Can University Education Cultivate Immigrant Integration?

The Case of Local Enfranchisement for Foreign Residents in Japan

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Consistent **correlation between higher education and liberal immigration attitudes** (Citrin et al. 1997; Hainmueller and Hiscox 2007, 2010) while evidence is **mixed on their causal connections** (Lancee and Sarrasin 2015; Cavaille and Marshall 2019) .

Existing evidence is **largely based on North America and Europe**. But some **Asian countries, including Japan, are also popular destinations of immigrants**.

Can current evidence hold outside of North American/ European contexts (i.e., 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?

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.

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.

Data

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 ($N \approx 4000$).

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

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

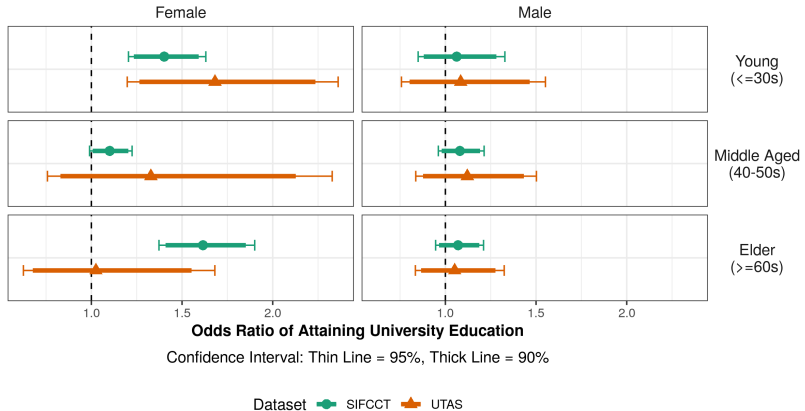Controls: knowledge, interest, employment, economic evaluation, income, and survey waves/years.

DV: The Agreement with Granting Local Suffrage to Permanent Residents

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 (only SIFCCT), employment, economic evaluation, income (only SIFCCT), and wave/year fixed effects as controls. See Appendix for the detailed tables.

SIFCCT Table   UTAS Table

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.

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)**.
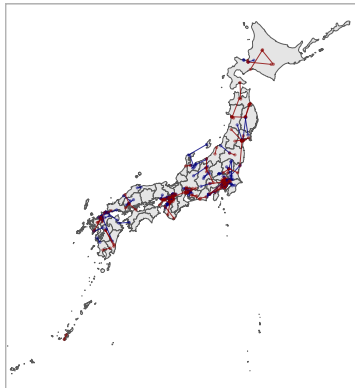- λ: Weight for geographic adjustment (match if $\overline{d_{i,j}} < \lambda$).

Additional strategy to improve causal inference

No Distance Adjustment
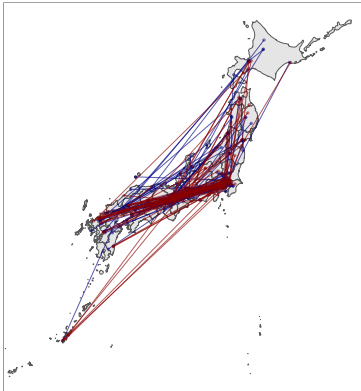
Distance Adjusted (λ = 200km)

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

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.
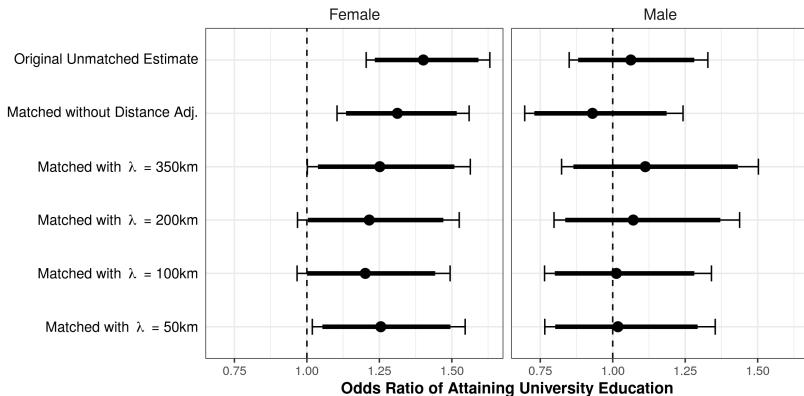
▶ $\lambda = 350km$ ▶ $\lambda = 100km$ ▶ $\lambda = 50km$

DV: The Agreement with Granting Local Suffrage to Permanent Residents

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   ▸ $\lambda = 350km$ ▸ $\lambda = 200km$ ▸ $\lambda = 100km$ ▸ $\lambda = 50km$

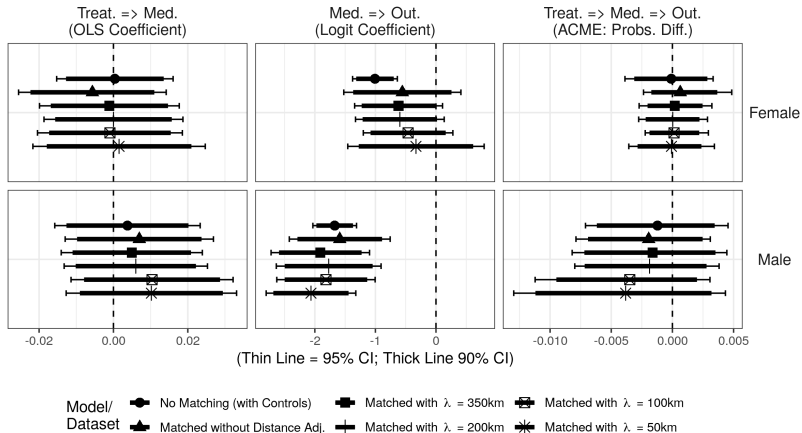**Causal mediation analysis** (Imai et al. 2011)
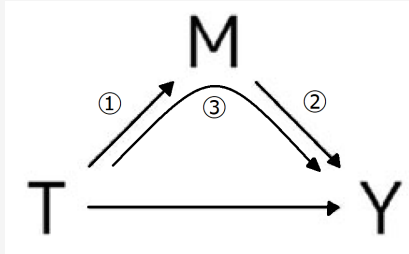
1. **Treatment** (T: University Education) $\Rightarrow$ **Mediator** (M: Ideology/ Feeling towards Korea/China)
2. **Mediator** (M) $\Rightarrow$ **Outcome** (Y: Integration Attitudes)
3. **Average Causal Mediation Effect**: T $\Rightarrow$ M $\Rightarrow$ Y

Causal mediation analysis (ideology)

	Treat. => Med. (OLS Coefficient)	Med. => Out. (Logit Coefficient)	Treat. => Med. => Out. (ACME: Probs. Diff.)

(Thin Line = 95% CI; Thick Line = 90% CI)

Model/Dataset
- ● No Matching (with Controls)
- ■ Matched with λ = 350km
- ⯐ Matched with λ = 100km
- ▲ Matched without Distance Adj.
- ✦ Matched with λ = 200km
- ✳ Matched with λ = 50km

Treatment: University education or more (1), Senior High School or less (0).
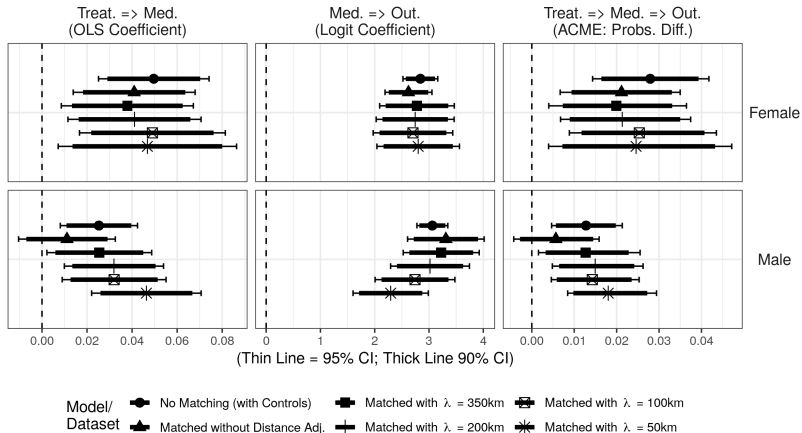Mediatior: Conservative Ideology (rescaled to 0-1 with 1 being the most conservative). Model is estimated by OLS.
Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

▸ LDP support   ▸ Left party support   ▸ Right party support

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Causal mediation analysis (feeling towards South Korea)

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

▶ Feeling twd China
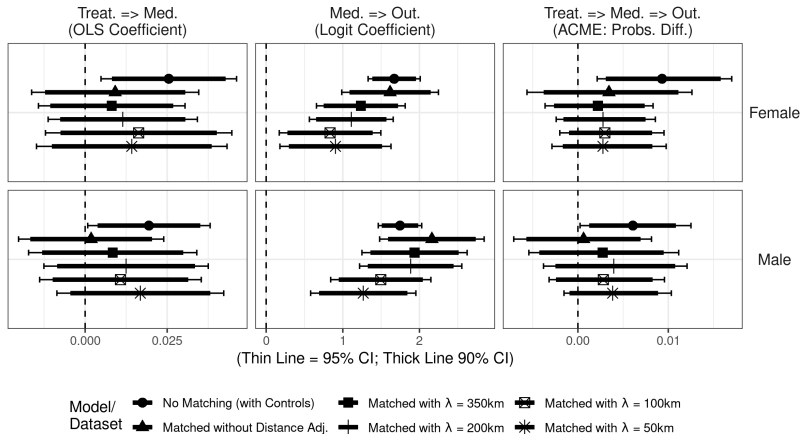
Causal mediation analysis (feeling towards China)

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

▸ Feeling twd South Korea

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.

Caveats:

- Limited to **integration policy**. Limited to **Japan**.
- **Non-geographic** selection effects (e.g., family).

Future questions (in Japan):

- What is driving political beliefs **if not education**?
- Does education have differential effects on **other types of ideological attitudes**?

Thank you for listening!

Cavaille, Charlotte, and John Marshall. 2019. "Education and Anti-Immigration Attitudes: Evidence from Compulsory Schooling Reforms across Western Europe." *American Political Science Review* 113 (1): 254–263.

Citrin, Jack, Donald P. Green, Christopher Muste, and Cara Wong. 1997. "Public Opinion Toward Immigration Reform: The Role of Economic Motivations." *The Journal of Politics* 59 (3): 858–881. doi:*10.2307/2998640*. JSTOR: *2998640*.

Hainmueller, Jens, and Michael J. Hiscox. 2007. "Educated Preferences: Explaining Attitudes Toward Immigration in Europe." *International Organization* 61, no. 2 (April): 399–442. Accessed May 1, 2020. doi:*10.1017/S0020818307070142*. *https://www.cambridge.org/core/journals/international-organization/article/educated-preferences-explaining-attitudes-toward-immigration-in-europe/EE145A6B222E943889E95610B683ADE8*.

———. 2010. "Attitudes toward Highly Skilled and Low-Skilled Immigration: Evidence from a Survey Experiment." *American Political Science Review* 104 (1): 61–84.

Ho, Daniel E., Kosuke Imai, Gary King, and Elizabeth A. Stuart. 2007. "Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference." *Political Analysis* 15 (3): 199–236.

Imai, Kosuke, Luke Keele, Dustin Tingley, and Teppei Yamamoto. 2011. "Unpacking the Black Box of Causality: Learning about Causal Mechanisms from Experimental and Observational Studies." *American Political Science Review* 105 (4): 765–789.

Keele, Luke, Rocío Titiunik, and José R. Zubizarreta. 2015. "Enhancing a Geographic Regression Discontinuity Design through Matching to Estimate the Effect of Ballot Initiatives on Voter Turnout." *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 178, no. 1 (January): 223–239.

Lancee, Bram, and Oriane Sarrasin. 2015. "Educated Preferences or Selection Effects? A Longitudinal Analysis of the Impact of Educational Attainment on Attitudes Towards Immigrants." *European Sociological Review* 31, no. 4 (August 1): 490–501. Accessed May 1, 2020. doi:*10.1093/esr/jcv008*. *https://academic.oup.com/esr/article/31/4/490/496810*.

Morita, Liang. 2017. "Why Japan Isn't More Attractive to Highly-Skilled Migrants." Edited by Jamie Halsall. *Cogent Social Sciences* 3 (1): 1306952. eprint: *https://www.tandfonline.com/doi/pdf/10.1080/23311886.2017.1306952*.
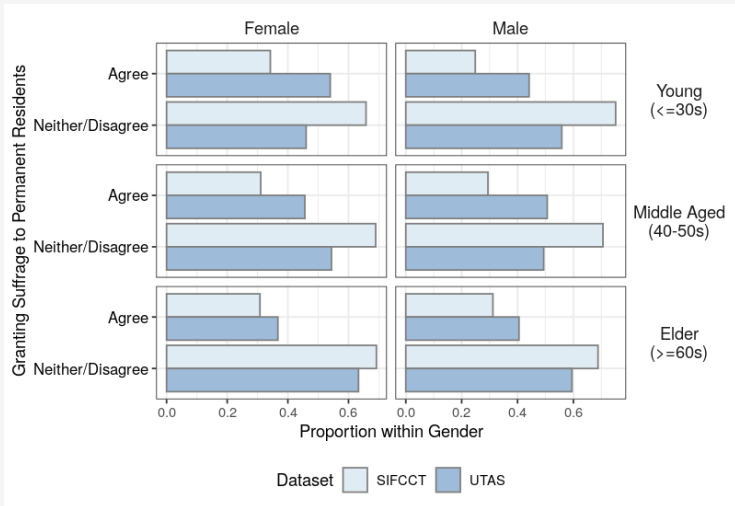
Education and the Support for Foreigner's Local Suffrage (Logit, SIFCCT)

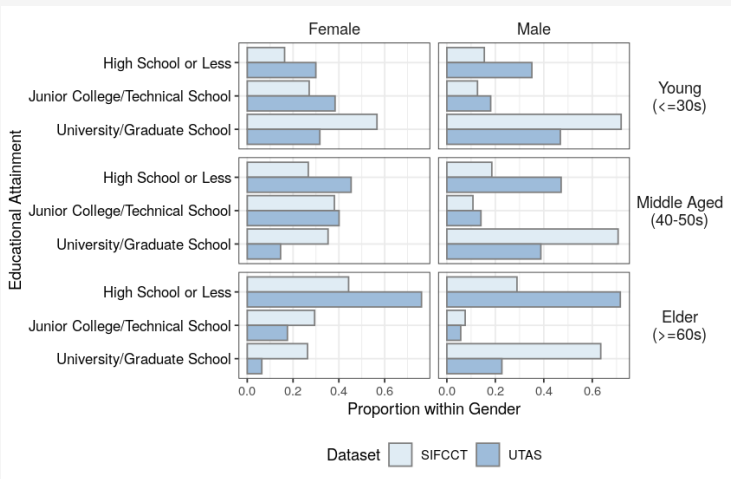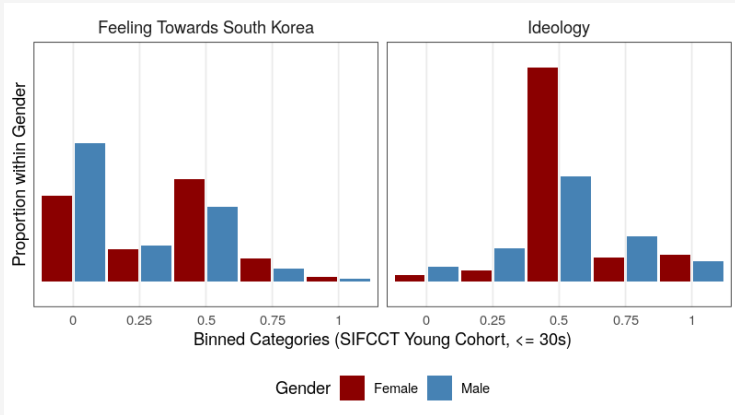|	Female	Male
(Intercept)	−0.990 (0.108)***	−1.258 (0.141)***
University Education	0.338 (0.077)***	0.061 (0.114)
Middle Aged (40-50s)	0.079 (0.085)	0.215 (0.104)*
Elder (>=60s)	−0.049 (0.110)	0.364 (0.095)***
University*Middle Aged	−0.241 (0.101)*	0.017 (0.130)
University*Elder	0.142 (0.101)	0.007 (0.118)
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	Distance Adjusted (λ = 350km)
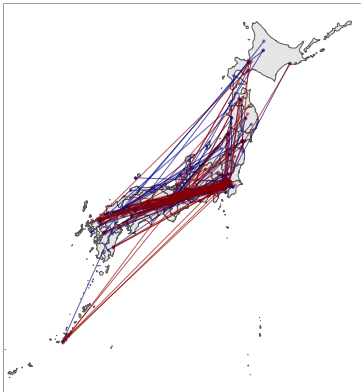
892/892 Female and 837/838 Male Matched Pairs Found
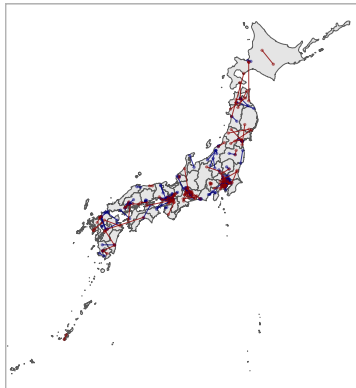
847/892 Female and 823/838 Male Matched Pairs Found

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
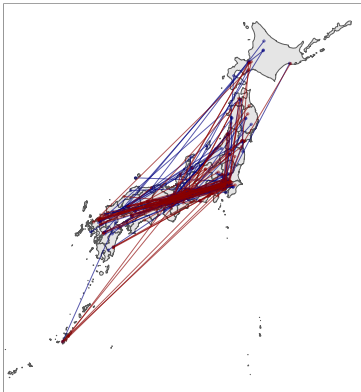
Distance Adjusted (λ = 100km)

892/892 Female and 837/838 Male Matched Pairs Found
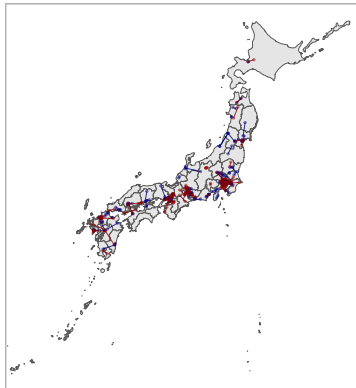
715/892 Female and 743/838 Male Matched Pairs Found

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

Distance Adjusted (λ = 50km)

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

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.

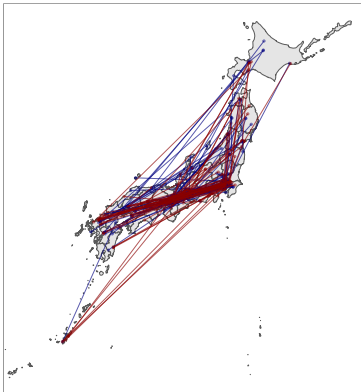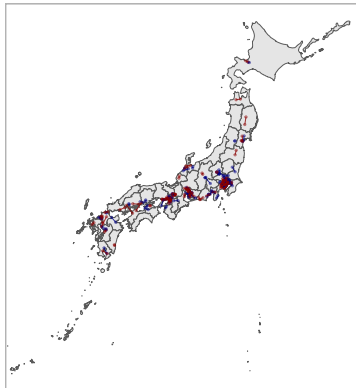▸ $\lambda = 350km$ ▸ $\lambda = 200km$ ▸ $\lambda = 100km$

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	$0.097\ (0.123)$	$0.339\ (0.187)^{\dagger}$
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

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$. 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 λ = 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	$0.337\ (0.193)^{\dagger}$	$0.329\ (0.319)$
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

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$. 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 λ = 200km)

	Female	Male
(Intercept)	$-1.266\ (0.267)^{***}$	$-1.670\ (0.386)^{***}$
University Education	$0.184\ (0.111)^{\dagger}$	$0.012\ (0.143)$
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

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$. 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 λ = 100km)

	Female	Male
(Intercept)	$-1.442\ (0.334)^{***}$	$-1.605\ (0.369)^{***}$
University Education	$0.195\ (0.116)^{\dagger}$	$0.068\ (0.150)$
Knowledge	$-0.213\ (0.302)$	$-0.373\ (0.214)^{\dagger}$
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

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$. 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 λ = 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

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$. 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)
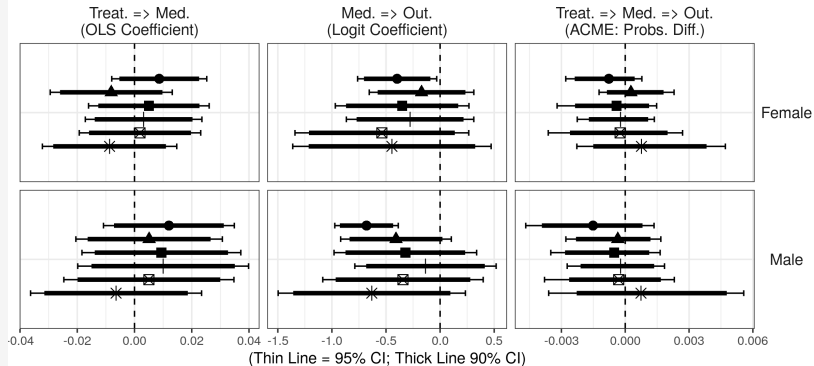
Treatment: University education or more (1), Senior High School or less (0).
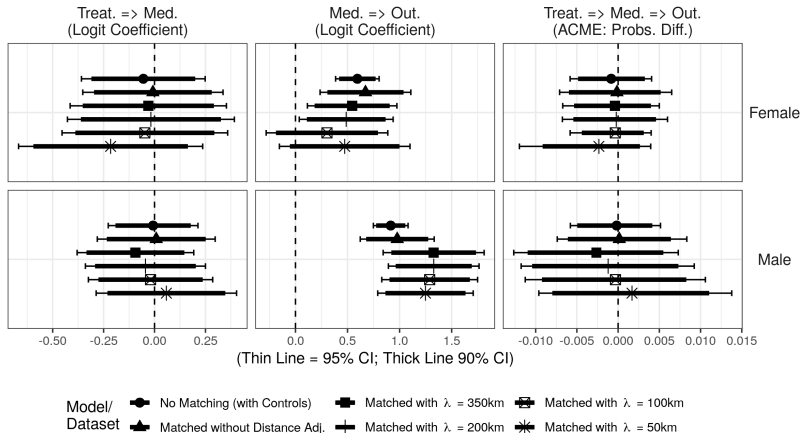Mediatior: LDP Feeling Thermometer (rescaled to 0-1 with 1 being the warmest). Model is estimated by OLS.
Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

▸ 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).
Mediatior: Left Party Support (1 supporting DPJ, JCP, SDP, or CGP, 0 else). Model is estimated by logit.
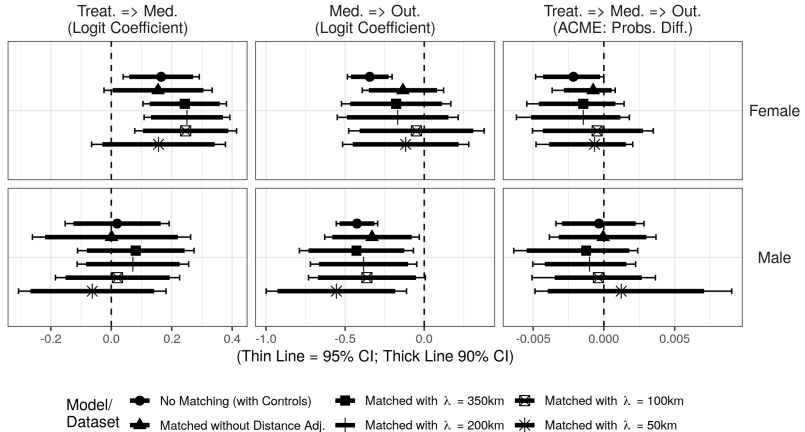Outcome: Rather agree or agree with granting suffrage to permanent residents (1), else (0). Model is estimated by logit.

▶ Ideology   ▶ LDP support   ▶ Right party support

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