Online Supporting Materials

This is the Online Appendix of "The Relationship between University Education and Pro-Immigrant Attitudes Varies by Generation: Insights from Japan".

Contents

A Dependent Variable Wordings

Admit More Foreigners

- 質問：あなたが生活している地域で今後外国人が増えることに賛成ですか、反対ですか。[Q: Do you agree or disagree with the increasing number of foreigners in the neighborhood you live in?]
- 回答：賛成 (1)、やや賛成 (2/3)、やや反対 (1/3)、反対 (0) [A: "agree" (1), "somewhat agree" (2/3), "somewhat disagree" (1/3), and "disagree" (0)]

Integrate Foreign Residents

- 質問：あなたは、次のそれぞれの権利について、日本政府は日本に定住している、または、定住する意思のある外国人に対して認めるべきだと思いますか。（地方参政権（選挙権））[Q: For each of the following rights, do you think such a right should be granted to foreigners who are settled or have the intent to settle in Japan? (Local suffrage (voting right))]
- 回答：そう思う (1)、ややそう思う (0.75)、どちらともいえない (0.5)、あまりそう思わない (0.25)、そう思わない (0) [A: "think so" (1), "somewhat think so" (0.75), "cannot say" (0.5), "somewhat don't think so" (0.25), and "don't think so" (0)]

B Regression Table behind Main Results

Table A1: Connections between university education and pro-immigrant attitudes vary by age cohort

	ICPP 2009		2022 Survey	
	Admit More Foreigners	Integrate Foreign Residents	Admit More Foreigners	Integrate Foreign Residents
(Intercept)	0.390 (0.034)***	0.467 (0.034)***	0.413 (0.039)***	0.454 (0.042)***
University Education	0.097 (0.018)***	0.057 (0.019)**	0.054 (0.023)*	0.069 (0.025)**
Cohort II (18+ in 1975-89)	0.100 (0.048)*	0.201 (0.060)**		
Cohort III (18+ in 1990-99)	0.146 (0.059)*	0.105 (0.069)	0.086 (0.082)	0.165 (0.082)*
Cohort IV (18+ in 2000-09)	0.209 (0.068)**	0.034 (0.086)	0.007 (0.083)	−0.020 (0.107)
Cohort V (18+ in 2010-)			0.090 (0.112)	0.166 (0.107)
University * Cohort II	−0.074 (0.024)**	−0.038 (0.031)		
University * Cohort III	−0.071 (0.032)*	−0.021 (0.034)	−0.059 (0.038)	−0.048 (0.039)
University * Cohort IV	−0.110 (0.030)**	−0.132 (0.034)***	−0.080 (0.040)*	−0.106 (0.044)*
University * Cohort V			0.018 (0.041)	0.019 (0.040)
Gender (Male)	−0.010 (0.011)	−0.013 (0.018)	0.011 (0.024)	−0.075 (0.027)**
Male * Cohort II	−0.024 (0.027)	−0.057 (0.032)		
Male * Cohort III	−0.025 (0.032)	−0.024 (0.039)	−0.029 (0.042)	0.032 (0.044)
Male * Cohort IV	−0.046 (0.039)	−0.097 (0.045)*	−0.030 (0.044)	0.047 (0.046)
Male * Cohort V			−0.146 (0.039)***	−0.114 (0.040)**
Income (Middle)	0.032 (0.017)	0.032 (0.028)	0.034 (0.029)	0.027 (0.031)
Income (Middle) * Cohort II	−0.044 (0.040)	−0.063 (0.043)		
Income (Middle) * Cohort III	−0.108 (0.050)*	−0.111 (0.064)	−0.011 (0.050)	−0.013 (0.053)
Income (Middle) * Cohort IV	−0.029 (0.052)	0.054 (0.061)	0.023 (0.053)	0.032 (0.055)
Income (Middle) * Cohort V			−0.036 (0.049)	−0.009 (0.049)
Income (High)	0.027 (0.020)	0.008 (0.023)	0.061 (0.033)	−0.013 (0.036)
Income (High) * Cohort II	−0.026 (0.045)	−0.056 (0.047)		
Income (High) * Cohort III	−0.040 (0.054)	−0.107 (0.053)	−0.021 (0.056)	0.054 (0.060)
Income (High) * Cohort IV	0.015 (0.053)	0.042 (0.043)	0.045 (0.063)	0.063 (0.065)
Income (High) * Cohort V			−0.022 (0.056)	0.071 (0.057)
Income (Missing)	−0.018 (0.036)	−0.031 (0.040)	0.028 (0.032)	0.037 (0.034)
Income (Missing) * Cohort II	−0.037 (0.065)	0.019 (0.074)		
Income (Missing) * Cohort III	−0.078 (0.078)	0.011 (0.058)	0.004 (0.055)	−0.017 (0.057)
Income (Missing) * Cohort IV	−0.002 (0.057)	0.040 (0.068)	−0.058 (0.064)	−0.026 (0.064)
Income (Missing) * Cohort V			−0.020 (0.061)	−0.089 (0.059)
Student/Housemaker/Part-Time			0.009 (0.033)	0.060 (0.037)
Student/Housemaker/Part-Time * Cohort III			−0.009 (0.079)	−0.113 (0.079)
Student/Housemaker/Part-Time * Cohort IV			−0.015 (0.082)	−0.012 (0.107)
Student/Housemaker/Part-Time * Cohort V			0.044 (0.111)	−0.040 (0.104)
Student/Part-Time	0.058 (0.018)**	0.088 (0.022)***		
Student/Part-Time * Cohort II	−0.001 (0.034)	−0.101 (0.038)*		
Student/Part-Time * Cohort III	−0.014 (0.044)	−0.007 (0.048)		
Student/Part-Time * Cohort IV	−0.030 (0.057)	−0.022 (0.085)		
Self-Employed/Full-Time	0.050 (0.013)***	0.059 (0.021)**	0.013 (0.035)	0.057 (0.038)
Self-Employed/Full-Time * Cohort II	−0.025 (0.030)	−0.045 (0.033)		
Self-Employed/Full-Time * Cohort III	−0.015 (0.038)	−0.036 (0.044)	−0.030 (0.077)	−0.183 (0.080)*
Self-Employed/Full-Time * Cohort IV	−0.063 (0.047)	0.015 (0.068)	0.008 (0.081)	−0.018 (0.105)
Self-Employed/Full-Time * Cohort V			0.014 (0.112)	−0.079 (0.105)
Currently Married	0.002 (0.016)	−0.017 (0.022)	0.043 (0.024)	0.061 (0.027)*
Married * Cohort II	0.004 (0.029)	0.041 (0.032)		
Married * Cohort III	−0.020 (0.025)	0.078 (0.033)*	−0.038 (0.041)	−0.033 (0.042)
Married * Cohort IV	−0.062 (0.055)	0.052 (0.054)	−0.030 (0.042)	−0.036 (0.045)
Married * Cohort V			−0.083 (0.042)	−0.070 (0.041)
Urbanness (Current Residence)	0.015 (0.034)	−0.022 (0.028)	−0.044 (0.032)	−0.045 (0.035)
Urbanness * Cohort II	0.016 (0.031)	−0.027 (0.037)		
Urbanness * Cohort III	0.039 (0.047)	0.065 (0.058)	0.015 (0.052)	−0.032 (0.055)
Urbanness * Cohort IV	−0.008 (0.050)	0.123 (0.052)*	0.050 (0.059)	0.075 (0.063)
Urbanness * Cohort V			0.054 (0.060)	−0.042 (0.059)
R^2	0.056	0.045	0.032	0.047
Adj. R^2	0.045	0.034	0.015	0.030
Num. obs.	3297	3274	2169	2199
RMSE	0.264	0.328	0.305	0.319
N Clusters	30	30		

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Robust standard errors in parentheses (clustered by residential area in ICPP2009).

C Robustness Check 1 (Alternative Dependent Variables, ICPP 2009 and ICPP 2013)

Admit More Foreigners (alternative measurement, ICPP2009)

- 質問：あなたが生活している地域に以下のような人々が増えることに賛成ですか、反対ですか。[Q: Do you agree or disagree with the increasing number of following types of people in the neighborhood you live in?]
- 対象（ICPP 2009）：アメリカ人、中国人、韓国人、東南アジア諸国の外国人、西ヨーロッパ諸国の外国人、南米諸国（ブラジルなど）の外国人 [Target (ICPP 2009): American, Chinese, South Korean, a foreigner from South East Asian countries, a foreigner from West European countries, a foreigner from South American countries (such as Brazil)]
- 対象（ICPP 2013）：アメリカ人、中国人、韓国人、フィリピン人、ドイツ人、日系ブラジル人 [Target (ICPP 2013): American, Chinese, South Korean, Philippino, German, Japanese Brazilian]
- 回答：賛成 (1)、やや賛成 (2/3)、やや反対 (1/3)、反対 (0) [A: "agree" (1), "somewhat agree" (2/3), "somewhat disagree" (1/3), and "disagree" (0)]

For each of ICPP 2009 and ICPP 2013, the factor score is generated from the above six questions using the regression method, through `fa()` function in `psych` package of R. Higher values of the score reflect more accepting attitudes toward an increasing number of foreigners in the neighborhood.

Admit More Foreigners (alternative measurement, 2022 web survey)

In 2022 web survey we also asked the alternative question on immigrant acceptance attitudes. The alternative question replaces "neighborhood you live in [あなたが生活している地域]" with "Japan [日本全体]."

Integrate Foreign Residents (alternative measurement)

- 質問：あなたは、次のそれぞれの権利について、日本政府は日本に定住している、または、定住する意思のある外国人に対して認めるべきだと思いますか。[Q: For each of the following rights, do you think such a right should be granted to foreigners who are settled or have the intent to settle in Japan?]
- 対象（2022 Web Survey）：公営住宅へ入居する権利、困窮した際に生活保護を受ける権利、地方参政権（選挙権）、地方公務員になる権利 [Target (2022 web survey): right to live in public housing, right to receive welfare when in poverty, local suffrage (voting right), right to become local civil servant]
- 対象（ICPP 2009）：公営住宅への入居の権利、生活保護の受給の権利、地方参政権（選挙権）、地方公務員になる権利 [Target (ICPP 2009): right of living in public housing, right of receiving welfare, local suffrage (voting right), right to become local civil servant]

- 対象（ICPP 2013）：公営住宅への入居の権利、困窮した際に生活保護を受ける権利、地方参政権（選挙権）、地方公務員になる権利 [Target (ICPP 2013): right of living in public housing, right to receive welfare when in poverty, local suffrage (voting right), right to become local civil servant]
- 回答：そう思う (1)、ややそう思う (0.75)、どちらともいえない (0.5)、あまりそう思わない (0.25)、そう思わない (0) [A: "think so" (1), "somewhat think so" (0.75), "cannot say" (0.5), "somewhat don't think so" (0.25), and "don't think so" (0)]

For each of 2022 web survey, ICPP 2009 and ICPP 2013, the factor score is generated from the above four questions using the regression method, through `fa()` function in `psych` package of R. Higher values of the score reflect more positive attitudes toward granting rights to foreigners.

Table A2: Connections between university education and pro-immigrant attitudes vary by age cohort (ICPP 2009, alternative measurement)

	Admit More Foreigners	Integrate Foreign Residents
(Intercept)	−0.465 (0.115)***	−0.237 (0.086)**
University Education	0.470 (0.072)***	0.219 (0.063)**
Cohort II (18+ in 1975-89)	0.538 (0.147)**	0.493 (0.158)**
Cohort III (18+ in 1990-99)	0.617 (0.242)*	0.335 (0.237)
Cohort IV (18+ in 2000-09)	0.944 (0.276)**	0.166 (0.229)
University * Cohort II	−0.303 (0.097)**	−0.074 (0.102)
University * Cohort III	−0.363 (0.131)**	−0.052 (0.095)
University * Cohort IV	−0.514 (0.157)**	−0.282 (0.099)**
Gender (Male)	−0.020 (0.047)	0.012 (0.056)
Male * Cohort II	−0.126 (0.093)	−0.159 (0.095)
Male * Cohort III	0.009 (0.106)	−0.093 (0.098)
Male * Cohort IV	−0.164 (0.152)	−0.230 (0.116)
Income (Middle)	0.150 (0.081)	0.136 (0.074)
Income (Middle) * Cohort II	−0.153 (0.131)	−0.227 (0.127)
Income (Middle) * Cohort III	−0.301 (0.223)	−0.432 (0.161)*
Income (Middle) * Cohort IV	−0.118 (0.167)	0.033 (0.198)
Income (High)	0.118 (0.073)	0.096 (0.074)
Income (High) * Cohort II	−0.061 (0.159)	−0.182 (0.138)
Income (High) * Cohort III	−0.157 (0.210)	−0.405 (0.152)*
Income (High) * Cohort IV	−0.041 (0.157)	0.098 (0.158)
Income (Missing)	−0.242 (0.135)	−0.097 (0.110)
Income (Missing) * Cohort II	0.035 (0.235)	0.071 (0.196)
Income (Missing) * Cohort III	0.083 (0.298)	−0.013 (0.178)
Income (Missing) * Cohort IV	0.049 (0.234)	−0.067 (0.224)
Student/Part-Time	0.106 (0.068)	0.147 (0.059)*
Student/Part-Time * Cohort II	0.052 (0.108)	−0.149 (0.111)
Student/Part-Time * Cohort III	0.193 (0.125)	0.142 (0.139)
Student/Part-Time * Cohort IV	0.031 (0.191)	0.079 (0.182)
Self-Employed/Full-Time	0.173 (0.057)**	0.136 (0.058)*
Self-Employed/Full-Time * Cohort II	−0.090 (0.117)	−0.111 (0.103)
Self-Employed/Full-Time * Cohort III	−0.043 (0.150)	−0.014 (0.141)
Self-Employed/Full-Time * Cohort IV	−0.229 (0.163)	−0.036 (0.136)
Currently Married	−0.038 (0.067)	−0.035 (0.053)
Married * Cohort II	−0.019 (0.101)	0.098 (0.082)
Married * Cohort III	−0.033 (0.115)	0.187 (0.099)
Married * Cohort IV	−0.183 (0.196)	0.017 (0.133)
Urbanness (Current Residence)	0.089 (0.093)	−0.102 (0.084)
Urbanness * Cohort II	−0.067 (0.118)	−0.006 (0.106)
Urbanness * Cohort III	−0.103 (0.176)	0.126 (0.193)
Urbanness * Cohort IV	−0.110 (0.211)	0.343 (0.139)*
R^2	0.086	0.046
Adj. R^2	0.074	0.034
Num. obs.	3174	3248
RMSE	0.930	0.917
N Clusters	30	30

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Robust standard errors in parentheses.

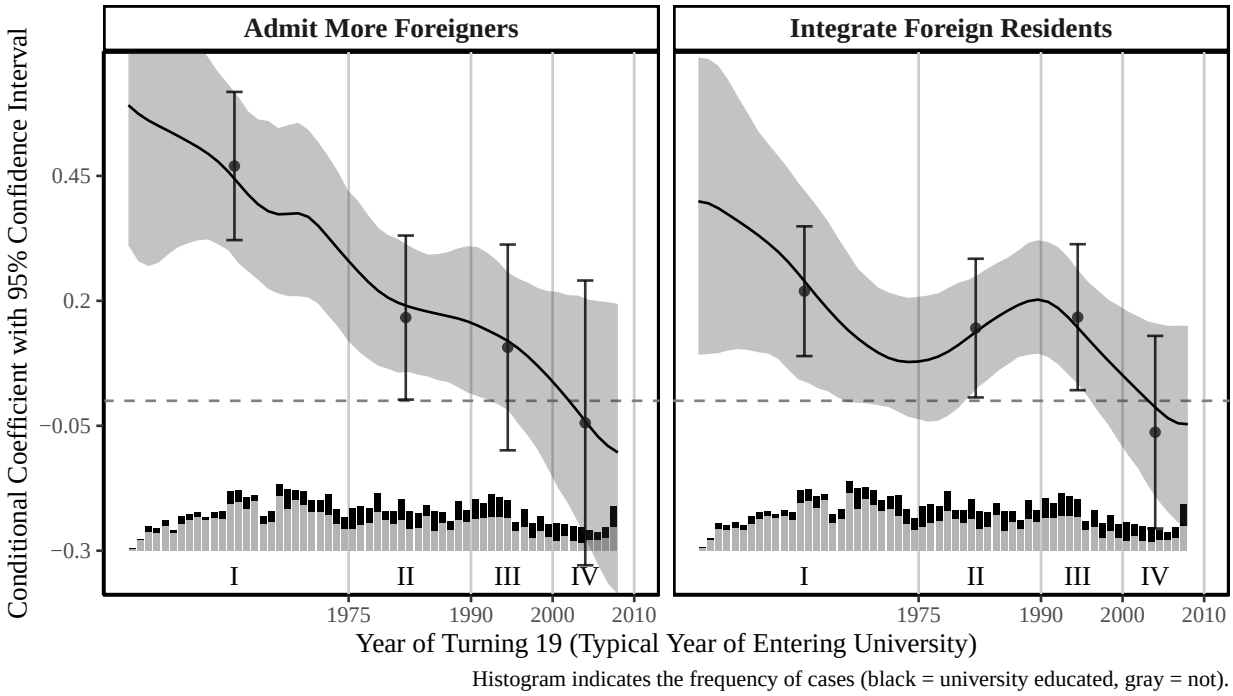

Figure A1: Connections between university education and pro-immigrant attitudes are declining in age until Cohort IV (ICPP 2009, alternative measurement)

Table A3: Connections between university education and attitude toward integrating foreign residents vary by age cohorts (2022 web survey, alternative measurement)

	Admit More Foreigners (Nation)	Integrate Foreign Residents
(Intercept)	0.448 (0.036)***	−0.159 (0.117)
University Education	0.044 (0.022)*	0.193 (0.074)**
Cohort III (18+ in 1990-99)	0.076 (0.084)	0.541 (0.220)*
Cohort IV (18+ in 2000-09)	0.052 (0.076)	−0.069 (0.269)
Cohort V (18+ in 2010-)	0.058 (0.099)	0.617 (0.293)*
University * Cohort III	−0.056 (0.036)	−0.111 (0.115)
University * Cohort IV	−0.072 (0.038)	−0.242 (0.127)
University * Cohort V	0.034 (0.039)	0.038 (0.119)
Gender (Male)	0.014 (0.023)	−0.119 (0.078)
Male * Cohort III	−0.038 (0.040)	0.042 (0.128)
Male * Cohort IV	−0.061 (0.041)	0.080 (0.133)
Male * Cohort V	−0.150 (0.037)***	−0.428 (0.116)***
Income (Middle)	0.033 (0.027)	0.056 (0.090)
Income (Middle) * Cohort III	−0.002 (0.047)	0.045 (0.157)
Income (Middle) * Cohort IV	−0.006 (0.049)	0.221 (0.161)
Income (Middle) * Cohort V	−0.028 (0.048)	−0.032 (0.142)
Income (High)	0.042 (0.031)	−0.010 (0.100)
Income (High) * Cohort III	−0.008 (0.054)	0.189 (0.177)
Income (High) * Cohort IV	0.057 (0.059)	0.293 (0.186)
Income (High) * Cohort V	0.027 (0.054)	0.057 (0.168)
Income (Missing)	0.002 (0.031)	0.103 (0.091)
Income (Missing) * Cohort III	0.020 (0.054)	−0.070 (0.161)
Income (Missing) * Cohort IV	−0.077 (0.059)	−0.109 (0.184)
Income (Missing) * Cohort V	0.002 (0.056)	−0.267 (0.175)
Student/Housemaker/Part-Time	0.001 (0.032)	0.119 (0.102)
Student/Housemaker/Part-Time * Cohort III	0.021 (0.084)	−0.360 (0.207)
Student/Housemaker/Part-Time * Cohort IV	−0.038 (0.076)	−0.095 (0.269)
Student/Housemaker/Part-Time * Cohort V	0.055 (0.096)	−0.108 (0.286)
Self-Employed/Full-Time	0.002 (0.034)	0.113 (0.105)
Self-Employed/Full-Time * Cohort III	−0.007 (0.082)	−0.648 (0.211)**
Self-Employed/Full-Time * Cohort IV	0.007 (0.073)	−0.170 (0.266)
Self-Employed/Full-Time * Cohort V	0.030 (0.097)	−0.302 (0.289)
Currently Married	0.043 (0.023)	0.174 (0.076)*
Married * Cohort III	−0.051 (0.039)	−0.149 (0.121)
Married * Cohort IV	−0.022 (0.040)	−0.106 (0.131)
Married * Cohort V	−0.057 (0.041)	−0.283 (0.120)*
Urbanness (Current Residence)	−0.029 (0.030)	−0.142 (0.097)
Urbanness * Cohort III	0.012 (0.051)	−0.096 (0.154)
Urbanness * Cohort IV	0.050 (0.056)	0.204 (0.185)
Urbanness * Cohort V	0.028 (0.056)	−0.093 (0.167)
R^2	0.034	0.049
Adj. R^2	0.017	0.032
Num. obs.	2181	2191
RMSE	0.290	0.921

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$. Robust standard errors in parentheses.

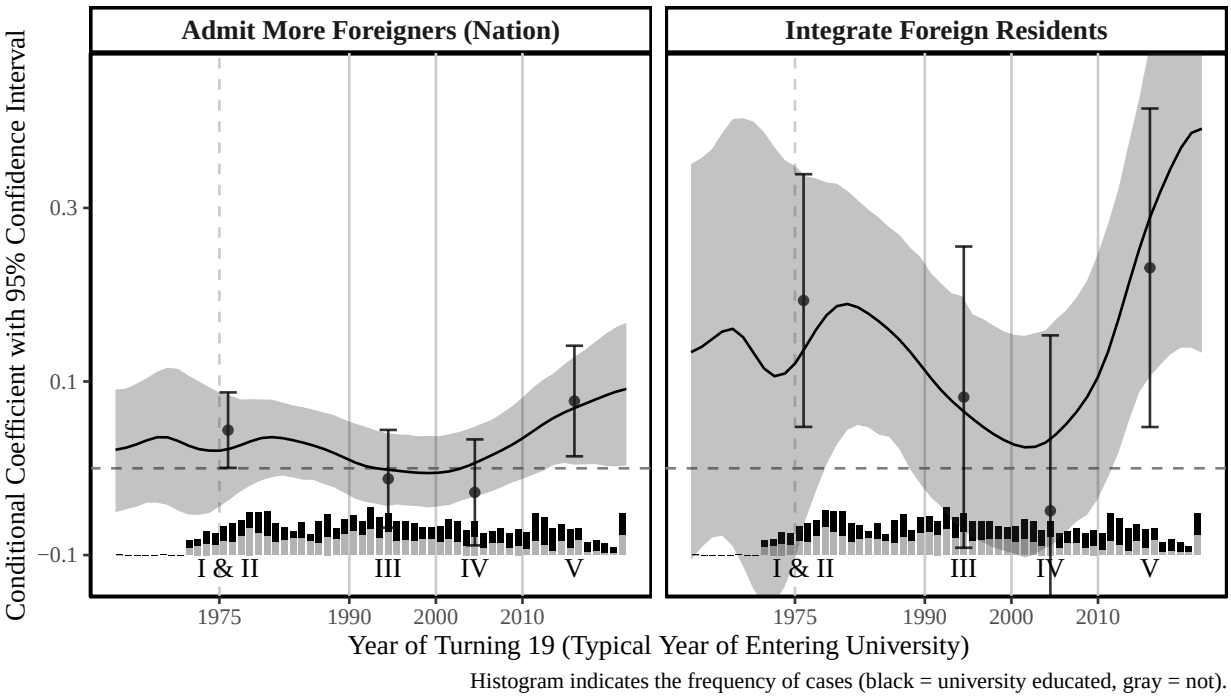

Figure A2: Connections between university education and pro-immigrant attitudes are declining in age until Cohort IV bur rising from Cohort V (2022 web survey, alternative measurement)

D Robustness Check 2 (ICPP 2013 with Alternative Measurement)

Table A4: Connections between university education and pro-immigrant attitudes vary by age cohort (ICPP 2013, alternative measurement)

	Admit More Foreigners	Integrate Foreign Residents
(Intercept)	−0.259 (0.081)**	0.055 (0.078)
University Education	0.168 (0.064)*	0.140 (0.061)*
Cohort II (18+ in 1975-89)	0.219 (0.162)	0.164 (0.150)
Cohort III (18+ in 1990-99)	0.275 (0.184)	−0.004 (0.155)
Cohort IV (18+ in 2000-09)	0.354 (0.236)	−0.296 (0.227)
University * Cohort II	−0.003 (0.080)	0.033 (0.090)
University * Cohort III	−0.071 (0.096)	−0.165 (0.119)
University * Cohort IV	−0.098 (0.117)	−0.294 (0.132)*
Gender (Male)	0.092 (0.050)	−0.076 (0.048)
Male * Cohort II	−0.102 (0.089)	0.016 (0.091)
Male * Cohort III	−0.193 (0.107)	0.023 (0.099)
Male * Cohort IV	−0.135 (0.117)	−0.012 (0.123)
Income (Middle)	0.106 (0.057)	0.055 (0.056)
Income (Middle) * Cohort II	−0.098 (0.120)	−0.109 (0.125)
Income (Middle) * Cohort III	−0.156 (0.157)	−0.164 (0.141)
Income (Middle) * Cohort IV	−0.050 (0.149)	0.294 (0.160)
Income (High)	0.198 (0.061)**	0.117 (0.066)
Income (High) * Cohort II	−0.199 (0.121)	−0.230 (0.113)*
Income (High) * Cohort III	−0.155 (0.149)	−0.155 (0.162)
Income (High) * Cohort IV	−0.042 (0.169)	0.285 (0.181)
Income (Missing)	−0.097 (0.100)	−0.101 (0.090)
Income (Missing) * Cohort II	0.220 (0.176)	−0.045 (0.133)
Income (Missing) * Cohort III	0.297 (0.182)	0.225 (0.210)
Income (Missing) * Cohort IV	0.229 (0.199)	0.586 (0.176)**
Student/Part-Time	0.069 (0.068)	−0.027 (0.074)
Student/Part-Time * Cohort II	0.020 (0.109)	−0.059 (0.121)
Student/Part-Time * Cohort III	0.183 (0.147)	−0.008 (0.127)
Student/Part-Time * Cohort IV	0.226 (0.146)	0.059 (0.158)
Self-Employed/Full-Time	0.037 (0.059)	0.038 (0.064)
Self-Employed/Full-Time * Cohort II	−0.047 (0.119)	−0.081 (0.094)
Self-Employed/Full-Time * Cohort III	−0.023 (0.120)	−0.052 (0.110)
Self-Employed/Full-Time * Cohort IV	0.286 (0.167)	0.115 (0.158)
Currently Married	−0.042 (0.055)	−0.062 (0.056)
Married * Cohort II	0.075 (0.100)	0.156 (0.094)
Married * Cohort III	0.035 (0.099)	0.278 (0.099)**
Married * Cohort IV	0.160 (0.114)	0.180 (0.111)
Urbanness (Current Residence)	−0.008 (0.086)	−0.147 (0.082)
Urbanness * Cohort II	0.016 (0.104)	−0.126 (0.101)
Urbanness * Cohort III	−0.014 (0.145)	−0.035 (0.120)
Urbanness * Cohort IV	−0.297 (0.211)	0.240 (0.203)
R^2	0.041	0.022
Adj. R^2	0.031	0.012
Num. obs.	3738	3808
RMSE	0.930	0.925
N Clusters	51	51

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Robust standard errors in parentheses.

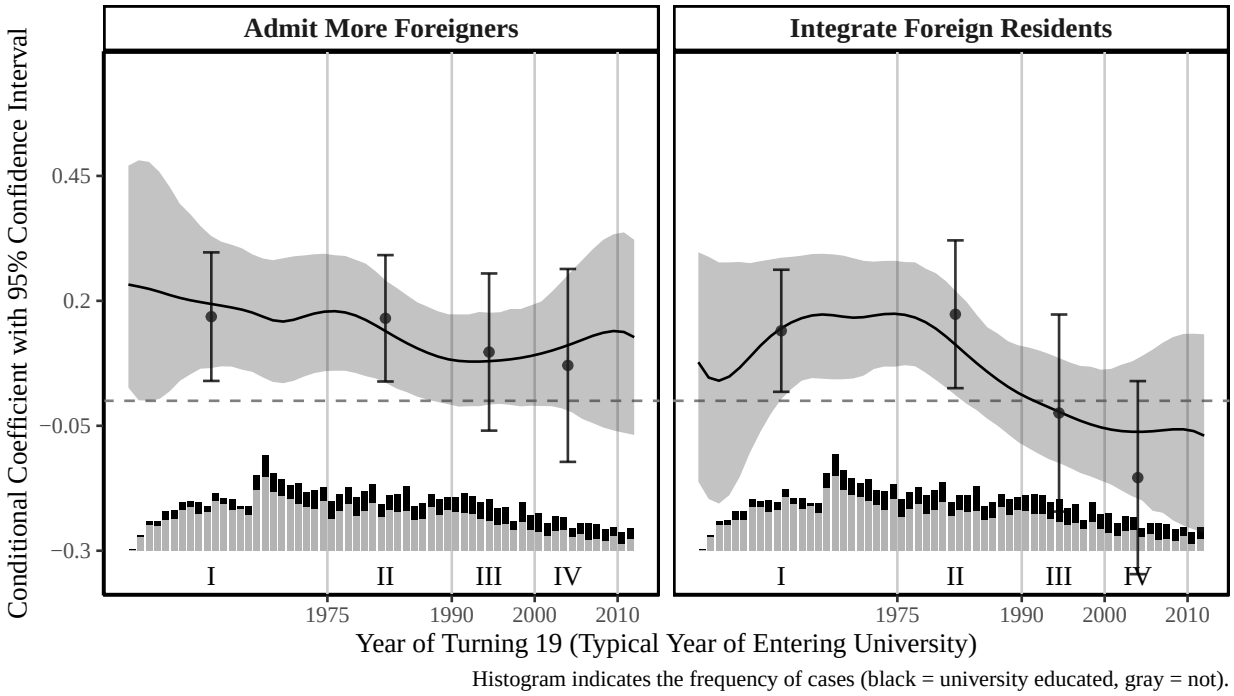

Figure A3: Connections between university education and pro-immigrant attitudes are declining in age until Cohort IV (ICPP 2013, alternative measurement)

E Robustness Check 3 (World Values Survey Wave 7)

Table A5: Connections between university education and pro-immigrant attitudes vary by age cohort (World Values Survey Wave 7, 2019)

	Admit Foreign Workers
(Intercept)	0.189 (0.079)*
University Education	−0.003 (0.055)
Cohort II (18+ in 1975-89)	0.252 (0.200)
Cohort III (18+ in 1990-99)	0.492 (0.260)
Cohort IV (18+ in 2000-09)	0.048 (0.210)
Cohort V (18+ in 2010-)	0.002 (0.199)
University * Cohort II	0.039 (0.088)
University * Cohort III	0.054 (0.097)
University * Cohort IV	−0.033 (0.103)
University * Cohort V	0.212 (0.106)*
Gender (Male)	0.084 (0.054)
Male * Cohort II	−0.123 (0.092)
Male * Cohort III	−0.089 (0.106)
Male * Cohort IV	−0.301 (0.107)**
Male * Cohort V	−0.413 (0.111)***
Income (Middle)	0.062 (0.053)
Income (Middle) * Cohort II	−0.073 (0.104)
Income (Middle) * Cohort III	−0.158 (0.120)
Income (Middle) * Cohort IV	−0.055 (0.132)
Income (Middle) * Cohort V	−0.344 (0.159)*
Income (High)	0.150 (0.075)*
Income (High) * Cohort II	−0.143 (0.116)
Income (High) * Cohort III	−0.268 (0.134)*
Income (High) * Cohort IV	−0.099 (0.152)
Income (High) * Cohort V	−0.364 (0.149)*
Income (Missing)	0.120 (0.088)
Income (Missing) * Cohort II	−0.106 (0.156)
Income (Missing) * Cohort III	−0.209 (0.177)
Income (Missing) * Cohort IV	−0.191 (0.179)
Income (Missing) * Cohort V	−0.366 (0.162)*
Student/Housemaker/Part-Time	0.083 (0.056)
Student/Housemaker/Part-Time * Cohort II	−0.137 (0.160)
Student/Housemaker/Part-Time * Cohort III	−0.235 (0.234)
Student/Housemaker/Part-Time * Cohort IV	0.095 (0.198)
Student/Housemaker/Part-Time * Cohort V	0.741 (0.109)***
Self-Employed/Full-Time	−0.039 (0.059)
Self-Employed/Full-Time * Cohort II	0.075 (0.157)
Self-Employed/Full-Time * Cohort III	−0.158 (0.232)
Self-Employed/Full-Time * Cohort IV	0.365 (0.194)
Self-Employed/Full-Time * Cohort V	0.896 (0.106)***
Currently Married	0.014 (0.055)
Married * Cohort II	0.047 (0.106)
Married * Cohort III	0.034 (0.122)
Married * Cohort IV	0.056 (0.115)
Married * Cohort V	0.009 (0.146)
Urbanness (Current Residence)	0.089 (0.076)
Urbanness * Cohort II	−0.161 (0.138)
Urbanness * Cohort III	−0.135 (0.150)
Urbanness * Cohort IV	−0.003 (0.172)
Urbanness * Cohort V	−0.356 (0.210)
R^2	0.055
Adj. R^2	0.016
Num. obs.	1240
RMSE	0.491

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Robust standard errors in parentheses.

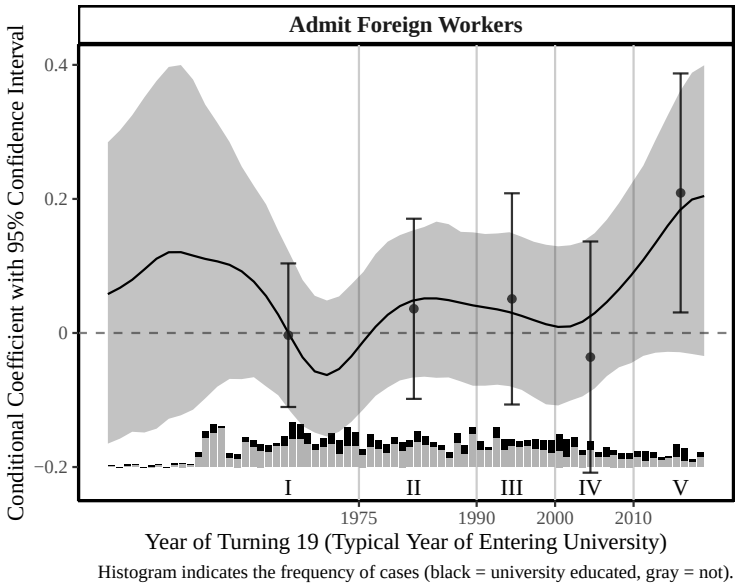

Figure A4: Connections between university education and pro-immigrant attitudes are staying weak until Cohort IV but rising in Cohort V (World Values Survey Wave 7, 2019)

The wording for the outcome question is as follows:

> *Q130 (Total N=1353): Immigration policy preference How about people from other countries coming here to work. Which one of the following do you think the government should do?*
>
> *1 Let anyone come who wants to (N = 20)*
>
> *2 Let people come as long as there are jobs available (N = 533)*
>
> *3 Place strict limits on the number of foreigners who can come here (N=708)*
>
> *4 Prohibit people coming here from other countries (N=11)*
>
> *-1 Don´t know (N = 74)*
>
> *-2 No answer (N=7)*

Since the responses to categories 1 and 4 are extremely rare, these answers are combined with 2 and 3, respectively. Don't know and no answer are recoded as missing. The final outcome variable has a binary outcome of 0 being placing strict limit or more (original 3 and 4) and 1 being accepting more immigrants (original 1 and 2).

F Main Results using Ordered Logit

Table A6: Connections between university education and pro-immigrant attitudes vary by age cohort (ordered logit)

	ICPP 2009		2022 Survey	
	Admit More Foreigners	Integrate Foreign Residents	Admit More Foreigners	Integrate Foreign Residents
University Education	0.698 (0.126)***	0.322 (0.121)**	0.326 (0.141)*	0.461 (0.139)***
Cohort II (18+ in 1975-89)	0.705 (0.346)*	1.043 (0.327)**		
Cohort III (18+ in 1990-99)	0.983 (0.421)*	0.546 (0.405)	0.448 (0.500)	0.870 (0.486)
Cohort IV (18+ in 2000-09)	1.528 (0.580)**	−0.035 (0.570)	0.040 (0.576)	−0.080 (0.592)
Cohort V (18+ in 2010-)			0.469 (0.639)	0.835 (0.602)
University * Cohort II	−0.578 (0.191)**	−0.196 (0.183)		
University * Cohort III	−0.484 (0.211)*	−0.108 (0.203)	−0.352 (0.226)	−0.330 (0.219)
University * Cohort IV	−0.793 (0.271)**	−0.725 (0.260)**	−0.437 (0.246)	−0.683 (0.242)**
University * Cohort V			0.135 (0.243)	0.085 (0.233)
Gender (Male)	−0.074 (0.102)	−0.068 (0.097)	0.103 (0.150)	−0.409 (0.149)**
Male * Cohort II	−0.157 (0.190)	−0.274 (0.180)		
Male * Cohort III	−0.184 (0.211)	−0.103 (0.208)	−0.200 (0.249)	0.180 (0.244)
Male * Cohort IV	−0.272 (0.254)	−0.455 (0.246)	−0.218 (0.262)	0.252 (0.256)
Male * Cohort V			−0.957 (0.238)***	−0.615 (0.228)**
Income (Middle)	0.230 (0.126)	0.146 (0.121)	0.208 (0.177)	0.161 (0.173)
Income (Middle) * Cohort II	−0.278 (0.264)	−0.314 (0.247)		
Income (Middle) * Cohort III	−0.760 (0.293)**	−0.583 (0.277)*	−0.073 (0.300)	−0.093 (0.292)
Income (Middle) * Cohort IV	−0.237 (0.367)	0.396 (0.355)	0.160 (0.315)	0.178 (0.306)
Income (Middle) * Cohort V			−0.220 (0.295)	−0.055 (0.281)
Income (High)	0.184 (0.134)	0.026 (0.130)	0.377 (0.197)	−0.076 (0.193)
Income (High) * Cohort II	−0.166 (0.265)	−0.312 (0.247)		
Income (High) * Cohort III	−0.276 (0.308)	−0.557 (0.291)	−0.104 (0.336)	0.315 (0.329)
Income (High) * Cohort IV	0.068 (0.375)	0.241 (0.354)	0.309 (0.371)	0.402 (0.358)
Income (High) * Cohort V			−0.093 (0.337)	0.499 (0.327)
Income (Missing)	−0.156 (0.207)	−0.177 (0.203)	0.142 (0.199)	0.176 (0.193)
Income (Missing) * Cohort II	−0.165 (0.404)	0.027 (0.383)		
Income (Missing) * Cohort III	−0.393 (0.426)	0.053 (0.402)	−0.003 (0.338)	−0.096 (0.327)
Income (Missing) * Cohort IV	−0.012 (0.422)	0.238 (0.403)	−0.233 (0.401)	−0.169 (0.381)
Income (Missing) * Cohort V			−0.145 (0.362)	−0.482 (0.341)
Student/Housemaker/Part-Time			0.064 (0.203)	0.313 (0.202)
Student/Housemaker/Part-Time * Cohort III			−0.009 (0.482)	−0.589 (0.470)
Student/Housemaker/Part-Time * Cohort IV			−0.116 (0.575)	−0.037 (0.591)
Student/Housemaker/Part-Time * Cohort V			0.347 (0.610)	−0.089 (0.569)
Student/Part-Time	0.408 (0.130)**	0.471 (0.124)***		
Student/Part-Time * Cohort II	−0.051 (0.242)	−0.553 (0.228)*		
Student/Part-Time * Cohort III	−0.095 (0.297)	−0.071 (0.282)		
Student/Part-Time * Cohort IV	−0.158 (0.420)	−0.062 (0.398)		
Self-Employed/Full-Time	0.375 (0.114)***	0.319 (0.109)**	0.063 (0.208)	0.325 (0.205)
Self-Employed/Full-Time * Cohort II	−0.225 (0.228)	−0.227 (0.216)		
Self-Employed/Full-Time * Cohort III	−0.129 (0.269)	−0.187 (0.263)	−0.115 (0.469)	−0.967 (0.463)*
Self-Employed/Full-Time * Cohort IV	−0.479 (0.412)	0.145 (0.396)	0.023 (0.562)	−0.140 (0.577)
Self-Employed/Full-Time * Cohort V			0.155 (0.611)	−0.411 (0.572)
Currently Married	0.037 (0.121)	−0.079 (0.116)	0.239 (0.147)	0.344 (0.146)*
Married * Cohort II	0.031 (0.196)	0.222 (0.188)		
Married * Cohort III	−0.150 (0.209)	0.379 (0.200)	−0.211 (0.241)	−0.180 (0.233)
Married * Cohort IV	−0.526 (0.374)	0.377 (0.364)	−0.170 (0.256)	−0.211 (0.249)
Married * Cohort V			−0.464 (0.252)	−0.436 (0.239)
Urbanness (Current Residence)	0.121 (0.164)	−0.124 (0.157)	−0.268 (0.194)	−0.251 (0.192)
Urbanness * Cohort II	0.131 (0.280)	−0.137 (0.266)		
Urbanness * Cohort III	0.310 (0.342)	0.385 (0.328)	0.107 (0.317)	−0.138 (0.308)
Urbanness * Cohort IV	−0.120 (0.437)	0.816 (0.421)	0.264 (0.351)	0.498 (0.344)
Urbanness * Cohort V			0.343 (0.354)	−0.225 (0.338)
AIC	7784.789	10245.597	5624.058	6822.812
BIC	8041.021	10507.629	5862.703	7067.730
Log Likelihood	−3850.394	−5079.799	−2770.029	−3368.406
Deviance	7700.789	10159.597	5540.058	6736.812
Num. obs.	3297	3274	2169	2199

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Robust standard errors in parentheses (clustered by residential area in ICPP2009).

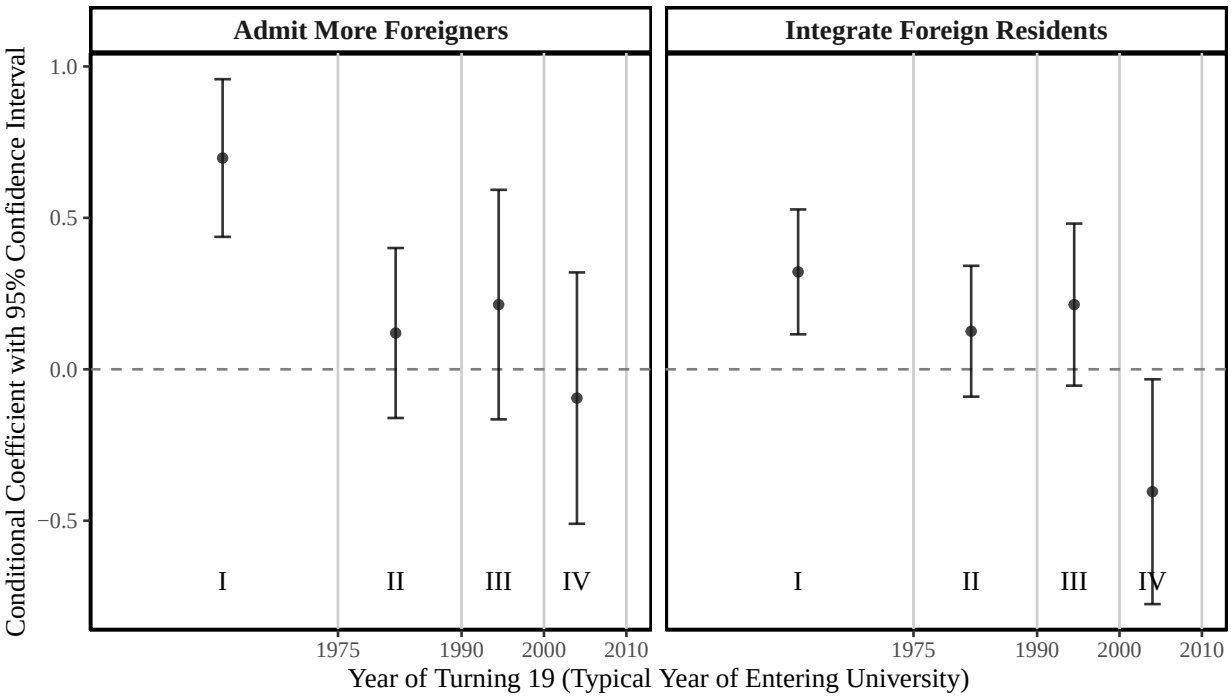

Figure A5: Connections between university education and pro-immigrant attitudes are declining in age until Cohort IV (ICPP 2009, ordered logit)

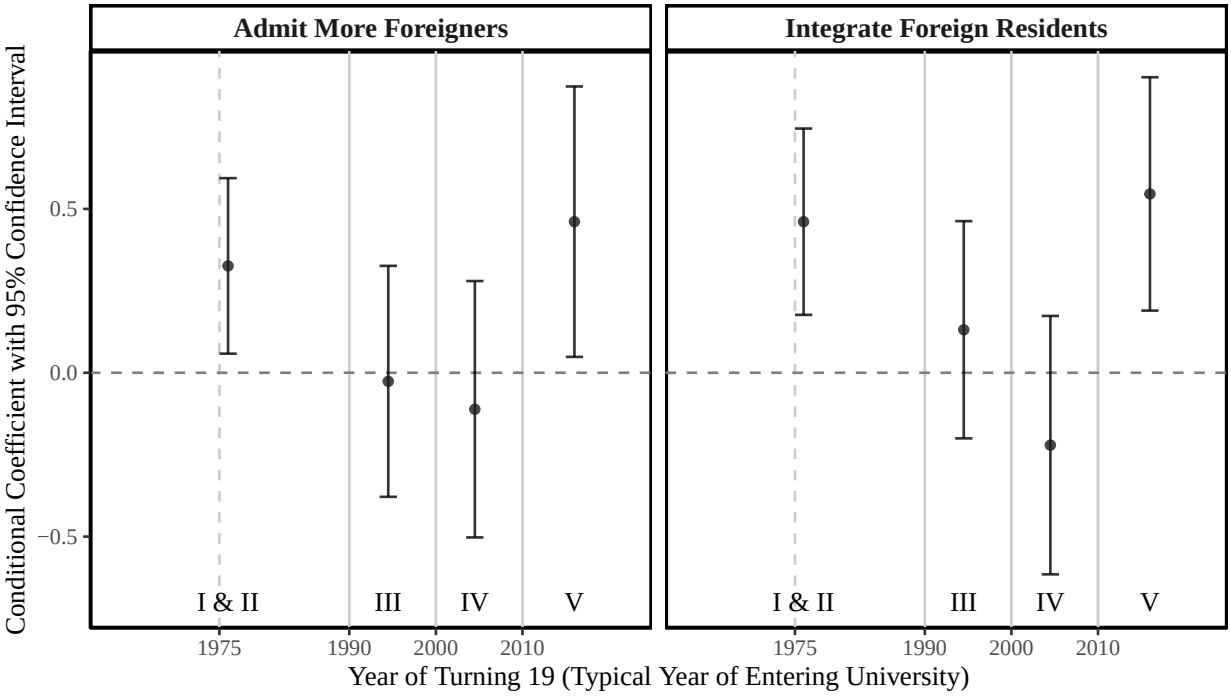

Figure A6: Connections between university education and pro-immigrant attitudes are declining in age until Cohort IV but rising from Cohort V (2022 web survey, ordered logit)

G Detailed Procedures and Tables for the Exploration of Mechanisms

University-educated Parents variable takes a value of 1 if any parent of a respondent graduated from university, 0 otherwise. *Hometown is City* variable takes a value of 1 if the region a respondent spent the most time prior to turning 18 is NOT a town or village, 0 otherwise.

Table A7: Explaining university education attainment through parental educational attainment, gender, and hometown context (2022 web survey)

	University Education
(Intercept)	-1.774 (0.214)***
University-educated Parents	1.449 (0.203)***
Cohort III (18+ in 1990-99)	0.834 (0.320)**
Cohort IV (18+ in 2000-09)	0.741 (0.337)*
Cohort V (18+ in 2010-)	1.728 (0.356)***
University (Parents) * Cohort III	0.210 (0.307)
University (Parents) * Cohort IV	-0.412 (0.306)
University (Parents) * Cohort V	-0.298 (0.305)
Gender (Male)	1.735 (0.165)***
Male * Cohort III	-0.632 (0.263)*
Male * Cohort IV	-0.709 (0.280)*
Male * Cohort V	-1.193 (0.277)***
Hometown in City	0.688 (0.209)***
Hometown (City) * Cohort III	-0.964 (0.322)**
Hometown (City) * Cohort IV	-0.153 (0.337)
Hometown (City) * Cohort V	-0.770 (0.361)*
AIC	2485.189
BIC	2575.385
Log Likelihood	-1226.595
Deviance	2453.189
Num. obs.	2074

$^{***}p < 0.001$; $^{**}p < 0.01$; $^{*}p < 0.05$. Robust standard errors in parentheses.

Note: Logistic regression with robust standard errors.

To create a variable of contact with foreigners, we use the following variable:

- 質問：あなたは下に示したそれぞれのおつき合いについて、次のような国の外国人と経験がありますか（現在進行中の経験も含む）。それぞれについてあてはまる国・外国人を全て選んでください。[Q: For each of the interactions listed below, do you have experience (including ongoing experience) with foreigners from the following countries? Please select all countries/foreigners that apply to each.]
- 対象：一緒に働く、学校で一緒に勉強、友人としてつき合う、自分または親せきと結婚、国際交流グループで一緒に活動、その他のグループや地域活動に一緒に参加、あいさつ程度のつき合い [Target: Working together, studying together at school, socializing as friends, marrying themselves or their relatives, working together in international exchange groups, participating in other groups or community activities together, and just greeting.]
- 回答：アメリカ人、中国人、 韓国人、フィリピン人、日系ブラジル人、その他の外国人 [A: Americans, Chinese, Koreans, Filipinos, Japanese Brazilians, and other foreigners]

Each target is coded as 1 if there is at least 1 encounter with a foreigner, 0 if none. Then, the values for targets are simply aggregated to create a measure of a scale from 0 to 7. Cronbach's alphas for this aggregation is 0.85.

For supporting separate surnames/same-sex marriage, the following questions are used:

- 質問：最近いわれているいくつかの意見について、あなたのお考えをお聞かせください。[Q: I would like to know your thoughts on some of the opinions that have been expressed these days.]
- 対象：夫婦別姓を法律で認める、同性同士の結婚を法律で認める [Target: Legalization of separate surnames for married couples, legalization of same-sex marriages.]
- 回答：賛成 (6)、(5)、(4)、どちらともいえない (3)、(2)、(1)、反対 (0) [A: "agree" (6), "can't say" (3), and "disagree" (0)]

Missing values are recoded as "can't say" (3). Then, we run a factor analysis with the resultant variable. Then, the factor score is used for the analysis.

Table A8: Connections between university education and contact with foreigners and supporting separate surnames/same-sex marriage vary by age cohort (2022 web survey)

	Contact with Foreigners	Support Equality
(Intercept)	1.475 (0.283)***	0.066 (0.114)
University Education	0.480 (0.163)**	0.083 (0.068)
Cohort III (18+ in 1990-99)	0.013 (0.539)	0.122 (0.234)
Cohort IV (18+ in 2000-09)	0.002 (0.670)	0.281 (0.266)
Cohort V (18+ in 2010-)	−0.551 (0.628)	0.722 (0.269)**
University * Cohort III	−0.204 (0.270)	0.062 (0.099)
University * Cohort IV	−0.082 (0.290)	0.035 (0.113)
University * Cohort V	−0.609 (0.304)*	0.122 (0.100)
Gender (Male)	−0.013 (0.179)	−0.374 (0.072)***
Male * Cohort III	0.349 (0.294)	0.069 (0.109)
Male * Cohort IV	0.473 (0.308)	0.110 (0.122)
Male * Cohort V	0.452 (0.288)	−0.206 (0.100)*
Income (Middle)	0.108 (0.189)	−0.017 (0.081)
Income (Middle) * Cohort III	−0.473 (0.356)	0.055 (0.131)
Income (Middle) * Cohort IV	−0.484 (0.371)	0.083 (0.142)
Income (Middle) * Cohort V	0.207 (0.334)	0.055 (0.120)
Income (High)	0.139 (0.217)	−0.026 (0.094)
Income (High) * Cohort III	−0.118 (0.400)	0.089 (0.149)
Income (High) * Cohort IV	−0.201 (0.434)	0.114 (0.163)
Income (High) * Cohort V	0.613 (0.387)	−0.064 (0.144)
Income (Missing)	0.062 (0.229)	0.009 (0.091)
Income (Missing) * Cohort III	−0.765 (0.394)	−0.096 (0.144)
Income (Missing) * Cohort IV	−0.462 (0.483)	−0.059 (0.173)
Income (Missing) * Cohort V	0.138 (0.442)	−0.190 (0.145)
Student/Housemaker/Part-Time	−0.262 (0.234)	0.010 (0.096)
Student/Housemaker/Part-Time * Cohort III	0.743 (0.534)	−0.037 (0.220)
Student/Housemaker/Part-Time * Cohort IV	1.046 (0.657)	−0.045 (0.265)
Student/Housemaker/Part-Time * Cohort V	0.539 (0.615)	−0.202 (0.248)
Self-Employed/Full-Time	0.261 (0.240)	0.089 (0.100)
Self-Employed/Full-Time * Cohort III	0.167 (0.508)	−0.213 (0.218)
Self-Employed/Full-Time * Cohort IV	0.586 (0.640)	−0.070 (0.262)
Self-Employed/Full-Time * Cohort V	−0.114 (0.620)	−0.402 (0.251)
Currently Married	−0.024 (0.164)	−0.054 (0.071)
Married * Cohort III	0.089 (0.281)	−0.068 (0.103)
Married * Cohort IV	−0.198 (0.313)	−0.026 (0.117)
Married * Cohort V	0.470 (0.307)	−0.007 (0.101)
Urbanness (Current Residence)	0.038 (0.226)	−0.106 (0.091)
Urbanness * Cohort III	0.109 (0.377)	0.135 (0.138)
Urbanness * Cohort IV	−0.427 (0.410)	−0.168 (0.160)
Urbanness * Cohort V	1.150 (0.422)**	0.029 (0.141)
R^2	0.049	0.098
Adj. R^2	0.032	0.082
Num. obs.	2237	2237
RMSE	2.164	0.822

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$. Robust standard errors in parentheses.

Note: OLS regression with robust standard errors.

H Contact with Foreigners on Occasions as Students

Table A9: Connections between university education and contact with foreigners on occasions as students vary by age cohort (2022 web survey)

	Learned Together with Foreigners
(Intercept)	−1.815 (0.333)***
University Education	0.859 (0.199)***
Cohort III (18+ in 1990-99)	0.509 (0.640)
Cohort IV (18+ in 2000-09)	0.333 (0.747)
Cohort V (18+ in 2010-)	1.761 (0.760)*
University * Cohort III	−0.353 (0.291)
University * Cohort IV	−0.306 (0.303)
University * Cohort V	−0.366 (0.297)
Gender (Male)	−0.164 (0.211)
Male * Cohort III	0.625 (0.318)*
Male * Cohort IV	0.168 (0.320)
Male * Cohort V	0.340 (0.293)
Income (Middle)	0.121 (0.252)
Income (Middle) * Cohort III	−0.287 (0.395)
Income (Middle) * Cohort IV	−0.267 (0.388)
Income (Middle) * Cohort V	0.152 (0.366)
Income (High)	0.346 (0.269)
Income (High) * Cohort III	−0.010 (0.425)
Income (High) * Cohort IV	−0.142 (0.437)
Income (High) * Cohort V	0.293 (0.405)
Income (Missing)	0.453 (0.277)
Income (Missing) * Cohort III	−0.766 (0.450)
Income (Missing) * Cohort IV	−0.261 (0.485)
Income (Missing) * Cohort V	−0.745 (0.436)
Student/Housemaker/Part-Time	−0.274 (0.288)
Student/Housemaker/Part-Time * Cohort III	−0.109 (0.617)
Student/Housemaker/Part-Time * Cohort IV	1.260 (0.746)
Student/Housemaker/Part-Time * Cohort V	−0.284 (0.714)
Self-Employed/Full-Time	0.376 (0.273)
Self-Employed/Full-Time * Cohort III	−0.734 (0.592)
Self-Employed/Full-Time * Cohort IV	0.756 (0.727)
Self-Employed/Full-Time * Cohort V	−1.576 (0.713)*
Currently Married	−0.096 (0.201)
Married * Cohort III	0.263 (0.312)
Married * Cohort IV	−0.185 (0.307)
Married * Cohort V	0.405 (0.302)
Urbanness (Current Residence)	0.025 (0.264)
Urbanness * Cohort III	0.437 (0.406)
Urbanness * Cohort IV	−0.012 (0.418)
Urbanness * Cohort V	0.395 (0.421)
AIC	2707.127
BIC	2935.642
Log Likelihood	−1313.563
Deviance	2627.127
Num. obs.	2237

***$p < 0.001$; **$p < 0.01$; *$p < 0.05$. Robust standard errors in parentheses.

Note: OLS regression (linear probability model) with robust standard errors.

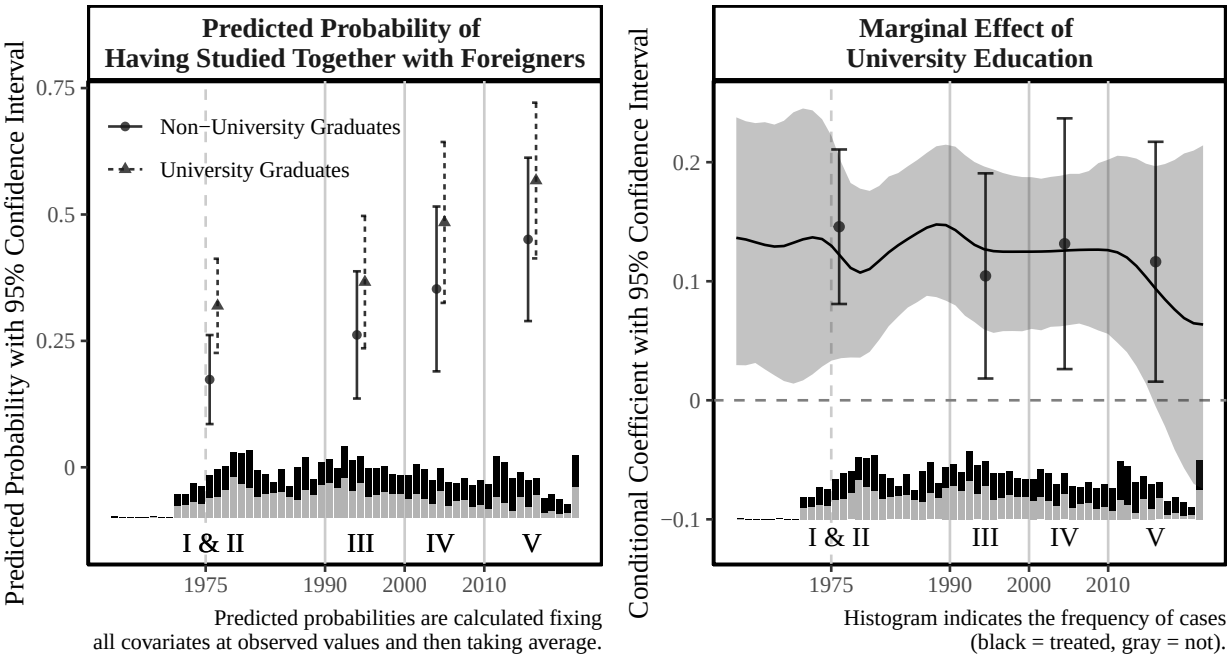

Figure A7: Connections between university education and contact with foreigners on occasions as students (2022 web survey)

I Distributions of Dependent Variables

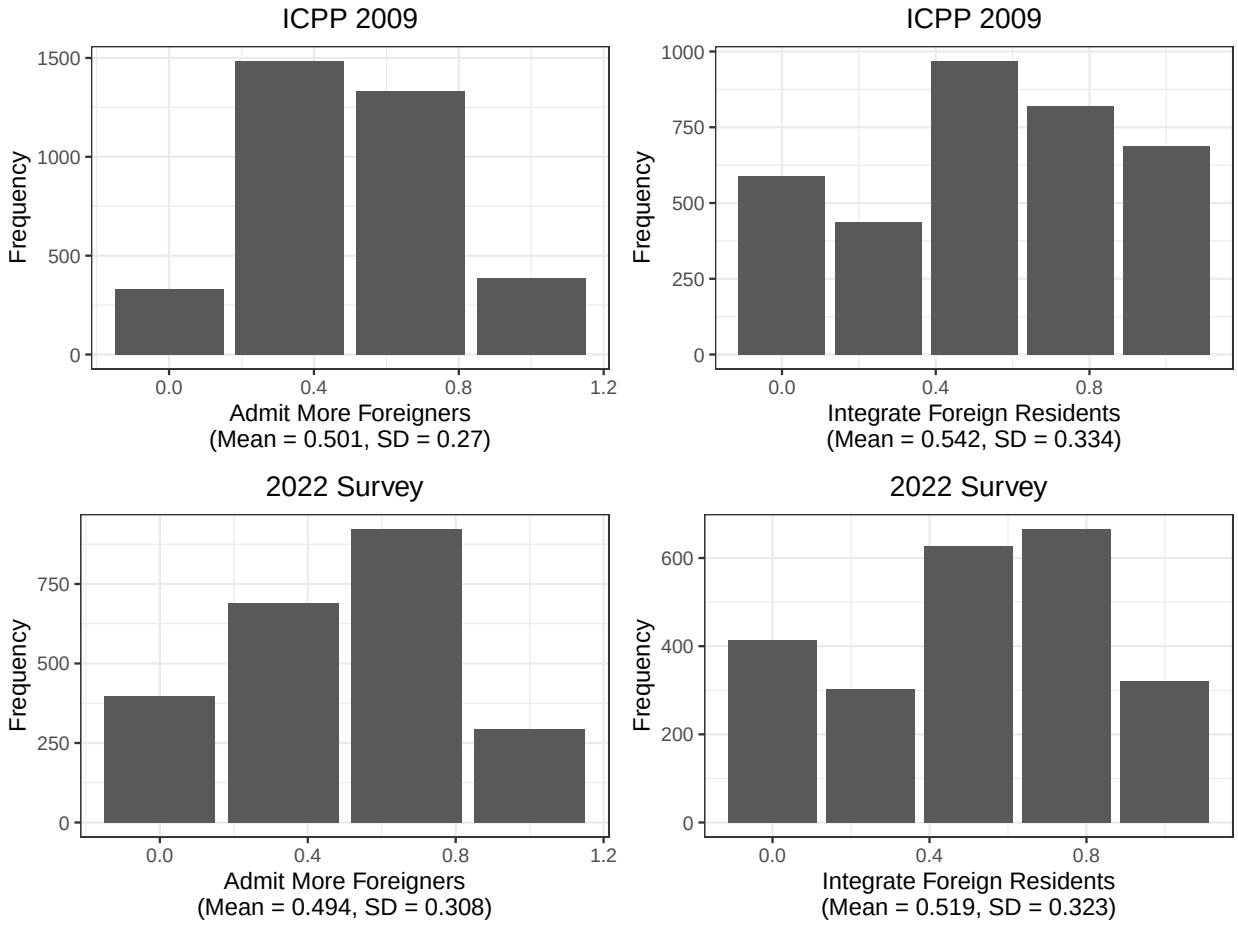

Figure A8: Dependent variables in the main analysis

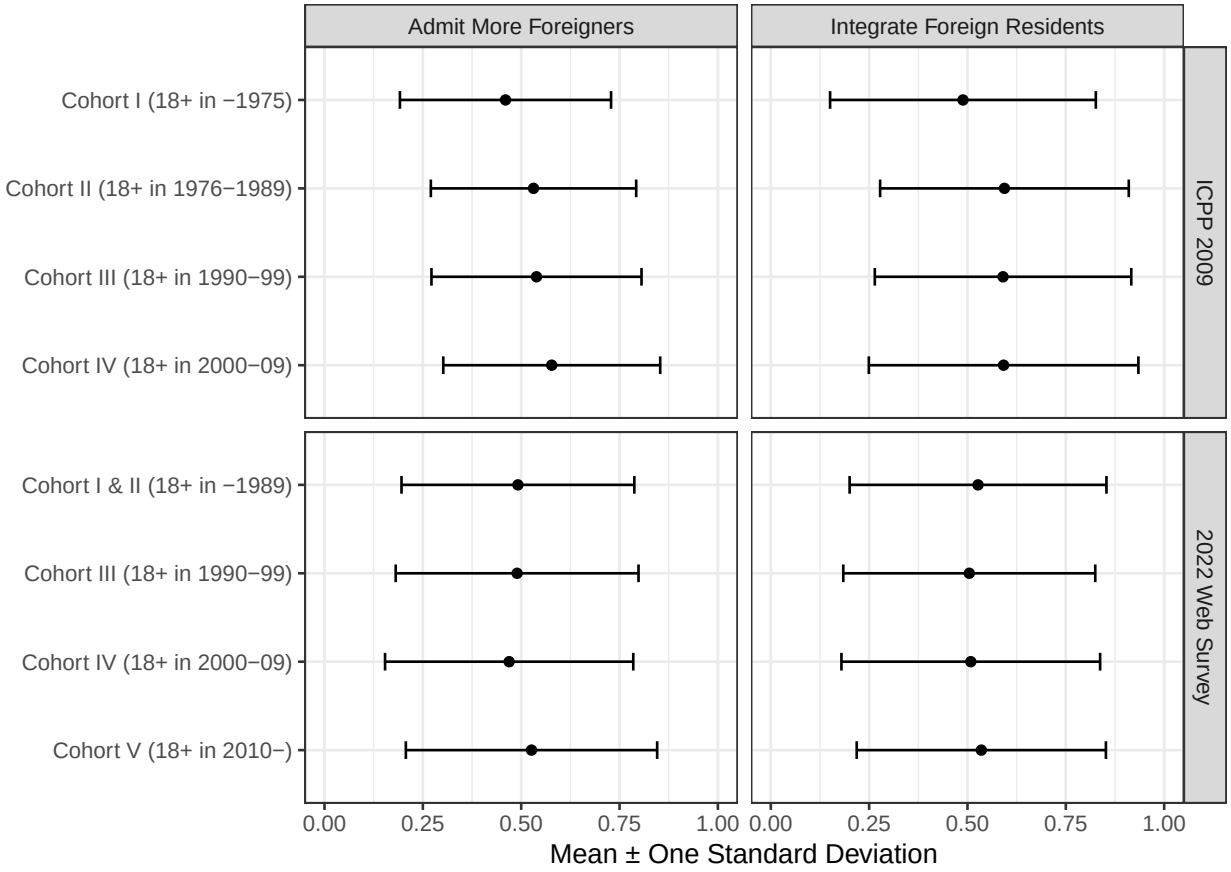

Figure A9: Dependent variables in the main analysis by age cohorts

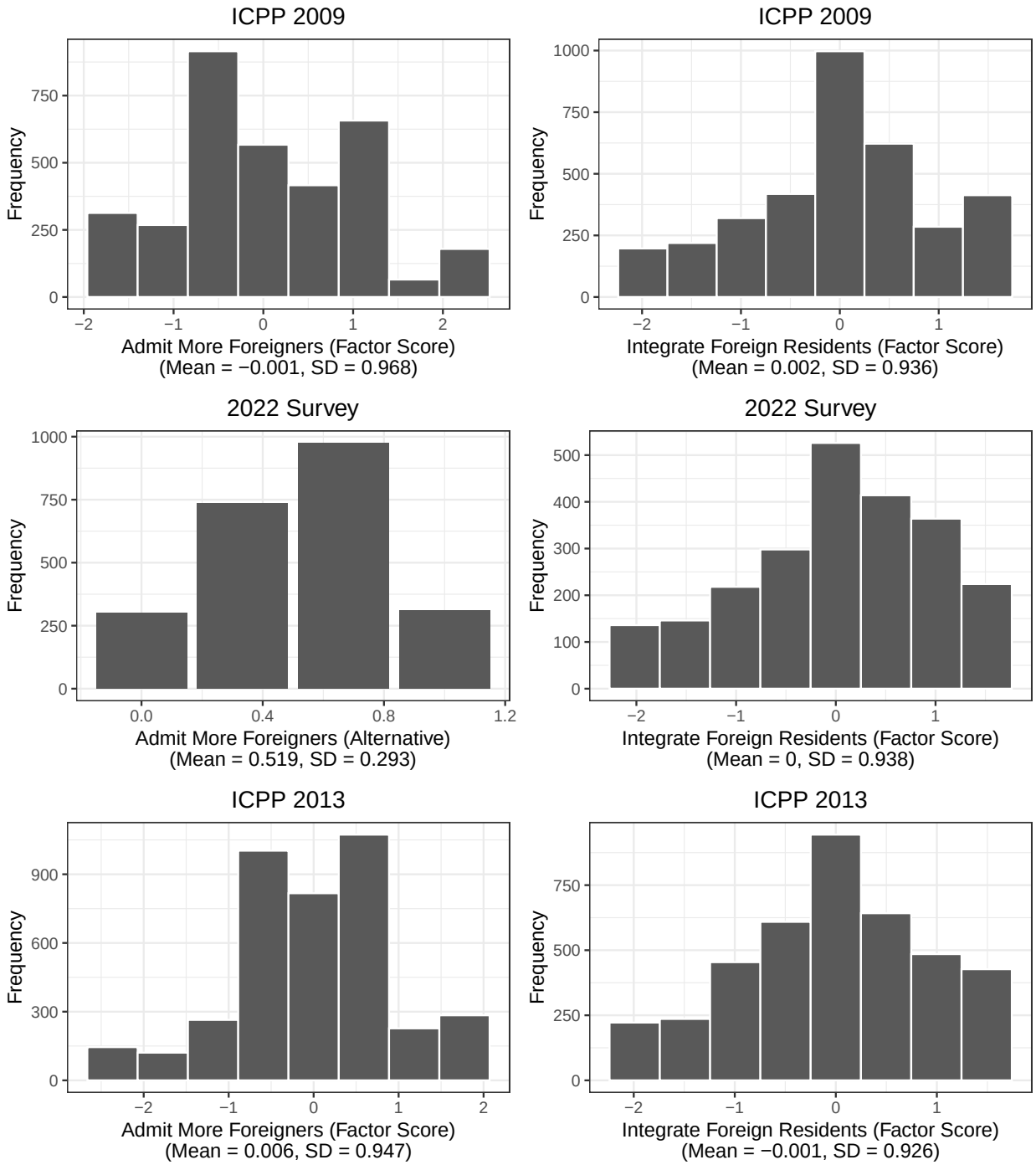

Figure A10: Alternative dependent variables in robustness checks

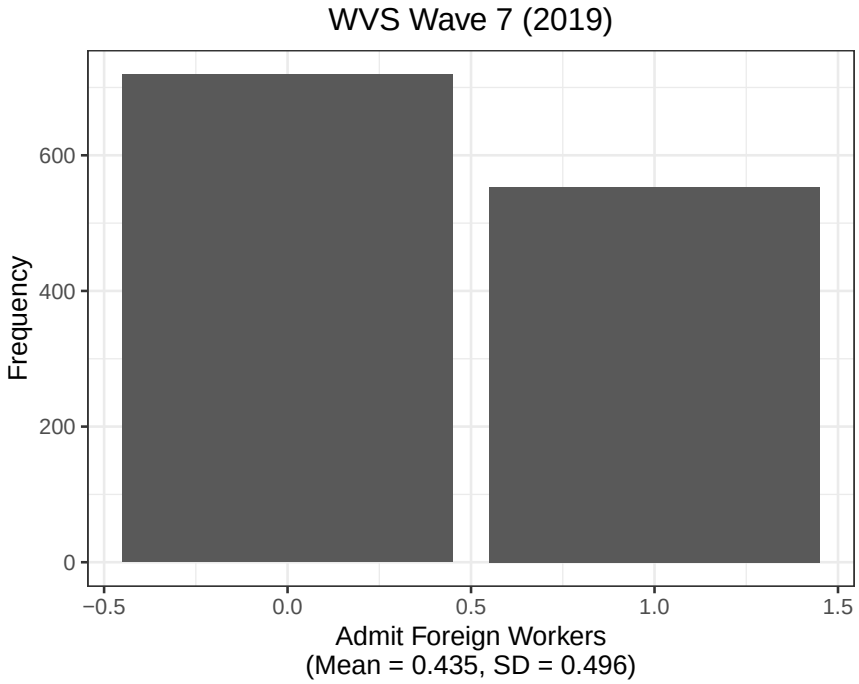

Figure A11: Dependent variable in WVS7 dataset