Final Project

Edison Hu

Invalid Date

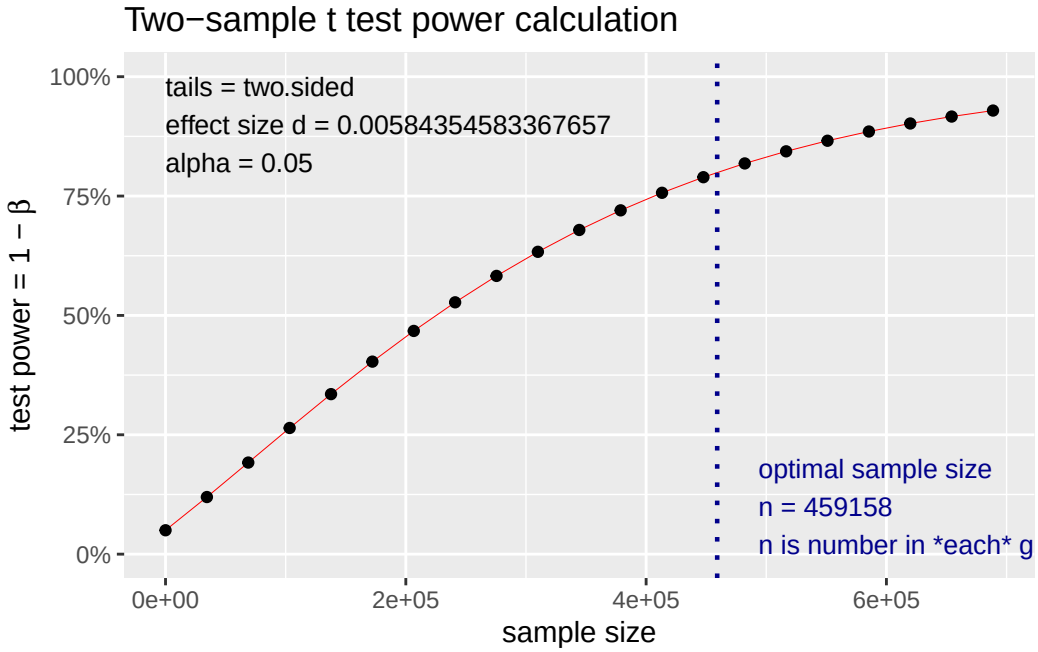
```
ids <- c("ccode1", "ccode2", "country1", "country2", "year")

# Outcome Variable
## MID onsets
dyadyrs <- create_dyadyears(directed = FALSE, subset_years = c(1816:2014)) %>%
  add_cow_mids() %>%
  mutate(
    country1 = countrycode::countrycode(ccode1,
                                        origin = "cown", destination = "iso3c"),
    country2 = countrycode::countrycode(ccode2,
                                        origin = "cown", destination = "iso3c")
    ) %>%
  select(all_of(ids), cowmidonset)

# Explanatory Variable
## regime change
polityIV <- readxl::read_xls(here::here("raw data/p4v2018.xls"))
polityIV <- polityIV %>%
  select(ccode, year, durable) %>%
  mutate(ccode2 = ccode) %>%
  rename(ccode1 = ccode)

dyadyrs <- left_join(dyadyrs, polityIV, by = c("ccode1", "year"))
dyadyrs <- dyadyrs %>%
  select(-ccode2.y) %>%
  rename(durable1 = durable,
         ccode2 = ccode2.x)
dyadyrs <- left_join(dyadyrs, polityIV, by = c("ccode2", "year"))
dyadyrs <- dyadyrs %>%
  select(-ccode1.y) %>%
```

```r
  rename(durable2 = durable,
         ccode1 = ccode1.x)

dyadyrs <- dyadyrs %>%
  mutate(
    regcha1 = ifelse(durable1 == 0, 1, 0),
    regcha2 = ifelse(durable2 == 0, 1, 0),
    regcha_uni = ifelse(regcha1 == 1 | regcha2 == 1, 1, 0)
    #regcha_bi = ifelse(regcha1 == 1 & regcha2 == 1, 1, 0)
    ) %>%
  select(all_of(ids), cowmidonset, regcha_uni)

## foreign policy similarity
dyadyrs <- dyadyrs %>%
  add_fpsim() %>%
  select(all_of(ids), cowmidonset, regcha_uni, piva, kappava)

# Covariates
## alliance
dyadyrs <- dyadyrs %>%
  add_cow_alliance()

## major power
dyadyrs <- dyadyrs %>%
  add_cow_majors() %>%
  mutate(major = ifelse(cowmaj1 == 1 | cowmaj2 == 1, 1, 0)) %>%
  select(-c(cowmaj1, cowmaj2))

## strategic rivalry
v_ids <- names(dyadyrs)
dyadyrs <- dyadyrs %>%
  add_strategic_rivalries() %>%
  select(all_of(v_ids), ongoingrivalry)

## distance
dyadyrs <- dyadyrs %>%
  add_minimum_distance()

## GDP per capita & Trade
v_ids <- names(dyadyrs)
dyadyrs <- dyadyrs %>%
```

```
  add_sdp_gdp() %>%
  add_cow_trade() %>%
  mutate(
    gdppc = abs(wbgdppc2011est1 - wbgdppc2011est2),
    trade = abs(flow1 - flow2)
  ) %>%
  group_by(year) %>%
  mutate(
    gdppc_dyd = (gdppc - mean(gdppc, na.rm = TRUE)) / sd(gdppc, na.rm = TRUE),
    trade_dyd = (trade - mean(trade, na.rm = TRUE)) / sd(trade, na.rm = TRUE)
  ) %>%
  ungroup()
dyadyrs <- dyadyrs %>%
  select(all_of(v_ids), gdppc_dyd, trade_dyd)

## NMC ratio
v_ids <- names(dyadyrs)
nmc_sy <- cow_nmc %>%
  group_by(year) %>%
  mutate(
    nc = cinc / sum(cinc)
    ) %>%
  ungroup() %>%
  rename(ccode1 = ccode,
         nc1 = nc) %>%
  select(ccode1, year, nc1)
dyadyrs <- left_join(dyadyrs, nmc_sy, by = c("ccode1", "year"))

nmc_sy <- nmc_sy %>%
  rename(ccode2 = ccode1,
         nc2 = nc1)
dyadyrs <- left_join(dyadyrs, nmc_sy, by = c("ccode2", "year"))
dyadyrs <- dyadyrs %>%
  mutate(
    nc = abs(nc1 - nc2)
    ) %>%
  group_by(year) %>%
  mutate(
    nmc_dyd = (nc - mean(nc, na.rm = TRUE)) / sd(nc, na.rm = TRUE)
    ) %>%
  ungroup() %>%
```

```r
  select(all_of(v_ids), nmc_dyd)

## create unique id
dyadyrs <- dyadyrs %>%
  mutate(
    id = paste(ccode1, ccode2, sep = "0")
  )
```

```r
ees <- feols(cowmidonset ~ regcha_uni | year + ccode1 + ccode2, data = dyadyrs)
etable(ees, file = here::here("ees.tex"))

mde <- pwr::pwr.t.test(n = n_distinct(dyadyrs)/2, d = NULL,
                       sig.level = 0.05, power = 0.8,
                       type="two.sample", alternative="two.sided")
plot(mde)
```




```r
covariates <- c("cow_defense", "cow_neutral", "cow_nonagg", "cow_entente", "major", "ongoi

media_test <- feols(c(cow_defense, cow_neutral, cow_nonagg, cow_entente, major, ongoingriv
etable(media_test)
```

	media_test.1	media_test.2	media_test.3
Dependent Var.:	cow_defense	cow_neutral	cow_nonagg
regcha_uni	0.0025 (0.0021)	-0.0008** (0.0003)	0.0030. (0.0017)
Fixed-Effects:			
year	Yes	Yes	Yes
ccode1	Yes	Yes	Yes
ccode2	Yes	Yes	Yes
S.E.: Clustered	by: year	by: year	by: year
Observations	701,558	701,558	701,558
R2	0.34282	0.03372	0.33951
Within R2	2.24e-5	3.81e-5	3.7e-5

	media_test.4	media_test.5	media_test.6
Dependent Var.:	cow_entente	major	ongoingrivalry
regcha_uni	0.0004 (0.0020)	-0.0051* (0.0021)	0.0006 (0.0003)
Fixed-Effects:			
year	Yes	Yes	Yes
ccode1	Yes	Yes	Yes
ccode2	Yes	Yes	Yes
S.E.: Clustered	by: year	by: year	by: year
Observations	701,558	728,465	728,465
R2	0.40503	0.83217	0.06983
Within R2	7.17e-7	0.00024	5.58e-6

	media_test.7	media_test.8	media_test.9
Dependent Var.:	gdppc_dyd	trade_dyd	nmc_dyd
regcha_uni	0.0513*** (0.0087)	-0.0128*** (0.0024)	0.0002 (0.0056)
Fixed-Effects:			
year	Yes	Yes	Yes
ccode1	Yes	Yes	Yes
ccode2	Yes	Yes	Yes
S.E.: Clustered	by: year	by: year	by: year
Observations	719,510	532,278	728,465
R2	0.38786	0.17640	0.77847
Within R2	0.00056	2.09e-5	1.64e-8

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```r
m <- feols(cowmidonset ~ regcha_uni + regcha_uni:piva + regcha_uni:ongoingrivalry +
              cow_defense + cow_neutral + cow_nonagg + cow_entente +
              regcha_uni:major +
              regcha_uni:mindist + I(mindist^2) +
              trade_dyd + gdppc_dyd + nmc_dyd,
           data = dyadyrs)


m1 <- feols(cowmidonset ~ regcha_uni + regcha_uni:ongoingrivalry |
              ccode1 + ccode2 + year, data = dyadyrs)

m2 <- feols(cowmidonset ~ regcha_uni  + regcha_uni:ongoingrivalry |
              ccode1 + ccode2 + year, cluster = c("year", "id"), data = dyadyrs)

m3 <- feols(cowmidonset ~ regcha_uni + regcha_uni:ongoingrivalry +
              cow_defense + cow_neutral + cow_nonagg + cow_entente +
              regcha_uni:major +
              regcha_uni:mindist + I(mindist^2) +
              trade_dyd + gdppc_dyd + nmc_dyd |
              ccode1 + ccode2 + year,
            cluster = c("year", "id"), data = dyadyrs)

m4 <- feols(cowmidonset ~ regcha_uni  + regcha_uni:piva |
              ccode1 + ccode2 + year, cluster = c("year", "id"), data = dyadyrs)

m5 <- feols(cowmidonset ~ regcha_uni + regcha_uni:piva + regcha_uni:ongoingrivalry +
              cow_defense + cow_neutral + cow_nonagg + cow_entente +
              regcha_uni:major +
              regcha_uni:mindist + I(mindist^2) +
              trade_dyd + gdppc_dyd + nmc_dyd |
              ccode1 + ccode2 + year,
            cluster = c("year", "id"), data = dyadyrs)

etable(m, m1, m4, m2, m3, m5)
```

	m	m1
Dependent Var.:	cowmidonset	cowmidonset
Constant	0.0048*** (0.0001)	
regcha_uni	0.0013** (0.0004)	-0.0005 (0.0003)
cow_defense	0.0044*** (0.0007)	
cow_neutral	0.0349*** (0.0018)	

cow_nonagg	0.0120*** (0.0009)	
cow_entente	-0.0113*** (0.0010)	
mindist square	-2.86e-11*** (1.56e-12)	
trade_dyd	0.0020*** (8.66e-5)	
gdppc_dyd	-0.0005*** (9.61e-5)	
nmc_dyd	0.0019*** (9.04e-5)	
regcha_uni x piva	-0.0012 (0.0009)	
regcha_uni x ongoingrivalry	0.1621*** (0.0023)	0.1501*** (0.0157)
regcha_uni x major	0.0131*** (0.0009)	
regcha_uni x mindist	-3.04e-7*** (5.86e-8)	
Fixed-Effects:	---	---
ccode1	No	Yes
ccode2	No	Yes
year	No	Yes
---	---	---
S.E. type	IID	by: ccode1
Observations	495,065	728,465
R2	0.01755	0.03465
Within R2	--	0.00970

	m4	m2
Dependent Var.:	cowmidonset	cowmidonset
Constant		
regcha_uni	0.0009. (0.0005)	-0.0005 (0.0005)
cow_defense		
cow_neutral		
cow_nonagg		
cow_entente		
mindist square		
trade_dyd		
gdppc_dyd		
nmc_dyd		
regcha_uni x piva	0.0086*** (0.0021)	
regcha_uni x ongoingrivalry		0.1501*** (0.0163)
regcha_uni x major		
regcha_uni x mindist		
Fixed-Effects:	---	---
ccode1	Yes	Yes
ccode2	Yes	Yes
year	Yes	Yes
---	---	---
S.E. type	by: year & id	by: year & id

Observations	701,558	728,465
R2	0.02515	0.03465
Within R2	0.00023	0.00970

	m3	m5
Dependent Var.:	cowmidonset	cowmidonset
Constant		
regcha_uni	1.51e-6 (0.0016)	0.0001 (0.0016)
cow_defense	0.0075** (0.0028)	0.0076** (0.0028)
cow_neutral	0.0306** (0.0096)	0.0306** (0.0096)
cow_nonagg	0.0140* (0.0055)	0.0140* (0.0055)
cow_entente	-0.0154** (0.0050)	-0.0154** (0.0050)
mindist square	5.12e-13 (5.02e-12)	6.29e-13 (5e-12)
trade_dyd	0.0013 (0.0008)	0.0013 (0.0008)
gdppc_dyd	-0.0001 (0.0003)	-0.0001 (0.0003)
nmc_dyd	-0.0061** (0.0021)	-0.0061** (0.0021)
regcha_uni x piva		-0.0006 (0.0022)
regcha_uni x ongoingrivalry	0.1485*** (0.0182)	0.1486*** (0.0182)
regcha_uni x major	0.0069* (0.0028)	0.0069* (0.0028)
regcha_uni x mindist	-1.52e-7 (1.56e-7)	-1.68e-7 (1.57e-7)
Fixed-Effects:	----------	----------
ccode1	Yes	Yes
ccode2	Yes	Yes
year	Yes	Yes
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S.E. type	by: year & id	by: year & id
Observations	495,065	495,065
R2	0.04063	0.04064
Within R2	0.01257	0.01258

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1