Ordinal Logistic Regression or Proportional Odds Logistic Regression

Proposals success rate
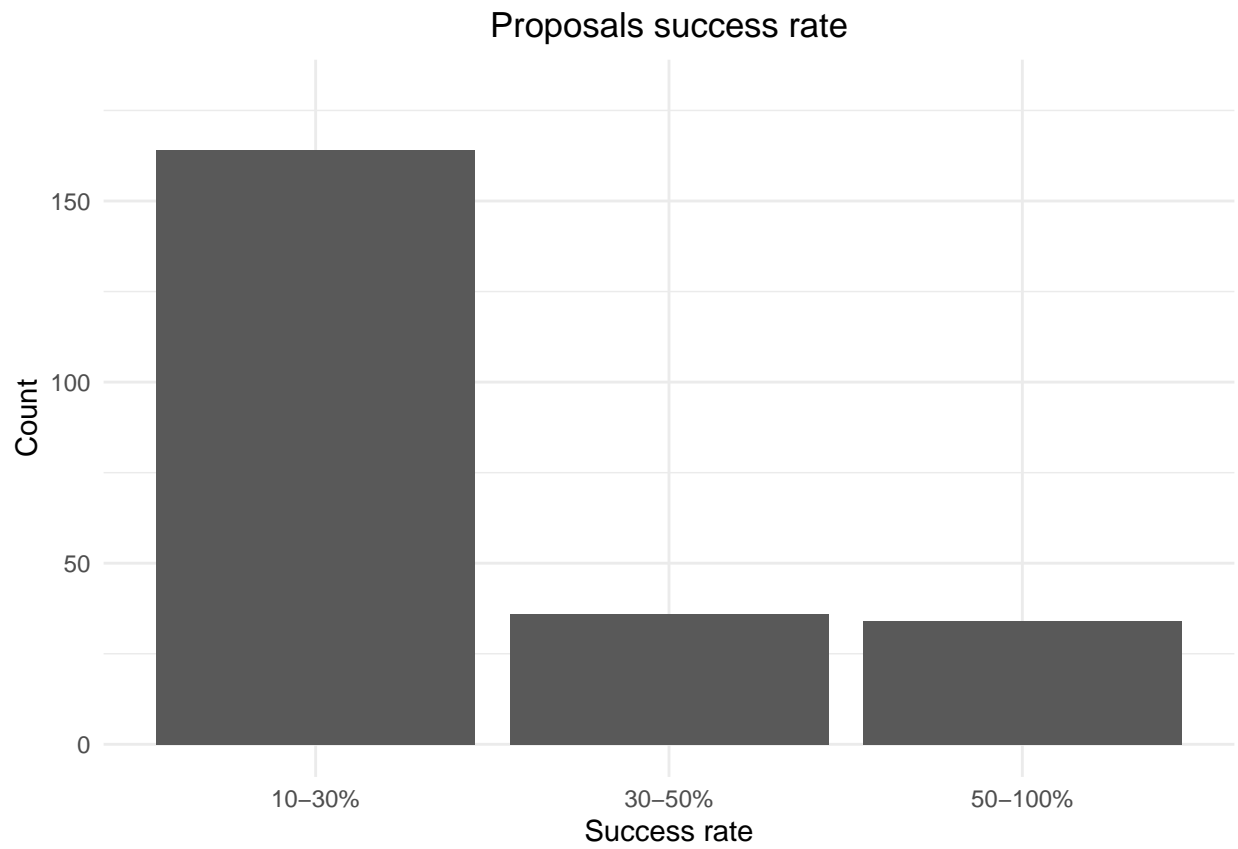
Model with NP1 as reference

```
## Call:
## polr(formula = SR ~ H + NP + AGR, data = lm_DF, Hess = TRUE)
##
## Coefficients:
##        Value Std. Error t value
## H     0.3054    0.16584   1.842
## NP2 -1.0237    0.32757  -3.125
## NP3 -1.7628    0.45863  -3.844
## AGR  0.1322    0.08956   1.476
##
## Intercepts:
##     Value   Std. Error t value
## 1|2  2.0988  0.8763     2.3949
## 2|3  3.1436  0.8923     3.5230
##
## Residual Deviance: 347.288
## AIC: 359.288


##            Value Std. Error   t value p value
## H     0.3054378 0.16583835  1.841780  0.0655
## NP2 -1.0237239 0.32757384 -3.125170  0.0018
## NP3 -1.7628495 0.45863295 -3.843704  0.0001
## AGR  0.1322072 0.08955988  1.476188  0.1399
## 1|2  2.0987518 0.87633721  2.394913  0.0166
## 2|3  3.1436343 0.89231929  3.522993  0.0004
```

Model with NP3 as reference

```
## Call:
## polr(formula = SR ~ H + NP + AGR, data = lm_DF, Hess = TRUE)
##
## Coefficients:
##       Value Std. Error t value
## H   0.3054    0.16582   1.842
## NP1 1.7629    0.45864   3.844
## NP2 0.7392    0.47607   1.553
## AGR 0.1322    0.08956   1.476
##
## Intercepts:
##     Value  Std. Error t value
## 1|2 3.8613 0.9172     4.2098
## 2|3 4.9062 0.9404     5.2174
##
## Residual Deviance: 347.288
## AIC: 359.288


##          Value Std. Error  t value p value
## H   0.3053887 0.16582413 1.841642  0.0655
## NP1 1.7629223 0.45863863 3.843816  0.0001
## NP2 0.7392274 0.47607498 1.552754  0.1205
## AGR 0.1321841 0.08955895 1.475945  0.1400
## 1|2 3.8613222 0.91721497 4.209833  0.0000
## 2|3 4.9062130 0.94035126 5.217426  0.0000
```

Model with all variables NP1, DWH5 and DS1 as reference

```
## Call:
## polr(formula = SR ~ H + AGR + NP + DWH + DS, data = lm_DF, Hess = TRUE)
##
## Coefficients:
##         Value Std. Error    t value
## H      0.2805  1.559e-01  1.799e+00
## AGR    0.1686  9.472e-02  1.780e+00
## NP3   -1.6589  4.750e-01 -3.493e+00
## NP2   -1.1168  3.441e-01 -3.246e+00
## DWH1  -0.4238  1.242e+00 -3.413e-01
## DWH2 16.7403  3.599e-07  4.652e+07
## DWH3   1.2327  5.597e-01  2.202e+00
## DWH4   0.5549  3.718e-01  1.493e+00
## DS2   -1.3782  6.120e-01 -2.252e+00
## DS3   -1.3905  5.917e-01 -2.350e+00
##
## Intercepts:
##      Value       Std. Error    t value
## 1|2        1.3563        1.0470        1.2954
## 2|3        2.5104        1.0577        2.3733
##
## Residual Deviance: 325.2645
## AIC: 349.2645


##              Value   Std. Error       t value p value
## H      0.2805227 1.559494e-01  1.798806e+00  0.0720
## AGR    0.1685554 9.471832e-02  1.779544e+00  0.0752
## NP3   -1.6588837 4.749651e-01 -3.492643e+00  0.0005
## NP2   -1.1168337 3.441041e-01 -3.245628e+00  0.0012
## DWH1  -0.4238227 1.241614e+00 -3.413483e-01  0.7328
## DWH2 16.7403126 3.598537e-07  4.651977e+07  0.0000
## DWH3   1.2327202 5.597340e-01  2.202332e+00  0.0276
## DWH4   0.5549039 3.717628e-01  1.492629e+00  0.1355
## DS2   -1.3781830 6.120500e-01 -2.251749e+00  0.0243
## DS3   -1.3905272 5.917480e-01 -2.349864e+00  0.0188
## 1|2    1.3562686 1.046975e+00  1.295416e+00  0.1952
## 2|3    2.5103621 1.057746e+00  2.373312e+00  0.0176
```

Model with all variables, NP3, DWH1 and DS1 as reference

```
## Call:
## polr(formula = SR ~ H + AGR + NP + DWH + DS, data = lm_DF, Hess = TRUE)
##
## Coefficients:
##          Value Std. Error     t value
## H       0.2805  1.559e-01   1.799e+00
## AGR     0.1686  9.472e-02   1.779e+00
## NP1     1.6589  4.750e-01   3.493e+00
## NP2     0.5421  5.012e-01   1.082e+00
## DWH5    0.4241  1.242e+00   3.415e-01
## DWH2   17.3088  8.540e-06   2.027e+06
## DWH3    1.6568  1.310e+00   1.265e+00
## DWH4    0.9790  1.254e+00   7.806e-01
## DS2    -1.3782  6.121e-01  -2.252e+00
## DS3    -1.3906  5.917e-01  -2.350e+00
##
## Intercepts:
##      Value      Std. Error   t value
## 1|2        3.4391         1.5350       2.2405
## 2|3        4.5932         1.5511       2.9613
##
## Residual Deviance: 325.2645
## AIC: 349.2645


##              Value     Std. Error        t value  p value
## H        0.2805182  1.559481e-01   1.798792e+00   0.0721
## AGR      0.1685509  9.471826e-02   1.779498e+00   0.0752
## NP1      1.6589255  4.749675e-01   3.492714e+00   0.0005
## NP2      0.5420713  5.011534e-01   1.081647e+00   0.2794
## DWH5     0.4240753  1.241671e+00   3.415360e-01   0.7327
## DWH2    17.3087880  8.539650e-06   2.026873e+06   0.0000
## DWH3     1.6567619  1.309969e+00   1.264734e+00   0.2060
## DWH4     0.9789629  1.254057e+00   7.806366e-01   0.4350
## DS2     -1.3782361  6.120511e-01  -2.251832e+00   0.0243
## DS3     -1.3905968  5.917493e-01  -2.349976e+00   0.0188
## 1|2      3.4391300  1.535012e+00   2.240459e+00   0.0251
## 2|3      4.5932313  1.551090e+00   2.961293e+00   0.0031
```