

In Japan, University Education Does Not Increase Support for Immigrant Integration

ANONYMISED AUTHOR(S) *Anonymised Institution(s)*

While there is lively debate on whether higher education cultivates support for admitting foreigners into North America and Europe, there is little discussion on the extent to which this relationship generalizes beyond these continents. In light of Japan's growing reliance on foreign workers and the public's divided opinion on integrating foreigners, we examine the relationship between university education and Japanese attitudes toward local enfranchisement for foreign residents. Using a large-scale online survey with corresponding ZIP codes, we isolate the causal effects of education independent of residential contexts. We further assess mechanisms underlying such effects through causal mediation analysis. Our findings show Japanese university education has limited effect on support for enfranchisement. Even though Japan is also a modern democracy with well-developed higher education institutions, these institutions do not lead to more supportive attitudes toward immigrant integration because they are neither vehicles for liberalization in ideology nor positive affect toward foreigners.

Word Count: 8960

Debates on immigration are dominated by research set within western contexts. A review of 288 published articles in 55 English-language journals between 1955 and 2011 show the four most prolific countries on immigration research are the United States, Canada, United Kingdom, and Australia (Bilodeau). It is true that these countries are highly desirable destinations, but the issue of immigration is no less relevant for countries like Hong Kong, Singapore, and Japan. Immigrants in popular Asian destinations confront behavioral and institutional biases against the proverbial 'other' in much the same way as their counterparts do in North America and Europe. In December 2018, Japan passed a controversial immigration law that aimed to attract 345,000 foreign workers (Denyer and Kashiwagi). To date, there is no concrete plan to integrate foreigners and it remains unclear how Japanese society will promote their presence in the long-term beyond as a workforce. So, given what we know about the effect of university education on pro-immigrant attitudes in some western democracies, to what extent

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does university education play a role in support for immigration among Japanese nationals? Our short answer is ‘not much’. We provide a longer one in the following pages.

Higher education in North America and Europe has a consistently strong correlation with liberal attitudes toward immigration (Citrin et al.; Hainmueller and Hiscox) while evidence is mixed on whether education is a cause or outcome of such attitudes (Lancee and Sarrasin; Cavaille and Marshall). This article makes three theoretical and methodological contributions to this body of work. First, we demonstrate limitation in applying a western-driven theory of attitude formation to non-western contexts, even for something as seemingly universal as education. Second, we explain why it does not generalize by examining the causal chain between university education and mediating variables such as income, political knowledge, ideology, and affect toward major immigrant groups in Japan. Third, we filter out selection effects of geographic contexts (Branton and Jones; Oliver and Mendelberg, but Kustov, Laaker, and Reller; Maxwell) by focusing on respondents who have not moved since high school and controlling for characteristics of their neighborhoods.

The rest of the article are as follows: we review scholarship on how university education shapes attitudes toward immigrants in North America and Europe, then discuss how this relationship may be different in Japan. To test our theoretical expectations, we estimate average causal effects and average causal mediation effects of university education using a unique large-scale online survey dataset in Japan that allows us to control for residential contexts at the neighborhood and municipal levels. The main analyses are followed by robustness checks using matching methodologies and an alternative survey with mail-in samples. We conclude the article by discussing some of its limitations and extensions.

EXISTING EVIDENCE ON UNIVERSITY EDUCATION AND IMMIGRATION

In empirical studies based on North America and Europe, there is consistent evidence on the correlation between university education and willingness to admit and integrate immigrants (Citrin et al.; Hainmueller and Hiscox, but see Hainmueller and Hopkins). Evidence on the causal effects of education is less consistent. On one hand, using six compulsory education reforms that occurred in Europe as an instrument of education in regression discontinuity design, Cavaille and Marshall

find additional years in secondary education decreases anti-immigration attitudes and suggest this relationship is indeed causal. On the other hand, Lancee and Sarrasin track Swiss youths' willingness to grant equal rights to immigrants as they progress through schooling and find little within-individual change in attitudes.

Setting empirics aside for the moment, theoretically, why might education increase support for immigration? One explanation is the greater financial security and skills afforded by obtaining a higher degree. Since high-skilled native workers do not have to directly compete with immigrants—especially when a majority of immigrants are expected to be low-skilled—they may be less threatened by their presence (Scheve and Slaughter; Mayda). While intuitive, empirical evidence is not always consistent with this view (Hainmueller and Hopkins). For example, in Hainmueller and Hiscox's survey experiment, subjects with university degrees are more likely to support both high-skilled and low-skilled immigration.

Perhaps a more convincing explanation lies in perception toward the sociotropic influence of immigrants (Chandler and Tsai; Card, Dustmann, and Preston; Hainmueller and Hopkins). This mechanism rests on at least three expectations regarding education content and student experience. First, professors in western universities tend to be left-leaning (Gross and Simmons; Langbert, Quain, and Klein) and this tendency is particularly consistent on the issue of immigration (Werfhorst). So, they may pass on their views to students. Second, the learning process in universities may promote positive views toward cultural diversity. Even if professors leave personal views out of classrooms, or if curriculum have nothing to do with social attitudes (for example, math and engineering courses), the “cognitive verbal proficiency and sophistication” (Nie, Junn, and Stehlik-Barry, p.180) required in higher education emphasizes the importance of open discussions and taking diverse opinions into account. This type of active learning process can have a direct positive effect on students' valuation of immigrants. Lastly, both in and outside of classrooms, university experience is expected to foster immigrant acceptance by reducing social distance between natives and foreigners (Sigelman and Welch; Welch and Sigelman). University coursework, dormitories and campus organizations provide opportunities for students to meet and mingle with people from different backgrounds. These social contacts lead to friendships (or at least, reduces negative stereotypes) between natives and foreigners,

which encourages the former to become more supportive of immigration.

The mechanisms described above provide insights on how university education shapes attitudes toward immigration in western democracies. However, if “education system is the primary vehicle through which the ‘official’ or ‘ideal’ culture is transmitted to citizens” (Phelan et al.), surely what is considered official or ideal changes across time and space. And if financial security, liberal values, and social contact are mechanisms driving the relationship between university education and liberal immigration attitudes, then this relationship ought to become weaker in contexts where these mechanisms are suppressed. We turn now to a discussion of university education and immigration in Japan.

UNIVERSITY EDUCATION AND IMMIGRATION IN JAPAN

The word ‘immigrant’ carries a different connotation in Japan than it does in western countries. While immigrants in the west are associated with ‘visible minorities’ marked by language, physiognomy, and/or phenotype, the marginalization of immigrants in Japan is largely “invisible”, an internal struggle that lies in the underbelly of the “homogeneity myth” (Tamura). The first wave of Korean (and to a lesser extent, Taiwanese) immigrants in Japan trace their roots to the pre-WWII period.¹ Many adopt “tsumeji” (Japanese style names) and once they become fluent in Japanese, are not outwardly different from native Japanese. On the other hand, since Japan determines nationality strictly by parentage and naturalization, children of those first-wave immigrants are legally classified as ‘immigrants’ with special permanent resident status² even though they are born and raised in Japan. By the end of 2019, about 2.93 million foreigners live in Japan, most of whom are permanent residents, followed by technical intern trainees on short term visas (Itabashi). Most foreign residents live in large metropolitan areas such as Tokyo, Aichi and Gunma (Mizuho Research Institute). Since 2007, Chinese took over Koreans

¹Since there were no North or South Korea in pre-WWII, first-wave Korean immigrants often identify themselves with Korea as a whole.

²Specifically, special permanent resident status was granted for those who previously hold Japanese citizenship prior to the independence of South Korea, North Korea, and Taiwan. Special permanent residents generally receive more benefits than regular permanent residents, but not voting rights.

as the largest foreign group, generating controversy as “neo-Chinatowns” spilled beyond traditional ethnic neighborhoods (Schreiber). They also form the largest group of regular permanent residents, though *Zainichi* Koreans still dominate in the total of special and regular permanent resident status (Tai; Surak; Day).

The Japanese government promotes a policy to increase admission of immigrants but this policy does not come in tandem with plans to integrate them into Japanese society (Morita). Japan is one of only two Asian countries ranked by the 2015 Migrant Integration Policy Index (MIPEX). Based on eight indicators of integration—labor market mobility, family reunion, health, education, political participation, permanent residence, access to nationality and anti-discrimination—Japan ranks 27 out of 38 countries while South Korea ranks 18. It scores higher on measures of labor market mobility, but low on measures of long-term pathways to becoming a permanent part of Japanese society. Barriers to attaining permanent residence and citizenship in Japan are particularly high, and it essentially grants no non-citizen voting rights at any level of elections (Justwan, Table 1).³ In contrast, countries like Sweden, the Netherlands and Belgium grant local voting rights to non-citizens, and evidence points to higher levels of political trust, higher levels of political participation, and stronger ties with the host country among non-citizens (Martiniello; Munro).

Historically, the demand for non-citizen voting rights in Japan has been made by the population of *Zainichi* Koreans. Given the contentious history between Japan and Korea, the end goal of political integration for *Zainichi* Koreans has never been to obtain Japanese citizenship, but to advance their status as foreigners in Japan (Kashiwazaki). Bills to grant local suffrage to foreigners with permanent resident status have been submitted to the Diet several times, especially after diplomatic pressure by the South Korean government in 2000 (Chung). However, those bills never achieved enough support for deliberation on the floor because conservative politicians in the Liberal Democratic Party (LDP), the long-standing ruling party of Japan, expressed concerns that permanent resident foreigners, specifically *Zainichi* Koreans, may betray Japanese national interests if they can participate in (any level of) Japanese politics (Strausz).

³Several municipalities in Japan allow non-citizens to vote in the local referendum, but the outcome of local referendum has no legal binding authority.

In terms of university education in Japan, the connection to political attitudes/behaviors is not always consistent with findings in western countries. For example, political participation in Japan was negatively related to levels of education in the 1980s (Kabashima), though this relationship changes overtime (Sakaiya). On willingness to admit foreigners, correlational results from experiments conducted by Kage, Tanaka, and Rosenbluth provide mixed evidence. They show college education in Japan is associated with willingness to admit foreigners due to both economic needs and cultural diversity. However, college education “does not increase the likelihood that Japanese respondents appreciate immigrants solely for economic or cultural reasons” (Kage, Tanaka, and Rosenbluth, 2). Given this caveat, it is possible that previous expectations regarding the connection between university education and positive attitudes toward immigrants—financial security, liberal-leaning professors, active learning pedagogy, and reduction in social distance between natives and immigrants through social contact—may not always hold in Japan.

There is little systematic evidence on whether Japanese university professors are proponents of liberal ideology. For example, Azuma, Murata, and Kakeya machine-coded political ideologies of department chairs’ messages in top Japanese university websites through supervised learning. Their results show significant portions of those messages are in fact conservative, especially in fields of natural science and engineering. Also, a survey conducted by Tarohmaru shows that the positive perception towards Japanese academia does not strongly or consistently correlate with liberal ideology of respondents. In addition, ethnographic works on the experience of non-Japanese faculties show that non-Japanese professors in Japanese universities are socially and institutionally segregated (Whitsed and Wright; Poole). These evidence suggest not many Japanese professors likely hold progressive views, much less pass on such views to students.

Similarly, learning pedagogy that facilitates diversity of opinions and open discussions may play a weaker role in Japan. Whitsed and Wright conduct interviews with foreign English teachers and suggest Japanese university education is mostly for ‘show’ rather than genuine learning. After working hard in high schools and *jukus* (cram schools) to get into universities, students tend to view universities as a “relaxing time before they have to go into society.” Granted, anyone walking past a sorority or fraternity house would also question the priorities of American students, but the “culture of indifference”

and “the student is the customer” seem to spillover into Japanese professors’ approach to teaching as well. Instead of focusing on learning discourse that leads to appreciation of diverse opinions and characters, they go through rote motions of taking attendance and administering quizzes (McVeigh). While it is true that the agenda in recent reforms to Japanese higher education encourages the use of active learning pedagogy, a 2019 survey of university instructors across Japan reveals they have a poor understanding of what this concept means in practice (Ito and Takeuchi).

Relative to the influence of professors and learning pedagogy, social contact with foreigners may play a stronger role in how Japanese universities shape immigration attitudes. In a homogeneous society like Japan, universities may be a particularly important channel to learn about and acquaint with foreigners in social settings because people rarely have those opportunities in their daily lives. Since the 1990s, higher education reforms in Japan pursue “globalization” by encouraging universities to offer courses in English and to increase the enrollment of exchange students (Rose and McKinley). Given that relatively few foreigners enroll in primary/secondary schools, universities today are probably the first institutions that provide multiple opportunities for Japanese natives to interact with foreigners as classmates, friends in school-based social clubs, and instructors (Baseel; Vogel; Green).

There is a caveat to the social contact mechanism in Japan: gender discrepancy in types of study pursued by students. Females are more likely to enroll in humanity programs such as global studies, communications, or linguistics, the programs in which the majority of foreign students are enrolled (Cabinet Office, Government of Japan; Japan Student Services Organization). This discrepancy is not unique to Japan and can in part be attributed to different societal expectations on females versus males (Trusz), but local institutional biases play a role as well. For example, in 2018, Tokyo Medical University was found guilty of boosting male enrollment by giving them additional scores on entrance tests, and a subsequent Education Ministry survey discovered for about 80% of eighty-one medical universities, male applicants’ success rate was significantly higher than that of females (Shirakawa). For whichever reason, this gendered university experience may result in stronger relationships between university education and support of enfranchisement among female rather than male graduates because the former have more classmates who are foreigners, as well as more opportunities to interact with them in social settings.

TABLE 1. Existing (Western) theoretical mechanisms on how university education affects attitudes toward foreigners and their potential applications to Japan

Mechanism	How it works in the west	Application to Japan
<i>Financial security</i>	Diploma/skills/networks increases financial security ⇒ Reduces perceived economic threats from foreigners.	The same mechanism should apply.
<i>Liberalizing learning experience</i>	Liberal professors and active learning pedagogy ⇒ Students embrace diversity in political values and rights.	Weak evidence of liberal professor and diversity-enhancing learning pedagogy. If any, more applicable to more recent graduates .
<i>Positive social contact</i>	“Globalized” curriculum creates opportunities for positive social contact with foreigners ⇒ Develops trust and positive impression toward foreigners.	Gendered selections of curriculum with higher likelihood of contact (females > males). More applicable to more recent graduates .

Table 1 summarizes our theoretical framework. The left column summarizes three explanations for why university education increases pro-immigrant attitudes in western countries. The right column extends these mechanisms to the Japanese context. Just like in western countries, earning a university diploma may increase support for immigration by reducing perceived economic threat. However, the influence of professors and learning pedagogy may be weaker and only affect graduates who attended university after education reforms in the 1990s. Additionally, male students may have less opportunities to socially interact with foreigners. Therefore, it is possible university education increases support for granting suffrage among Japanese females, but not among Japanese males. All else equal, there may also be larger effects among the younger Japanese population. We formalize these expectations with the following hypotheses:

H1A: Japanese females with university degrees are *more supportive* of granting suffrage to permanent resident foreigners than Japanese females with high school degrees at most.

H1B: Japanese males with university degrees are *not more supportive* of granting suffrage to permanent resident foreigners than Japanese males with high school degrees at most.

H2: The younger the respondent, the larger the positive effect of Japanese university education on support for granting suffrage to permanent resident foreigners.

To the extent university education has an effect on support for granting suffrage, the next three hypotheses test how it does (or does not). First, if western universities increase earning potential so that graduates perceive less economic threat from immigrants, the same mechanism should hold in Japan.

H3A: The effect of Japanese university education on support for granting suffrage to permanent resident foreigners *is* mediated by increase in financial security.

However, unlike western universities, not-so-liberal professors and outcome-oriented learning pedagogy may not lead students to have more liberal political values. In other words, the effect of Japanese university education on views toward immigrant integration, if any, should not be mediated by ideological beliefs.

H3B: The effect of Japanese university education on support for granting suffrage to permanent resident foreigners *is not* mediated by liberalization in political ideology.

Finally, permanent residents' local suffrage in Japan is perceived to be an issue owned by *Zainichi* Koreans. In addition, the growing population size and majority status of Chinese immigrants in the category of regular permanent residents make them another relevant group for the issue of foreigner enfranchisement. Therefore, if Japanese university education has any effect on attitudes toward foreigner enfranchisement, we expect affect toward Koreans and Chinese to mediate this effect.

H3C: The effect of Japanese university education on support for granting suffrage to permanent resident foreigners *is* mediated by more positive affect toward Koreans and Chinese.

In summary, H1 and H2 imply if university education has any effects on support for granting suffrage to permanent resident foreigners among in Japan, they are driven by females and younger cohorts. H3A, H3B, and H3C describe our explanations as to *how* university education shapes support for foreigner suffrage in Japan. We turn next to discuss the way we test these hypotheses.

DATA AND EMPIRICAL STRATEGY

Our primary data source is the Survey on the Image of Foreign Countries and Current Topics (SIFCCT).⁴ SIFCCT is a collection of online surveys conducted every month from October 2011 to September 2013. Each month, approximately 2000 respondents are newly sampled from a pool of online survey monitors, for a total of over 50000 respondents. These respondents are registered at the survey organization, Nikkei Research, and sampling takes account of balance in distribution of gender and age cohorts (i.e., 20s, 30s, 40s, 50s, and 60s or over) according to the Japanese census.

In addition to its large sample size, SIFCCT asks each respondent for the postal ZIP code of their current residence.⁵ In Japan, postal ZIP code is given at the sub-municipal neighborhood level (called *machiaza*, the lowest unit of address defined at the block or community level). Each municipality contains 1 to 5000 ZIP codes. We therefore argue that postal ZIP code represents the neighborhood context of the current residence of respondents.

The subsequent analyses focus on the 7827 SIFCCT respondents who claim to have lived in their current ZIP code since they were fifteen years old (age of entering high school in Japan).⁶ Respondents who satisfy this condition should have spent significant time before university in their current neighborhood, which eliminates the possibility that contextual effect is spurious, i.e., university education influences attitudes toward immigrants and residence simultaneously (Kustov, Laaker, and Reller; Maxwell).⁷ Then, to account for the confounding effect of neighborhood context, we control for

⁴Data of the Survey on the Images of Foreign Countries and Current Topics (data depositor: Waseda University Research Institute of Contemporary Japanese Systems), was provided by the Social Science Japan Data Archive (SSJDA) of the Tokyo University Institute of Social Science. The authors of this research are responsible for all analyses of the data, and neither the researchers who collected these data nor the SSJDA which distributes it carry any responsibility. The original datasets are available from SSJDA website (<https://csrda.iss.u-tokyo.ac.jp/en/>), survey number 0979 and 0980.

⁵Postal ZIP code data are currently not available through SSJDA. Authors can provide the data upon request.

⁶More specifically, we extract those respondents who lives in the current ZIP code for years the same or longer than their age minus fifteen. Those who did not provide ZIP codes and those who have missing values in relevant variables in the analysis are also dropped from the analysis.

⁷For reference, we also run analysis on those who moved the residence. Check Online Appendix for more details.

urban-rural characteristics (captured by residence in DID, Densely Inhabited District), the percentage of foreigners, and the percentage of university graduates at both neighborhood (i.e., *machi*) and municipality levels using ZIP codes.⁸

Our key explanatory variable is respondents' level of education, coded as 1 if they completed university or graduate school, 0 if they did not. The proportion of university graduates differ significantly across gender, i.e., lower among female (42.6%) than male (62.4%), and age, i.e., higher among younger cohort (60.5% in 20-30s) than older cohort (47.3% in 60s or over). Given that we hypothesize the effect of university education is moderated by gender (H1A and H1B) and age (H2), we include triple interactions between education, gender and continuous age. One potential concern in the current research design is that our target sample (i.e., those who stay in their local ZIP code since before university) may look significantly different from the eliminated sample (i.e., those who have changed their residence after the age of graduating university). As it turns out, there are similar tendencies across our target and eliminated samples. Among respondents who have lived in their current ZIP code since the age of fifteen, 54.6% are coded as 1, which is slightly lower than, but comparable to, the 56.0% coded as 1 among respondents who have moved to their current residence after the age of twenty-three, the typical age of university graduation in Japan (check Online Appendix for more detailed figures).⁹

Our outcome is support for regional suffrage of permanent resident foreigners. The original responses are on a 5-point scale from strongly disagree to strongly agree, with 9.7% who respond "don't know" or skip the question. We code the outcome in two ways. First, as a continuous variable from 0 (strongly disagree) to 1 (strongly agree), with non-responses replaced with the middle value. Second, as a three-category variable with "agree", "disagree", and "neither" ("neither" category includes

⁸ZIP codes are converted to geographic coordinates using Yahoo! Japan Geocoder API (<https://developer.yahoo.co.jp/webapi/map/openlocalplatform/v1/ZIPcodesearch.html>). Then, those geographic coordinates are matched with DID data (2010) from the Ministry of Land, Infrastructure, Transport, and Tourism (<https://nlftp.mlit.go.jp/ksj/gml/datalist/KsjTmplt-A16.html>) and other contextual data from 2010 Japanese Census obtained through the Statistical Bureau of Japan (www.stat.go.jp).

⁹More specifically, we focus on those respondents who lives in the current ZIP code for years the same or shorter than their age minus 23.

non-responses). Again, our target sample looks similar to the eliminated sample in distribution. We have 28.3% “agree,” 28.2% “neither,” and 43.5% “disagree,” in the target “stayed” sample, whereas the corresponding percentages are 30.5%, 29.0%, and 40.5% in the “moved” sample. This similarity persists even after breakdown by gender and age (check Online Appendix).

In the subsequent analyses, given the nature of outcome variables, we implement OLS regression for the continuous outcome and multinomial logit for the categorical outcome. Robust standard errors are used for the statistical test to account for potential correlations in residuals. As described above, we control for urban-rural characteristics, percentage of foreigners, and percentage of university graduates at both neighborhood and municipality levels. Length of residence in current neighborhood (measured by the percentage of life spent at the current ZIP code) is an additional control, since long-time residents may feel more threatened by the political integration of foreigners in their community. Also, to account for a time trend, we include fixed effects of survey month (omitted from the outputs). We present main results in the next section.

MAIN RESULT

Table 2 shows the coefficients from our main analyses and Figure 1 illustrates simulated conditional coefficients of university education by gender and age. In the figure, the left column plots OLS coefficients for the continuous outcome (ranges from 0 to 1). The right column plots multinomial logit coefficients for the categorical outcome, focusing on the contrast between “agree” and “disagree”. Regardless of modelling strategy, three tendencies are apparent. First, consistent with H1A, university education does not have a substantive effect on suffrage opinion among males of any age. Confidence intervals of all OLS/multinomial logit coefficients contain 0, meaning the effects are not statistically significant. Second, in contradiction to H1B, if any, education has a negative substantive effect on suffrage opinion among females. This negative effect shrinks and eventually becomes null among younger respondents. This pattern is partially consistent with H2, which predicts *larger positive* effects among younger individuals.

Separate from our key explanatory variable “university education”, at least two control variables are worth mentioning (Especially looking at the multinomial logit result. The tendency persists for

TABLE 2. The effect of university education on the support for granting suffrage to permanent residents in Japan

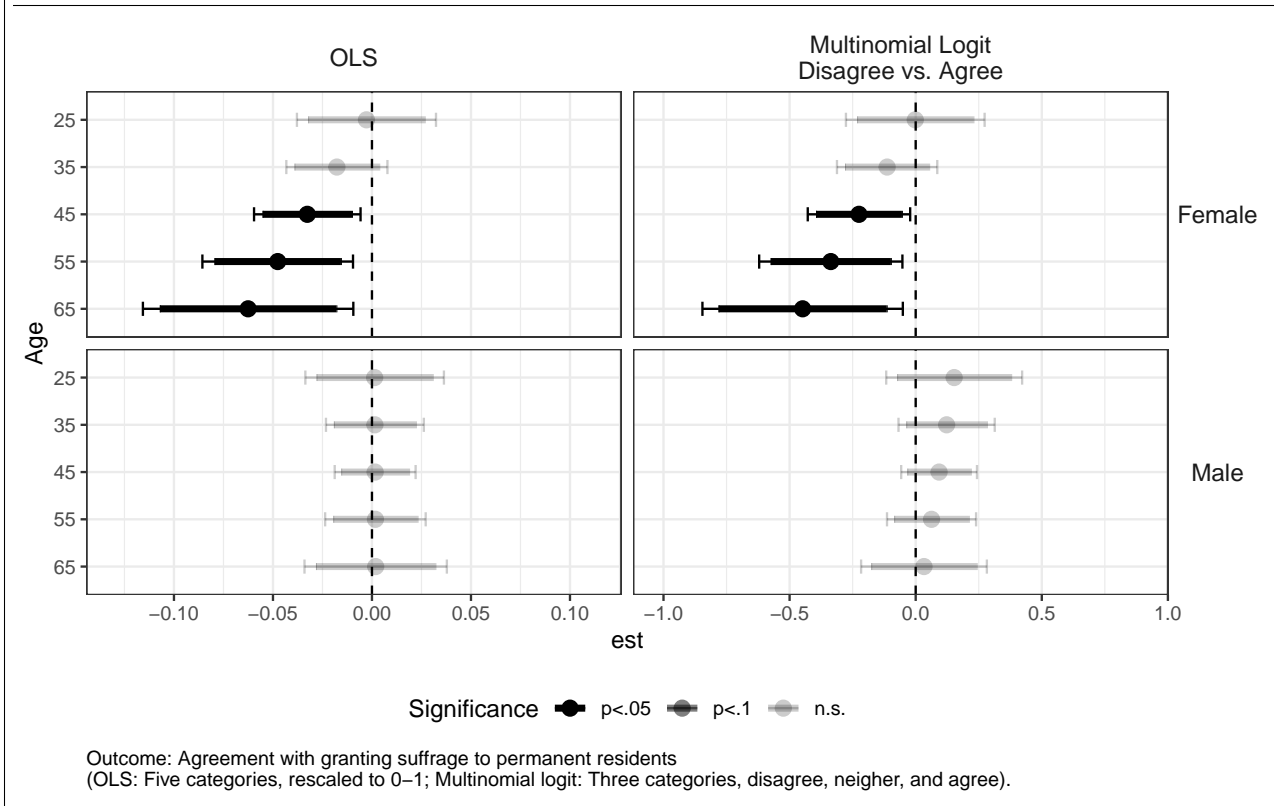
	OLS	Multinomial logit	
		vs. Agree	vs. Neither
University education	−0.0327 (0.0137)*	−0.2250 (0.1029)***	−0.4884 (0.1036)*
Gender (male)	−0.1097 (0.0108)***	−0.7877 (0.0819)***	−0.8149 (0.0857)***
Age (by 10 years, centered at 45)	0.0013 (0.0057)	0.0267 (0.0448) [†]	−0.0816 (0.0464)
University * Male	0.0343 (0.0170)*	0.3177 (0.1258)**	0.3265 (0.1273)*
University * Age	−0.0149 (0.0092)	−0.1117 (0.0689)	0.0359 (0.0701)
University * Male * Age	0.0151 (0.0118)	0.0818 (0.0878)	0.0541 (0.0884)
Male * Age	0.0106 (0.0081)	0.0953 (0.0622)	−0.0205 (0.0634)
% of Life Residing Locally (zip)	−0.0358 (0.0296)	−0.1588 (0.2178)	0.1554 (0.2153)
DID residence (zip)	0.0110 (0.0113)	0.0576 (0.0821) [†]	0.1353 (0.0823)
Foreigner % sqrt. (zip)	−0.0129 (0.0089)	−0.0909 (0.0665)*	−0.1365 (0.0678)
University % by 10% (zip)	0.0004 (0.0073)	0.0115 (0.0530)	−0.0661 (0.0525)
DID proportion (mun.)	−0.0129 (0.0198)	−0.0445 (0.1434)**	−0.3924 (0.1455)
Foreigner % sqrt. (mun.)	−0.0031 (0.0124)	−0.0283 (0.0917)	0.0716 (0.0929)
University % by 10% (mun.)	−0.0012 (0.0103)	−0.0233 (0.0759)	0.1103 (0.0746)
R ²	0.0289		
Adj. R ²	0.0246		
Num. obs.	7827	7827	
AIC		16618.2864	
Log Likelihood		−8239.1432	
K		3	

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; [†] $p < 0.1$. Robust standard errors in parentheses. Survey month fixed effects omitted from the output. For multinomial logit, the baseline category is "disagree". The table is exported using `texreg` R package (Leifeld).

OLS model too, but is not statistically significant). First, residence in Densely Inhabited District (DID) at the neighborhood level tends to increase “agree” responses to foreigner’s suffrage, while the proportion of DID in current municipality decreases “agree” responses. This contrast implies that context may be functioning at multiple levels, i.e., municipality level context may not always represent neighborhood context. Second, if any, higher percentage of foreigners in the neighborhood decreases, rather than increases, support for suffrage expansion. While those contextual effects are not central to our study, they comport with mixed findings in debates on how and when geographic environment shapes immigration attitudes.

In sum, we find no evidence that university education has a positive effect on support for granting local suffrage to permanent residents. Instead, we find that the effect is potentially negative among older females. In the next section we conduct robustness checks of this initial result.

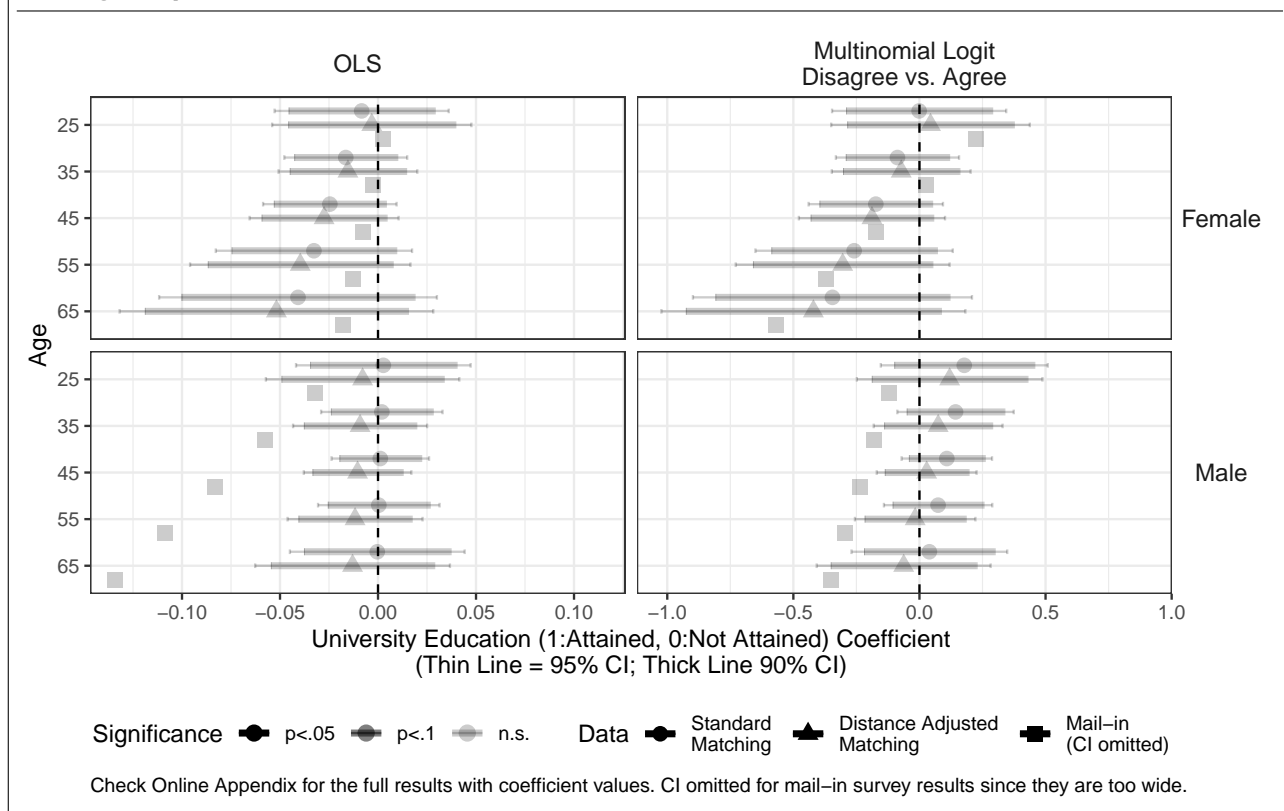
FIGURE 1. Comparing OLS regression and multinomial logit for the effect of university education on the support for granting suffrage to permanent residents in Japan (OLS regression and multinomial logit)



ROBUSTNESS CHECKS OF MAIN RESULT

Results in the previous section can be potentially biased in at least three ways. First, we make strong assumptions regarding functional forms of the relationships between covariates, treatment, and outcome variables. Second, while we do incorporate contextual variables as controls, there may be other contextual variables we fail to measure and include. Third, results may be sensitive to the sample and mode of the SIFCCT's online survey format.

To alleviate concerns about these biases, we implement robustness checks with three strategies. First, matching is another way to filter out the effect of covariates, but makes no assumptions regarding functional forms (Ho et al.). Therefore, analyses with matching provide an additional check that results obtained in the previous section are not an artifact of arbitrary model selection. Second, in order to surmount the challenge of additional contextual confounders, we employ a matching method introduced by Keele, Titiunik, and Zubizarreta that minimizes both heterogeneity in covariate

FIGURE 2. Robustness checks of the effect of university education on the support for granting suffrage to permanent residents

distributions and geographic distance between matched pairs. This matching method functions under the framework of optimal subset matching (Rosenbaum), which “optimally seeks to retain the largest number of treated subjects for which common support holds” (Keele, Titiunik, and Zubizarreta, 230).¹⁰ Third, SIFCCT fielded an extra wave of survey in November 2012 with an identical set of questions. In contrast to the main online survey, this survey select respondents from a nationally representative voter listing and collects responses through mail. While the sample size is substantially smaller than the main online survey (Originally $N = 1202$, cut down to $N = 199$ after limiting to those who “stayed”), we use this mail-in survey to see if the tendencies found in the main survey persists with an alternative survey sample and mode of collection.

In Figure 2, we show estimated effects of university education from standard matching, geographic

¹⁰We use integer programming (Zubizarreta) to apply different types of constraints for different covariates. `designmatch` package in R with Gurobi optimizer (<https://www.gurobi.com/>) is used to run matching. Check Online Appendix for more details on the matching methodology.

distance adjusted matching,¹¹ and the mail-in survey dataset. We use identical models and estimation strategies as in Table 2.¹² Two tendencies are apparent from the figure. First, it turns out that university education coefficients are now generally weakened and statistically insignificant across all gender and ages. Second, while effects in general are weakened and statistically insignificant, there persists the stronger tendency of negative education effect among older females. It is worth noting that mail-in survey results, even when the nature of data is quite different from online and matched datasets, show similar patterns (except for males in OLS models).

In sum, through robustness checks of the main result using matching and alternative samples, we find similar but weaker effect of university education compared to the main result.¹³ In general, the effect of Japanese university education on support for granting local suffrage to foreigners is non-existent, and if any, its direction is negative. The current results reaffirm H1A, continues to contradict with H1B and to partially support H2.

CAUSAL MEDIATION ANALYSIS

Table 2, Figure 1 and Figure 2 show the weak role of Japanese university education in shaping natives' attitudes toward granting suffrage for foreigners, but how do these patterns arise? In the previous section, we focus on total causal effects. In this section, we test our hypotheses for the causal processes

¹¹This method has a parameter, λ , which controls the trade-off between matching and geographic distance, such that "it is preferable to match additional pairs if on average they are at a smaller distance than λ " (Keele, Titiunik, and Zubizarreta, 231). We show the result with $\lambda = 200km$ here, while the results are consistent across alternative values of λ . Check Online Appendix for alternative results.

¹²Following the recommendation from Ho et al., we keep all covariates in the models estimated on matched datasets to filter out any imbalance remained in the matched datasets. There is no variation in survey month for mail-in survey, thus survey month fixed effect is not included in the model for mail-in survey.

¹³Note that matched datasets provide more precise estimates of causal effect, but its generalizability is limited to the population that have the similar covariate characteristics as non-university graduates. With matched datasets, we cannot extrapolate our finding to those university graduates who have covariate characteristics non-comparable to high school graduates. In fact, the number of observation is reduced to 4614 in the standard matching dataset, and to 3786 in the geographic distance adjusted matching dataset.

by estimating the average causal mediation effect (ACME) of university education. We use causal mediation analysis within the counterfactual framework described in Imai et al. and implement it by the `mediation` package in R (Tingley et al.).¹⁴ For each mediator, this package uses Monte Carlo simulations to estimate treatment effects mediated by proposed mediators. We present ACME estimates using both unmatched and matched (with geographic distance adjustment) datasets to verify they are robust to different modelling assumptions.¹⁵

We use seven variables to test the mediating effects of financial security, liberalizing learning experience, and positive social contact. For ‘financial security’ (H3A), we rate respondents on a 0-1 scale from lowest to highest income percentile. For ‘liberalizing learning experience’ (H3B), we rate respondents on a 0-1 scale for their self-identified ideological position and differences in feeling thermometer ratings between two major parties in Japan at the time: Liberal Democratic Party (LDP, center right) and Democratic Party of Japan (DPJ, center left). On both ideology scales, 1 indicates more conservative leanings. For ‘positive social contact’ (H3C), we rate respondents on a 0-1 scale their self-identified feeling thermometer toward South Korea and China, such that 0 is the coldest and 1 is the warmest.¹⁶ To account for the possibility that attitudes toward immigrants from Asian countries are distinct from attitudes toward non-Asian immigrants, we include thermometer ratings of the United States as well.¹⁷

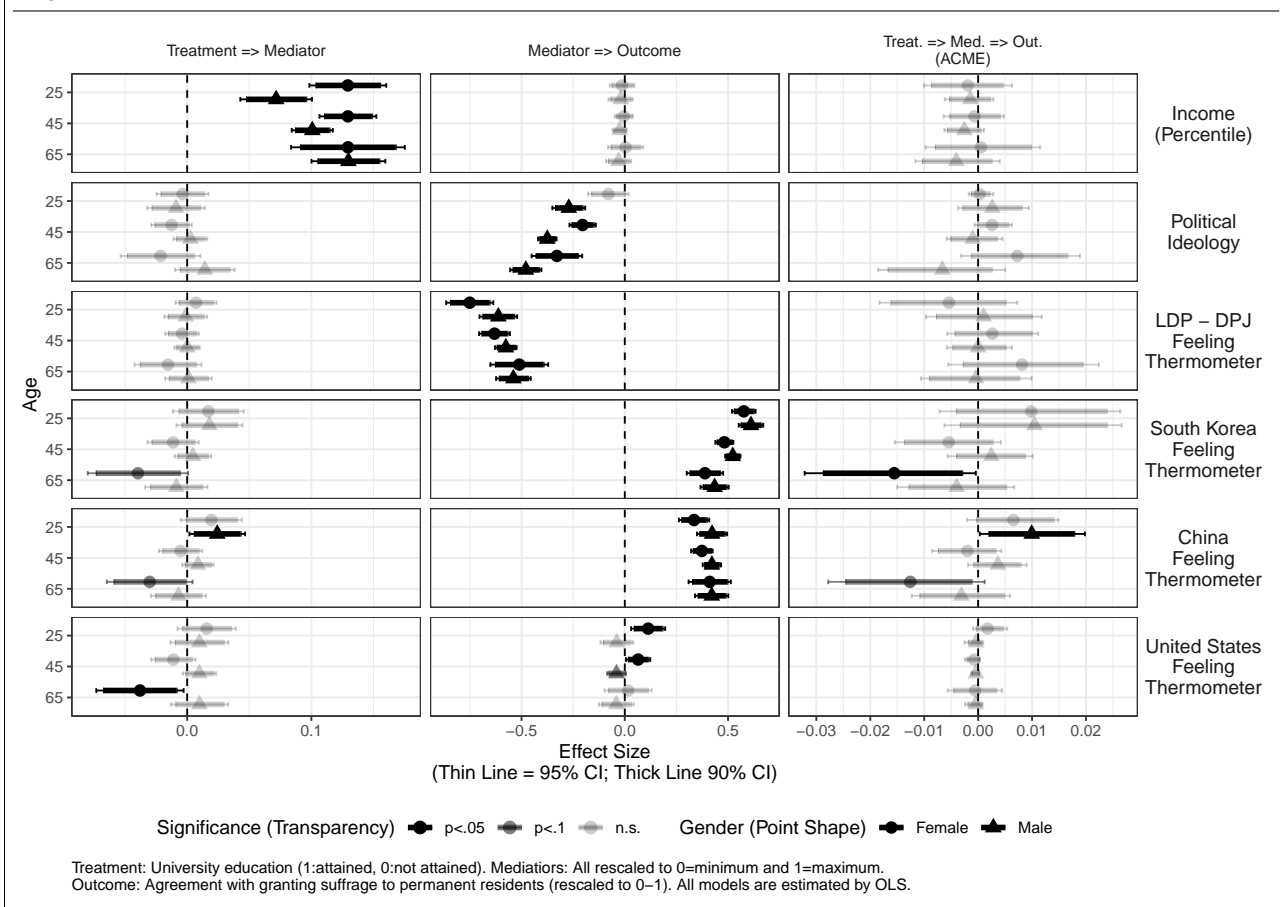
Figure 3 shows ACME of Japanese university education with unmatched data from the online SIFCCT survey. The left panel shows estimated effects of university education on each mediating variable: income, conservative ideology, support for LDP-DPJ, attitude toward South Korea, China, and the United States. The center panel shows estimated effects of mediating variables on support for granting voting rights to permanent resident foreigners. The right panel shows the estimated ACME of university education through mediating variables. Each effect size is scaled in terms of OLS

¹⁴In addition to controlling for pre-treatment covariates that affect both treatment (i.e., university education) and outcome (i.e., support for foreigners’ local suffrage), valid assessment of ACME assumes any post-treatment covariates that potentially affect both mediator and outcome are controlled (Imai et al.).

¹⁵Check Online Appendix for the results with other matching specifications.

¹⁶We do not use thermometer ratings of North Korea since attitudes towards North Korea may involve a more complex set of considerations than ethnicity.

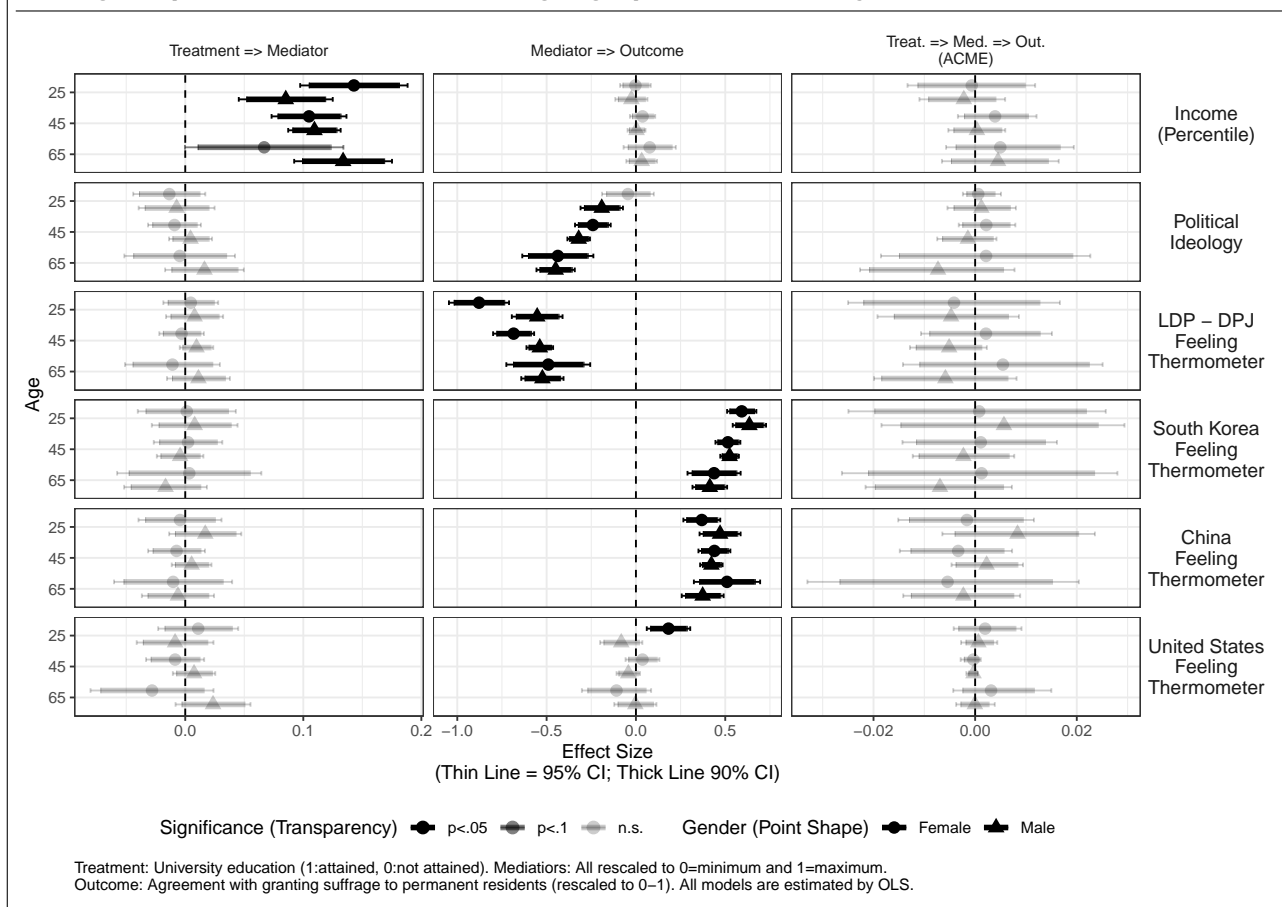
¹⁷See Online Appendix for details on all variables in analyses.

FIGURE 3. The causal mediation effect of university education on support for granting suffrage to permanent residents (with unmatched dataset)

coefficients.

Contrary to H3A, the first row of panels shows income does not mediate the effect of university education on support for granting suffrage to permanent resident foreigners. The broken link seems to lie in the second chain. While university graduates have higher incomes, high earners are not more likely to support suffrage. This finding is inconsistent with the argument that economic self interests affect support for immigration (Scheve and Slaughter; Mayda). Instead, it adds to existing evidence in North America and western Europe that education is more likely to affect sociotropic rather than economic assessments (Hainmueller and Hopkins).

In support of H3B, the second and third row of panels show political ideology does not mediate the effect of university education on support for granting suffrage to permanent resident foreigners. This time, the broken link seems to lie in the first chain. Although Japanese respondents with more conservative leanings (measured as either self-assessed political ideology, or support for the more

FIGURE 4. The causal mediation effect of university education on the support for granting suffrage to permanent residents (with geographic distance adjusted matched dataset)

conservative LDP) are less likely to support suffrage for permanent resident foreigners, those who completed university are not any more or less liberal. The effect size of self-reported ideology is smaller for younger respondents. This pattern is consistent with recent findings in Japan that traditional self-assessed ideology questions do not function as intended for younger generations, since understanding of ideology in Japan has shifted over the generations (Jou and Endo).¹⁸

Contrary to H3C, there is no consistent evidence that positive feelings toward Korea and China mediate the effect of university education on support for granting suffrage to permanent resident

¹⁸One might suspect that these null-findings on liberalization is caused by the apolitical nature of Japanese education. On this point, we estimated an additional ACME with political knowledge (i.e., the correct answers to collection of factual questions) as a mediator. Here, we find that those who completed university do hold higher levels of political knowledge, rejecting the above suspicion. Interestingly, then, political knowledge significantly mediate the effect of education in a *negative* direction. See more detailed results in Online Appendix.

foreigners. The broken link seems to lie in the first chain. Although respondents who have more positive feelings toward Korea and China are more likely to support suffrage expansion, there is no consistent evidence that Japanese university graduates have more positive feelings toward Korea and China. Lastly, in comparison to the last row of panels on feelings toward the United States, it is evident the issue of foreigner's suffrage is more closely tied to Koreans and Chinese than to Americans.

Figure 4 provides a robustness check with geographic distance adjustment.¹⁹ The results reinforce causal mediation analyses with unmatched data. For H3A (first row), university education does increase income, but income has no effect on support for suffrage expansion. For H3B (second and third rows), conservative ideological values do reduce support for suffrage expansion, but university education does not have any influence on ideology. Lastly, for H3C (fourth and fifth rows), feelings toward Korea and China have positive effects on suffrage expansion. However, university education has no power whatsoever to influence those feelings.

DISCUSSION

This paper challenges an established theory of opinion formation by applying it to a country that has, to our knowledge, not sufficiently explored how university education shapes public opinion. Examining local enfranchisement of foreigners as a tool of integration, we find mechanisms that underlie current theories cannot be fully applied to Japan. We introduce potential reasons why these mechanisms work differently, and demonstrate within a causal inference framework that major parts—ideological liberalization through the learning process and positive social contact—need to be reconsidered once they are removed from North American/European contexts. However, similar to empirical studies that differentiate between low- and high-skilled immigrants to western countries, economic self-interests (measured as income) does not influence immigration preferences in Japan, even though university education does increase income.

One implication of these findings is that future research on the political effects of higher education may be more fruitful if they move beyond the economic versus culture debate, and instead focus on

¹⁹The tendency shown in this figure persists in further robustness checks with alternative matched datasets. Check Online Appendix for details.

understanding how higher education shapes sociotropic factors such as political ideology and affect toward foreigners. Another implication, specific to Japan, is that this country has one of the most highly educated citizenry in the world, yet its higher education system may not be an engine for social change and progress. Normatively, is Japan content to have universities that impart no added influence on their students beyond job skills and diplomas? We examine the issue of immigrant integration in this paper, but similar analysis can be applied to other political issues such as gender inequality in political participation and representation, LGBT rights to marriage, and freedom of religious expression.

In parting, we acknowledge limitations and suggest extensions of this paper. We have only examined one aspect of immigrant integration in one country. As the MIPEx indicators show, integration is a composite outcome of multiple factors, and empirical findings in Japan may not extend to other Asian countries. We also do not have more fine grained data to directly test our explanations as to why university education may (not) have stronger effects on younger cohorts. In order to test these explanations, we plan to gather information on university enrollment rates, majors, and outcomes conditioned by gender and country of origin.

A broader question is that if an entire generation of Japanese youth are not being socialized ideologically at formal institutions of learning, where are they getting their political beliefs from? Due to data limitation, we focus analyses on respondents who have stayed at the same residence since the age of fifteen in order to filter out confounding effects of environmental contexts. Additional information on change in residential environment before and after university would allow for analyses on whether university education influences where Japanese live after graduating, and whether their choices of post-graduate residence in turn influence immigration attitudes. Furthermore, additional information on how Japanese political elites and news media frame the issue of foreigner's suffrage and immigrant integration would lend insight on elite-public opinion formation in Japan.

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