Geographic Representation and Requests for Federal Funds in the U.S. Senate (Appendix Analysis 1)

Jacyln Kaslovsky and Andrew R. Stone

Table A.2

```
# Loading the data
load("state_level_data.RData")

# Making a table of means and standard deviations for state-level (non-standardized) variables
# Variables to use
cols <- c('logsum','democrat","on_appropriations","distance_from_dw_median","logpop","female","previous_
       "freshman", "POPPCT_URBAN", "state.median.household.income")

# Table
stargazer(as.data.frame(senators_appropriations_state[,cols]),
          covariate.labels=c("Log(State Appropriations Requests + 1)","Democrat (Majority Party Member)"
                             "Distance from Floor Median","Log State Population", "Senator is a Woman",
                             "Freshman Senator", "State Percent Urban Population", "State Median Househo
          title="Summary Statistics of Dataset Analyzing State-Level Outcomes", digits=2, summary.stat=
          notes='\\parbox[t]{1\\textwidth}{\\footnotesize \\textit{Note}: Table presents summary statis
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Sat, Jul 06, 2024 - 17:32:33
## \begin{table}[!htbp] \centering
##   \caption{Summary Statistics of Dataset Analyzing State-Level Outcomes}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
## Statistic & \multicolumn{1}{c}{Mean} & \multicolumn{1}{c}{St. Dev.} & \multicolumn{1}{c}{Min} & \mul
## \hline \\[-1.8ex]
## Log(State Appropriations Requests + 1) & 12.62 & 9.51 & 0.00 & 21.76 \\
## Democrat (Majority Party Member) & 0.50 & 0.50 & 0 & 1 \\
## Member of Appropriations Committee & 0.30 & 0.46 & 0 & 1 \\
## Distance from Floor Median & 0.43 & 0.16 & 0.09 & 0.91 \\
## Log State Population & 15.24 & 1.01 & 13.29 & 17.54 \\
## Senator is a Woman & 0.24 & 0.43 & 0 & 1 \\
## Previous Vote Share & 57.83 & 6.93 & 46.00 & 79.00 \\
## Seniority & 6.48 & 4.51 & 1 & 24 \\
## Party Leader & 0.18 & 0.39 & 0 & 1 \\
## Freshman Senator & 0.09 & 0.29 & 0 & 1 \\
## State Percent Urban Population & 74.08 & 14.27 & 39.10 & 95.02 \\
## State Median Household Income & 6.50 & 1.05 & 4.58 & 8.67 \\
```

```
## \hline \\[-1.8ex]
## \multicolumn{5}{l}{\parbox[t]{1\textwidth}{\footnotesize \textit{Note}: Table presents summary statis
## \end{tabular}
## \end{table}
```

Table C.1 Analysis

```
# Remove all objects
rm(list=ls())
# Loading the data
load("state_level_data.RData")

# FY 2022
# Running the zero inflated model
zim.fy2022 <- glmmTMB(logsum ~ logpop_scaled + on_appropriations +  female + democrat +
                  previous_vote_share_scaled + seniority_scaled + party_leader + distance_from_dw_media
                  freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled,
                zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democrat*distar
                data = senators_appropriations_state[senators_appropriations_state$year==2021,], family
# Model summary and standard errors
summary_zim_fy2022 <- summary(zim.fy2022)
ses_fy2022 <- standard_error(zim.fy2022)

# Save coefficients from the model
cond_fy2022 <- summary_zim_fy2022$coefficients$cond
zi_fy2022 <- summary_zim_fy2022$coefficients$zi
coefs_fy2022 <- c(cond_fy2022[,1])
coefs2_fy2022 <- c(zi_fy2022[,1])

# Save standard errors from the model
ses_cond_fy2022 <- c(ses_fy2022$SE[ses_fy2022$Component=="conditional"])
names(ses_cond_fy2022) <- ses_fy2022$Parameter[ses_fy2022$Component=="conditional"]
ses_zi_fy2022 <- c(ses_fy2022$SE[ses_fy2022$Component=="zero_inflated"])
names(ses_zi_fy2022) <- ses_fy2022$Parameter[ses_fy2022$Component=="zero_inflated"]

# Running linear models to feed into stargazer, but we will replace the coefficients and SEs with those
basic_reg_fy2022 <- lm(logsum ~ democrat + on_appropriations + distance_from_dw_median_scaled + logpop_s
                  female + previous_vote_share_scaled + seniority_scaled + party_leader  +
                  freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled,
                data = senators_appropriations_state[senators_appropriations_state$year==2021,])

basic_reg2_fy2022 <- lm(logsum ~  democrat + on_appropriations + distance_from_dw_median_scaled +
                  democrat*distance_from_dw_median_scaled,
                data = senators_appropriations_state[senators_appropriations_state$year==2021 & comple

# FY 2023
# Running the zero inflated model
zim.fy2023 <- glmmTMB(logsum ~ logpop_scaled+ on_appropriations +  female + democrat +
                        previous_vote_share_scaled + seniority_scaled + party_leader + distance_from_dw
                        freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled,
                      zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democrat*
                      data = senators_appropriations_state[senators_appropriations_state$year==2022,],
```

```r
# Model summary and standard errors
summary_zim_fy2023 <- summary(zim.fy2023)
ses_fy2023 <- standard_error(zim.fy2023)

# Save coefficients from the model
cond_fy2023 <- summary_zim_fy2023$coefficients$cond
zi_fy2023 <- summary_zim_fy2023$coefficients$zi
coefs_fy2023 <- c(cond_fy2023[,1])
coefs2_fy2023 <- c(zi_fy2023[,1])

# Save standard errors from the model
ses_cond_fy2023 <- c(ses_fy2023$SE[ses_fy2023$Component=="conditional"])
names(ses_cond_fy2023) <- ses_fy2023$Parameter[ses_fy2023$Component=="conditional"]
ses_zi_fy2023 <- c(ses_fy2023$SE[ses_fy2023$Component=="zero_inflated"])
names(ses_zi_fy2023) <- ses_fy2023$Parameter[ses_fy2023$Component=="zero_inflated"]

# Running linear models to feed into stargazer, but we will replace the coefficients and SEs with those
basic_reg_fy2023 <- lm(logsum ~ democrat + on_appropriations + distance_from_dw_median_scaled + logpop_s
                       female + previous_vote_share_scaled + seniority_scaled + party_leader  +
                       freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled,
                     data = senators_appropriations_state[senators_appropriations_state$year==2022,])

basic_reg2_fy2023 <- lm(logsum ~  democrat + on_appropriations + distance_from_dw_median_scaled +
                          democrat*distance_from_dw_median_scaled,
                        data = senators_appropriations_state[senators_appropriations_state$year==2022 & c
```

Table C.1 Output

```r
# Stargazer table of regression results
# coef and se take the coefficients and standard errors from the zero-inflated model
c1.model.list <- list(basic_reg2_fy2022, basic_reg_fy2022, basic_reg2_fy2023, basic_reg_fy2023)
stargazer(c1.model.list,
          omit=c("Constant"),
          notes.append = FALSE,notes.label = "",
          report="vc*s",star.char=c("*","**"),star.cutoffs = c(0.10,0.05),no.space = TRUE,
          font.size = "footnotesize", model.numbers = FALSE,
          column.labels=c("First Stage 2022","Second Stage 2022","First Stage 2023","Second Stage 2023"
          dep.var.labels = "Log(State Appropriations Requests + 1)",column.sep.width="0pt",
          covariate.labels=c( "Democrat (Majority Party Member)", "Member of Appropriations Committee",
                              "Distance from Floor Median x Democrat", "Log State Population",
                              "Senator is a Woman","Previous Vote Share" , "Seniority", "Party Leader",
                              "Freshman Senator", "State Percent Urban Population", "State Median Housel
                              "Fiscal Year 2023", "Other Senator Requested * Other Senator Same Party")
          notes="\\parbox[t]{\\textwidth}{\\footnotesize \\textit{Note}: The table shows the results fr
                       senator's state-level appropriation request behavior. All non-binary variables a
                       second stage models the logged total amount of funding a senator requests. $^{*
          label="tab1_state_sepyears",
          digits=3,
          coef=list(coefs2_fy2022, coefs_fy2022, coefs2_fy2023, coefs_fy2023),
          se=list(ses_zi_fy2022, ses_cond_fy2022, ses_zi_fy2023, ses_cond_fy2023),
          digits.extra = 0,
```

```
          title="Predictors of Spending Requests at the State Level Subset by Fiscal Year",
          omit.stat = c("ll","rsq","adj.rsq","ser","f"))
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Sat, Jul 06, 2024 - 17:32:34
## \begin{table}[!htbp] \centering
##   \caption{Predictors of Spending Requests at the State Level Subset by Fiscal Year}
##   \label{tab1_state_sepyears}
## \footnotesize
## \begin{tabular}{@{\extracolsep{0pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{Log(State Appropriations Requests + 1)} \\
##  & First Stage 2022 & Second Stage 2022 & First Stage 2023 & Second Stage 2023 \\
## \hline \\[-1.8ex]
##  Democrat (Majority Party Member) & $-$5.052$^{**}$ & 0.458 & $-$5.052$^{**}$ & 0.242 \\
##   & (1.558) & (0.296) & (1.558) & (0.264) \\
##   Member of Appropriations Committee & $-$0.840 & 0.313 & $-$0.840 & 0.311 \\
##   & (0.756) & (0.217) & (0.756) & (0.194) \\
##   Distance from Floor Median & 2.006$^{**}$ & $-$0.056 & 2.006$^{**}$ & $-$0.087 \\
##   & (0.690) & (0.152) & (0.690) & (0.136) \\
##   Distance from Floor Median x Democrat & $-$3.658$^{**}$ &  & $-$3.658$^{**}$ &  \\
##   & (1.398) &  & (1.398) &  \\
##   Log State Population &  & 0.285$^{**}$ &  & 0.312$^{**}$ \\
##   &  & (0.129) &  & (0.116) \\
##   Senator is a Woman &  & 0.430$^{**}$ &  & 0.269 \\
##   &  & (0.217) &  & (0.194) \\
##   Previous Vote Share &  & 0.139 &  & 0.116 \\
##   &  & (0.124) &  & (0.111) \\
##   Seniority &  & 0.200$^{*}$ &  & 0.009 \\
##   &  & (0.112) &  & (0.100) \\
##   Party Leader &  & 0.002 &  & 0.049 \\
##   &  & (0.243) &  & (0.217) \\
##   Freshman Senator &  & 0.475 &  & 0.838$^{**}$ \\
##   &  & (0.444) &  & (0.397) \\
##   State Percent Urban Population &  & 0.103 &  & $-$0.117 \\
##   &  & (0.139) &  & (0.124) \\
##   State Median Household Income &  & $-$0.164 &  & 0.066 \\
##   &  & (0.131) &  & (0.117) \\
##  \hline \\[-1.8ex]
## Observations & 99 & 99 & 99 & 99 \\
## \hline
## \hline \\[-1.8ex]
## \multicolumn{5}{r}{\parbox[t]{\textwidth}{\footnotesize \textit{Note}: The table shows the results fi
##                         senator's state-level appropriation request behavior. All non-binary variable
##                         second stage models the logged total amount of funding a senator requests. $
## \end{tabular}
## \end{table}
```

Table C.4 Analysis

```r
# Remove all objects
rm(list=ls())
# Loading the data
load("state_level_data.RData")

# Pooling both years together
senators_appropriations_state_oneyear <- senators_appropriations_state %>%
  group_by(senator,state, logpop, on_appropriations, female, democrat,
           freshman, seniority, party_leader, previous_vote_share, distance_from_dw_median,
           POPPCT_URBAN, state.median.household.income)%>%
  dplyr::summarize(logsum = log(sum(appropriation_sum)+1))
```

```
## `summarise()` has grouped output by 'senator', 'state', 'logpop',
## 'on_appropriations', 'female', 'democrat', 'freshman', 'seniority',
## 'party_leader', 'previous_vote_share', 'distance_from_dw_median',
## 'POPPCT_URBAN'. You can override using the `.groups` argument.
```

```r
# Re-standardize the non-binary variables (now 100 observations instead of 200)
# Variables to standardize
senators_appropriations_state_scaled <- senators_appropriations_state_oneyear[,c("logpop", "previous_vo
# Standardize
senators_appropriations_state_scaled <- as.data.frame(scale(senators_appropriations_state_scaled))
# Rename standardized variables
colnames(senators_appropriations_state_scaled) <- c("logpop_scaled", "previous_vote_share_scaled", "seni
# Add the standardized variables to the dataset
senators_appropriations_state_oneyear <- bind_cols(senators_appropriations_state_oneyear, senators_appr

# Pooled
# Running the zero inflated model
zim_pooled <- glmmTMB(logsum ~ logpop_scaled  + on_appropriations +  female + democrat +
                    previous_vote_share_scaled + seniority_scaled + party_leader + distance_from_dw_media
                    freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled,
                  zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democrat*distan
                  data = senators_appropriations_state_oneyear, family = gaussian)
# Model summary and standard errors
summary_zim_pooled <- summary(zim_pooled)
ses_pooled  <-standard_error(zim_pooled)

# Save coefficients from the model
cond_pooled <- summary_zim_pooled$coefficients$cond
zi_pooled <- summary_zim_pooled$coefficients$zi
coefs_pooled <- c(cond_pooled[,1])
coefs2_pooled <- c(zi_pooled[,1])

# Save standard errors from the model
ses_cond_pooled <- c(ses_pooled$SE[ses_pooled$Component=="conditional"])
names(ses_cond_pooled) <- ses_pooled$Parameter[ses_pooled$Component=="conditional"]
ses_zi_pooled <- c(ses_pooled$SE[ses_pooled$Component=="zero_inflated"])
names(ses_zi_pooled) <- ses_pooled$Parameter[ses_pooled$Component=="zero_inflated"]

# Running linear models to feed into stargazer, but we will replace the coefficients and SEs with those
basic_reg_pooled <- lm(logsum ~ democrat + on_appropriations + distance_from_dw_median_scaled + logpop_s
```

```
                  female + previous_vote_share_scaled + seniority_scaled + party_leader  +
                  freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled,
                data = senators_appropriations_state_oneyear)

basic_reg2_pooled <- lm(logsum ~  democrat + on_appropriations + distance_from_dw_median_scaled +
                   democrat*distance_from_dw_median_scaled,
                 data = senators_appropriations_state_oneyear[complete.cases(senators_appropriations_sta
```

Table C.4 Output

```
# Stargazer table of regression results
# coef and se take the coefficients and standard errors from the zero-inflated model
stargazer(basic_reg2_pooled, basic_reg_pooled,
          omit=c("Constant"),
          notes.append = FALSE,notes.label = "",
          report="vc*s",star.char=c("*","**"),star.cutoffs = c(0.10,0.05),no.space = TRUE,
          font.size = "footnotesize", model.numbers = FALSE,
          column.labels=c("First Stage","Second Stage"),
          dep.var.labels = "Log(State Appropriations Requests + 1)",column.sep.width="0pt",
          covariate.labels=c( "Democrat (Majority Party Member)", "Member of Appropriations Committee",
                              "Distance from Floor Median x Democrat", "Log State Population",
                              "Senator is a Woman","Previous Vote Share" , "Seniority", "Party Leader",
                              "Freshman Senator", "State Percent Urban Population", "State Median Housel
          notes="\\parbox[t]{.9\\textwidth}{\\footnotesize \\textit{Note}: The table shows the results
                       senator's state-level appropriation request behavior. All non-binary variables
                       second stage models the logged total amount of funding a senator requests. $^{*
          label="tab1_state_pooled",
          digits=3,
          coef=list(coefs2_pooled, coefs_pooled),
          se=list(ses_zi_pooled, ses_cond_pooled),
          digits.extra = 0,
          title="Predictors of Spending Requests at the State Level Pooling Fiscal Years",
          omit.stat = c("ll","rsq","adj.rsq","ser","f"))
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Sat, Jul 06, 2024 - 17:32:35
## \begin{table}[!htbp] \centering
##   \caption{Predictors of Spending Requests at the State Level Pooling Fiscal Years}
##   \label{tab1_state_pooled}
## \footnotesize
## \begin{tabular}{@{\extracolsep{0pt}}lcc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{2}{c}{\textit{Dependent variable:}} \\
## \cline{2-3}
## \\[-1.8ex] & \multicolumn{2}{c}{Log(State Appropriations Requests + 1)} \\
##  & First Stage & Second Stage \\
## \hline \\[-1.8ex]
##  Democrat (Majority Party Member) & $-$5.052$^{**}$ & 0.341 \\
##   & (1.558) & (0.262) \\
```

```
##   Member of Appropriations Committee & $-$0.840 & 0.326$^{*}$ \\
##   & (0.756) & (0.192) \\
##   Distance from Floor Median & 2.011$^{**}$ & $-$0.069 \\
##   & (0.692) & (0.135) \\
##   Distance from Floor Median x Democrat & $-$3.667$^{**}$ &  \\
##   & (1.402) &  \\
##   Log State Population &  & 0.316$^{**}$ \\
##   &  & (0.115) \\
##   Senator is a Woman &  & 0.323$^{*}$ \\
##   &  & (0.192) \\
##   Previous Vote Share &  & 0.122 \\
##   &  & (0.110) \\
##   Seniority &  & 0.088 \\
##   &  & (0.099) \\
##   Party Leader &  & 0.013 \\
##   &  & (0.215) \\
##   Freshman Senator &  & 0.773$^{**}$ \\
##   &  & (0.393) \\
##   State Percent Urban Population &  & $-$0.043 \\
##   &  & (0.123) \\
##   State Median Household Income &  & $-$0.012 \\
##   &  & (0.116) \\
##  \hline \\[-1.8ex]
## Observations & 99 & 99 \\
## \hline
## \hline \\[-1.8ex]
## \multicolumn{3}{r}{\parbox[t]{.9\textwidth}{\footnotesize \textit{Note}: The table shows the results
##                         senator's state-level appropriation request behavior. All non-binary variable
##                         second stage models the logged total amount of funding a senator requests. $
## \end{tabular}
## \end{table}
```

Table C.6 Analysis

```
# Remove all objects
rm(list=ls())
# Loading the data
load("state_level_data.RData")

# Running the zero inflated model
zim_main <- glmmTMB(logsum ~ logpop_scaled  + on_appropriations +  female + democrat + previous_vote_sha
                  + party_leader + distance_from_dw_median_scaled + freshman + POPPCT_URBAN_scaled + sta
                  zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democrat*dista
                  data = senators_appropriations_state, family = gaussian)
# Model summary and standard errors
summary_zim_main <- summary(zim_main)
ses_main <- standard_error(zim_main)

# Save coefficients from the model
cond_main <- summary_zim_main$coefficients$cond
zi_main <- summary_zim_main$coefficients$zi
coefs_main <- c(cond_main[,1])
```

```r
coefs2_main <- c(zi_main[,1])

# Save standard errors from the model
ses_cond_main <- c(ses_main$SE[ses_main$Component=="conditional"])
names(ses_cond_main) <- ses_main$Parameter[ses_main$Component=="conditional"]
ses_zi_main <- c(ses_main$SE[ses_main$Component=="zero_inflated"])
names(ses_zi_main) <- ses_main$Parameter[ses_main$Component=="zero_inflated"]

# Running linear models to feed into stargazer, but we will replace the coefficients and SEs with those
basic_reg_main <- lm(logsum ~ democrat + on_appropriations + distance_from_dw_median_scaled + logpop_sca
                  female + previous_vote_share_scaled + seniority_scaled + party_leader  +
                  freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled + factor(year),
                data = senators_appropriations_state)

basic_reg2_main <- lm(logsum ~  democrat + on_appropriations + distance_from_dw_median_scaled +
                   democrat*distance_from_dw_median_scaled,
                 data = senators_appropriations_state[complete.cases(senators_appropriations_state),])
```

Table C.6 Output

```r
# Stargazer table of regression results
# coef and se take the coefficients and standard errors from the zero-inflated model
stargazer(basic_reg2_main, basic_reg_main,
          omit=c("Constant"),
          notes.append = FALSE,notes.label = "",
          report="vc*s",star.char=c("*","**"),star.cutoffs = c(0.10,0.05),no.space = TRUE,
          font.size = "footnotesize", model.numbers = FALSE,
          column.labels=c("First Stage","Second Stage"),
          dep.var.labels = "Log(State Appropriations Requests + 1)",column.sep.width="0pt",
          covariate.labels=c( "Democrat (Majority Party Member)", "Member of Appropriations Committee",
                              "Distance from Floor Median x Democrat", "Log State Population",
                              "Senator is a Woman","Previous Vote Share" , "Seniority", "Party Leader",
                              "Freshman Senator", "State Percent Urban Population", "State Median Housel
                              "Fiscal Year 2023"),
          notes="\\parbox[t]{.9\\textwidth}{\\footnotesize \\textit{Note}: The table shows the results
                       senator's state-level appropriation request behavior. All non-binary variables
                       second stage models the logged total amount of funding a senator requests. $^{*
          label="tab1_state",
          digits=3,
          coef=list(coefs2_main, coefs_main),
          se=list(ses_zi_main, ses_cond_main),
          digits.extra = 0,
          title="Predictors of Spending Requests at the State Level",
          omit.stat = c("ll","rsq","adj.rsq","ser","f"))
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Sat, Jul 06, 2024 - 17:32:35
## \begin{table}[!htbp] \centering
##   \caption{Predictors of Spending Requests at the State Level}
##   \label{tab1_state}
```

```
## \footnotesize
## \begin{tabular}{@{\extracolsep{0pt}}lcc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{2}{c}{\textit{Dependent variable:}} \\
## \cline{2-3}
## \\[-1.8ex] & \multicolumn{2}{c}{Log(State Appropriations Requests + 1)} \\
##  & First Stage & Second Stage \\
## \hline \\[-1.8ex]
##  Democrat (Majority Party Member) & $-$5.052$^{**}$ & 0.350$^{*}$ \\
##   & (1.101) & (0.202) \\
##   Member of Appropriations Committee & $-$0.840 & 0.312$^{**}$ \\
##   & (0.535) & (0.148) \\
##   Distance from Floor Median & 2.006$^{**}$ & $-$0.071 \\
##   & (0.488) & (0.104) \\
##   Distance from Floor Median x Democrat & $-$3.658$^{**}$ &  \\
##   & (0.989) &  \\
##   Log State Population &  & 0.298$^{**}$ \\
##   &  & (0.088) \\
##   Senator is a Woman &  & 0.350$^{**}$ \\
##   &  & (0.148) \\
##   Previous Vote Share &  & 0.127 \\
##   &  & (0.085) \\
##   Seniority &  & 0.105 \\
##   &  & (0.076) \\
##   Party Leader &  & 0.025 \\
##   &  & (0.166) \\
##   Freshman Senator &  & 0.656$^{**}$ \\
##   &  & (0.303) \\
##   State Percent Urban Population &  & $-$0.007 \\
##   &  & (0.095) \\
##   State Median Household Income &  & $-$0.049 \\
##   &  & (0.090) \\
##   Fiscal Year 2023 &  & 0.537$^{**}$ \\
##   &  & (0.128) \\
##  \hline \\[-1.8ex]
## Observations & 198 & 198 \\
## \hline
## \hline \\[-1.8ex]
## \multicolumn{3}{r}{\parbox[t]{.9\textwidth}{\footnotesize \textit{Note}: The table shows the results
##                         senator's state-level appropriation request behavior. All non-binary variable
##                         second stage models the logged total amount of funding a senator requests. $
## \end{tabular}
## \end{table}
```

Table C.9 Analysis

```
# Remove all objects
rm(list=ls())
# Loading the data
load("state_level_data.RData")
```

```r
# Set the seed to run the bootstrap and create empty lists to store results
set.seed(02138)
# 20000 bootstraps
nboot <- 20000
results_cond_coefs  <- list()
results_cond_ses  <- list()
results_zi_coefs  <- list()
results_zi_ses  <- list()

# Creating a unique senator variable
senators_appropriations_state$unique_senator_name <- paste0(senators_appropriations_state$senator, sena

# Bootstrapping at the senator level
ids <- unique(senators_appropriations_state$unique_senator_name)

# Running the bootstrap
# Ensure R and package versions match readme
for (k in 1:nboot) {
  # Sample senators to be used in this bootstrap iteration
  senator_sample <- sample(ids,  length(ids),replace=TRUE)

  # All of the senator profiles for this sample
  dataset <- inner_join(tibble(unique_senator_name = senator_sample), senators_appropriations_state, by

  # Then, run the zero-inflated model with this sample
  zim_2 <- glmmTMB(logsum ~ logpop_scaled + on_appropriations +  female + democrat +
                     previous_vote_share_scaled + seniority_scaled + party_leader +
                     distance_from_dw_median_scaled +
                     freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled + factor(yea
                   zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democrat*dis
                   data = dataset, family = gaussian)

  summary_zim <- summary(zim_2)

  # Storing the results
  results_cond_coefs[[k]]  <- summary_zim$coefficients$cond[,1]
  results_cond_ses[[k]]  <- summary_zim$coefficients$cond[,2]
  results_zi_coefs[[k]]  <- summary_zim$coefficients$zi[,1]
  results_zi_ses[[k]]  <- summary_zim$coefficients$zi[,2]

  # Printing progress
  if (k %% 100 == 0) cat(paste(k, "out of", nboot, "samples stored..\n"))
}
```

```
## dropping columns from rank-deficient conditional model: freshman
## dropping columns from rank-deficient conditional model: freshman
## dropping columns from rank-deficient conditional model: freshman
## dropping columns from rank-deficient conditional model: freshman
## dropping columns from rank-deficient conditional model: freshman
```

```r
# Turn the bootstrap results into our CI estimates
# Omitting models with NA SEs
to.keep <- which(apply(is.na(do.call(rbind.data.frame,results_cond_ses)),1,sum) == 0)
```

```r
# SD of coefficients to create standard errors for bootstrap
cond_vec_se_alt <- apply(do.call(rbind.data.frame,results_cond_coefs)[to.keep,], 2, sd)
zi_vec_se_alt <- apply(do.call(rbind.data.frame,results_zi_coefs)[to.keep,], 2, sd)

# Variable names for our bootstrapped SEs
names(cond_vec_se_alt) <- c("intercept","logpop_scaled", "on_appropriations", "female", "democrat", "pre
                            "party_leader","distance_from_dw_median_scaled", "freshman", "POPPCT_URBAN_s
                            "state.median.household.income_scaled", "factor(year)2022")
names(zi_vec_se_alt) <- c("intercept","democrat", "on_appropriations", "distance_from_dw_median_scaled"

# Rounding
cond_vec_se_alt <- round(cond_vec_se_alt,3)
zi_vec_se_alt <- round(zi_vec_se_alt,3)

# Run the zero-inflated model outside of the loop to get coefficients
zim_bootstrap <- glmmTMB(logsum ~ logpop_scaled + on_appropriations +  female + democrat +
                  previous_vote_share_scaled + seniority_scaled + party_leader + distance_from_dw_media
                  freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled + factor(year)
                zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democrat*distan
                data = senators_appropriations_state, family = gaussian)
# Model summary
summary_zim_bootstrap <- summary(zim_bootstrap)

# Save coefficients from the model
cond_bootstrap <- summary_zim_bootstrap$coefficients$cond
zi_bootstrap <- summary_zim_bootstrap$coefficients$zi
coefs_bootstrap <- c(cond_bootstrap[,1])
coefs2_bootstrap <- c(zi_bootstrap[,1])

# Running linear models to feed into stargazer, but we will replace the coefficients and SEs with those
basic_reg_bootstrap <- lm(logsum ~ democrat + on_appropriations + distance_from_dw_median_scaled + logpo
                  female + previous_vote_share_scaled + seniority_scaled + party_leader  +
                  freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled + factor(year),
                data = senators_appropriations_state)

basic_reg2_bootstrap <- lm(logsum ~  democrat + on_appropriations + distance_from_dw_median_scaled +
                   democrat*distance_from_dw_median_scaled,
                 data = senators_appropriations_state[complete.cases(senators_appropriations_state),])
```

Table C.9 Output

```r
# Stargazer table of regression results
# se takes the bootstrapped SEs
stargazer(basic_reg2_bootstrap, basic_reg_bootstrap,
          omit=c("Constant"),
          notes.append = FALSE,notes.label = "",
          report="vc*s",star.char=c("*","**"),star.cutoffs = c(0.10,0.05),no.space = TRUE,
          font.size = "footnotesize", model.numbers = FALSE,
          column.labels=c("First Stage","Second Stage"),
          dep.var.labels = "Log(State Appropriations Requests + 1)",column.sep.width="0pt",
          covariate.labels=c( "Democrat (Majority Party Member)", "Member of Appropriations Committee",
```

```
                              "Distance from DW-NOMINATE Median x Democrat", "Log State Population",
                              "Senator is a Woman","Previous Vote Share" , "Seniority", "Party Leader",
                              "Freshman Senator", "State Percent Urban Population", "State Median Housel
                              "Fiscal Year 2023", "Other Senator Requested * Other Senator Same Party")
          notes="\\parbox[t]{.9\\textwidth}{\\footnotesize \\textit{Note}: The table shows the results f
                        senator's state-level appropriation request behavior. The first stage models whe
                        second stage models the logged total amount of funding a senator requests. Stand
                        We are forced to drop 884 of our 20000 bootstrapped iterations due to insufficie
          label="tab1_state_boot",
          digits=3,
          coef=list(coefs2_bootstrap, coefs_bootstrap),
          se=list(zi_vec_se_alt, cond_vec_se_alt),
          digits.extra = 0,
          title="Predictors of Spending Requests at the State Level with Bootstrapped Standard Errors",
          omit.stat = c("ll","rsq","adj.rsq","ser","f"))
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Sat, Jul 06, 2024 - 18:37:37
## \begin{table}[!htbp] \centering
##   \caption{Predictors of Spending Requests at the State Level with Bootstrapped Standard Errors}
##   \label{tab1_state_boot}
## \footnotesize
## \begin{tabular}{@{\extracolsep{0pt}}lcc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{2}{c}{\textit{Dependent variable:}} \\
## \cline{2-3}
## \\[-1.8ex] & \multicolumn{2}{c}{Log(State Appropriations Requests + 1)} \\
##  & First Stage & Second Stage \\
## \hline \\[-1.8ex]
##  Democrat (Majority Party Member) & $-$5.052 & 0.350 \\
##   & (15.310) & (0.370) \\
##   Member of Appropriations Committee & $-$0.840 & 0.312 \\
##   & (1.334) & (0.219) \\
##   Distance from DW-NOMINATE Median & 2.006 & $-$0.071 \\
##   & (7.747) & (0.180) \\
##   Distance from DW-NOMINATE Median x Democrat & $-$3.658 &  \\
##   & (14.578) &  \\
##   Log State Population &  & 0.298$^{**}$ \\
##   &  & (0.146) \\
##   Senator is a Woman &  & 0.350 \\
##   &  & (0.247) \\
##   Previous Vote Share &  & 0.127 \\
##   &  & (0.175) \\
##   Seniority &  & 0.105 \\
##   &  & (0.115) \\
##   Party Leader &  & 0.025 \\
##   &  & (0.323) \\
##   Freshman Senator &  & 0.656$^{*}$ \\
##   &  & (0.398) \\
##   State Percent Urban Population &  & $-$0.007 \\
##   &  & (0.159) \\
##   State Median Household Income &  & $-$0.049 \\
```

```
##   &  & (0.135) \\
##   Fiscal Year 2023 &  & 0.537$^{**}$ \\
##   &  & (0.065) \\
##  \hline \\[-1.8ex]
## Observations & 198 & 198 \\
## \hline
## \hline \\[-1.8ex]
## \multicolumn{3}{r}{\parbox[t]{.9\textwidth}{\footnotesize \textit{Note}: The table shows the results
##                         senator's state-level appropriation request behavior. The first stage models
##                         second stage models the logged total amount of funding a senator requests. St
##                         We are forced to drop 884 of our 20000 bootstrapped iterations due to insuffi
## \end{tabular}
## \end{table}
```

Table C.12 Analysis

```
# Remove all objects
rm(list=ls())
# Loading the data
load("state_level_data.RData")

# Running the per capita model
zim.logpercap <- glmmTMB(log_percap ~  logpop_scaled  + on_appropriations +  female + democrat + previou
                         + party_leader + distance_from_dw_median_scaled + freshman + POPPCT_URBAN_scale
                         zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democra
                         data = senators_appropriations_state, family = gaussian)
# Model summary and standard errors
summary_zim_logpercap <- summary(zim.logpercap)
ses_logpercap <-standard_error(zim.logpercap)

# Save coefficients from the model
cond_logpercap <- summary_zim_logpercap$coefficients$cond
zi_logpercap <- summary_zim_logpercap$coefficients$zi
coefs_logpercap <- c(cond_logpercap[,1])
coefs2_logpercap <- c(zi_logpercap[,1])

# Save standard errors from the model
ses_cond_logpercap <- c(ses_logpercap$SE[ses_logpercap$Component=="conditional"])
names(ses_cond_logpercap) <- ses_logpercap$Parameter[ses_logpercap$Component=="conditional"]
ses_zi_logpercap <- c(ses_logpercap$SE[ses_logpercap$Component=="zero_inflated"])
names(ses_zi_logpercap) <- ses_logpercap$Parameter[ses_logpercap$Component=="zero_inflated"]

# Running linear models to feed into stargazer, but we will replace the coefficients and SEs with those
basic_reg_percap <- lm(log_percap ~  democrat + on_appropriations + distance_from_dw_median_scaled + log
                         female + previous_vote_share_scaled + seniority_scaled + party_leader  +
                         freshman + POPPCT_URBAN_scaled + state.median.household.income_scaled + factor

basic_reg2_percap <- lm(log_percap ~  democrat + on_appropriations + distance_from_dw_median_scaled + de
                        data = senators_appropriations_state[complete.cases(senators_appropriations_sta
```

Table C.12 Output

```
# Stargazer table of regression results
# coef and se take the coefficients and standard errors from the zero-inflated model
stargazer(basic_reg2_percap, basic_reg_percap,
          omit=c("Constant"),
          notes.append = FALSE,notes.label = "",
          report="vc*s",star.char=c("*","**"),star.cutoffs = c(0.10,0.05),no.space = TRUE,
          font.size = "footnotesize", model.numbers = FALSE,
          column.labels=c("First Stage","Second Stage"),
          dep.var.labels = "Log(Per Capita State Appropriations Requests + 1)",column.sep.width="0pt",
          covariate.labels=c( "Democrat (Majority Party Member)", "Member of Appropriations Committee",
                              "Distance from Floor Median x Democrat", "Log State Population",
                              "Senator is a Woman","Previous Vote Share" , "Seniority", "Party Leader",
                              "Freshman Senator", "State Percent Urban Population", "State Median Housel
                              "Fiscal Year 2023"),
          notes="\\parbox[t]{.9\\textwidth}{\\footnotesize \\textit{Note}: The table shows the results
                       senator's state-level appropriation request behavior. All non-binary variables
                       second stage models the logged total amount of funding a senator requests. $^{*
          label="tab1_statepercap",
          digits=3,
          coef=list(coefs2_logpercap, coefs_logpercap),
          se=list(ses_zi_logpercap, ses_cond_logpercap),
          digits.extra = 0,
          title="Predictors of Per Capita Spending Requests at the State Level",
          omit.stat = c("ll","rsq","adj.rsq","ser","f"))
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Sat, Jul 06, 2024 - 18:37:37
## \begin{table}[!htbp] \centering
##   \caption{Predictors of Per Capita Spending Requests at the State Level}
##   \label{tab1_statepercap}
## \footnotesize
## \begin{tabular}{@{\extracolsep{0pt}}lcc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{2}{c}{\textit{Dependent variable:}} \\
## \cline{2-3}
## \\[-1.8ex] & \multicolumn{2}{c}{Log(Per Capita State Appropriations Requests + 1)} \\
##  & First Stage & Second Stage \\
## \hline \\[-1.8ex]
##  Democrat (Majority Party Member) & $-$5.052$^{**}$ & 0.341$^{*}$ \\
##   & (1.101) & (0.197) \\
##   Member of Appropriations Committee & $-$0.840 & 0.305$^{**}$ \\
##   & (0.535) & (0.145) \\
##   Distance from Floor Median & 2.006$^{**}$ & $-$0.070 \\
##   & (0.488) & (0.102) \\
##   Distance from Floor Median x Democrat & $-$3.658$^{**}$ &  \\
##   & (0.989) &  \\
##   Log State Population &  & $-$0.699$^{**}$ \\
##   &  & (0.086) \\
##   Senator is a Woman &  & 0.343$^{**}$ \\
```

```
##   &  & (0.145) \\
##   Previous Vote Share &  & 0.122 \\
##   &  & (0.083) \\
##   Seniority &  & 0.102 \\
##   &  & (0.075) \\
##   Party Leader &  & 0.018 \\
##   &  & (0.162) \\
##   Freshman Senator &  & 0.641$^{**}$ \\
##   &  & (0.296) \\
##   State Percent Urban Population &  & $-$0.010 \\
##   &  & (0.093) \\
##   State Median Household Income &  & $-$0.047 \\
##   &  & (0.088) \\
##   Fiscal Year 2023 &  & 0.525$^{**}$ \\
##   &  & (0.125) \\
##  \hline \\[-1.8ex]
## Observations & 198 & 198 \\
## \hline
## \hline \\[-1.8ex]
## \multicolumn{3}{r}{\parbox[t]{.9\textwidth}{\footnotesize \textit{Note}: The table shows the results
##                         senator's state-level appropriation request behavior. All non-binary variable
##                         second stage models the logged total amount of funding a senator requests. $
## \end{tabular}
## \end{table}
```

Table C.21 Analysis

```r
# Remove all objects
rm(list=ls())
# Loading the data
load("state_level_data.RData")

# Running the below poverty line model
zim_below_poverty <- glmmTMB(logsum ~ logpop_scaled  + on_appropriations +  female + democrat +
                  previous_vote_share_scaled + seniority_scaled + party_leader + distance_from_dw_media
                  freshman + POPPCT_URBAN_scaled + state.pct.poverty_scaled + factor(year),
                zi = ~  democrat + on_appropriations + distance_from_dw_median_scaled + democrat*distan
                data = senators_appropriations_state, family = gaussian)
# Model summary and standard errors
summary_zim_below_poverty <- summary(zim_below_poverty)
ses_below_poverty <-standard_error(zim_below_poverty)
# Save coefficients from the model
cond_below_poverty <- summary_zim_below_poverty$coefficients$cond
zi_below_poverty <- summary_zim_below_poverty$coefficients$zi
coefs_below_poverty <- c(cond_below_poverty[,1])
coefs2_below_poverty <- c(zi_below_poverty[,1])

# Save standard errors from the model
ses_cond_below_poverty <- c(ses_below_poverty$SE[ses_below_poverty$Component=="conditional"])
names(ses_cond_below_poverty) <- ses_below_poverty$Parameter[ses_below_poverty$Component=="conditional"]
ses_zi_below_poverty <- c(ses_below_poverty$SE[ses_below_poverty$Component=="zero_inflated"])
names(ses_zi_below_poverty) <- ses_below_poverty$Parameter[ses_below_poverty$Component=="zero_inflated"]
```

```r
# Running linear models to feed into stargazer, but we will replace the coefficients and SEs with those
basic_reg_below_poverty <- lm(logsum ~ democrat + on_appropriations + distance_from_dw_median_scaled + l
                  female + previous_vote_share_scaled + seniority_scaled + party_leader  +
                  freshman + POPPCT_URBAN_scaled + state.pct.poverty_scaled + factor(year),
                data = senators_appropriations_state)

basic_reg2_below_poverty <- lm(logsum ~  democrat + on_appropriations + distance_from_dw_median_scaled +
                   democrat*distance_from_dw_median_scaled,
                 data = senators_appropriations_state[complete.cases(senators_appropriations_state),])
```

Table C.21 Output

```r
# Stargazer table of regression results
# coef and se take the coefficients and standard errors from the zero-inflated model
stargazer(basic_reg2_below_poverty, basic_reg_below_poverty,
          omit=c("Constant"),
          notes.append = FALSE,notes.label = "",
          report="vc*s",star.char=c("*","**"),star.cutoffs = c(0.10,0.05),no.space = TRUE,
          font.size = "footnotesize", model.numbers = FALSE,
          column.labels=c("First Stage","Second Stage"),
          dep.var.labels = "Log(State Appropriations Requests + 1)",column.sep.width="0pt",
          covariate.labels=c( "Democrat (Majority Party Member)", "Member of Appropriations Committee",
                              "Distance from Floor Median x Democrat", "Log State Population",
                              "Senator is a Woman","Previous Vote Share" , "Seniority", "Party Leader",
                              "Freshman Senator", "State Percent Urban Population", "State Percent Belo
                              "Fiscal Year 2023", "Other Senator Requested * Other Senator Same Party")
          notes="\\parbox[t]{.9\\textwidth}{\\footnotesize \\textit{Note}: The table shows the results
                       senator's state-level appropriation request behavior. All non-binary variables
                       second stage models the logged total amount of funding a senator requests. $^{*
          label="tab1_state_poverty",
          digits=3,
          coef=list(coefs2_below_poverty, coefs_below_poverty),
          se=list(ses_zi_below_poverty, ses_cond_below_poverty),
          digits.extra = 0,
          title="Predictors of Spending Requests at the State Level Replacing Median Income with Percen
          omit.stat = c("ll","rsq","adj.rsq","ser","f"))
```

```
##
## % Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac a
## % Date and time: Sat, Jul 06, 2024 - 18:37:37
## \begin{table}[!htbp] \centering
##   \caption{Predictors of Spending Requests at the State Level Replacing Median Income with Percent B
##   \label{tab1_state_poverty}
## \footnotesize
## \begin{tabular}{@{\extracolsep{0pt}}lcc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{2}{c}{\textit{Dependent variable:}} \\
## \cline{2-3}
## \\[-1.8ex] & \multicolumn{2}{c}{Log(State Appropriations Requests + 1)} \\
##  & First Stage & Second Stage \\
```

```
## \hline \\[-1.8ex]
##  Democrat (Majority Party Member) & $-$5.052$^{**}$ & 0.445$^{**}$ \\
##   & (1.101) & (0.201) \\
##   Member of Appropriations Committee & $-$0.840 & 0.296$^{**}$ \\
##   & (0.535) & (0.147) \\
##   Distance from Floor Median & 2.006$^{**}$ & $-$0.075 \\
##   & (0.488) & (0.103) \\
##   Distance from Floor Median x Democrat & $-$3.658$^{**}$ &  \\
##   & (0.989) &  \\
##   Log State Population &  & 0.269$^{**}$ \\
##   &  & (0.089) \\
##   Senator is a Woman &  & 0.366$^{**}$ \\
##   &  & (0.146) \\
##   Previous Vote Share &  & 0.126 \\
##   &  & (0.082) \\
##   Seniority &  & 0.123 \\
##   &  & (0.076) \\
##   Party Leader &  & 0.050 \\
##   &  & (0.165) \\
##   Freshman Senator &  & 0.604$^{**}$ \\
##   &  & (0.301) \\
##   State Percent Urban Population &  & $-$0.012 \\
##   &  & (0.084) \\
##   State Percent Below the Poverty Line &  & 0.129$^{*}$ \\
##   &  & (0.074) \\
##   Fiscal Year 2023 &  & 0.537$^{**}$ \\
##   &  & (0.126) \\
##  \hline \\[-1.8ex]
## Observations & 198 & 198 \\
## \hline
## \hline \\[-1.8ex]
## \multicolumn{3}{r}{\parbox[t]{.9\textwidth}{\footnotesize \textit{Note}: The table shows the results
##                         senator's state-level appropriation request behavior. All non-binary variabl
##                         second stage models the logged total amount of funding a senator requests. $
## \end{tabular}
## \end{table}
```