

gov2020-repl-project

Packages

```
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   3.5.1     v tibble    3.2.1
v lubridate  1.9.3     v tidyr    1.3.1
v purrr     1.0.2
-- 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 beco
```

```
library(broom)
library(estimatr)
library(margins)

# remotes::install_github("markwestcott34/stargazer-booktabs")
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>

Import Data

```
panel_year <- read.csv("panel-year-gov2020.csv")
```

New Variables

```
# Function to check if of age during a conflict
of_age_when <- function(conflict_years, birth_year, age_range = 18:40) {
  min_year <- min(conflict_years)
  max_year <- max(conflict_years)
  birth_age_min <- min_year - birth_year
  birth_age_max <- max_year - birth_year
  return(birth_age_min %in% age_range | birth_age_max %in% age_range)
}

# Function to create combat instrument
create_combat_instrument <- function(cohort, combat_str, combat_pattern) {
  cohort * (str_detect(combat_str, combat_pattern))
}

# Refactored cohort_frame
cohort_frame <- panel_year %>%
  mutate(
    promotion_after_1949 = ifelse(!is.na(shangjiang_year), 1, 0),
    promotion_after_1988 = ifelse(is.na(shangjiang_year) | shangjiang_year < 1988, 0, 1),
    promotion_before_1955 = ifelse(is.na(shangjiang_year) | shangjiang_year > 1955, 0, 1),

    long_march_cohort = of_age_when(1934:1935, birth_year),
    combat_korea_cohort = of_age_when(1950:1953, birth_year),
    combat_vietnam_cohort = of_age_when(1964:1975, birth_year),
    combat_communist_cohort = of_age_when(1946:1950, birth_year),
    combat_japan_cohort = of_age_when(1937:1945, birth_year),
    combat_india_cohort = of_age_when(1962, birth_year),

    long_march_subset = of_age_when(1934:1935, birth_year, 30:50),
    combat_korea_subset = of_age_when(1950:1953, birth_year, 30:50),
    combat_vietnam_subset = of_age_when(1964:1975, birth_year, 30:50),
    combat_communist_subset = of_age_when(1946:1950, birth_year, 30:50),
    combat_japan_subset = of_age_when(1937:1945, birth_year, 30:50),
```

```

combat_india_subset = of_age_when(1962, birth_year, 30:50),

fought_korea = str_detect(combat, "Korea|Korean"),
fought_vietnam = str_detect(combat, "Vietnam|Vietnamese"),
fought_comunist = str_detect(combat, "Communist"),
fought_japan = str_detect(combat, "Japan|Japanese"),
fought_india = str_detect(combat, "India|Indian"),

last_conflict_year = case_when(
  fought_vietnam ~ 1975,
  fought_korea ~ 1953,
  fought_india ~ 1962,
  fought_comunist ~ 1950,
  fought_japan ~ 1945,
  TRUE ~ NA_real_
),
age_when_shangjiang = shangjiang_year - birth_year,

missed_all_eligibility = as.integer(
  !(birth_year %in% c(1904:1920, 1920:1935, 1949:1961, 1907:1929, 1900:1922, 1919:1939))
),
any_combat = fought_korea + fought_vietnam + fought_india + fought_comunist + fought_japan
combat_pre_1955 = fought_korea + fought_japan + fought_comunist + participated_long_march
combat_post_1955 = fought_vietnam + fought_india
) %>%
mutate(
  pre_prc_cohort = as.integer(birth_year %in% 1894:1933),
  post_prc_cohort = as.integer(birth_year %in% 1910:1959)
)

```

Restructure Data

```

df <- cohort_frame %>%
  dplyr::select(name, unique_id, birth_year, general_rank, promotion_after_1949, any_combat,
  distinct())

```

Base Model

```
# Promotion to general ~ combat before and after 1949

m1 <- glm(promotion_after_1949 ~ any_combat, data = df, family = binomial(link = "logit"))

summary(m1)
```

Call:
glm(formula = promotion_after_1949 ~ any_combat, family = binomial(link = "logit"),
 data = df)

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.24953	0.10151	-12.309	< 2e-16 ***
any_combat	-0.16833	0.05698	-2.954	0.00314 **

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

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 1036.7 on 1069 degrees of freedom
Residual deviance: 1027.6 on 1068 degrees of freedom
AIC: 1031.6

Number of Fisher Scoring iterations: 4

```
m2 <- glm(promotion_before_1955 ~ combat_pre_1955, data = df, family = binomial(link = "logit"))

summary(m2)
```

Call:
glm(formula = promotion_before_1955 ~ combat_pre_1955, family = binomial(link = "logit"),
 data = df)

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-6.4205	0.7014	-9.154	< 2e-16 ***

```
combat_pre_1955    1.2559      0.2137    5.876 4.19e-09 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)
```

```
Null deviance: 308.25  on 1069  degrees of freedom
Residual deviance: 240.00  on 1068  degrees of freedom
AIC: 244
```

```
Number of Fisher Scoring iterations: 8
```

```
m3 <- glm(promotion_after_1988 ~ any_combat, data = df, family = binomial(link = "logit"))

summary(m3)
```

```
Call:
glm(formula = promotion_after_1988 ~ any_combat, family = binomial(link = "logit"),
     data = df)
```

```
Coefficients:
```

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.1655	0.1014	-11.496	< 2e-16 ***
any_combat	-0.5233	0.0770	-6.797	1.07e-11 ***

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

```
(Dispersion parameter for binomial family taken to be 1)
```

```
Null deviance: 926.84  on 1069  degrees of freedom
Residual deviance: 867.95  on 1068  degrees of freedom
AIC: 871.95
```

```
Number of Fisher Scoring iterations: 5
```

```
tidy_m2 <- tidy(m2, conf.int = TRUE)
tidy_m3 <- tidy(m3, conf.int = TRUE)

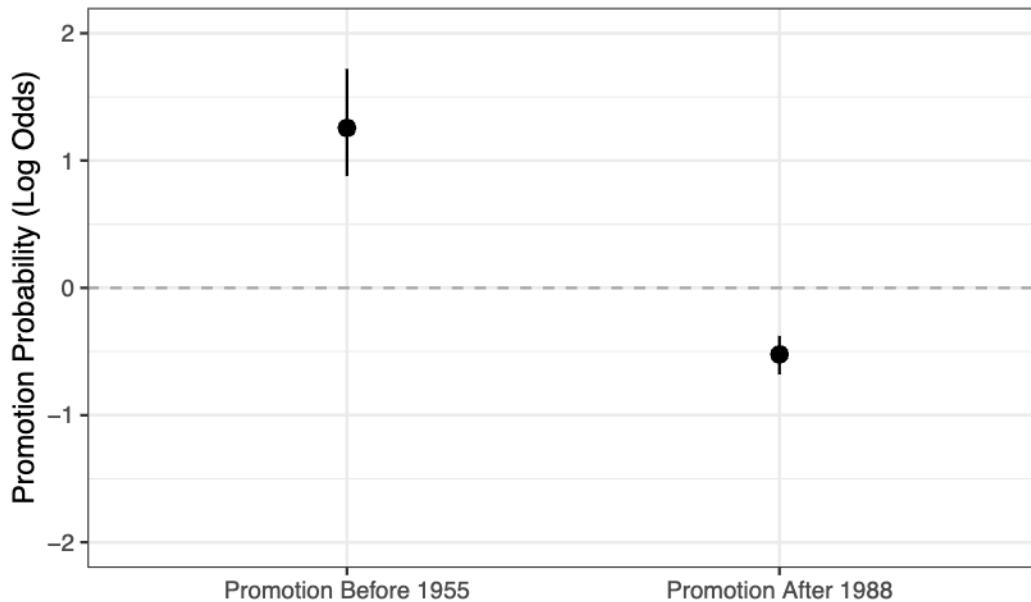
tidy_m2 <- tidy_m2 %>% mutate(model = "Promotion Before 1955")
tidy_m3 <- tidy_m3 %>% mutate(model = "Promotion After 1988")
```

```

tidy_frame <- tidy_m2 %>%
  bind_rows(tidy_m3) %>%
  filter(term != "(Intercept)") %>%
  mutate(model = factor(model, levels = c("Promotion Before 1955", "Promotion After 1988")))

ggplot(tidy_frame, aes(x = model, y = estimate, ymin = conf.low, ymax = conf.high)) +
  geom_hline(yintercept = 0, lty = "dashed", color = "darkgrey") +
  geom_pointrange() +
  labs(
    title = "Coefficient Plot for Promotion Models",
    x = "Model",
    y = "Log Odds (Coefficient)"
  ) +
  theme_bw() +
  scale_y_continuous(limits = c(-2, 2)) +
  labs(y = "Promotion Probability (Log Odds)",
       x = NULL,
       title = "")

```



```

ggsave(filename = "output/base_logodds.pdf", width = 6, height = 4)

mar1 <- margins(m2) %>% summary

```

```

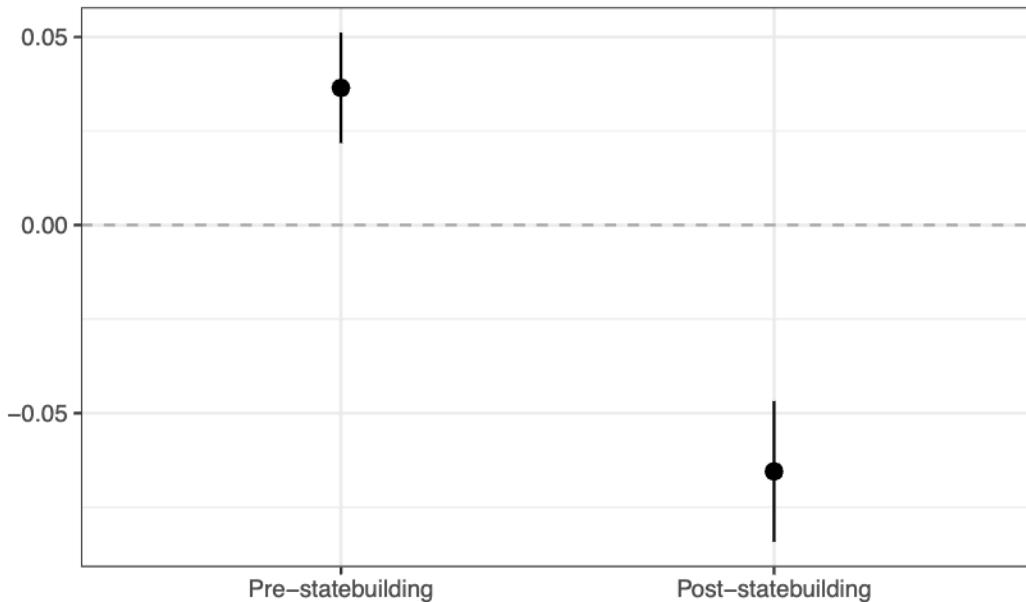
mar2 <- margins(m3) %>% summary

t <- rbind(mar1, mar2) %>% mutate(`factor` = `factor` %>% factor(., levels = .))

ggplot(t, aes(x = factor, y = AME, ymin = lower, ymax = upper)) + geom_hline(yintercept = 0,
  geom_pointrange() +
  scale_x_discrete(labels = c("Pre-statebuilding", "Post-statebuilding")) +
  labs(
    title = "Marginal Effect of Combat Experience on Promotion Probability",
    x = NULL,
    y = NULL
  ) +
  theme_bw()

```

Marginal Effect of Combat Experience on Promotion Probability



```

# scale_y_continuous(limits = c(-2, 2)) +
# ggsave(filename = "output/base_ames.pdf", height = 4, width = 6)

```

Expanded Model 1 (+ education + parentCCP)

```
m5 <- glm(promotion_before_1955 ~ combat_pre_1955 + education_level + parent_CCP_leader , data = df)

summary(m5)
```

Call:
glm(formula = promotion_before_1955 ~ combat_pre_1955 + education_level +
parent_CCP_leader, family = binomial(link = "logit"), data = df)

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-6.36741	0.91978	-6.923	4.43e-12 ***
combat_pre_1955	1.25464	0.21856	5.740	9.45e-09 ***
education_level	-0.02135	0.40287	-0.053	0.958
parent_CCP_leader	-13.86407	950.01719	-0.015	0.988

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

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 308.25 on 1069 degrees of freedom
Residual deviance: 239.20 on 1066 degrees of freedom
AIC: 247.2

Number of Fisher Scoring iterations: 17

```
m6 <- glm(promotion_after_1988 ~ any_combat + education_level + parent_CCP_leader, data = df

summary(m6)
```

Call:
glm(formula = promotion_after_1988 ~ any_combat + education_level +
parent_CCP_leader, family = binomial(link = "logit"), data = df %>%
filter(promotion_before_1955 != 1))

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
--	----------	------------	---------	----------

```

(Intercept)      -2.43058   0.30787  -7.895 2.91e-15 ***
any_combat       -0.47647   0.07773  -6.130 8.78e-10 ***
education_level   0.69718   0.15535   4.488 7.20e-06 ***
parent_CCP_leader -0.08611   0.42908  -0.201    0.841
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

(Dispersion parameter for binomial family taken to be 1)

```

Null deviance: 914.75 on 1034 degrees of freedom
Residual deviance: 842.62 on 1031 degrees of freedom
AIC: 850.62

```

Number of Fisher Scoring iterations: 5

Expanded Model 2 (+ birth province FE)

```
m8 <- glm(promotion_before_1955 ~ combat_pre_1955 + education_level + parent_CCP_leader + as
```

Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

```
summary(m8)
```

Call:

```
glm(formula = promotion_before_1955 ~ combat_pre_1955 + education_level +
parent_CCP_leader + as.factor(birth_province), family = binomial(link = "logit"),
data = df)
```

Coefficients:

		Estimate	Std. Error	z value	Pr(> z)
(Intercept)		-2.318e+01	7.135e+03	-0.003	0.997
combat_pre_1955		1.344e+00	2.994e-01	4.487	7.22e-06 ***
education_level		-2.841e-01	4.420e-01	-0.643	0.520
parent_CCP_leader		-1.640e+01	4.182e+03	-0.004	0.997
as.factor(birth_province)		2.097e+00	1.314e+04	0.000	1.000
as.factor(birth_province)		2.184e+00	1.626e+04	0.000	1.000
as.factor(birth_province)		-4.231e-01	1.286e+04	0.000	1.000
as.factor(birth_province)		1.289e+00	1.050e+04	0.000	1.000

as.factor(birth_province)	9.894e-01	9.870e+03	0.000	1.000
as.factor(birth_province)	1.580e+01	7.135e+03	0.002	0.998
as.factor(birth_province)	2.353e-02	1.327e+04	0.000	1.000
as.factor(birth_province)	1.965e-01	2.098e+04	0.000	1.000
as.factor(birth_province)	1.688e+01	7.135e+03	0.002	0.998
as.factor(birth_province)	7.702e-02	7.399e+03	0.000	1.000
as.factor(birth_province)	2.469e+00	3.009e+04	0.000	1.000
as.factor(birth_province)	-3.225e-01	8.535e+03	0.000	1.000
as.factor(birth_province)	-1.215e+00	1.032e+04	0.000	1.000
as.factor(birth_province)	1.876e+01	7.135e+03	0.003	0.998
as.factor(birth_province)	-5.028e-01	3.009e+04	0.000	1.000
as.factor(birth_province)	4.084e-01	7.976e+03	0.000	1.000
as.factor(birth_province)	1.498e+01	7.135e+03	0.002	0.998
as.factor(birth_province)	3.851e-01	7.601e+03	0.000	1.000
as.factor(birth_province)	1.572e+01	7.135e+03	0.002	0.998
as.factor(birth_province)	1.160e+00	8.950e+03	0.000	1.000
as.factor(birth_province)	-1.846e+00	3.009e+04	0.000	1.000
as.factor(birth_province)	1.753e+01	7.135e+03	0.002	0.998
as.factor(birth_province)	-3.190e+00	3.009e+04	0.000	1.000
as.factor(birth_province)	1.785e+01	7.135e+03	0.003	0.998
as.factor(birth_province)	-1.485e+00	1.332e+04	0.000	1.000
as.factor(birth_province)	1.749e+01	7.135e+03	0.002	0.998
as.factor(birth_province)	2.184e+00	3.009e+04	0.000	1.000
as.factor(birth_province)	1.879e+01	7.135e+03	0.003	0.998
as.factor(birth_province)	-3.628e-01	1.314e+04	0.000	1.000
as.factor(birth_province)	1.870e+01	7.135e+03	0.003	0.998
as.factor(birth_province)	5.778e-01	9.450e+03	0.000	1.000

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

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 308.25 on 1069 degrees of freedom
 Residual deviance: 197.09 on 1035 degrees of freedom
 AIC: 267.09

Number of Fisher Scoring iterations: 20

```
m9 <- glm(promotion_after_1988 ~ any_combat + education_level + parent_CCP_leader + as.factor(birth_province))

summary(m9)
```

Call:

```
glm(formula = promotion_after_1988 ~ any_combat + education_level +
    parent_CCP_leader + as.factor(birth_province), family = binomial(link = "logit"),
    data = df %>% filter(promotion_before_1955 != 1))
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-3.14069	1.06401	-2.952	0.003160 **
any_combat	-0.33695	0.08955	-3.763	0.000168 ***
education_level	0.68226	0.16349	4.173	3e-05 ***
parent_CCP_leader	0.38433	0.46128	0.833	0.404743
as.factor(birth_province)	1.67452	1.30272	1.285	0.198651
as.factor(birth_province)	0.83893	1.56535	0.536	0.592001
as.factor(birth_province)	-15.42552	1530.81972	-0.010	0.991960
as.factor(birth_province)	-0.48792	1.48469	-0.329	0.742433
as.factor(birth_province)	0.08629	1.30111	0.066	0.947123
as.factor(birth_province)	0.85790	1.15350	0.744	0.457035
as.factor(birth_province)	-15.72574	1742.83424	-0.009	0.992801
as.factor(birth_province)	-15.11050	2795.57295	-0.005	0.995687
as.factor(birth_province)	0.10414	1.14344	0.091	0.927434
as.factor(birth_province)	0.90658	1.06688	0.850	0.395464
as.factor(birth_province)	18.65998	3956.18048	0.005	0.996237
as.factor(birth_province)	0.74594	1.15366	0.647	0.517897
as.factor(birth_province)	-14.99786	1109.00543	-0.014	0.989210
as.factor(birth_province)	-14.84927	1608.18118	-0.009	0.992633
as.factor(birth_province)	20.01613	3956.18047	0.005	0.995963
as.factor(birth_province)	1.40550	1.09214	1.287	0.198121
as.factor(birth_province)	-0.83344	1.29334	-0.644	0.519310
as.factor(birth_province)	0.46155	1.08617	0.425	0.670887
as.factor(birth_province)	0.86001	1.09506	0.785	0.432248
as.factor(birth_province)	0.90430	1.15931	0.780	0.435370
as.factor(birth_province)	-14.77906	3956.18048	-0.004	0.997019
as.factor(birth_province)	0.28271	1.11136	0.254	0.799201
as.factor(birth_province)	-14.44212	3956.18048	-0.004	0.997087
as.factor(birth_province)	-0.16869	1.14580	-0.147	0.882957
as.factor(birth_province)	-14.71420	1591.81438	-0.009	0.992625
as.factor(birth_province)	-0.97114	1.47795	-0.657	0.511126
as.factor(birth_province)	19.67918	3956.18047	0.005	0.996031
as.factor(birth_province)	1.37256	1.10124	1.246	0.212627
as.factor(birth_province)	0.94880	1.51872	0.625	0.532145
as.factor(birth_province)	0.30937	1.15947	0.267	0.789609
as.factor(birth_province)	0.99881	1.19885	0.833	0.404763

```

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

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 914.75 on 1034 degrees of freedom
Residual deviance: 788.51 on 1000 degrees of freedom
AIC: 858.51

Number of Fisher Scoring iterations: 16

```

Expanded Model 3 (+ network)

```
m11 <- glm(promotion_before_1955 ~ combat_pre_1955 + education_level + parent_CCP_leader + d
```

```
Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
summary(m11)
```

Call:

```
glm(formula = promotion_before_1955 ~ combat_pre_1955 + education_level +
parent_CCP_leader + deng.network + jiang.network + hu.network +
xi.network + as.factor(birth_province), family = binomial(link = "logit"),
data = df)
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-2.293e+01	7.198e+03	-0.003	0.9975
combat_pre_1955	1.303e+00	3.236e-01	4.027	5.66e-05 ***
education_level	-4.017e-01	4.563e-01	-0.880	0.3787
parent_CCP_leader	-1.663e+01	4.040e+03	-0.004	0.9967
deng.network	8.455e-01	3.938e-01	2.147	0.0318 *
jiang.network	-1.679e+01	4.264e+03	-0.004	0.9969
hu.network	-1.772e+01	4.051e+03	-0.004	0.9965
xi.network	-1.513e+01	3.861e+03	-0.004	0.9969
as.factor(birth_province)	2.219e+00	1.296e+04	0.000	0.9999
as.factor(birth_province)	2.169e+00	1.629e+04	0.000	0.9999
as.factor(birth_province)	-3.928e-01	1.274e+04	0.000	1.0000

as.factor(birth_province)	1.296e+00	1.056e+04	0.000	0.9999
as.factor(birth_province)	1.564e+00	9.736e+03	0.000	0.9999
as.factor(birth_province)	1.561e+01	7.198e+03	0.002	0.9983
as.factor(birth_province)	1.585e-01	1.322e+04	0.000	1.0000
as.factor(birth_province)	2.308e-01	2.113e+04	0.000	1.0000
as.factor(birth_province)	1.671e+01	7.198e+03	0.002	0.9981
as.factor(birth_province)	8.128e-02	7.451e+03	0.000	1.0000
as.factor(birth_province)	2.571e+00	3.011e+04	0.000	0.9999
as.factor(birth_province)	-2.183e-01	8.496e+03	0.000	1.0000
as.factor(birth_province)	-1.351e+00	1.033e+04	0.000	0.9999
as.factor(birth_province)	1.842e+01	7.198e+03	0.003	0.9980
as.factor(birth_province)	-4.372e-01	3.011e+04	0.000	1.0000
as.factor(birth_province)	3.788e-01	7.989e+03	0.000	1.0000
as.factor(birth_province)	1.492e+01	7.198e+03	0.002	0.9983
as.factor(birth_province)	3.465e-01	7.646e+03	0.000	1.0000
as.factor(birth_province)	1.549e+01	7.198e+03	0.002	0.9983
as.factor(birth_province)	1.228e+00	8.986e+03	0.000	0.9999
as.factor(birth_province)	-1.740e+00	3.011e+04	0.000	1.0000
as.factor(birth_province)	1.731e+01	7.198e+03	0.002	0.9981
as.factor(birth_province)	-3.889e+00	3.011e+04	0.000	0.9999
as.factor(birth_province)	1.760e+01	7.198e+03	0.002	0.9980
as.factor(birth_province)	-1.457e+00	1.339e+04	0.000	0.9999
as.factor(birth_province)	1.729e+01	7.198e+03	0.002	0.9981
as.factor(birth_province)	1.989e+01	3.038e+04	0.001	0.9995
as.factor(birth_province)	1.902e+01	7.198e+03	0.003	0.9979
as.factor(birth_province)	-4.889e-01	1.321e+04	0.000	1.0000
as.factor(birth_province)	1.828e+01	7.198e+03	0.003	0.9980
as.factor(birth_province)	5.967e-01	9.443e+03	0.000	0.9999

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

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 308.25 on 1069 degrees of freedom
 Residual deviance: 190.48 on 1031 degrees of freedom
 AIC: 268.48

Number of Fisher Scoring iterations: 20

```
m12 <- glm(promotion_after_1988 ~ any_combat + education_level + parent_CCP_leader + deng.net
summary(m12)
```

Call:

```
glm(formula = promotion_after_1988 ~ any_combat + education_level +
  parent_CCP_leader + deng.network + jiang.network + hu.network +
  xi.network + as.factor(birth_province), family = binomial(link = "logit"),
  data = df %>% filter(promotion_before_1955 != 1))
```

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-3.16153	1.06551	-2.967	0.003006 **
any_combat	-0.38474	0.10211	-3.768	0.000165 ***
education_level	0.71251	0.16665	4.276	1.91e-05 ***
parent_CCP_leader	0.28004	0.46617	0.601	0.548020
deng.network	0.57144	0.35958	1.589	0.112016
jiang.network	0.65563	0.45724	1.434	0.151606
hu.network	1.09861	0.44300	2.480	0.013141 *
xi.network	1.18325	0.37770	3.133	0.001731 **
as.factor(birth_province)	1.54530	1.31076	1.179	0.238426
as.factor(birth_province)	0.82101	1.56685	0.524	0.600286
as.factor(birth_province)	-15.54215	1525.39459	-0.010	0.991871
as.factor(birth_province)	-0.49138	1.48539	-0.331	0.740788
as.factor(birth_province)	-0.18236	1.30705	-0.140	0.889036
as.factor(birth_province)	0.62825	1.15889	0.542	0.587742
as.factor(birth_province)	-16.05588	1686.11719	-0.010	0.992402
as.factor(birth_province)	-15.08635	2793.78343	-0.005	0.995691
as.factor(birth_province)	-0.16985	1.15193	-0.147	0.882781
as.factor(birth_province)	0.73847	1.06941	0.691	0.489856
as.factor(birth_province)	18.59008	3956.18048	0.005	0.996251
as.factor(birth_province)	0.52304	1.16107	0.450	0.652366
as.factor(birth_province)	-15.14913	1096.02550	-0.014	0.988972
as.factor(birth_province)	-15.26972	1562.91995	-0.010	0.992205
as.factor(birth_province)	20.07207	3956.18047	0.005	0.995952
as.factor(birth_province)	1.14304	1.09774	1.041	0.297753
as.factor(birth_province)	-0.84323	1.29604	-0.651	0.515292
as.factor(birth_province)	0.32178	1.08861	0.296	0.767543
as.factor(birth_province)	0.58806	1.10063	0.534	0.593138
as.factor(birth_province)	0.75060	1.16789	0.643	0.520421
as.factor(birth_province)	-14.67532	3956.18048	-0.004	0.997040
as.factor(birth_province)	0.09745	1.11559	0.087	0.930390
as.factor(birth_province)	-14.86202	3956.18049	-0.004	0.997003
as.factor(birth_province)	-0.30971	1.14998	-0.269	0.787687
as.factor(birth_province)	-14.65457	1586.36915	-0.009	0.992629
as.factor(birth_province)	-1.30279	1.48641	-0.876	0.380775

```

as.factor(birth_province)      18.58872 3956.18049  0.005 0.996251
as.factor(birth_province)      1.22210   1.10328  1.108 0.267994
as.factor(birth_province)      0.86827   1.52513  0.569 0.569146
as.factor(birth_province)      0.12461   1.16562  0.107 0.914865
as.factor(birth_province)      0.85892   1.20764  0.711 0.476935
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 914.75  on 1034  degrees of freedom
Residual deviance: 769.06  on  996  degrees of freedom
AIC: 847.06

Number of Fisher Scoring iterations: 16

```

Export regression table (1)

```

stargazer(m2, m3, m5, m6, m8, m9, m11, m12,
          header = FALSE,
          omit = c("birth_province", ".network"), type = "latex",
          dep.var.labels = rep(c("Pre-1955", "1988+"), 4),
          add.lines=list(#c("Birth decade fixed effects", "$\\checkmark", "$\\checkmark",
                           c("Birth province fixed effects", "", "", "", "", "$\\checkmark",
                           c("Leader networks", "", "", "", "", "", "", "$\\checkmark", "$\\checkmark",
          covariate.labels = c("Pre-1955 Combat exp.", "Any combat exp.",
                               "Education", "Parental CCP history"),
          label = "tab:logit-reg",
          title = "Logit Regressions on Pre- and Post-Statebuilding Promotions",
          # out = "output/logit-reg.tex"
        )

```

IV Regression (Rank ~ Fight | Eligible) (Promotions in 1955)

Long March

```

iv_model_long_march <- iv_robust(promotion_before_1955 ~ participated_long_march |
                                    long_march_cohort,
                                    data = df, diagnostics = TRUE)

```

```
summary(iv_model_long_march)
```

Call:

```
iv_robust(formula = promotion_before_1955 ~ participated_long_march |  
          long_march_cohort, data = df, diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper	DF
(Intercept)	-0.003678	0.00183	-2.010	4.472e-02	-0.007268		
participated_long_march	0.124393	0.02070	6.008	2.570e-09	0.083768		

Multiple R-squared: 0.05871 , Adjusted R-squared: 0.05783
F-statistic: 36.1 on 1 and 1068 DF, p-value: 2.57e-09

Diagnostics:

	numdf	dendf	value	p.value
Weak instruments	1	1068	1066.528	<2e-16 ***
Wu-Hausman	1	1067	6.368	0.0118 *
Overidentifying	0	NA	NA	NA

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

```
# first_stage_long_march <- lm(combat_post_1949 ~ long_march_instrument + age + cmc_chair_con  
#  
# summary(first_stage_long_march)
```

Sino-Japanese War

```
iv_model_japan_war <- iv_robust(promotion_before_1955 ~ fought_japan + participated_long_mar  
                                  data = df, diagnostics = TRUE)  
  
summary(iv_model_japan_war)
```

```
Call:  
iv_robust(formula = promotion_before_1955 ~ fought_japan + participated_long_march |  
    combat_japan_cohort + participated_long_march, data = df,  
    diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper	DF
(Intercept)	0.0007141	0.00180	0.3967	0.69169	-0.002818		
fought_japanTRUE	0.0264456	0.02502	1.0572	0.29068	-0.022640		
participated_long_march	0.0751612	0.03000	2.5058	0.01237	0.016305		
(Intercept)	0.004246	1067					
fought_japanTRUE	0.075532	1067					
participated_long_march	0.134017	1067					

Multiple R-squared: 0.06573 , Adjusted R-squared: 0.06398
F-statistic: 18.14 on 2 and 1067 DF, p-value: 1.789e-08

Diagnostics:

	numdf	dendf	value	p.value							
Weak instruments	1	1067	141.580	<2e-16 ***							
Wu-Hausman	1	1066	0.206	0.65							
Overidentifying	0	NA	NA	NA							

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

```
# first_stage_japan_war <- lm(combat_post_1949 ~ combat_japan_instrument + long_march_instru  
  
# summary(first_stage_japan_war)
```

Communist Civil War

```
iv_model_civil_war <- iv_robust(promotion_before_1955 ~ fought_comunist + participated_long_march |  
    combat_comunist_cohort + participated_long_march + fought_japanTRUE, data = df, diagnostics = TRUE)  
  
summary(iv_model_civil_war)
```

Call:

```
iv_robust(formula = promotion_before_1955 ~ fought_comunist +
  participated_long_march + fought_japan | combat_comunist_cohort +
  participated_long_march + fought_japan, data = df, diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper	DF
(Intercept)	0.008135	0.004873	1.669	0.095355	-0.001427	0.017698	1066
fought_comunistTRUE	-0.036295	0.021568	-1.683	0.092710	-0.078617	0.006026	1066
participated_long_march	0.070766	0.025075	2.822	0.004859	0.021564	0.119968	1066
fought_japanTRUE	0.059705	0.023947	2.493	0.012810	0.012716	0.106695	1066

Multiple R-squared: 0.06083 , Adjusted R-squared: 0.05819
F-statistic: 12.84 on 3 and 1066 DF, p-value: 3.049e-08

Diagnostics:

	numdf	dendif	value	p.value
Weak instruments	1	1066	478.648	<2e-16 ***
Wu-Hausman	1	1065	3.143	0.0765 .
Overidentifying	0	NA	NA	NA

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

```
#  
# first_stage_civil_war <- lm(combat_post_1949 ~ combat_comunist_instrument + combat_japan_...  
#  
# summary(first_stage_civil_war)
```

Korean War

```
iv_model_korea <- iv_robust(promotion_before_1955 ~ fought_korea + fought_comunist + fought_...
```

```
summary(iv_model_korea)
```

Call:

```
iv_robust(formula = promotion_before_1955 ~ fought_korea + fought_comunist +
  fought_japan + participated_long_march | combat_korea_cohort +
  fought_comunist + fought_japan + participated_long_march,
  data = df, diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper	DF
(Intercept)	0.005932	0.002803	2.1160	0.034579	0.0004311		
fought_koreaTRUE	-0.466755	0.170106	-2.7439	0.006173	-0.8005371		
fought_comunistTRUE	0.045063	0.020610	2.1864	0.029001	0.0046217		
fought_japanTRUE	0.168813	0.063573	2.6554	0.008039	0.0440704		
participated_long_march	-0.013993	0.048490	-0.2886	0.772958	-0.1091397		
(Intercept)	0.01143	1065					
fought_koreaTRUE	-0.13297	1065					
fought_comunistTRUE	0.08551	1065					
fought_japanTRUE	0.29355	1065					
participated_long_march	0.08115	1065					

Multiple R-squared: -0.6341 , Adjusted R-squared: -0.6403

F-statistic: 6.725 on 4 and 1065 DF, p-value: 2.406e-05

Diagnostics:

	numdf	dendif	value	p.value
Weak instruments	1	1065	39.47	4.85e-10 ***
Wu-Hausman	1	1064	12.26	0.000483 ***
Overidentifying	0	NA	NA	NA

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

```
# first_stage_korea <- lm(combat_post_1949 ~ combat_korea_instrument + combat_japan_instrument)
#
# summary(first_stage_korea)
```

```

library(broom)

coef_long_march <- tidy(iv_model_long_march, conf.int = TRUE)[2, ]
coef_japan_war <- tidy(iv_model_japan_war, conf.int = TRUE)[2, ]
coef_civil_war <- tidy(iv_model_civil_war, conf.int = TRUE)[2, ]
coef_korea <- tidy(iv_model_korea, conf.int = TRUE)[2, ]
# coef_india <- tidy(iv_model_india, conf.int = TRUE)[2, ]
# coef_vietnam <- tidy(iv_model_vietnam, conf.int = TRUE)[2, ]

coefficients <- coef_long_march %>%
  bind_rows(coef_japan_war) %>%
  bind_rows(coef_civil_war) %>%
  bind_rows(coef_korea) # %>%
  # bind_rows(coef_india) %>%
  # bind_rows(coef_vietnam)

coefficients$model <- factor(c("Long March", "Sino-Japanese War", "Civil War", "Korean War"))

plot55 <- coefficients %>%
  filter(!model %in% c("Sino-India War", "Vietnam War")) %>%
  ggplot(aes(x = model, y = estimate)) +
  geom_point() +
  geom_errorbar(aes(ymin = conf.low, ymax = conf.high), width = 0.1) +
  geom_hline(yintercept = 0, linetype = "dashed", color = "red") +
  labs(
    title = "2SLS Estimates: 1955",
    x = NULL,
    y = "Change in Probability of Promotion"
  ) +
  theme_bw() +
  scale_y_continuous(limits = c(-1, .5)) +
  theme(axis.text.x = element_text(angle = 0, hjust = 0.5))

```

IV Regression (Rank ~ Fight | Eligible) (Promotions post 1988)

Long March

```

iv_model_long_march <- iv_robust(promotion_after_1988 ~ participated_long_march |
                                    long_march_cohort,
                                    data = df, diagnostics = TRUE)

```

```
summary(iv_model_long_march)
```

Call:

```
iv_robust(formula = promotion_after_1988 ~ participated_long_march |  
          long_march_cohort, data = df, diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper
(Intercept)	0.2370	0.01663	14.25	2.555e-42	0.2044	0.2696
participated_long_march	-0.2766	0.02484	-11.14	2.487e-27	-0.3253	-0.2279
DF						
(Intercept)	1068					
participated_long_march	1068					

Multiple R-squared: 0.02837 , Adjusted R-squared: 0.02746

F-statistic: 124 on 1 and 1068 DF, p-value: < 2.2e-16

Diagnostics:

	numdf	dendf	value	p.value							
Weak instruments	1	1068	1066.5	<2e-16 ***							
Wu-Hausman	1	1067	81.3	<2e-16 ***							
Overidentifying	0	NA	NA	NA							

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

```
# first_stage_long_march <- lm(combat_post_1949 ~ long_march_instrument + age + cmc_chair_con  
#  
# summary(first_stage_long_march)
```

Sino-Japanese War

```
iv_model_japan_war <- iv_robust(promotion_after_1988 ~ fought_japan + participated_long_march |  
                                    data = df, diagnostics = TRUE)  
  
summary(iv_model_japan_war)
```

```
Call:  
iv_robust(formula = promotion_after_1988 ~ fought_japan + participated_long_march |  
    combat_japan_cohort + participated_long_march, data = df,  
    diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper
(Intercept)	0.2742	0.01963	13.970	7.414e-41	0.2357	0.3127
fought_japanTRUE	-0.5545	0.07117	-7.792	1.563e-14	-0.6942	-0.4149
participated_long_march	0.3137	0.06164	5.090	4.239e-07	0.1928	0.4347
	DF					
(Intercept)	1067					
fought_japanTRUE	1067					
participated_long_march	1067					

Multiple R-squared: -0.03881 , Adjusted R-squared: -0.04075
F-statistic: 62.44 on 2 and 1067 DF, p-value: < 2.2e-16

Diagnostics:

	numdf	dendf	value	p.value
Weak instruments	1	1067	141.58	<2e-16 ***
Wu-Hausman	1	1066	84.53	<2e-16 ***
Overidentifying	0	NA	NA	NA

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

```
# first_stage_japan_war <- lm(combat_post_1949 ~ combat_japan_instrument + long_march_instru  
  
# summary(first_stage_japan_war)
```

Communist Civil War

```
iv_model_civil_war <- iv_robust(promotion_after_1988 ~ fought_comunist + participated_long  
    combat_comunist_cohort + participated_long_march + fought_japan  
    data = df, diagnostics = TRUE)  
  
summary(iv_model_civil_war)
```

Call:

```
iv_robust(formula = promotion_after_1988 ~ fought_comunist +
  participated_long_march + fought_japan | combat_comunist_cohort +
  participated_long_march + fought_japan, data = df, diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper
(Intercept)	0.25661	0.01991	12.8893	1.970e-35	0.2175	0.29567
fought_comunistTRUE	-0.14309	0.03828	-3.7386	1.949e-04	-0.2182	-0.06799
participated_long_march	-0.03692	0.03322	-1.1116	2.666e-01	-0.1021	0.02826
fought_japanTRUE	-0.04204	0.04341	-0.9685	3.330e-01	-0.1272	0.04313
	DF					
(Intercept)	1066					
fought_comunistTRUE	1066					
participated_long_march	1066					
fought_japanTRUE	1066					

Multiple R-squared: 0.07258 , Adjusted R-squared: 0.06997

F-statistic: 33.91 on 3 and 1066 DF, p-value: < 2.2e-16

Diagnostics:

	numdf	dendf	value	p.value
Weak instruments	1	1066	478.65	<2e-16 ***
Wu-Hausman	1	1065	0.58	0.446
Overidentifying	0	NA	NA	NA

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

```
#  
# first_stage_civil_war <- lm(combat_post_1949 ~ combat_comunist_instrument + combat_japan_...  
#  
# summary(first_stage_civil_war)
```

Korean War

```
iv_model_korea <- iv_robust(promotion_after_1988 ~ fought_korea + fought_comunist + fought_...  
  data = df, diagnostics = TRUE)
```

```
summary(iv_model_korea)
```

Call:

```
iv_robust(formula = promotion_after_1988 ~ fought_korea + fought_comunist +
  fought_japan + participated_long_march | combat_korea_cohort +
  fought_comunist + fought_japan + participated_long_march,
  data = df, diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper	DF
(Intercept)	0.253294	0.01934	13.09634	1.915e-36	0.2153		
fought_koreaTRUE	0.005861	0.13140	0.04461	9.644e-01	-0.2520		
fought_comunistTRUE	-0.129397	0.03262	-3.96729	7.756e-05	-0.1934		
fought_japanTRUE	-0.054194	0.05632	-0.96228	3.361e-01	-0.1647		
participated_long_march	-0.036438	0.04109	-0.88677	3.754e-01	-0.1171		
(Intercept)	0.29124	1065					
fought_koreaTRUE	0.26370	1065					
fought_comunistTRUE	-0.06540	1065					
fought_japanTRUE	0.05631	1065					
participated_long_march	0.04419	1065					

Multiple R-squared: 0.07357 , Adjusted R-squared: 0.07009

F-statistic: 26.9 on 4 and 1065 DF, p-value: < 2.2e-16

Diagnostics:

	numdf	dendif	value	p.value
Weak instruments	1	1065	39.470	4.85e-10 ***
Wu-Hausman	1	1064	0.604	0.437
Overidentifying	0	NA	NA	NA

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

```
# first_stage_korea <- lm(combat_post_1949 ~ combat_korea_instrument + combat_japan_instrument)
#
# summary(first_stage_korea)
```

Sino-Indian War

```
iv_model_india <- iv_robust(promotion_after_1988 ~ fought_india + fought_korea + fought_commu  
                                combat_india_cohort + fought_korea + fought_comunist + fought_ja  
                                data = df, diagnostics = TRUE)  
  
summary(iv_model_india)
```

Call:

```
iv_robust(formula = promotion_after_1988 ~ fought_india + fought_korea +  
          fought_comunist + fought_japan + participated_long_march |  
          combat_india_cohort + fought_korea + fought_comunist + fought_japan +  
          participated_long_march, data = df, diagnostics = TRUE)
```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper	DF
(Intercept)	0.244757	0.02161	11.3268	3.678e-28	0.202356	0.287157	1064
fought_indiaTRUE	1.988743	2.52967	0.7862	4.319e-01	-2.974956	6.952442	1064
fought_koreaTRUE	0.088536	0.04812	1.8399	6.606e-02	-0.005885	0.182957	1064
fought_comunistTRUE	-0.131025	0.03416	-3.8361	1.323e-04	-0.198045	-0.064005	1064
fought_japanTRUE	-0.119376	0.06458	-1.8486	6.480e-02	-0.246089	0.007338	1064
participated_long_march	0.007763	0.04888	0.1588	8.738e-01	-0.088148	0.103673	1064

Multiple R-squared: -0.08055 , Adjusted R-squared: -0.08563

F-statistic: 23.94 on 5 and 1064 DF, p-value: < 2.2e-16

Diagnostics:

	numdf	dendf	value	p.value
Weak instruments	1	1064	3.16	0.0758 .
Wu-Hausman	1	1063	0.72	0.3962
Overidentifying	0	NA	NA	NA

```

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

```

```

# first_stage_vietnam <- lm(combat_post_1949 ~ combat_vietnam_instrument + combat_korea_instrument)
#
# summary(first_stage_vietnam)

```

Vietnam War

```

iv_model_vietnam <- iv_robust(promotion_after_1988 ~ fought_vietnam + fought_korea + fought_comunist + fought_japan + fought_india + participated_long_march | combat_vietnam_cohort + fought_korea + fought_comunist + fought_japan + fought_india + participated_long_march,
                                data = df, diagnostics = TRUE)

summary(iv_model_vietnam)

```

Call:

```

iv_robust(formula = promotion_after_1988 ~ fought_vietnam + fought_korea +
           fought_comunist + fought_japan + fought_india + participated_long_march |
           combat_vietnam_cohort + fought_korea + fought_comunist +
           fought_japan + fought_india + participated_long_march,
           data = df, diagnostics = TRUE)

```

Standard error type: HC2

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	CI Lower	CI Upper	DF
(Intercept)	0.0733996	0.0979	0.749755	0.45357	-0.1187	0.2655	1063
fought_vietnamTRUE	3.9585761	2.0821	1.901265	0.05754	-0.1269	8.0440	1063
fought_koreaTRUE	-0.0775553	0.1378	-0.562845	0.57366	-0.3479	0.1928	1063
fought_comunistTRUE	-0.0003165	0.1011	-0.003131	0.99750	-0.1987	0.1980	1063
fought_japanTRUE	-0.1260578	0.1216	-1.036868	0.30003	-0.3646	0.1125	1063
fought_indiaTRUE	-0.4670318	0.7793	-0.599292	0.54911	-1.9962		
participated_long_march	0.0319126	0.1135	0.281181	0.77863	-0.1908		

```

fought_indiaTRUE      1.0621 1063
participated_long_march 0.2546 1063

Multiple R-squared: -3.243 , Adjusted R-squared: -3.267
F-statistic: 4.764 on 6 and 1063 DF, p-value: 8.399e-05

```

Diagnostics:

	numdf	dendif	value	p.value							
Weak instruments	1	1063	3.90	0.0486 *							
Wu-Hausman	1	1062	15.87	7.24e-05 ***							
Overidentifying	0	NA	NA	NA							

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

```

# first_stage_vietnam <- lm(combat_post_1949 ~ combat_vietnam_instrument + combat_korea_instrument)
#
# summary(first_stage_vietnam)

```

```

library(broom)

coef_long_march <- tidy(iv_model_long_march, conf.int = TRUE)[2, ]
coef_japan_war <- tidy(iv_model_japan_war, conf.int = TRUE)[2, ]
coef_civil_war <- tidy(iv_model_civil_war, conf.int = TRUE)[2, ]
coef_korea <- tidy(iv_model_korea, conf.int = TRUE)[2, ]
coef_india <- tidy(iv_model_india, conf.int = TRUE)[2, ]
coef_vietnam <- tidy(iv_model_vietnam, conf.int = TRUE)[2, ]

coefficients <- coef_long_march %>%
  bind_rows(coef_japan_war) %>%
  bind_rows(coef_civil_war) %>%
  bind_rows(coef_korea) %>%
  bind_rows(coef_india) %>%
  bind_rows(coef_vietnam)

coefficients$model <- factor(c("Long March", "Sino-Japanese War", "Civil War", "Korean War", "India War"))

plot88 <- coefficients %>%
  filter(!model %in% c("Sino-India War", "Vietnam War")) %>%
  ggplot(aes(x = model, y = estimate)) +
  geom_point() +
  geom_errorbar(aes(ymin = conf.low, ymax = conf.high), width = 0.1) +
  geom_hline(yintercept = 0, linetype = "dashed", color = "red") +
  theme_minimal()

```

```

  labs(
    title = "2SLS Estimates: 1988+",
    x = NULL,
    y = "Change in Probability of Promotion"
  ) +
  theme_bw() +
  scale_y_continuous(limits = c(-1, .5)) +
  theme(axis.text.x = element_text(angle = 0, hjust = 0.5))

```

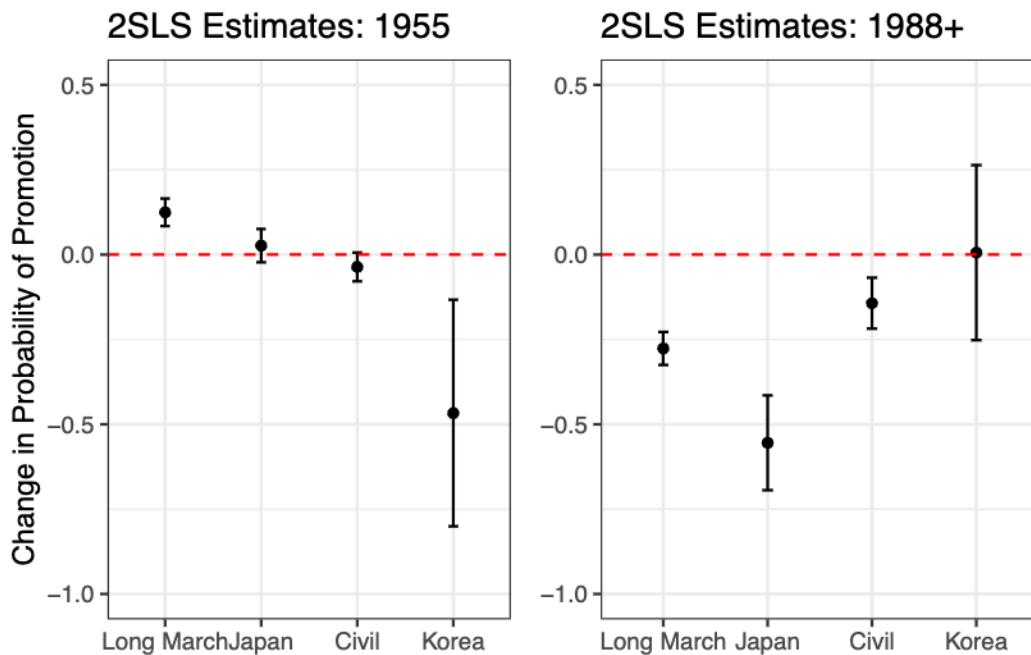
Combined Plots

```

library(ggpubr)

combined_plot <- ggarrange(plot55 + scale_x_discrete(labels = c("Long March", "Japan", "Civil", "Korea"),
                                                       na.value = "NA"),
                           plot56 + scale_x_discrete(labels = c("Long March", "Japan", "Civil", "Korea"),
                                                       na.value = "NA"),
                           nrow = 1, ncol = 2)
combined_plot

```



```
# ggsave(combined_plot, filename = "output/2sols.pdf", height = 4, width = 8)
```