

Can University Education Cultivate Immigrant Integration?

The Case of Local Enfranchisement
for Foreign Residents in Japan

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October 1st/2nd, 2020

Motivation

Data

Analysis

Discussion

Higher education and immigration attitudes

Higher education and political behavior/attitudes

(Wolfinger and Rosenstone 1980; Nie, Junn, and Stehlik-Barry 1996; Highton 2009).

Higher education and socioeconomic outcomes (Angrist and Pischke 2009).

Higher education and liberal immigration attitudes: consistent **correlation** (Citrin et al. 1997; Hainmueller and Hiscox 2007, 2010), inconsistent **causal** connections (Lancee and Sarasin 2015; Cavaille and Marshall 2019) .

Existing evidence is largely based on **North America** and **Europe**.

Do theories generalize elsewhere (i.e., Japan)?

The Role of University Education in Japan and Elsewhere

North America and Europe	Japan
University professors pass on liberal views to students.	⇒ Potentially weaker . Little evidence on liberal ideology of Japanese professors.
Learning pedagogy increases the support for diversity.	⇒ Potentially weaker . Less focus on learning process rather than outcomes.
University provides opportunities for positive social contact with foreigners .	⇒ Potentially gendered . Females ↑ than males to enroll in humanity and social studies: the majority of foreigners are enrolled there.

Hypotheses

H1 (**Male**) University education **does not** increase the support for granting suffrage to permanent resident foreigners.

H2 (**Female**) University education **does** increase the support for granting suffrage to permanent resident foreigners.

H3A Education's effect **is not mediated** by **liberalization in ideology**.

H3B/C Education's effect **is mediated** by **more positive feeling toward Koreans/Chinese**.

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Survey on the Image of Foreign Countries and Current Topics (SIFCCT)

- Monthly online survey ($N \approx 2000$) conducted 2011/10 – 2013/09 (*Total* $N \approx 50000$) with fresh Japanese samples.
- Majority of respondents provide **ZIP codes** of their residential address.

UTokyo-Asahi Survey (UTAS)

- Mail election surveys with Japanese samples conducted in 2009, 2012 and 2014 ($N \approx 4000$).

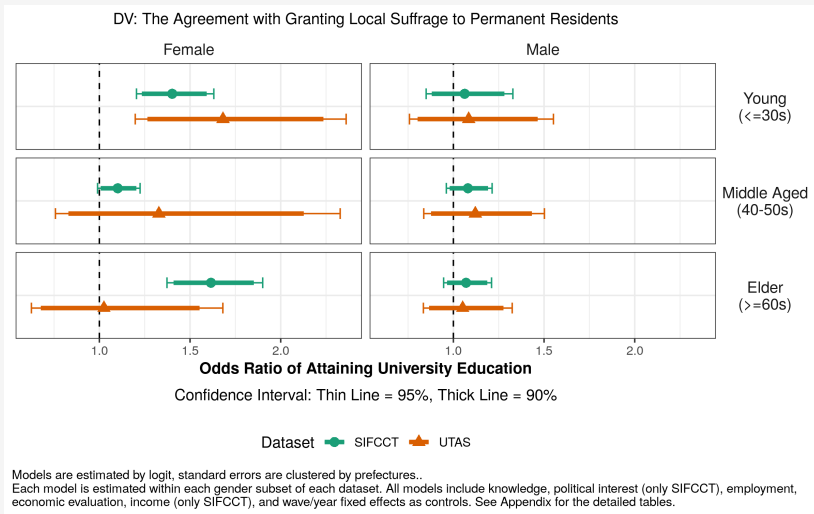
Motivation

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Initial results (Logit): Strongest correlation among young females



Additional strategy to improve causal inference (SIFCCT)

Geographic distance adjusted matching

(Keele, Titiunik, and Zubizarreta 2015)

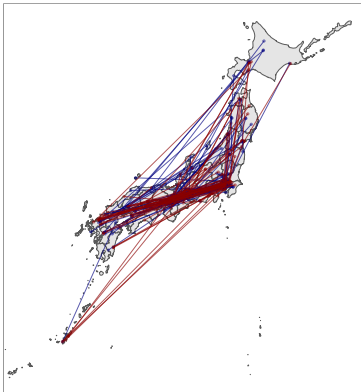
1. **Matching (exact or fine balance) based on known confounders** (knowledge, interest, employment, economic evaluation, income, and survey waves).
2. **Adjust for geographic dist. b/w pairs** by minimizing:

$$\sum_{i \in H} \sum_{j \in U} d_{i,j} a_{i,j} - \lambda \sum_{i \in H} \sum_{j \in U} a_{i,j}$$

- $i \in H$: (Treated/minority) Cases **without** university education
- $j \in U$: (Control/majority) Cases **with** university education
- $a_{i,j}$: Indicator, if i and j are **matched in step 1**.
- $d_{i,j}$: **Geographic distance between i and j (in km)**.
- λ : **Weight for geographic adjustment (match if $\overline{d_{i,j}} < \lambda$)**.

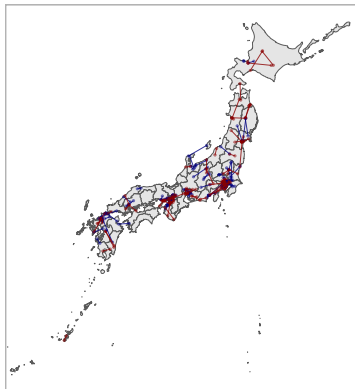
Additional strategy to improve causal inference

No Distance Adjustment



892/892 Female and 837/838 Male Matched Pairs Found

Distance Adjusted ($\lambda = 200\text{km}$)



812/892 Female and 806/838 Male Matched Pairs Found

Dots represent randomly sampled 200 matched respondent pairs (age 20s or 30s in SIFCCT) and lines connect two matched pairs on the map (red = female, blue = male). The left panel shows the matching outcome without geographic distance adjustment and the right panel shows the outcome of matching with geographic distance adjustment.

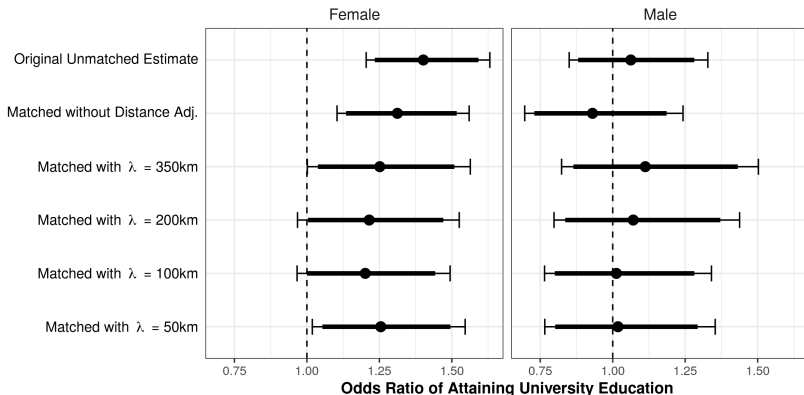
► $\lambda = 350\text{km}$

► $\lambda = 100\text{km}$

► $\lambda = 50\text{km}$

Matched results (Logit, SIFCCT Young Cohort)

DV: The Agreement with Granting Local Suffrage to Permanent Residents



Confidence Interval: Thin Line = 95%, Thick Line = 90%

Models are estimated by logit, standard errors are clustered by prefectures..

Each model is estimated within each gender subset of each dataset. All models include knowledge, political interest, employment, economic evaluation, income, and wave fixed effects as controls. See Appendix for the detailed tables.

► W/o adjustment

► $\lambda = 350\text{km}$

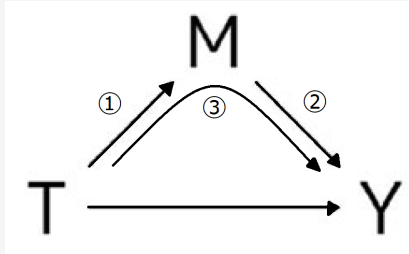
► $\lambda = 200\text{km}$

► $\lambda = 100\text{km}$

► $\lambda = 50\text{km}$

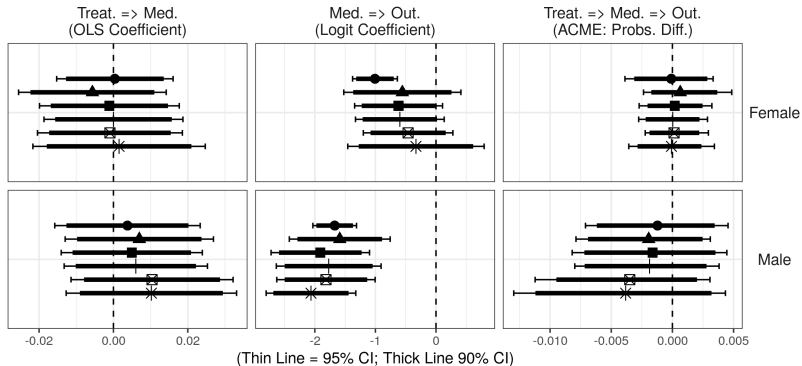
Causal mediation analysis

Causal mediation analysis (Imai et al. 2011)



1. **Treatment** (T: University Education) \Rightarrow **Mediator** (M: Ideology/ Feeling towards Korea/China)
2. **Mediator** (M) \Rightarrow **Outcome** (Y: Integration Attitudes)
3. **Average Causal Mediation Effect**: $T \Rightarrow M \Rightarrow Y$

Causal mediation analysis (ideology)



Model/
Dataset

- No Matching (with Controls)
- Matched with $\lambda = 350\text{km}$
- ▣ Matched with $\lambda = 100\text{km}$
- ▲ Matched without Distance Adj.
- ⊕ Matched with $\lambda = 200\text{km}$
- ✱ Matched with $\lambda = 50\text{km}$

Treatment: University education or more (1), Senior High School or less (0).

Mediator: Conservative Ideology (rescaled to 0-1 with 1 being the most conservative). Model is estimated by OLS.

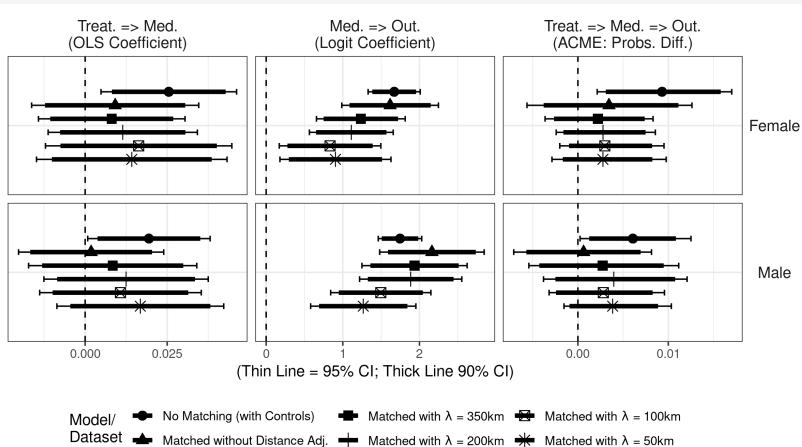
Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

► LDP support

► Left party support

► Right party support

Causal mediation analysis (feeling towards China)

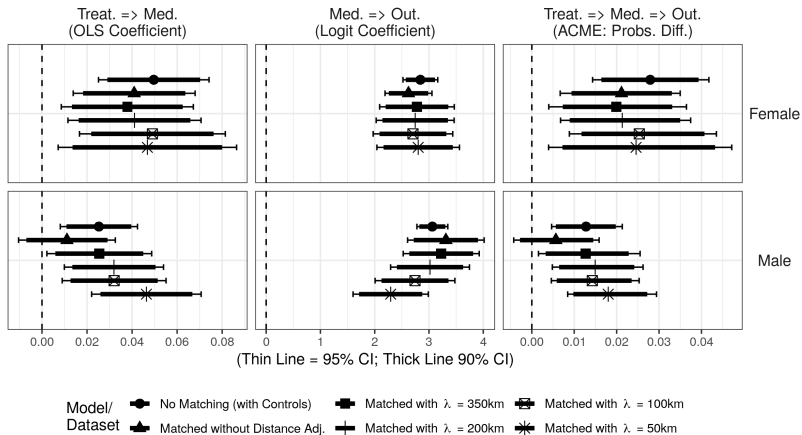


Treatment: University education or more (1), Senior High School or less (0).

Mediator: Feeling thermometer towards China (rescaled to 0-1 with 1 being the most favorable). Model is estimated by OLS.

Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

Causal mediation analysis (feeling towards South Korea)



Treatment: University education or more (1), Senior High School or less (0).

Mediator: Feeling thermometer towards South Korea (rescaled to 0-1 with 1 being the most favorable). Model is estimated by OLS.

Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

Motivation

Data

Analysis

Discussion

Summary

Japanese university education has a **limited effect** on immigration integration attitudes (i.e., support for granting voting rights to foreigners). If any, the effect ...

- Exists among young cohort.
- Exists among **female**.
- Is **Mediated** through **feeling towards South Korea**.

⇒ **More nuanced and inclusive theory** of how higher education shapes public opinion

Geographic-distance adjustment to matching provides more **robust inferences** of causal effect.

Thank you for listening!

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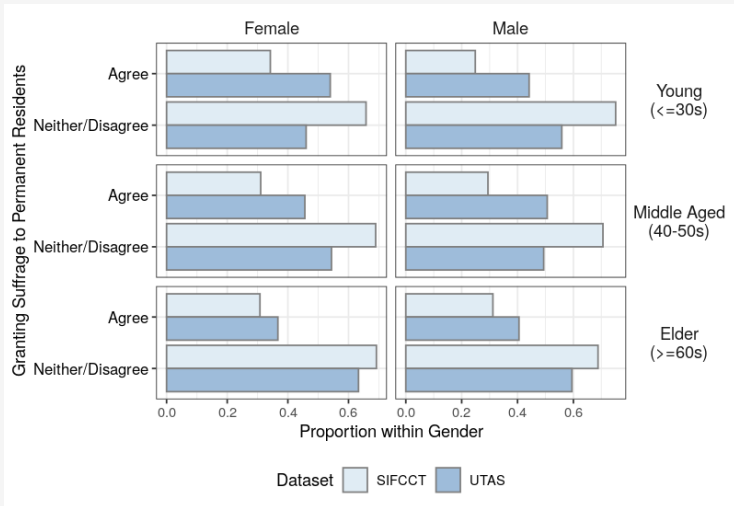


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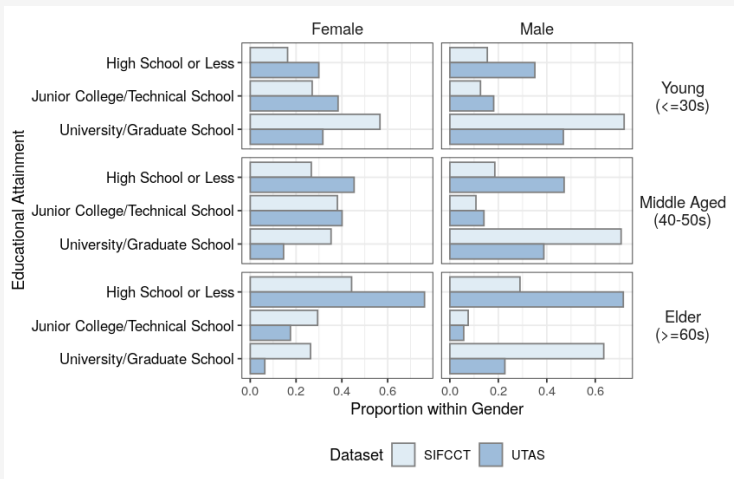
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Descriptive (Outcome)



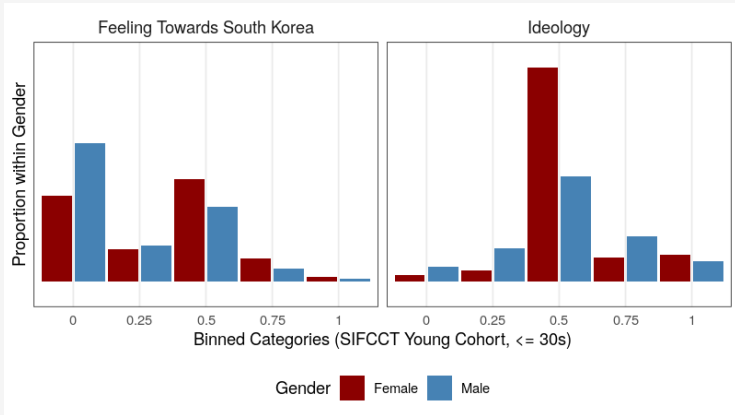
[▶ Back to Data](#)

Descriptive (Education)



[► Back to Data](#)

Descriptive (Mediator)



► [Back to Data](#)

Education and the Support for Foreigner's Local Suffrage (Logit, SIFCCT)

	Female	Male
(Intercept)	-0.990 (0.108)***	-1.258 (0.141)***
University Education	0.338 (0.077)***	0.061 (0.114)
Middle Aged (40-50s)	0.079 (0.085)	0.215 (0.104)*
Elder (>=60s)	-0.049 (0.110)	0.364 (0.095)***
University*Middle Aged	-0.241 (0.101)*	0.017 (0.130)
University*Elder	0.142 (0.101)	0.007 (0.118)
Knowledge	-0.191 (0.061)**	-0.157 (0.089) [†]
Political Interest	0.227 (0.107)*	0.172 (0.071)*
Employed	0.093 (0.045)*	0.066 (0.057)
Economic Evaluation	0.370 (0.107)***	0.175 (0.077)*
Income	-0.007 (0.071)	0.151 (0.069)*
Length of Residence	0.003 (0.068)	-0.195 (0.071)**
AIC	12437.805	19485.290
BIC	12668.327	19731.706
Log Likelihood	-6186.902	-9710.645
Deviance	12373.805	19421.290
Num. obs.	9935	16326

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.1$. Wave fixed effects omitted from the output.

Response ranges from 1 = disagree to 5 = agree for supporting permanent resident's local suffrage.

The model is estimated by logit, standard errors are clustered by prefectures..

Education and the Support for Foreigner's Local Suffrage (Logit, UTAS)

	Model 1	Model 2
(Intercept)	0.228 (0.204)	-0.007 (0.172)
University Education	0.520 (0.173)**	0.081 (0.183)
Middle Aged (40-50s)	-0.151 (0.195)	0.282 (0.188)
Elder (>=60s)	-0.427 (0.198)*	0.004 (0.170)
University*Middle Aged	-0.236 (0.382)	0.033 (0.214)
University*Elder	-0.495 (0.278) [†]	-0.031 (0.209)
Knowledge	-0.076 (0.221)	-0.198 (0.211)
Employed	-0.027 (0.110)	0.127 (0.109)
Economic Evaluation	-0.434 (0.241) [†]	-0.633 (0.207)**
AIC	2365.709	2888.057
BIC	2425.888	2950.292
Log Likelihood	-1171.854	-1433.028
Deviance	2343.709	2866.057
Num. obs.	1756	2117

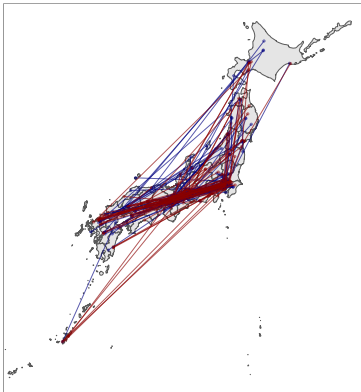
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.1$. Year fixed effects omitted from the output.

Response ranges from 1 = disagree to 5 = agree for supporting permanent resident's local suffrage.

The model is estimated by logit, standard errors are clustered by prefectures..

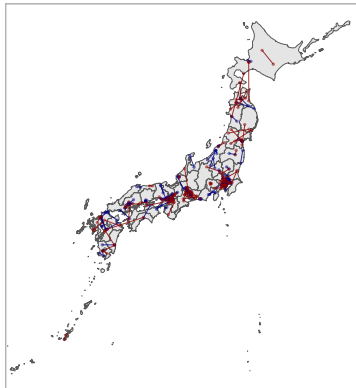
Geographic distance adjusted matching ($\lambda = 350km$)

No Distance Adjustment



892/892 Female and 837/838 Male Matched Pairs Found

Distance Adjusted ($\lambda = 350km$)



847/892 Female and 823/838 Male Matched Pairs Found

Dots represent randomly sampled 200 matched respondent pairs (age 20s or 30s in SIFCCT) and lines connect two matched pairs on the map (red = female, blue = male). The left panel shows the matching outcome without geographic distance adjustment and the right panel shows the outcome of matching with geographic distance adjustment.

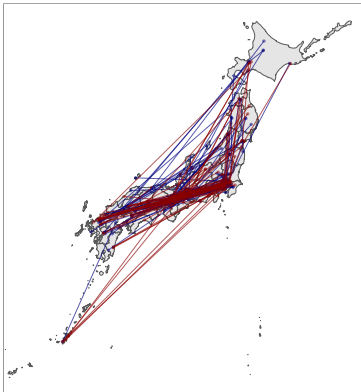
► $\lambda = 200km$

► $\lambda = 100km$

► $\lambda = 50km$

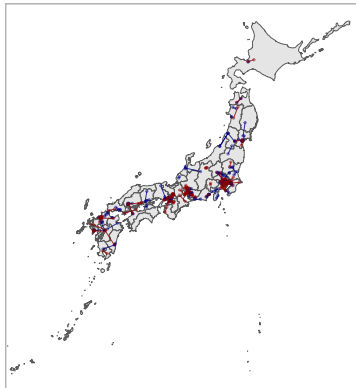
Geographic distance adjusted matching ($\lambda = 100km$)

No Distance Adjustment



892/892 Female and 837/838 Male Matched Pairs Found

Distance Adjusted ($\lambda = 100km$)



715/892 Female and 743/838 Male Matched Pairs Found

Dots represent randomly sampled 200 matched respondent pairs (age 20s or 30s in SIFCCT) and lines connect two matched pairs on the map (red = female, blue = male). The left panel shows the matching outcome without geographic distance adjustment and the right panel shows the outcome of matching with geographic distance adjustment.

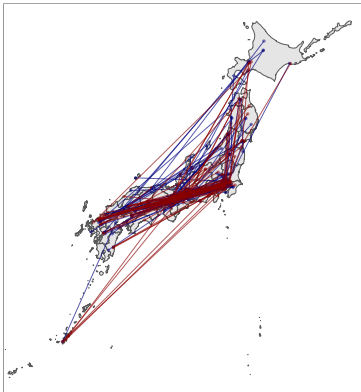
► $\lambda = 350km$

► $\lambda = 200km$

► $\lambda = 50km$

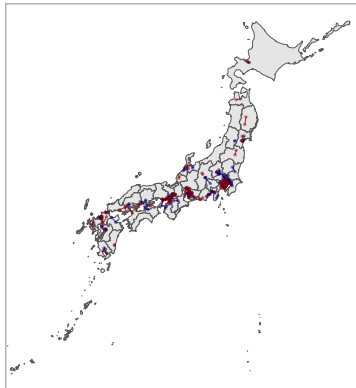
Geographic distance adjusted matching ($\lambda = 50km$)

No Distance Adjustment



892/892 Female and 837/838 Male Matched Pairs Found

Distance Adjusted ($\lambda = 50km$)



581/892 Female and 626/838 Male Matched Pairs Found

Dots represent randomly sampled 200 matched respondent pairs (age 20s or 30s in SIFCCT) and lines connect two matched pairs on the map (red = female, blue = male). The left panel shows the matching outcome without geographic distance adjustment and the right panel shows the outcome of matching with geographic distance adjustment.

► $\lambda = 350km$

► $\lambda = 200km$

► $\lambda = 100km$

Education and the Support for Foreigner's Local Suffrage (Logit, SIFCCT with Respondents 30s or Younger: Matched Without Distance Adjustment)

	Female	Male
(Intercept)	-1.002 (0.270)***	-1.340 (0.304)***
University Education	0.272 (0.088)**	-0.072 (0.148)
Knowledge	0.102 (0.284)	-0.656 (0.173)***
Political Interest	0.572 (0.191)**	0.353 (0.220)
Employed	0.097 (0.123)	0.339 (0.187) [†]
Economic Evaluation	0.342 (0.220)	0.255 (0.315)
Income	-0.131 (0.250)	0.235 (0.229)
Length of Residence	-0.237 (0.174)	-0.384 (0.128)**
AIC	2232.187	1815.467
BIC	2385.812	1967.311
Log Likelihood	-1088.094	-879.734
Deviance	2176.187	1759.467
Num. obs.	1784	1674

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.1$. Wave fixed effects omitted from the output.

Response ranges from 1 = disagree to 5 = agree for supporting permanent resident's local suffrage.

The model is estimated by logit, standard errors are clustered by prefectures..

Education and the Support for Foreigner's Local Suffrage (Logit, SIFCCT with Respondents 30s or Younger: Matched With $\lambda = 350km$)

	Female	Male
(Intercept)	-1.304 (0.284)***	-1.538 (0.366)***
University Education	0.227 (0.106)*	0.018 (0.145)
Knowledge	-0.150 (0.289)	-0.627 (0.181)***
Political Interest	0.717 (0.223)**	0.315 (0.213)
Employed	0.061 (0.115)	0.256 (0.244)
Economic Evaluation	0.337 (0.193) [†]	0.329 (0.319)
Income	0.026 (0.309)	0.705 (0.225)**
Length of Residence	-0.315 (0.157)*	-0.441 (0.132)***
AIC	2104.617	1794.082
BIC	2256.793	1945.453
Log Likelihood	-1024.309	-869.041
Deviance	2048.617	1738.082
Num. obs.	1694	1646

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.1$. Wave fixed effects omitted from the output.

Response ranges from 1 = disagree to 5 = agree for supporting permanent resident's local suffrage.

The model is estimated by logit, standard errors are clustered by prefectures..

Education and the Support for Foreigner's Local Suffrage (Logit, SIFCCT with Respondents 30s or Younger: Matched With $\lambda = 200km$)

	Female	Male
(Intercept)	-1.266 (0.267)***	-1.670 (0.386)***
University Education	0.184 (0.111) [†]	0.012 (0.143)
Knowledge	-0.195 (0.286)	-0.533 (0.185)**
Political Interest	0.691 (0.227)**	0.321 (0.217)
Employed	0.053 (0.108)	0.398 (0.278)
Economic Evaluation	0.432 (0.196)*	0.281 (0.310)
Income	-0.108 (0.317)	0.670 (0.204)**
Length of Residence	-0.296 (0.150)*	-0.417 (0.134)**
AIC	2019.884	1754.985
BIC	2170.878	1905.771
Log Likelihood	-981.942	-849.492
Deviance	1963.884	1698.985
Num. obs.	1624	1612

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.1$. Wave fixed effects omitted from the output.

Response ranges from 1 = disagree to 5 = agree for supporting permanent resident's local suffrage.

The model is estimated by logit, standard errors are clustered by prefectures..

Education and the Support for Foreigner's Local Suffrage (Logit, SIFCCT with Respondents 30s or Younger: Matched With $\lambda = 100km$)

	Female	Male
(Intercept)	-1.442 (0.334)***	-1.605 (0.369)***
University Education	0.195 (0.116) [†]	0.068 (0.150)
Knowledge	-0.213 (0.302)	-0.373 (0.214) [†]
Political Interest	0.717 (0.237)**	0.263 (0.211)
Employed	0.028 (0.109)	0.360 (0.297)
Economic Evaluation	0.250 (0.199)	0.254 (0.365)
Income	-0.292 (0.338)	0.672 (0.189)***
Length of Residence	-0.295 (0.186)	-0.490 (0.136)***
AIC	1792.431	1649.477
BIC	1939.864	1797.985
Log Likelihood	-868.216	-796.739
Deviance	1736.431	1593.477
Num. obs.	1430	1486

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.1$. Wave fixed effects omitted from the output.

Response ranges from 1 = disagree to 5 = agree for supporting permanent resident's local suffrage.

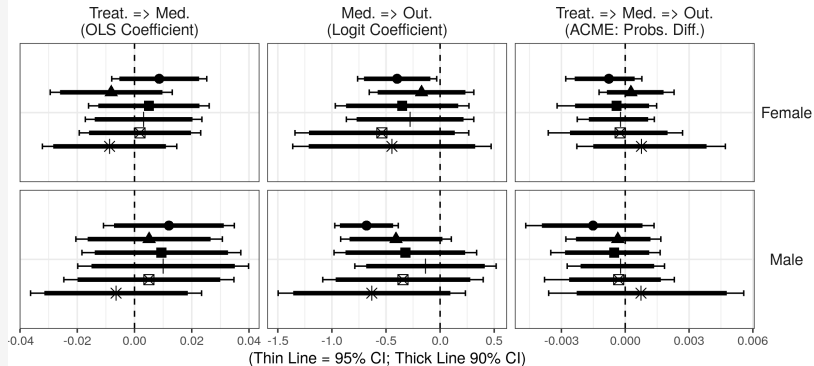
The model is estimated by logit, standard errors are clustered by prefectures..

Education and the Support for Foreigner's Local Suffrage (Logit, SIFCCT with Respondents 30s or Younger: Matched With $\lambda = 50km$)

	Female	Male
(Intercept)	-1.406 (0.302)***	-2.013 (0.346)***
University Education	0.224 (0.114)*	0.107 (0.153)
Knowledge	-0.385 (0.365)	-0.139 (0.229)
Political Interest	0.936 (0.218)***	0.276 (0.246)
Employed	-0.011 (0.119)	0.366 (0.252)
Economic Evaluation	0.086 (0.194)	0.428 (0.404)
Income	-0.312 (0.419)	0.681 (0.244)**
Length of Residence	-0.270 (0.213)	-0.461 (0.168)**
AIC	1445.007	1413.942
BIC	1586.628	1557.652
Log Likelihood	-694.503	-678.971
Deviance	1389.007	1357.942
Num. obs.	1162	1252

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$. Wave fixed effects omitted from the output.
 Response ranges from 1 = disagree to 5 = agree for supporting permanent resident's local suffrage.
 The model is estimated by logit, standard errors are clustered by prefectures..

Causal mediation analysis (LDP support)



Model/
Dataset

- No Matching (with Controls)
- Matched with $\lambda = 350\text{km}$
- ⊠ Matched with $\lambda = 100\text{km}$
- ▲ Matched without Distance Adj.
- ⊕ Matched with $\lambda = 200\text{km}$
- * Matched with $\lambda = 50\text{km}$

Treatment: University education or more (1), Senior High School or less (0).

Mediator: LDP Feeling Thermometer (rescaled to 0-1 with 1 being the warmest). Model is estimated by OLS.

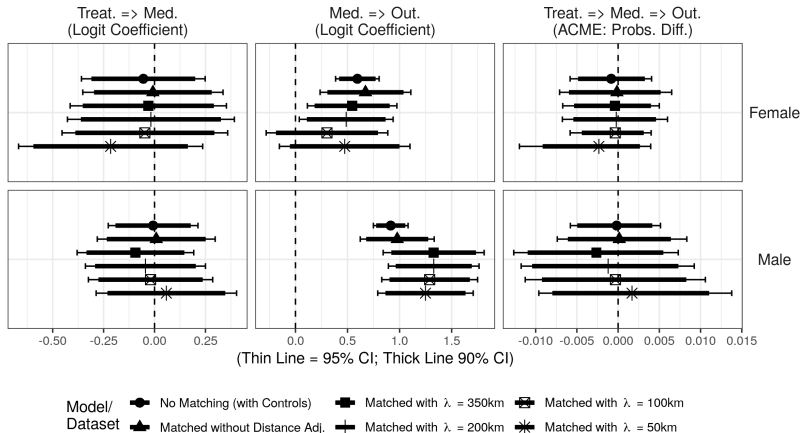
Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

► Ideology

► Left party support

► Right party support

Causal mediation analysis (left party support)



Treatment: University education or more (1), Senior High School or less (0).

Mediator: Left Party Support (1 supporting DPJ, JCP, SDP, or CGP, 0 else). Model is estimated by logit.

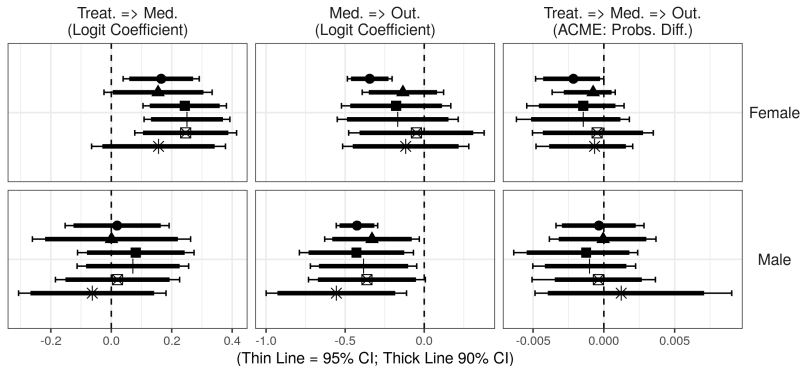
Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

► Ideology

► LDP support

► Right party support

Causal mediation analysis (right party support)



Model/
Dataset

- No Matching (with Controls)
- Matched with $\lambda = 350\text{km}$
- ▣ Matched with $\lambda = 100\text{km}$
- ▲ Matched without Distance Adj.
- ⊕ Matched with $\lambda = 200\text{km}$
- ✱ Matched with $\lambda = 50\text{km}$

Treatment: University education or more (1), Senior High School or less (0).

Mediator: Right Party Support (1 supporting LDP, YP, or JRP, 0 else). Model is estimated by logit.

Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

► Ideology

► LDP support

► Left party support

Enfranchisement of Foreigners in Japan

Japan promotes immigrants' admission but it **does not come in tandem with their integration** (Morita 2017).

- In MIPEx, Japan scores **low** on measures of **long-term pathways** to becoming a permanent part of society.
- Japan **does not grant voting rights to permanent residents** at any level of elections.

Does university education increase the support for foreigners' voting rights in Japan?

Enfranchisement of Foreigners in Japan

Historically, **Zainichi Koreans** (who holds *special* permanent resident status) demand **voting rights for permanent residents** in Japan.

Concerns that **foreigners**, specifically *Zainichi* Koreans, **may betray Japanese national interests** if they can participate in politics.

Since 2007, **Chinese** took over Koreans as the largest foreign group. They also form the largest group of *regular* permanent residents.

Matching (Ho et al. 2007)

$$\tilde{p}(X|T = 1) = \tilde{p}(X|T = 0)$$

- $\tilde{p}(\cdot)$: **Empirical density** of the data
- T : **Binary treatment** (independent) variable. 1 = treated (or minority) 0 = control (or majority)
- X : **Confounders** (variables causally *prior* to treatment and outcome). Assumes no omitted variable bias.

Matching is a **non-parametric preprocessing approach** to **filter away the influence of confounders** on the effect of treatment on outcome.

Support for granting local suffrage to permanent residents: 1=Agree, 0=Neither/Disagree 3

University Education: 1 = Undergraduate degree or more, 0 = High-school or less (2 year college/vocational schools excluded)

Mediators (scores 0-1): **Self-identified Ideology**, and **Feeling towards South Korea/China**

Controls: knowledge, interest, employment, economic evaluation, income, and survey waves/years.