson")
             deu_duration   duration1    duration2 intraconflict      aitems     bitems      aitem       bitem  hetero.sta sta.sup.num
deu_duration    1.00000000  0.99970097  0.823789182    0.02009271  0.36874155  0.4189797  0.3169181  0.25964934  0.23014700  0.04855631
duration1       0.99970097  1.00000000  0.822313641    0.02003965  0.36912361  0.4226830  0.3181991  0.26376734  0.22907667  0.05107434
duration2       0.82378918  0.82231364  1.000000000    0.06675965  0.25369433  0.2507519  0.1764534  0.12518059  0.22717575 -0.01939497
intraconflict   0.02009271  0.02003965  0.066759647    1.00000000 -0.43038817  0.1940439 -0.5418151  0.33909818  0.08143082 -0.02407943
aitems          0.36874155  0.36912361  0.253694329   -0.43038817  1.00000000  0.3048808  0.7943451  0.33171885  0.09949249  0.09404644
bitems          0.41897970  0.42268302  0.250751935    0.19404394  0.30488078  1.0000000  0.4410623  0.81769445  0.10627008  0.20321267
aitem           0.31691809  0.31819911  0.176453393   -0.54181508  0.79434513  0.4410623  1.0000000  0.45504664  0.11556924  0.04576470
bitem           0.25964934  0.26376734  0.125180591    0.33909818  0.33171885  0.8176944  0.4550466  1.00000000  0.16141236  0.11038254
hetero.sta      0.23014700  0.22907667  0.227175750    0.08143082  0.09949249  0.1062701  0.1155692  0.16141236  1.00000000 -0.24995871
sta.sup.num     0.04855631  0.05107434 -0.019394966   -0.02407943  0.09404644  0.2032127  0.0457647  0.11038254 -0.24995871  1.00000000
sta.opp.num     0.15096549  0.15471109  0.080503557    0.02715679  0.16701600  0.2753921  0.1761698  0.28207067  0.45517148  0.62338184
sta.sup         0.11071991  0.11089009  0.080959578   -0.03731773  0.12821493  0.0525853  0.1160791  0.04787564  0.81950611 -0.11678930
sta.opp        -0.23870870 -0.23811067 -0.228181185   -0.08429374 -0.07800282 -0.1599908 -0.1437464 -0.20975553 -0.83571700  0.28049249
interconflict   0.30503092  0.30260915  0.275501300    0.02674311  0.11637806  0.3205642  0.1772872  0.20645591  0.17481477 -0.01974116
epconflict      0.03873386  0.03748745 -0.002478188   -0.17734101  0.45701287  0.2574372  0.4501556  0.26112586  0.10610524  0.02196183
saliency       -0.19139900 -0.18774870 -0.160220340    0.07378873 -0.20900855 -0.1001788 -0.2643026 -0.20059860 -0.18087436  0.19085479
con.duration    0.23153966  0.22988945  0.260357219   -0.09176733  0.30168371  0.1128724  0.1859206  0.02701681  0.12386516  0.22860075
             sta.opp.num     sta.sup     sta.opp interconflict   epconflict    saliency con.duration
deu_duration   0.15096549  0.11071991 -0.23870870    0.30503092  0.038733862 -0.19139900   0.23153966
duration1      0.15471109  0.11089009 -0.23811067    0.30260915  0.037487450 -0.18774870   0.22988945
duration2      0.08050356  0.08095958 -0.22818118    0.27550130 -0.002478188 -0.16022034   0.26035722
intraconflict  0.02715679 -0.03731773 -0.08429374    0.02674311 -0.177341009  0.07378873  -0.09176733
aitems         0.16701600  0.12821493 -0.07800282    0.11637806  0.457012866 -0.20900855   0.30168371
bitems         0.27539206  0.05258530 -0.15999085    0.32056423  0.257437156 -0.10017883   0.11287244
aitem          0.17616983  0.11607908 -0.14374636    0.17728721  0.450155593 -0.26430257   0.18592057
bitem          0.28207067  0.04787564 -0.20975553    0.20645591  0.261125861 -0.20059860   0.02701681
hetero.sta     0.45517148  0.81950611 -0.83571700    0.17481477  0.106105237 -0.18087436   0.12386516
sta.sup.num    0.62338184 -0.11678930  0.28049249   -0.01974116  0.021961830  0.19085479   0.22860075
sta.opp.num    1.00000000  0.45920320 -0.37704405    0.08607781  0.115382327  0.06499461   0.28491236
sta.sup        0.45920320  1.00000000 -0.50037777    0.16940108  0.085007315 -0.02281308   0.05550698
sta.opp       -0.37704405 -0.50037777  1.00000000   -0.14599607 -0.154752144  0.21366789  -0.19836668
interconflict  0.08607781  0.16940108 -0.14599607    1.00000000 -0.070158512 -0.14482961  -0.10954563
epconflict     0.11538233  0.08500731 -0.15475214   -0.07015851  1.000000000 -0.16863220   0.21070821
saliency       0.06499461 -0.02281308  0.21366789   -0.14482961 -0.168632197  1.00000000  -0.10835271
con.duration   0.28491236  0.05550698 -0.19836668   -0.10954563  0.210708213 -0.10835271   1.00000000
>
```

#additional options to change
#type ="analysis and plotting produce that is performed
#axis.title = "label for y-axis"
#axis.lim = "range of values along y-axis"
#title ="title for your plot"
#legend.title = "title for your legend"
multilevel negative binomial regression (Table 3.2)
Model 1 test H1:intra-institutional conflict* preference heterogeneity among stakeholders

```
> model1=glm(duration1~intraconflict*hetero.sta+aitem+bitem+sta.sup+sta.opp+
+             interconflict+epconflict+saliency+con.duration, quasipoisson, data3_0)
> summary(model1)

Call:
glm(formula = duration1 ~ intraconflict * hetero.sta + aitem +
    bitem + sta.sup + sta.opp + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.5459  -1.3814  -0.3743   1.1830   6.5745

Coefficients:
                         Estimate Std. Error t value Pr(>|t|)
(Intercept)              2.778e+00  3.530e-01   7.870 8.53e-12 ***
intraconflict            3.177e-01  2.188e-01   1.452   0.1501
hetero.sta               5.722e-01  5.780e-01   0.990   0.3248
aitem                    5.440e-01  1.840e-01   2.956   0.0040 **
bitem                   -9.584e-02  1.514e-01  -0.633   0.5284
sta.sup                 -6.672e-01  5.919e-01  -1.127   0.2627
sta.opp                  2.225e-01  6.780e-01   0.328   0.7435
interconflict            2.766e-01  1.284e-01   2.154   0.0340 *
epconflict              -1.352e-01  1.050e-01  -1.288   0.2012
saliency                -7.092e-05  5.409e-04  -0.131   0.8960
con.duration             2.542e-03  1.140e-03   2.230   0.0283 *
intraconflict:hetero.sta 4.186e-01  4.430e-01   0.945   0.3472
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 4.301669)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 358.81  on 88  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

#Model 1:Figure 3.2
#pdf("./plots/pdf/figure3.2.pdf",width=9,height=6)
#png("./plots/png/figure 3.2.png",width=1100, height=800, res=120)



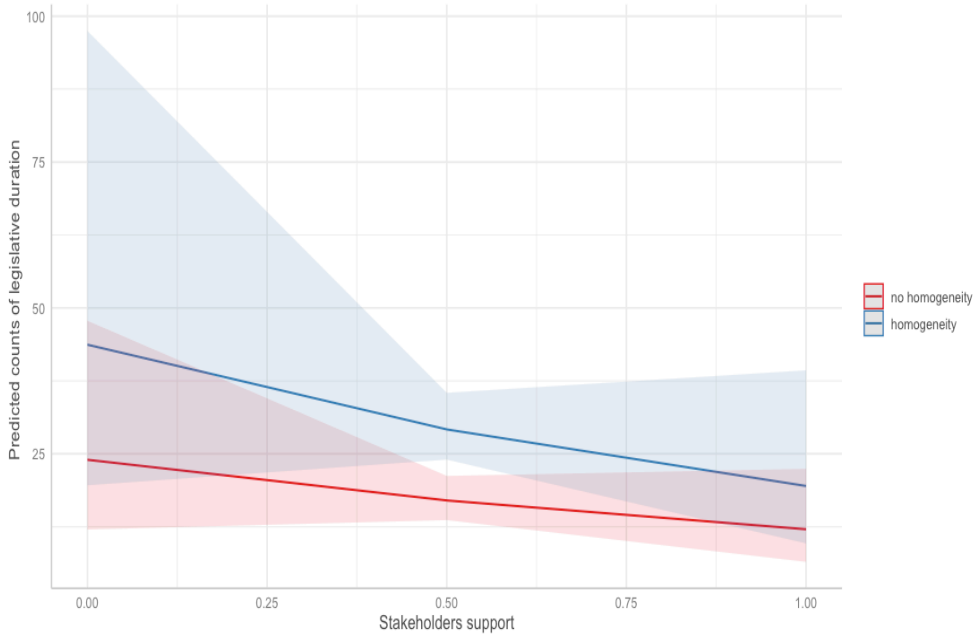
Model 2 test H2:stakeholders'support*Preference homogeneity of member states

```
> model2=glm(duration1~intraconflict+hetero.sta+aitems*sta.sup+bitems+sta.opp
+           +interconflict+epconflict+saliency+con.duration, quasipoisson, data3_0)
> summary(model2)

Call:
glm(formula = duration1 ~ intraconflict + hetero.sta + aitems *
    sta.sup + bitems + sta.opp + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.3261  -1.4058  -0.2665   0.9058   6.1179

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)     3.0185339  0.3665801   8.234 1.54e-12 ***
intraconflict   0.0910751  0.1244959   0.732  0.46639
hetero.sta      0.7167822  0.5652597   1.268  0.20812
aitems          0.1808392  0.1983466   0.912  0.36440
sta.sup        -0.7531290  0.5781844  -1.303  0.19612
bitems          0.1762398  0.0604335   2.916  0.00449 **
sta.opp         0.0468967  0.6795461   0.069  0.94514
interconflict   0.1634975  0.1304981   1.253  0.21357
epconflict     -0.2039500  0.1035403  -1.970  0.05201 .
saliency       -0.0002638  0.0005124  -0.515  0.60799
con.duration    0.0014468  0.0011344   1.275  0.20552
aitems:sta.sup -0.0410829  0.3526144  -0.117  0.90751
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for quasipoisson family taken to be 3.971502)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 325.57  on 88  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

Model 2 Figure 3.3

#pdf("./plots/pdf/figure3.3.pdf",width=9,height=6)

#png("./plots/png/figure3.3.png",width=1100, height=800, res=120)



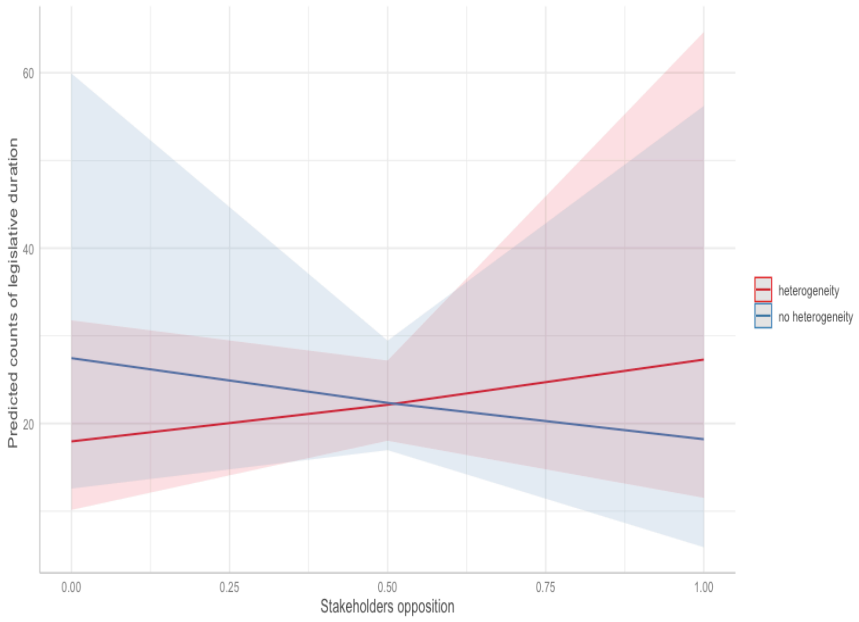
Model3 test H3: stakeholders' opposition*Preference heterogeneity of member states

```
> model3=glm(duration1~intraconflict+hetero.sta+aitems+sta.sup+bitems*sta.opp+
+              interconflict+epconflict+saliency+con.duration, quasipoisson, data3_0)
> summary(model3)

Call:
glm(formula = duration1 ~ intraconflict + hetero.sta + aitems +
    sta.sup + bitems * sta.opp + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.2940  -1.3435  -0.3465   0.9906   6.0189

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)     3.3687631  0.3659651   9.205 1.55e-14 ***
intraconflict   0.0738989  0.1211952   0.610  0.54360
hetero.sta      0.7290272  0.5258307   1.386  0.16912
aitems          0.1477990  0.0513207   2.880  0.00499 **
sta.sup        -0.7520222  0.5508694  -1.365  0.17568
bitems         -0.1613419  0.1873422  -0.861  0.39146
sta.opp        -0.7572451  0.7665114  -0.988  0.32590
interconflict   0.2010099  0.1291860   1.556  0.12330
epconflict     -0.1956734  0.1014672  -1.928  0.05702 .
saliency       -0.0002866  0.0004991  -0.574  0.56733
con.duration    0.0014078  0.0010855   1.297  0.19807
bitems:sta.opp  0.8173629  0.4258920   1.919  0.05820 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for quasipoisson family taken to be 3.767691)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 312.11  on 88  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

Model 3 Figure 3.4

#pdf("./plots/pdf/figure3.3.pdf",width=9,height=6)

#png("./plots/png/figure3.3.png",width=1100, height=800, res=120)



Model4 test all hypotheses

```
> model4=glm(duration1~intraconflict*hetero.sta+aitems*sta.sup+bitems*sta.opp+
+              interconflict+epconflict+saliency+con.duration, quasipoisson, data3_0)
> summary(model4)

Call:
glm(formula = duration1 ~ intraconflict * hetero.sta + aitems *
    sta.sup + bitems * sta.opp + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.4094  -1.3320  -0.3223   0.8581   5.9428

Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
(Intercept)              3.6325420  0.4432547   8.195 2.13e-12 ***
intraconflict           -0.0577493  0.1529902  -0.377   0.7068
hetero.sta               0.2375892  0.6028862   0.394   0.6945
aitems                  -0.1723018  0.2517825  -0.684   0.4956
sta.sup                 -0.8375487  0.5601387  -1.495   0.1385
bitems                  -0.2306365  0.2022873  -1.140   0.2574
sta.opp                 -1.1673024  0.8414098  -1.387   0.1689
interconflict            0.1837585  0.1297383   1.416   0.1603
epconflict              -0.1755707  0.1024890  -1.713   0.0903 .
saliency                -0.0002000  0.0005022  -0.398   0.6914
con.duration             0.0012530  0.0011088   1.130   0.2616
intraconflict:hetero.sta 0.7422368  0.4879717   1.521   0.1319
aitems:sta.sup           0.5756590  0.4391967   1.311   0.1934
bitems:sta.opp           1.0185747  0.4660570   2.186   0.0316 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 3.770714)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 301.99  on 86  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

alternative model specifications (Table A3)
model A

```
> modela=glm(duration1~intraconflict+aitems+bitems+hetero.sta+sta.sup+sta.opp+interconflict+epconflict+saliency+con.duration,quasipoisson, data3
_0)
> summary(modela)

Call:
glm(formula = duration1 ~ intraconflict + aitems + bitems + hetero.sta +
    sta.sup + sta.opp + interconflict + epconflict + saliency +
    con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.3113  -1.3973  -0.2941   0.8898   6.1219

Coefficients:
               Estimate Std. Error t value Pr(>|t|)
(Intercept)    3.0366074  0.3302793   9.194 1.49e-14 ***
intraconflict  0.0923451  0.1234414   0.748  0.45638
aitems         0.1585259  0.0520057   3.048  0.00303 **
bitems         0.1764652  0.0601167   2.935  0.00424 **
hetero.sta     0.6971550  0.5367109   1.299  0.19732
sta.sup       -0.7666475  0.5636091  -1.360  0.17719
sta.opp        0.0301864  0.6607882   0.046  0.96367
interconflict  0.1620474  0.1292074   1.254  0.21307
epconflict    -0.2037218  0.1029450  -1.979  0.05091 .
saliency      -0.0002648  0.0005097  -0.520  0.60461
con.duration   0.0014214  0.0011079   1.283  0.20283
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 3.932177)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 325.62  on 89  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

model B

```
> modelb=glm(duration1~intraconflict*hetero.sta+interconflict+epconflict+saliency+con.duration,quasipoisson, data3_0)
> summary(modelb)

Call:
glm(formula = duration1 ~ intraconflict * hetero.sta + interconflict +
    epconflict + saliency + con.duration, family = quasipoisson,
    data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.7562  -1.5327  -0.3386   1.0627   7.6798

Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
(Intercept)              2.8550024  0.1582480  18.041  < 2e-16 ***
intraconflict           -0.0252639  0.1487141  -0.170  0.86548
hetero.sta               0.1895236  0.2395073   0.791  0.43080
interconflict            0.3803080  0.1320165   2.881  0.00494 **
epconflict              -0.0037293  0.1054056  -0.035  0.97185
saliency                -0.0005509  0.0005649  -0.975  0.33206
con.duration             0.0029659  0.0011765   2.521  0.01342 *
intraconflict:hetero.sta 0.3151935  0.4653460   0.677  0.49990
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 4.963916)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 420.52  on 92  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

model C

```
> modelc=glm(duration1~aitems*sta.sup+interconflict+epconflict+saliency+con.duration,quasipoisson, data3_0)
> summary(modelc)

Call:
glm(formula = duration1 ~ aitems * sta.sup + interconflict +
    epconflict + saliency + con.duration, family = quasipoisson,
    data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.4285  -1.7576  -0.3588   1.4733   7.2190

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)     2.8628711  0.2696256  10.618   <2e-16 ***
aitems          0.1308931  0.2063458   0.634   0.5274
sta.sup         0.0639323  0.4278645   0.149   0.8815
interconflict   0.3306346  0.1301140   2.541   0.0127 *
epconflict     -0.1344003  0.1085310  -1.238   0.2187
saliency       -0.0005467  0.0005385  -1.015   0.3127
con.duration    0.0019784  0.0011699   1.691   0.0942 .
aitems:sta.sup  0.0172467  0.3678362   0.047   0.9627
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 4.588495)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 393.34  on 92  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

model D

```
> modeld=glm(duration1~bitems*sta.opp+interconflict+epconflict+saliency+con.duration,quasipoisson, data3_0)
> summary(modeld)

Call:
glm(formula = duration1 ~ bitems * sta.opp + interconflict +
    epconflict + saliency + con.duration, family = quasipoisson,
    data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-3.6128  -1.4303  -0.4462   1.1075   5.9542

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)     3.3934667  0.2769140  12.255   <2e-16 ***
bitems         -0.1718145  0.1911626  -0.899   0.3711
sta.opp        -1.3981651  0.5631043  -2.483   0.0148 *
interconflict   0.2547499  0.1304959   1.952   0.0540 .
epconflict     -0.1035927  0.0963105  -1.076   0.2849
saliency       -0.0006195  0.0004988  -1.242   0.2174
con.duration    0.0022910  0.0011010   2.081   0.0402 *
bitems:sta.opp  0.9095218  0.4299643   2.115   0.0371 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 4.059098)

    Null deviance: 524.15  on 99  degrees of freedom
Residual deviance: 351.80  on 92  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 4
```

alternative operationalization of the explanatory factors (Table A4)
model 1

```
> model1=glm(duration2~intraconflict*hetero.sta+aitems+bitems+sta.sup.num+sta.opp.num+interconflict+epconflict+saliency+con.duration, quasipoiss
on, data3_0)
> summary(model1)

Call:
glm(formula = duration2 ~ intraconflict * hetero.sta + aitems +
    bitems + sta.sup.num + sta.opp.num + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-4.3304  -2.0839  -0.6603   1.0539   7.3549

Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
(Intercept)              1.6932581  0.3141468   5.390 5.83e-07 ***
intraconflict            0.2838164  0.2914828   0.974   0.3329
hetero.sta               1.1939767  0.7179722   1.663   0.0999 .
aitems                   0.2014268  0.1002511   2.009   0.0476 *
bitems                   0.1589372  0.1217737   1.305   0.1952
sta.sup.num              0.0061069  0.0070807   0.862   0.3908
sta.opp.num             -0.0067873  0.0044729  -1.517   0.1327
interconflict            0.3713953  0.2425355   1.531   0.1293
epconflict              -0.2874031  0.2047376  -1.404   0.1639
saliency                -0.0003722  0.0010468  -0.356   0.7230
con.duration             0.0047040  0.0020812   2.260   0.0263 *
intraconflict:hetero.sta  0.0952185  0.8151093   0.117   0.9073
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 8.053349)

    Null deviance: 841.52  on 99  degrees of freedom
Residual deviance: 612.05  on 88  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 5
```

model 2

```
> model2=glm(duration2~intraconflict+hetero.sta+aitems*sta.sup.num+bitems+sta.opp.num+interconflict+epconflict+saliency+con.duration, quasipoisso
n, data3_0)
> summary(model2)

Call:
glm(formula = duration2 ~ intraconflict + hetero.sta + aitems *
    sta.sup.num + bitems + sta.opp.num + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-4.4882  -2.1552  -0.6618   1.0662   7.3952

Coefficients:
                    Estimate Std. Error t value Pr(>|t|)
(Intercept)         1.764263   0.372273   4.739 8.19e-06 ***
intraconflict       0.291627   0.235720   1.237   0.2193
hetero.sta          1.220199   0.670560   1.820   0.0722 .
aitems              0.148164   0.182637   0.811   0.4194
sta.sup.num         0.004860   0.008010   0.607   0.5456
bitems              0.159888   0.120398   1.328   0.1876
sta.opp.num        -0.006726   0.004467  -1.506   0.1357
interconflict       0.365727   0.242426   1.509   0.1350
epconflict         -0.285295   0.204905  -1.392   0.1673
saliency           -0.000394   0.001034  -0.381   0.7041
con.duration        0.004419   0.002186   2.022   0.0462 *
aitems:sta.sup.num  0.001214   0.003463   0.350   0.7269
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 8.041286)

    Null deviance: 841.52  on 99  degrees of freedom
Residual deviance: 611.17  on 88  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 5
```

model 3

```
> model3=glm(duration2~intraconflict+hetero.sta+aitems+sta.sup.num+bitems*sta.opp.num+interconflict+epconflict+saliency+con.duration, quasipoisso
n, data3_0)
> summary(model3)

Call:
glm(formula = duration2 ~ intraconflict + hetero.sta + aitems +
    sta.sup.num + bitems * sta.opp.num + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-4.3418  -2.0426  -0.7029   1.1210   7.4653

Coefficients:
                    Estimate Std. Error t value Pr(>|t|)
(Intercept)        1.7844565  0.3515478   5.076 2.13e-06 ***
intraconflict      0.3310399  0.2394446   1.383   0.1703
hetero.sta         1.2828524  0.6839870   1.876   0.0640 .
aitems             0.2058527  0.1006428   2.045   0.0438 *
sta.sup.num        0.0072230  0.0073882   0.978   0.3309
bitems             0.0461231  0.2273303   0.203   0.8397
sta.opp.num       -0.0093776  0.0063809  -1.470   0.1452
interconflict      0.3722580  0.2422355   1.537   0.1279
epconflict        -0.2711812  0.2069434  -1.310   0.1935
saliency          -0.0004774  0.0010443  -0.457   0.6487
con.duration       0.0045678  0.0020793   2.197   0.0307 *
bitems:sta.opp.num 0.0018413  0.0032063   0.574   0.5672
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 8.064796)

    Null deviance: 841.52  on 99  degrees of freedom
Residual deviance: 609.50  on 88  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 5
```

model 4

```
> model4=glm(duration2~intraconflict*hetero.sta+aitems*sta.sup.num+bitems*sta.opp.num+interconflict+epconflict+saliency+con.duration, quasipoiss
on, data3_0)
> summary(model4)

Call:
glm(formula = duration2 ~ intraconflict * hetero.sta + aitems *
    sta.sup.num + bitems * sta.opp.num + interconflict + epconflict +
    saliency + con.duration, family = quasipoisson, data = data3_0)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-4.4697  -2.0800  -0.6504   1.1426   7.4842

Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
(Intercept)              1.8277581  0.4024680   4.541 1.81e-05 ***
intraconflict            0.3148619  0.3000221   1.049   0.2969
hetero.sta               1.2661231  0.7410626   1.709   0.0911 .
aitems                   0.1678067  0.1926485   0.871   0.3862
sta.sup.num              0.0061893  0.0085872   0.721   0.4730
bitems                   0.0571235  0.2342475   0.244   0.8079
sta.opp.num             -0.0091199  0.0065092  -1.401   0.1648
interconflict            0.3655058  0.2467593   1.481   0.1422
epconflict              -0.2697568  0.2098951  -1.285   0.2022
saliency                -0.0004693  0.0010683  -0.439   0.6616
con.duration             0.0043989  0.0022570   1.949   0.0546 .
intraconflict:hetero.sta 0.0273927  0.8637898   0.032   0.9748
aitems:sta.sup.num       0.0008644  0.0037140   0.233   0.8165
bitems:sta.opp.num       0.0017045  0.0032931   0.518   0.6061
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for quasipoisson family taken to be 8.23603)

    Null deviance: 841.52  on 99  degrees of freedom
Residual deviance: 608.97  on 86  degrees of freedom
AIC: NA

Number of Fisher Scoring iterations: 5
```

OLS regression model (Table A5)
Model 1: intra-institutional conflict* preference heterogeneity among stakeholders

```
> model1<-lm(duration1~intraconflict*hetero.sta+aitems+bitems+sta.sup.num+sta.opp.num+interconflict+epconflict+saliency+con.duration, data=data3
_0)
> summary(model1)

Call:
lm(formula = duration1 ~ intraconflict * hetero.sta + aitems +
    bitems + sta.sup.num + sta.opp.num + interconflict + epconflict +
    saliency + con.duration, data = data3_0)

Residuals:
    Min      1Q  Median      3Q     Max
-17.197  -6.370  -0.388   4.201  36.090

Coefficients:
                          Estimate Std. Error t value Pr(>|t|)
(Intercept)              12.271918   3.417589   3.591 0.000542 ***
intraconflict            -0.470114   3.211043  -0.146 0.883936
hetero.sta               10.523941   7.367101   1.429 0.156686
aitems                    3.588112   1.243721   2.885 0.004922 **
bitems                    4.495598   1.485722   3.026 0.003250 **
sta.sup.num               0.074078   0.072764   1.018 0.311446
sta.opp.num              -0.068449   0.048717  -1.405 0.163536
interconflict             4.442162   3.258128   1.363 0.176232
epconflict               -4.886092   2.345109  -2.084 0.040104 *
saliency                 -0.004108   0.011153  -0.368 0.713504
con.duration              0.048904   0.028372   1.724 0.088285 .
intraconflict:hetero.sta 13.341825   9.631861   1.385 0.169500
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 9.462 on 88 degrees of freedom
Multiple R-squared:  0.3776,    Adjusted R-squared:  0.2998
F-statistic: 4.854 on 11 and 88 DF,  p-value: 8.015e-06
```

Model 2: Preference homogeneity of member states* Stakeholders support

```
> model2<-lm(duration1~intraconflict+hetero.sta+aitems*sta.sup.num+sta.opp.num+bitems+interconflict+epconflict+saliency+con.duration,data=data3_
0)
> summary(model2)

Call:
lm(formula = duration1 ~ intraconflict + hetero.sta + aitems *
    sta.sup.num + sta.opp.num + bitems + interconflict + epconflict +
    saliency + con.duration, data = data3_0)

Residuals:
    Min      1Q  Median      3Q     Max
-14.832  -6.521  -1.198   4.696  36.331

Coefficients:
                       Estimate Std. Error t value Pr(>|t|)
(Intercept)          11.689847   3.868337   3.022  0.00329 **
intraconflict         1.906134   2.793561   0.682  0.49682
hetero.sta           12.958206   7.183103   1.804  0.07466 .
aitems                4.602980   2.162738   2.128  0.03611 *
sta.sup.num           0.087226   0.078358   1.113  0.26867
sta.opp.num          -0.062155   0.049062  -1.267  0.20854
bitems                4.274641   1.489799   2.869  0.00515 **
interconflict         4.713119   3.286817   1.434  0.15513
epconflict           -5.278280   2.368449  -2.229  0.02839 *
saliency             -0.006947   0.011032  -0.630  0.53051
con.duration          0.050196   0.029268   1.715  0.08986 .
aitems:sta.sup.num -0.024047   0.040159  -0.599  0.55084
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 9.545 on 88 degrees of freedom
Multiple R-squared:  0.3666,    Adjusted R-squared:  0.2875
F-statistic: 4.631 on 11 and 88 DF,  p-value: 1.529e-05
```

Model 3: Preference heterogeneity of member states * Stakeholders opposition

```
> model3<-lm(duration1~intraconflict+hetero.sta+aitems+bitems*sta.opp.num+sta.sup.num+interconflict+epconflict+saliency+con.duration, data=data3
_0)
> summary(model3)

Call:
lm(formula = duration1 ~ intraconflict + hetero.sta + aitems +
    bitems * sta.opp.num + sta.sup.num + interconflict + epconflict +
    saliency + con.duration, data = data3_0)

Residuals:
    Min      1Q  Median      3Q     Max
-15.912  -6.325  -1.260   4.735  36.499

Coefficients:
                  Estimate Std. Error t value Pr(>|t|)
(Intercept)       13.583236   3.849595   3.528 0.000667 ***
intraconflict      2.057832   2.844632   0.723 0.471347
hetero.sta        13.646808   7.239664   1.885 0.062729 .
aitems             3.591180   1.258633   2.853 0.005394 **
bitems             3.131855   2.840582   1.103 0.273233
sta.opp.num       -0.086631   0.069453  -1.247 0.215589
sta.sup.num        0.080854   0.076496   1.057 0.293421
interconflict      4.598721   3.287140   1.399 0.165327
epconflict        -5.000028   2.380251  -2.101 0.038534 *
saliency          -0.008182   0.011227  -0.729 0.468074
con.duration       0.045434   0.028653   1.586 0.116406
bitems:sta.opp.num 0.019030   0.040413   0.471 0.638879
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 9.553 on 88 degrees of freedom
Multiple R-squared:  0.3657,    Adjusted R-squared:  0.2864
F-statistic: 4.612 on 11 and 88 DF,  p-value: 1.618e-05
```

Model 4: all interactions

```
> model4<-lm(duration1~intraconflict*hetero.sta+aitems*sta.sup.num+bitems*sta.opp.num+interconflict+epconflict+saliency+con.duration, data=data3
_0)
> summary(model4)

Call:
lm(formula = duration1 ~ intraconflict * hetero.sta + aitems *
    sta.sup.num + bitems * sta.opp.num + interconflict + epconflict +
    saliency + con.duration, data = data3_0)

Residuals:
    Min      1Q  Median      3Q     Max
-16.699  -6.290  -0.756   4.002  36.205

Coefficients:
                           Estimate Std. Error t value Pr(>|t|)
(Intercept)              11.512737   4.136652   2.783  0.00662 **
intraconflict            -0.147409   3.295822  -0.045  0.96443
hetero.sta               10.459259   7.499040   1.395  0.16668
aitems                    5.429840   2.247141   2.416  0.01779 *
sta.sup.num               0.115701   0.083630   1.383  0.17010
bitems                    3.004607   2.904375   1.035  0.30380
sta.opp.num              -0.097588   0.069979  -1.395  0.16675
interconflict             4.521911   3.277377   1.380  0.17125
epconflict               -4.889836   2.379150  -2.055  0.04289 *
saliency                 -0.004699   0.011434  -0.411  0.68211
con.duration              0.054349   0.029317   1.854  0.06719 .
intraconflict:hetero.sta 14.599071   9.825163   1.486  0.14097
aitems:sta.sup.num       -0.040579   0.041877  -0.969  0.33526
bitems:sta.opp.num        0.025395   0.041596   0.611  0.54313
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 9.511 on 86 degrees of freedom
Multiple R-squared:  0.3854,    Adjusted R-squared:  0.2925
F-statistic: 4.148 on 13 and 86 DF,  p-value: 2.638e-05
```

###THE END