Name Bias Pilot (N=200)

November 13, 2024

Items

Read Data

```
## Pull directly from Qualtrics API
qual_data <- fetch_survey(surveyID='SV_3k5GruA7i11Kdb8',
                  label = T,
                  convert = F,
                  start_date = "2024-11-13",
                  force_request = T)

# Read the Excel file
professors_data <- read_excel("Nameselect_1022_humancheck.xlsx")
```

Multinomial Logit

```
## # weights:  12 (6 variable)
## initial  value 273.099989
## iter  10 value 249.639701
## final  value 249.639529
## converged
```

```
## Multinomial Logit Results (Reference Category: Female_Eastern)
```

```
## ================================================================
```

```
##                       Comparison Coefficient    SE Z_score P_value
##  Female_Western vs Female_Eastern       0.537 0.562   0.955  0.3395
##    Male_Eastern vs Female_Eastern      -0.227 0.507  -0.447  0.6547
##    Male_Western vs Female_Eastern      -0.016 0.514  -0.030  0.9759
##  Significance
##
##
##
```

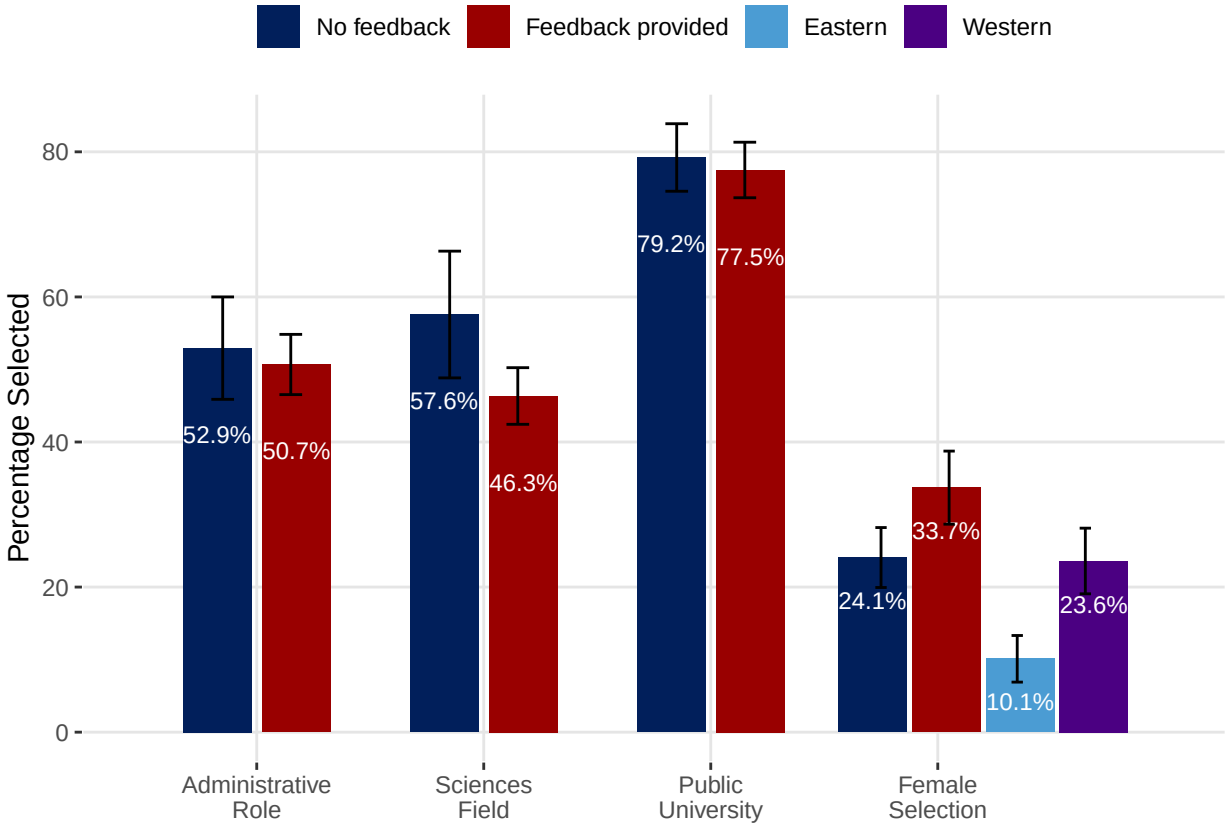
SUR, followed by Wald Test

```
##
## systemfit results
## method: SUR
##
##          N  DF     SSR  detRCov   OLS-R2 McElroy-R2
## system 394 390 46.9311 0.013336 0.009701   0.008056
##
##           N  DF     SSR      MSE     RMSE       R2    Adj R2
## eastern 197 195 17.9695 0.092151 0.303564 0.000001 -0.005127
## western 197 195 28.9616 0.148521 0.385384 0.015625  0.010577
##
## The covariance matrix of the residuals used for estimation
##            eastern   western
## eastern  0.0921514 -0.018725
## western -0.0187250  0.148521
##
## The covariance matrix of the residuals
##            eastern   western
## eastern  0.0921514 -0.018725
## western -0.0187250  0.148521
##
## The correlations of the residuals
##           eastern   western
## eastern  1.000000 -0.160058
## western -0.160058  1.000000
##
##
## SUR estimates for 'eastern' (equation 1)
## Model Formula: female_eastern ~ gender_feedback
##
##                     Estimate   Std. Error  t value  Pr(>|t|)
## (Intercept)      0.101851852  0.029210502  3.48682 0.0006039 ***
## gender_feedback -0.000728256  0.043458740 -0.01676 0.9866473
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.303564 on 195 degrees of freedom
## Number of observations: 197 Degrees of Freedom: 195
## SSR: 17.969517 MSE: 0.092151 Root MSE: 0.303564
## Multiple R-Squared: 1e-06 Adjusted R-Squared: -0.005127
##
##
## SUR estimates for 'western' (equation 2)
## Model Formula: female_western ~ gender_feedback
##
##                  Estimate Std. Error t value   Pr(>|t|)
## (Intercept)     0.1388889  0.0370836 3.74529 0.00023715 ***
## gender_feedback 0.0970662  0.0551722 1.75933 0.08008953 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.385384 on 195 degrees of freedom
```

```
## Number of observations: 197 Degrees of Freedom: 195
## SSR: 28.96161 MSE: 0.148521 Root MSE: 0.385384
## Multiple R-Squared: 0.015625 Adjusted R-Squared: 0.010577

## Linear hypothesis test (Theil's F test)
##
## Hypothesis:
## eastern_gender_feedback - western_gender_feedback = 0
##
## Model 1: restricted model
## Model 2: sur_model
##
##   Res.Df Df      F Pr(>F)
## 1    391
## 2    390  1 1.6778  0.196
```

Figure


No feedback
Feedback provided
Eastern
Western
Percentage Selected
80
60
40
20
0
52.9%
50.7%
57.6%
46.3%
79.2%
77.5%
24.1%
33.7%
10.1%
23.6%
Administrative Role
Sciences Field
Public University
Female Selection