Replication - Main Tables

2025-06-15

Replication of the main tables

Table 1 - Incumbent 2010

Required libraries.

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ---- tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v ggplot2   3.5.2     v tibble    3.2.1
## v lubridate 1.9.4     v tidyr     1.3.1
## v purrr     1.0.4
## -- Conflicts ---------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(stargazer)
```

```
##
## Please cite as:
##
##  Hlavac, Marek (2022). stargazer: Well-Formatted Regression and Summary Statistics Tables.
##  R package version 5.2.3. https://CRAN.R-project.org/package=stargazer
```

```
library(knitr)
library(broom)
library(haven)
library(fixest)
library(modelsummary)
library(gt)
library(webshot2)
library(car)
```

```
## Loading required package: carData
##
## Attaching package: 'car'
##
## The following object is masked from 'package:dplyr':
##
##     recode
##
## The following object is masked from 'package:purrr':
##
##     some
```

Defining the control and dependent variables.

```
gpcontrols <- c("GP_population", "GP_lit", "GP_sc", "GP_st", "GP_nbvillages",
                "RES00_gender", "RES00_obc", "RES00_sc", "RES00_st",
                "RES10_obc", "RES10_sc", "RES10_st", "RES05_obc", "RES05_sc", "RES05_st")


incum_dep_vars1 <- c("INC05_running", "INC05_voteshare",
                     "INCSPOUSE05_running", "INCSPOUSE05_voteshare",
                     "INCOTHER05_running", "INCOTHER05_voteshare")
```

Loading the data and filtering it.

```
data <- read_dta("~/work/Electoral data cleaned.dta")


data_filtered <- data %>%
  filter(RES10_gender == 0 & SAMPLE_hhsurvey == 1 & GP_tag == 1 & INC05_can_run == 1) %>%
  mutate(
    FAMnotINC05_running = INCorFAM05_running - INC05_running,
    FAMnotINC05_voteshare = INCorFAM05_voteshare - INC05_voteshare,
    FAMnotINC05_won = INCorFAM05_won - INC05_won
  )
```

Function for the regression formulas.

```
create_formula <- function(dep_var, model_type) {
  base_controls <- paste(gpcontrols, collapse = " + ")

  if (model_type == "any_treatment") {
    formula_str <- paste(dep_var, "~ INT_treatment + RES05_gender + INT_treatment:RES05_gender +",
                         base_controls, "+ factor(district)")
  } else if (model_type == "gender_general") {
    formula_str <- paste(dep_var, "~ INT_treatment_gender + INT_treatment_general + RES05_gender + INT_
                         base_controls, "+ factor(district)")
  }

  return(as.formula(formula_str))
}
```

Function for the statistical tests.

```
calculate_tests <- function(model, model_type) {
  if (model_type == "any_treatment") {
    test1 <- tryCatch({
      car::linearHypothesis(model, "RES05_gender = 0")
    }, error = function(e) list(PrF = NA))
    pval1 <- if (!is.null(test1$PrF)) round(test1$`Pr(>F)`[2], 2) else NA

    test2 <- tryCatch({
      car::linearHypothesis(model, "INT_treatment:RES05_gender = 0")
    }, error = function(e) list(PrF = NA))
    pval2 <- if (!is.null(test2$PrF)) round(test2$`Pr(>F)`[2], 2) else NA

    test3 <- tryCatch({
      car::linearHypothesis(model, "INT_treatment = INT_treatment:RES05_gender")
    }, error = function(e) list(PrF = NA))
```

```
    pval3 <- if (!is.null(test3$PrF)) round(test3$`Pr(>F)`[2], 2) else NA

    return(list(pval1 = pval1, pval2 = pval2, pval3 = pval3))
  } else if (model_type == "gender_general") {
    test1 <- tryCatch({
      car::linearHypothesis(model, "INT_treatment_gender:RES05_gender = 0")
    }, error = function(e) list(PrF = NA))
    pval1 <- if (!is.null(test1$PrF)) round(test1$`Pr(>F)`[2], 2) else NA

    test2 <- tryCatch({
      car::linearHypothesis(model, "INT_treatment_general:RES05_gender = 0")
    }, error = function(e) list(PrF = NA))
    pval2 <- if (!is.null(test2$PrF)) round(test2$`Pr(>F)`[2], 2) else NA

    test3 <- tryCatch({
      car::linearHypothesis(model, "INT_treatment_gender = INT_treatment_general")
    }, error = function(e) list(PrF = NA))
    pval3 <- if (!is.null(test3$PrF)) round(test3$`Pr(>F)`[2], 2) else NA

    test4 <- tryCatch({
      car::linearHypothesis(model, "INT_treatment_gender:RES05_gender = INT_treatment_general:RES05_gen
    }, error = function(e) list(PrF = NA))
    pval4 <- if (!is.null(test4$PrF)) round(test4$`Pr(>F)`[2], 2) else NA

    return(list(pval1 = pval1, pval2 = pval2, pval3 = pval3, pval4 = pval4))
  }
}
```

Estimating the models, starting by initialising lists of results.

```
models_list <- list()
control_means <- list()
test_results <- list()
```

Models with “any treatment”:

```
for (i in 1:length(incum_dep_vars1)) {
  dep_var <- incum_dep_vars1[i]

  control_mean <- data_filtered %>%
    filter(INT_treatment == 0 & RES05_gender == 0) %>%
    summarise(mean = mean(!!sym(dep_var), na.rm = TRUE)) %>%
    pull(mean) %>%
    round(2)

  control_means[[i]] <- control_mean

  formula <- create_formula(dep_var, "any_treatment")
  model <- lm(formula, data = data_filtered)
  models_list[[i]] <- model

  test_results[[i]] <- calculate_tests(model, "any_treatment")
}
```

Models with “gender and general treatment”:

```
for (i in 1:length(incum_dep_vars1)) {
  dep_var <- incum_dep_vars1[i]
  j <- i + length(incum_dep_vars1)

  control_means[[j]] <- control_means[[i]]

  formula <- create_formula(dep_var, "gender_general")
  model <- lm(formula, data = data_filtered)
  models_list[[j]] <- model

  test_results[[j]] <- calculate_tests(model, "gender_general")
}
```

Variables to display and selection of columns and summary statistics (means and test results).

```
outregvar2 <- c("INT_treatment", "INT_treatment_gender", "INT_treatment_general", "RES05_gender", "INT_


col_names <- c("Incumbent Runs", "Incumbent Vote Share",
               "Incumbent Spouse Runs", "Incumbent Spouse Vote Share",
               "Other Family Member Runs", "Other Family Member Vote Share")


additional_lines <- list(
  c("Observations", sapply(models_list, function(x) nobs(x))),
  c("Mean in Control without GQ", unlist(control_means)),
  c("Treatment with GQ = Treat without GQ", sapply(test_results[1:length(incum_dep_vars1)], function(x)
  c("Gender Treat = General Treat without GQ", sapply(test_results[(length(incum_dep_vars1)+1):length(te
  c("Gender Treat = General Treat with GQ", sapply(test_results[(length(incum_dep_vars1)+1):length(test_
)
```

Generating the output table.

```
stargazer(models_list,
          type = "text",
          column.labels = col_names,
          keep = outregvar2,
          add.lines = additional_lines,
          digits = 2,
          title = "Table 1: Effects on Incumbent and Family Candidate Entry",
          out = "Table1_Incumbent_2010_completed.txt")
```

```
##
## Table 1: Effects on Incumbent and Family Candidate Entry
## ================================================================================================
##
##                                          ------------------------------------------------------
##                                              INC05_running         INC05_voteshare      INCSPOUSE05_ru
##                                              Incumbent Runs      Incumbent Vote Share  Incumbent Spous
##                                                   (1)                   (2)                   (3)
## ------------------------------------------------------------------------------------------------
## INT_treatment                                    -0.26***              -6.27***               0.06
##                                                   (0.09)                (2.35)               (0.07)
##
## INT_treatment_gender
```

```
##
##
## INT_treatment_general
##
##
## RES05_gender                                  -0.38***             -10.22***              0.36***
##                                                (0.11)               (2.65)                (0.08)
##
## INT_treatment:RES05_gender                     0.36**               9.13**               -0.27**
##                                                (0.14)               (3.52)                (0.11)
##
## INT_treatment_gender:RES05_gender
##
##
## INT_treatment_general:RES05_gender
##
##
## ------------------------------------------------------------------------------------------------
## Observations                                     152                  149                   152
## Mean in Control without GQ                       0.46                 10.1                  0.04
## Treatment with GQ = Treat without GQ
## Gender Treat = General Treat without GQ
## Gender Treat = General Treat with GQ
## Observations                                     152                  149                   152
## R2                                               0.32                 0.39                  0.22
## Adjusted R2                                      0.21                 0.29                  0.10
## Residual Std. Error                  0.40 (df = 131)      9.94 (df = 128)      0.32 (df = 1
## F Statistic                        3.02*** (df = 20; 131) 4.01*** (df = 20; 128) 1.80** (df = 20
## ================================================================================================
## Note:
```

Narrower version of the table.

Table 2 - Performance 2010

Required libraries:

```
library(tidyverse)
library(fixest)
library(stargazer)
library(haven)
library(lmtest)
```

```
## Loading required package: zoo
```

```
##
## Attaching package: 'zoo'
```

```
## The following objects are masked from 'package:base':
##
##     as.Date, as.Date.numeric
```

Defining the macros: control variables and variables related to the regression.

```
# Control variables
gpcontrols <- c("GP_population", "GP_lit", "GP_sc", "GP_st", "GP_nbvillages",
                "RES00_gender", "RES00_obc", "RES00_sc", "RES00_st",
```

```
                "RES10_obc", "RES10_sc", "RES10_st", "RES05_obc", "RES05_sc", "RES05_st")

# Regression variables
outregvar2 <- c("INT_treatment", "RES05_gender", "X_anytr_genderres05")
```

Data processing: uploading, filtering.

```
# Change path accordingly to your workspace.
data <- read_dta("~/work/Electoral data cleaned.dta")

# Filtering the data
data_filtered <- data %>%
  filter(RES10_gender == 0, SAMPLE_hhsurvey == 1, GP_tag == 1, INC05_can_run == 1) %>%
  mutate(
    FAMnotINC05_running = INCFAM05_running - INC05_running,
    FAMnotINC05_voteshare = INCFAM05_voteshare - INC05_voteshare,
    FAMnotINC05_won = INCFAM05_won - INC05_won
  )
```

Generation of the performance indices of the program.

```
data_filtered <- data_filtered %>%
  mutate(
    index_empl_svy_0 = rowMeans(select(., std_HH_NREGA, std_HH_NREGA_unmet_demand_m, std_HH_NREGA_unmet
    index_empl_svy_1 = rowMeans(select(., std_HH_NREGA_unmet_demand, std_HH_NREGA_unmet_demand_m, std_HH
    index_empl_svy_2 = rowMeans(select(., std_HH_NREGA, std_HH_NREGA_work_m, std_HH_NREGA_work_f), na.rm
    index_empl_svy_3 = rowMeans(select(., std_HH_NREGA_unmet_demand_m, std_HH_NREGA_unmet_demand_f), na
  )
```

Dependent variables.

```
incum_dep_vars1 <- c("INC05_running", "INC05_voteshare", "INC05_won",
                     "INCSPOUSE05_running", "INCSPOUSE05_voteshare", "INCSPOUSE05_won",
                     "INCOTHER05_running", "INCOTHER05_voteshare", "INCOTHER05_won")

indices <- c("index_empl_svy_0", "index_empl_svy_1", "index_empl_svy_2", "index_empl_svy_3")
```

Initialization of the lists for the upcoming results.

```
models_list <- list()
control_means <- numeric(length(incum_dep_vars1) * length(indices))
pvals_1 <- numeric(length(incum_dep_vars1) * length(indices))
pvals_2 <- numeric(length(incum_dep_vars1) * length(indices))
effect_average <- numeric(length(incum_dep_vars1) * length(indices))
effect_good <- numeric(length(incum_dep_vars1) * length(indices))
effect_bad <- numeric(length(incum_dep_vars1) * length(indices))
```

Doing the regressions.

```
i <- 0
for (x in 0:1) {
  for (dep_var in incum_dep_vars1) {
    for (index in indices) {
      i <- i + 1

      # control mean
      control_mean <- data_filtered %>%
```

```
    filter(INT_treatment == 0 & RES05_gender == x) %>%
    summarise(mean = mean(!!sym(dep_var), na.rm = TRUE)) %>%
    pull(mean) %>%
    round(2)

  control_means[i] <- control_mean

  # mean and standard error of the index
  index_stats <- data_filtered %>%
    filter(RES05_gender == x) %>%
    summarise(mean = mean(!!sym(index), na.rm = TRUE),
              sd = sd(!!sym(index), na.rm = TRUE))

  index_mean <- round(index_stats$mean, 2)
  index_sd <- round(index_stats$sd, 2)

  # interaction variables
  data_filtered <- data_filtered %>%
    mutate(
      TEMP_index = get(index),
      TEMP_X_res_index = RES05_gender * get(index),
      TEMP_X_anytr_index = INT_treatment * get(index),
      TEMP_X_anytr_res_index = INT_treatment * RES05_gender * get(index)
    )

  # checking that all the variables exist in the set
  all_vars <- c(dep_var, "INT_treatment", "TEMP_index", "TEMP_X_anytr_index", gpcontrols, "district
  if (all(all_vars %in% names(data_filtered))) {
    # model estimation
    formula <- as.formula(paste(dep_var, "~ INT_treatment + TEMP_index + TEMP_X_anytr_index +", pas
    model <- tryCatch({
      lm(formula, data = data_filtered %>% filter(RES05_gender == x))
    }, error = function(e) {
      message("Error in model fitting: ", e$message)
      NULL
    })

    if (!is.null(model)) {
      models_list[[i]] <- model

      # doing the tests
      test_1 <- tryCatch({
        waldtest(model, c("INT_treatment + TEMP_X_anytr_index = 0", paste("TEMP_index =", index_mea
      }, error = function(e) {
        message("Error in test 1: ", e$message)
        NULL
      })

      if (!is.null(test_1)) {
        pvals_1[i] <- round(test_1$p.value, 2)
      } else {
        pvals_1[i] <- NA
      }
```

```
          test_2 <- tryCatch({
            waldtest(model, c("INT_treatment + TEMP_X_anytr_index = 0"))
          }, error = function(e) {
            message("Error in test 2: ", e$message)
            NULL
          })

          if (!is.null(test_2)) {
            pvals_2[i] <- round(test_2$p.value, 2)
          } else {
            pvals_2[i] <- NA
          }

          # effects
          effect_average[i] <- coef(model)["INT_treatment"] + coef(model)["TEMP_X_anytr_index"] * index
          effect_good[i] <- coef(model)["INT_treatment"] + coef(model)["TEMP_X_anytr_index"] * (index_m
          effect_bad[i] <- coef(model)["INT_treatment"] + coef(model)["TEMP_X_anytr_index"] * (index_mea

          # displaying said effects
          cat("Effects on outcome", dep_var, "\n")
          cat("Effect of treatment for average performing incumbent is", effect_average[i], "\n")
          cat("Effect of treatment for +1 sd performing incumbent is", effect_good[i], "\n")
          cat("Effect of treatment for -1 sd performing incumbent is", effect_bad[i], "\n")
        } else {
          message("Model fitting failed for ", dep_var)
        }
      } else {
        message("Some variables are missing in the dataset for ", dep_var)
      }
    }
  }
}
```

```
## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is -0.2680824
## Effect of treatment for +1 sd performing incumbent is -0.06088096
## Effect of treatment for -1 sd performing incumbent is -0.4752838

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
```

```
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is -0.2673244
## Effect of treatment for +1 sd performing incumbent is -0.1495474
## Effect of treatment for -1 sd performing incumbent is -0.3851014

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is -0.2705949
## Effect of treatment for +1 sd performing incumbent is -0.1450253
## Effect of treatment for -1 sd performing incumbent is -0.3961645

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is -0.2695317
## Effect of treatment for +1 sd performing incumbent is -0.05695558
## Effect of treatment for -1 sd performing incumbent is -0.4821078

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is -6.831379
## Effect of treatment for +1 sd performing incumbent is -0.6289125
## Effect of treatment for -1 sd performing incumbent is -13.03384

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
```

```
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is -6.748288
## Effect of treatment for +1 sd performing incumbent is -2.795807
## Effect of treatment for -1 sd performing incumbent is -10.70077

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is -6.885008
## Effect of treatment for +1 sd performing incumbent is -2.052529
## Effect of treatment for -1 sd performing incumbent is -11.71749

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is -6.870809
## Effect of treatment for +1 sd performing incumbent is -0.8884793
## Effect of treatment for -1 sd performing incumbent is -12.85314

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.01561854
```

```
## Effect of treatment for +1 sd performing incumbent is -0.01672788
## Effect of treatment for -1 sd performing incumbent is -0.0145092

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.01167305
## Effect of treatment for +1 sd performing incumbent is -0.002991184
## Effect of treatment for -1 sd performing incumbent is -0.02035492

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.01516382
## Effect of treatment for +1 sd performing incumbent is -0.01780819
## Effect of treatment for -1 sd performing incumbent is -0.01251944

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.01568441
## Effect of treatment for +1 sd performing incumbent is -0.01042338
## Effect of treatment for -1 sd performing incumbent is -0.02094544

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"
```

```
## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is 0.06658035
## Effect of treatment for +1 sd performing incumbent is 0.01800806
## Effect of treatment for -1 sd performing incumbent is 0.1151526

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is 0.06395724
## Effect of treatment for +1 sd performing incumbent is 0.007988227
## Effect of treatment for -1 sd performing incumbent is 0.1199262

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is 0.06655364
## Effect of treatment for +1 sd performing incumbent is 0.02823508
## Effect of treatment for -1 sd performing incumbent is 0.1048722

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is 0.06812376
## Effect of treatment for +1 sd performing incumbent is 0.03229878
## Effect of treatment for -1 sd performing incumbent is 0.1039487

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification
```

```
## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is 0.6012781
## Effect of treatment for +1 sd performing incumbent is 0.2165459
## Effect of treatment for -1 sd performing incumbent is 0.9860102

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is 0.5693109
## Effect of treatment for +1 sd performing incumbent is -0.1275501
## Effect of treatment for -1 sd performing incumbent is 1.266172

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is 0.610773
## Effect of treatment for +1 sd performing incumbent is 0.344815
## Effect of treatment for -1 sd performing incumbent is 0.8767309

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is 0.6142258
## Effect of treatment for +1 sd performing incumbent is 0.4054103
## Effect of treatment for -1 sd performing incumbent is 0.8230413
```

```
## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is -0.000134813
## Effect of treatment for +1 sd performing incumbent is 0.009258667
## Effect of treatment for -1 sd performing incumbent is -0.009528293

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is 0.0003176332
## Effect of treatment for +1 sd performing incumbent is 0.004545843
## Effect of treatment for -1 sd performing incumbent is -0.003910577

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is -3.280611e-05
## Effect of treatment for +1 sd performing incumbent is 0.00708912
## Effect of treatment for -1 sd performing incumbent is -0.007154732

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification
```

```
## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is -0.0003216346
## Effect of treatment for +1 sd performing incumbent is 0.009504523
## Effect of treatment for -1 sd performing incumbent is -0.01014779

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1037853
## Effect of treatment for +1 sd performing incumbent is 0.08784882
## Effect of treatment for -1 sd performing incumbent is 0.1197218

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1038207
## Effect of treatment for +1 sd performing incumbent is 0.07884448
## Effect of treatment for -1 sd performing incumbent is 0.128797

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1040336
## Effect of treatment for +1 sd performing incumbent is 0.08597226
## Effect of treatment for -1 sd performing incumbent is 0.122095

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification
```

```
## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1039461
## Effect of treatment for +1 sd performing incumbent is 0.09743102
## Effect of treatment for -1 sd performing incumbent is 0.1104612

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 1.430371
## Effect of treatment for +1 sd performing incumbent is 2.356874
## Effect of treatment for -1 sd performing incumbent is 0.5038687

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 1.41262
## Effect of treatment for +1 sd performing incumbent is 1.690713
## Effect of treatment for -1 sd performing incumbent is 1.134528

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 1.400001
## Effect of treatment for +1 sd performing incumbent is 1.907303
## Effect of treatment for -1 sd performing incumbent is 0.8926987
```

```
## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 1.441221
## Effect of treatment for +1 sd performing incumbent is 2.567627
## Effect of treatment for -1 sd performing incumbent is 0.3148155

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.06218251
## Effect of treatment for +1 sd performing incumbent is 0.1182113
## Effect of treatment for -1 sd performing incumbent is 0.006153764

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.06241062
## Effect of treatment for +1 sd performing incumbent is 0.09167475
## Effect of treatment for -1 sd performing incumbent is 0.03314649

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = -0.01"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification
```

```
## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.06154668
## Effect of treatment for +1 sd performing incumbent is 0.09911119
## Effect of treatment for -1 sd performing incumbent is 0.02398217

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0", "TEMP_index = 0"

## Error in test 1: empty model specification

## Warning in modelUpdate(objects[[i - 1]], objects[[i]]):
## terms specified that are not in the model: "INT_treatment +
## TEMP_X_anytr_index = 0"

## Error in test 2: empty model specification

## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.06200652
## Effect of treatment for +1 sd performing incumbent is 0.1206385
## Effect of treatment for -1 sd performing incumbent is 0.003374508

## Error in test 1: there are aliased coefficients in the model

## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is 0.1442985
## Effect of treatment for +1 sd performing incumbent is 0.03541238
## Effect of treatment for -1 sd performing incumbent is 0.2531845

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is 0.08562395
## Effect of treatment for +1 sd performing incumbent is 0.01559434
## Effect of treatment for -1 sd performing incumbent is 0.1556536

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is 0.1012777
## Effect of treatment for +1 sd performing incumbent is 0.07500888
## Effect of treatment for -1 sd performing incumbent is 0.1275465

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_running
## Effect of treatment for average performing incumbent is 0.1706365
## Effect of treatment for +1 sd performing incumbent is 0.03997797
## Effect of treatment for -1 sd performing incumbent is 0.301295

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is 2.377071
## Effect of treatment for +1 sd performing incumbent is 0.2928875
## Effect of treatment for -1 sd performing incumbent is 4.461255
```

```
## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is 1.637864
## Effect of treatment for +1 sd performing incumbent is 0.788168
## Effect of treatment for -1 sd performing incumbent is 2.487559

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is 2.008738
## Effect of treatment for +1 sd performing incumbent is 0.7102595
## Effect of treatment for -1 sd performing incumbent is 3.307216

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_voteshare
## Effect of treatment for average performing incumbent is 2.526306
## Effect of treatment for +1 sd performing incumbent is 0.1909248
## Effect of treatment for -1 sd performing incumbent is 4.861688

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.00867496
## Effect of treatment for +1 sd performing incumbent is -0.05425431
## Effect of treatment for -1 sd performing incumbent is 0.03690439

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.01505433
## Effect of treatment for +1 sd performing incumbent is -0.002202576
## Effect of treatment for -1 sd performing incumbent is -0.02790608

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.006173785
## Effect of treatment for +1 sd performing incumbent is -0.01981416
## Effect of treatment for -1 sd performing incumbent is 0.007466591

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INC05_won
## Effect of treatment for average performing incumbent is -0.007627603
## Effect of treatment for +1 sd performing incumbent is -0.06318848
## Effect of treatment for -1 sd performing incumbent is 0.04793327

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is -0.2711929
```

```
## Effect of treatment for +1 sd performing incumbent is -0.3451705
## Effect of treatment for -1 sd performing incumbent is -0.1972152

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is -0.2432261
## Effect of treatment for +1 sd performing incumbent is -0.1874189
## Effect of treatment for -1 sd performing incumbent is -0.2990334

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is -0.2505507
## Effect of treatment for +1 sd performing incumbent is -0.189785
## Effect of treatment for -1 sd performing incumbent is -0.3113164

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_running
## Effect of treatment for average performing incumbent is -0.28485
## Effect of treatment for +1 sd performing incumbent is -0.4173557
## Effect of treatment for -1 sd performing incumbent is -0.1523444

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is -6.01982
## Effect of treatment for +1 sd performing incumbent is -10.21386
## Effect of treatment for -1 sd performing incumbent is -1.825782

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is -5.396206
## Effect of treatment for +1 sd performing incumbent is -7.982221
## Effect of treatment for -1 sd performing incumbent is -2.810192

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is -4.411193
## Effect of treatment for +1 sd performing incumbent is -4.1278
## Effect of treatment for -1 sd performing incumbent is -4.694586

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_voteshare
## Effect of treatment for average performing incumbent is -6.737726
## Effect of treatment for +1 sd performing incumbent is -11.94841
## Effect of treatment for -1 sd performing incumbent is -1.527043

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model
```

```
## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is 0.0203311
## Effect of treatment for +1 sd performing incumbent is 0.0332864
## Effect of treatment for -1 sd performing incumbent is 0.007375793

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is 0.0255038
## Effect of treatment for +1 sd performing incumbent is 0.04624032
## Effect of treatment for -1 sd performing incumbent is 0.004767284

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is 0.02352391
## Effect of treatment for +1 sd performing incumbent is 0.05839617
## Effect of treatment for -1 sd performing incumbent is -0.01134835

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCSPOUSE05_won
## Effect of treatment for average performing incumbent is 0.01834694
## Effect of treatment for +1 sd performing incumbent is 0.0171265
## Effect of treatment for -1 sd performing incumbent is 0.01956739

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1292218
## Effect of treatment for +1 sd performing incumbent is 0.2646418
## Effect of treatment for -1 sd performing incumbent is -0.006198099

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1294562
## Effect of treatment for +1 sd performing incumbent is 0.271624
## Effect of treatment for -1 sd performing incumbent is -0.01271158

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1287618
## Effect of treatment for +1 sd performing incumbent is 0.2632371
## Effect of treatment for -1 sd performing incumbent is -0.005713485

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_running
## Effect of treatment for average performing incumbent is 0.1358431
## Effect of treatment for +1 sd performing incumbent is 0.2714809
## Effect of treatment for -1 sd performing incumbent is 0.0002052494
```

```
## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 2.544656
## Effect of treatment for +1 sd performing incumbent is 3.60074
## Effect of treatment for -1 sd performing incumbent is 1.488572

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 2.548712
## Effect of treatment for +1 sd performing incumbent is 4.972919
## Effect of treatment for -1 sd performing incumbent is 0.1245048

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 2.7407
## Effect of treatment for +1 sd performing incumbent is 4.937236
## Effect of treatment for -1 sd performing incumbent is 0.5441648

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_voteshare
## Effect of treatment for average performing incumbent is 2.435382
## Effect of treatment for +1 sd performing incumbent is 3.557964
## Effect of treatment for -1 sd performing incumbent is 1.3128

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.0175992
## Effect of treatment for +1 sd performing incumbent is 0.009802141
## Effect of treatment for -1 sd performing incumbent is 0.02539626

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.02115388
## Effect of treatment for +1 sd performing incumbent is 0.02040723
## Effect of treatment for -1 sd performing incumbent is 0.02190053

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.02608269
## Effect of treatment for +1 sd performing incumbent is 0.02350526
## Effect of treatment for -1 sd performing incumbent is 0.02866012

## Error in test 1: there are aliased coefficients in the model
## Error in test 2: there are aliased coefficients in the model

## Effects on outcome INCOTHER05_won
## Effect of treatment for average performing incumbent is 0.01062636
```

```
## Effect of treatment for +1 sd performing incumbent is 0.006183361
## Effect of treatment for -1 sd performing incumbent is 0.01506935
```

Generation of a table displaying the coefficients of interest.

```r
# Selection of the right models to display
panel_A_models <- models_list[c(1, 5, 13, 17, 25, 29)]
panel_B_models <- models_list[c(37, 41, 49, 53, 61, 65)]

# Panel A
panel_A <- stargazer(
  panel_A_models,
  type = "text",
  column.labels = c("Model 1", "Model 5", "Model 13", "Model 17", "Model 25", "Model 29"),
  keep = c("INT_treatment", "TEMP_index", "TEMP_X_anytr_index"),
  add.lines = list(
    c("District FE", rep("Yes", length(panel_A_models))),
    c("GP Controls", rep("Yes", length(panel_A_models))),
    c("Mean in Control not WR in 2005", control_means[c(1, 5, 13, 17, 25, 29)]),
    c("Test Treat Effect", pvals_1[c(1, 5, 13, 17, 25, 29)]),
    c("Test Perf Effect in Treat", pvals_2[c(1, 5, 13, 17, 25, 29)])
  ),
  digits = 2,
  title = "Panel A: GP without Gender Quota in 2005",
  single.row = TRUE
)
```

```
##
## Panel A: GP without Gender Quota in 2005
## =============================================================================================================
##                                                                                              Dependent variabl
##                                 ------------------------------------------------------------------------------
##                                     INC05_running       INC05_voteshare    INCSPOUSE05_running INCSP(
##                                        Model 1              Model 5              Model 13
##                                          (1)                  (2)                  (3)
## -------------------------------------------------------------------------------------------------------------
## INT_treatment                      -0.27** (0.10)       -6.76*** (2.52)        0.07 (0.05)           (
## TEMP_index                          -0.09 (0.07)         -3.03* (1.71)         0.01 (0.04)          -(
## TEMP_X_anytr_index                  0.24** (0.11)         7.05** (2.82)       -0.06 (0.06)          -(
## -------------------------------------------------------------------------------------------------------------
## District FE                             Yes                  Yes                  Yes
## GP Controls                             Yes                  Yes                  Yes
## Mean in Control not WR in 2005         0.46                 10.1                 0.04
## Test Treat Effect
## Test Perf Effect in Treat
## Observations                            92                   90                   92
## R2                                     0.42                 0.53                 0.24
## Adjusted R2                            0.26                 0.39                 0.03
## Residual Std. Error               0.42 (df = 71)       10.25 (df = 69)      0.22 (df = 71)         4.8
## F Statistic                   2.59*** (df = 20; 71) 3.88*** (df = 20; 69) 1.13 (df = 20; 71)   0.63
## =============================================================================================================
## Note:
```

```r
# Panel B
panel_B <- stargazer(
  panel_B_models,
```

```
  type = "text",
  column.labels = c("Model 37", "Model 41", "Model 49", "Model 53", "Model 61", "Model 65"),
  keep = c("INT_treatment", "TEMP_index", "TEMP_X_anytr_index"),
  add.lines = list(
    c("District FE", rep("Yes", length(panel_B_models))),
    c("GP Controls", rep("Yes", length(panel_B_models))),
    c("Mean in Control not WR in 2005", control_means[c(37, 41, 49, 53, 61, 65)]),
    c("Test Treat Effect", pvals_1[c(37, 41, 49, 53, 61, 65)]),
    c("Test Perf Effect in Treat", pvals_2[c(37, 41, 49, 53, 61, 65)])
  ),
  digits = 2,
  title = "Panel B: GP with Gender Quota in 2005",
  single.row = TRUE
)
```

```
##
## Panel B: GP with Gender Quota in 2005
## ==========================================================================================================
##                                                                                  Dependent variable:
##                                 ---------------------------------------------------------------------------
##                                   INC05_running     INC05_voteshare   INCSPOUSE05_running INCSPOUSE05_
##                                      Model 37          Model 41           Model 49             Model
##                                        (1)               (2)                (3)                 (4)
## ----------------------------------------------------------------------------------------------------------
## INT_treatment                      0.15 (0.11)       2.48 (2.53)       -0.27** (0.13)       -5.82 (3
## TEMP_index                         -0.03 (0.12)      -0.18 (2.71)       0.07 (0.14)          4.57 (3
## TEMP_X_anytr_index                 -0.13 (0.14)      -2.54 (3.23)       -0.09 (0.17)         -5.11 (4
## ----------------------------------------------------------------------------------------------------------
## District FE                            Yes               Yes                Yes                 Yes
## GP Controls                            Yes               Yes                Yes                 Yes
## Mean in Control not WR in 2005         0.15              2.5                0.33                6.15
## Test Treat Effect
## Test Perf Effect in Treat
## Observations                            60                59                 60                  59
## R2                                     0.37              0.39               0.34                0.29
## Adjusted R2                            0.07              0.09               0.03                -0.0
## Residual Std. Error               0.36 (df = 40)    8.13 (df = 39)     0.42 (df = 40)      11.47 (df
## F Statistic                  1.23 (df = 19; 40) 1.31 (df = 19; 39) 1.09 (df = 19; 40)   0.84 (df =
## ==========================================================================================================
## Note:
```

```
# Combine the two in one txt doc
combined_output <- c(panel_A, "\n\n", panel_B)
writeLines(combined_output, file.path("~/work/Rajasthan-Voters-Replication/Table2_Performance_2010_compl
```

Table 3 - Challengers 2010

Table 4- Candidates 2015

```
# Packages to install if necessary
install.packages(c("tidyverse", "haven", "fixest","stargazer"))
```

```
## Installing packages into '/usr/local/lib/R/site-library'
## (as 'lib' is unspecified)
```

```r
#Libraries
library(tidyverse)
library(fixest)
library(stargazer)
library(haven)



## MACROS

# Controls
gpcontrols <- c("GP_population", "GP_lit", "GP_sc", "GP_st", "GP_nbvillages",
                "RES00_gender", "RES00_obc", "RES00_sc", "RES00_st",
                "RES10_obc", "RES10_sc", "RES10_st", "RES05_obc", "RES05_sc", "RES05_st")

gpcontrols15 <- c(gpcontrols, "RES15_obc", "RES15_sc", "RES15_st")

# Regression variables
outregvar2 <- c("INT_treatment", "RES05_gender", "X_anytr_genderres05")


## DATA PROCESSING

# Loading the data. Change path depending on your workspace.
data <- read_dta("~/work/Electoral data 2015 cleaned.dta")

# Filtering the data
data_filtered <- data %>%
  filter(RES10_gender == 0, GP_tag == 1, RES15_gender == 0) %>%
  mutate(
    INC10_can_run = 1,
    INC10_can_run = ifelse(ELEC10_won_female == 0 & RES15_gender == 1, 0, INC10_can_run),
    INC10_can_run = ifelse(ELEC10_won_sc == 0 & RES15_sc == 1, 0, INC10_can_run),
    INC10_can_run = ifelse(ELEC10_won_st == 0 & RES15_st == 1, 0, INC10_can_run)
  )

# Generate new variables
for (var in c("INT_treatment", "X_anytr_genderres05", "RES05_gender")) {
  data_filtered <- data_filtered %>%
    mutate(!!paste0("X15_", var) := get(var) * (RES15_gender == 1))
}

outregvar15 <- c("INT_treatment", "RES05_gender", "X_anytr_genderres05", "RES15_gender",
                 "X15_INT_treatment", "X15_RES05_gender", "X15_X_anytr_genderres05")

# Dependent variables
dep_vars <- c("ELEC15_nbcands", "ELEC15_incum10_running", "ELEC15_voteshare_incum10",
              "ELEC15_prop_cand2010", "ELEC15_voteshare_cand2010", "ELEC15_prop_female",
              "ELEC15_voteshare_female", "ELEC15_prop_nongen", "ELEC15_voteshare_nongen")
```

```r
# List to stock the results:
models_list <- list()
control_means <- numeric(length(dep_vars))
pvals <- numeric(length(dep_vars))
```

```r
## DOING THE REGRESSIONS


for (i in seq_along(dep_vars)) {
  dep_var <- dep_vars[i]

  # control mean
  control_mean <- data_filtered %>%
    filter(INT_treatment == 0 & RES05_gender == 0) %>%
    summarise(mean = mean(!!sym(dep_var), na.rm = TRUE)) %>%
    pull(mean) %>%
    round(2)

  control_means[i] <- control_mean

  # model estimation
  formula <- as.formula(paste(dep_var, "~", paste(c(outregvar2, gpcontrols15), collapse = " + "), "+ fa
  model <- lm(formula, data = data_filtered)
  models_list[[i]] <- model

  # do the test
  test_result <- summary(lm(test = RES05_gender + X_anytr_genderres05, data = model$model))$coefficients
  pvals[i] <- round(test_result, 2)
}
```

```
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
## Warning: In lm.fit(x, y, offset = offset, singular.ok = singular.ok, ...) :
##  extra argument 'test' will be disregarded
```

```r
stargazer(models_list,
          type = "text",
          column.labels = paste("Model", 1:length(dep_vars)),
          keep = outregvar2,
          add.lines = list(
            c("District FE", rep("Yes", length(dep_vars))),
            c("GP Controls", rep("Yes", length(dep_vars))),
            c("Mean in Control not WR in 2015", control_means),
            c("Test Treat Effect in WR=Treat Effect in NWR", pvals)
          ),
```

```
          digits = 2,
          title = "Table 4: Effects on Candidates - 2015",
          out = file.path("~/work/Rajasthan-Voters-Replication/Table4_Candidates_2015.txt"))
```

```
##
## Table 4: Effects on Candidates - 2015
## ==========================================================================================================
##
##                                                 ------------------------------------------------------
##                                                 ELEC15_nbcands ELEC15_incum10_running ELEC15_voteshare_ir
##                                                    Model 1            Model 2                Model 3
##                                                      (1)                (2)                    (3)
## ----------------------------------------------------------------------------------------------------------
## INT_treatment                                       0.35               0.07                  2.62**
##                                                    (1.21)             (0.05)                 (1.29)
##
## RES05_gender                                        0.82              0.12***                 2.42**
##                                                    (1.13)             (0.05)                 (1.20)
##
## X_anytr_genderres05                                -2.57              -0.14*                 -3.72*
##                                                    (1.89)             (0.08)                 (2.00)
##
## ----------------------------------------------------------------------------------------------------------
## District FE                                         Yes                Yes                    Yes
## GP Controls                                         Yes                Yes                    Yes
## Mean in Control not WR in 2015                      7.83               0                      0
## Test Treat Effect in WR=Treat Effect in NWR         0.77               0.16                   0.05
## Observations                                         89                 89                     89
## R2                                                  0.32               0.29                   0.27
## Adjusted R2                                         0.08               0.03                   0.02
## Residual Std. Error (df = 65)                       3.65               0.15                   3.87
## F Statistic (df = 23; 65)                           1.32               1.13                   1.06
## ==========================================================================================================
## Note:
```

Table 5 - Voters perception