Are Immigrant-Origin Candidates Penalized Due to Ingroup Favoritism or Outgroup Hostility?

Online appendix

Contents

A Population with a Migration Background

Table 1: Origin of naturalized Swiss citizens, 1991-2015

	n	%
Former Yugoslavia	204,383	26.3
Italy	117,821	15.2
Turkey	57,243	7.4
Germany	48,636	6.3
Portugal	35,782	4.6
France	33,146	4.3
Spain	21,982	2.8
Albania	19,404	2.5
Other Western European countries	27,603	3.6
Eastern European countries	34,290	4.4
Other Southern European countries	3,916	0.5
Sri Lanka and India	29,788	3.8
Other Eastern Asian countries	32,779	4.2
Maghreb	19,969	2.6
Other African countries	28,613	3.7
Central and Southern American countries	28,025	3.6
USA, Canada, Australia and New Zealand	10,490	1.4
Central Asian countries	9,929	1.3
Middle Eastern countries	9,535	1.2
Stateless/others	3,319	0.4
All	776,653	100.0

Note: Own calculations based on data from the Swiss Federal Statistical Office. Figures capture the nationality of the persons before naturalization.

B Data and Sample

B.1 Description of Data Collection

We collected data on negative and positive preference votes from cantonal and municipal offices in a time consuming procedure. The data on which we rely are of different forms, depending on the canton. We can group cantons in four broad categories according to the data they provided:

(1) Four cantons (Geneva, Neuchatel, Ticino, and Vaud) aggregated from the raw data candidate results about negative preference votes, internal positive preference votes ("cumulation") and external positive

preference votes ("panachage") in each municipality. For these cantons, we could directly use the data for our analysis. In all the other cantons, we collected raw data that resembled a copy of modified ballots that were cast by the voters. In other words, our data shows *for each modified ballot* which candidates have been crossed off, cumulated, or "panachaged" by the voter. These data had to be extracted from the electoral software.

(2) In the cantons Basel City, Grisons, and Lucerne raw data on the electoral results are stored at the cantonal offices. These cantons were able to either provide us this data for all municipalities (Basel City and Grisons) or for a 30 percent random sample of municipalities (Lucerne). (Please note that data extraction for the cantonal administrations is time-consuming because they have to extract the data for each municipality separately.)

(3) In the cantons Basel Country, Berne, and Valais we requested data from municipal administrations because municipalities have the authority to provide these data. In these three cantons we requested data in 30 percent of the municipalities (in the canton of Valais we could only request data in German-speaking municipalities due to data availability issues). Hence, depending on the return, in these cantons the final sample is considerably smaller than 30 percent.

(4) In another set of cantons (Schwyz, Solothurn, St. Gallen, Thurgau, and Zurich) data had to be extracted as individual files containing each 50 copies of modified ballots. In the cantons St. Gallen and Thurgau, we extracted the data from 30 percent of (randomly drawn) municipalities at the cantonal offices on the spot. Zurich and Schwyz provided us these data for all the municipalities.[1] Solothurn allowed us to extract data from 50 percent of the municipalities.

Finally, we could obtain the data only from a small number of municipalities from the canton Jura because there were significant differences in data formats between municipalities.

For the data extraction in the cantons Basel City, Basel Country, Berne, Grisons, Lucerne, and Valais we collaborated with the software company SESAM that provided us with written instructions and supported cantons and municipalities in case of data extraction problems.

Furthermore, in most cantons we had to exclude municipalities with a very small number of inhabitants (less than 200) in order to guarantee the secrecy of the ballot. Moreover, we had to exclude the

1. However, the canton of Schwyz has insisted that they randomly draw every second modified ballot from their software. By consequence, they provided data for all the municipalities, but including only half of the modified ballots for each of them. Since we compare negative and positive preference votes *within* party lists, this limitation should not bias our results.

canton of Thurgau in the models that include variables at the municipal level because of missing data for the variable measuring the share of naturalized citizens. This variable is built by aggregating naturalizations in the municipalities between 1991 and 2015. Because municipal boundaries in the canton of Thurgau were redrawn in the 1990s, we were unable to match the data on naturalizations with the municipalities from the year 2015.

Aggregating the number of times a candidate has been crossed off on the modified ballots provides us with the measure to construct the indicator of negative preference votes. Likewise, we aggregated the number of times candidates have been added to build the indicator of positive preference votes.

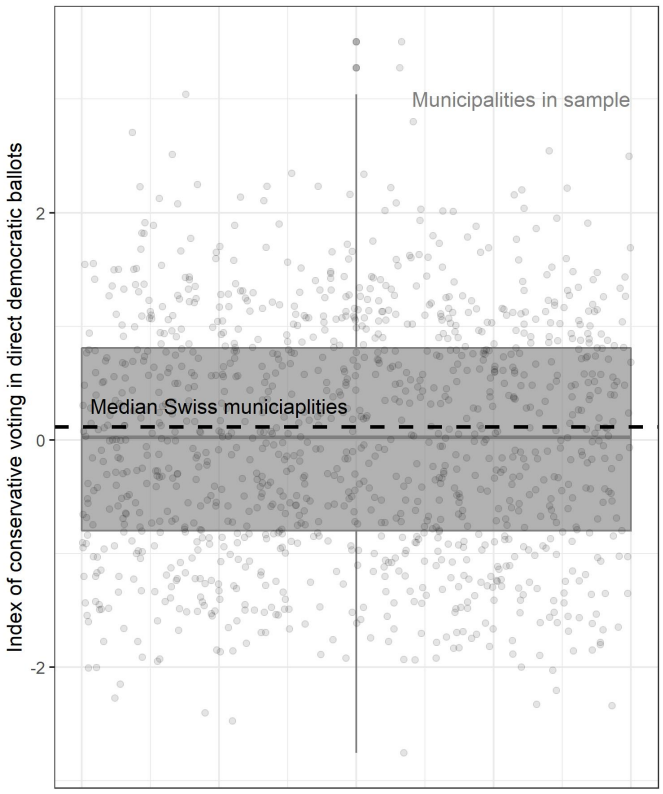
B.2 Sample

Table 2: Overview municipalities in our sample by canton

Canton	N	n	pct	Remarks
Zurich	169	160	94.67	Full sample of municipalities*
Berne	356	27	7.58	Data request sent to 30% of municipalities
Lucerne	83	23	27.71	Data received from 30% of municipalities**
Uri	20	0	0.00	Excluded, majority voting system
Schwyz	30	27	90.00	Full sample of municipalities (but only every second modified ballot)
Obwalden	7	0	0.00	Excluded, majority voting system
Nidwalden	11	0	0.00	Excluded, majority voting system
Glarus	3	0	0.00	Excluded, majority voting system
Zug	11	11	100.00	Full sample of municipalities
Fribourg	163	159	97.55	Full sample of municipalities
Solothurn	109	56	51.38	Data received from 50% of municipalities
Basel City	3	3	100.00	Full sample
Basel Country	86	6	6.98	Data request sent to 30% of municipalities
Schaffhausen	26	26	100.00	Full sample
Appenzell AR	20	0	0.00	Excluded, majority voting system
Appenzell IR	6	0	0.00	Excluded, majority voting system
St. Gallen	77	22	28.57	Data received from 30% of municipalities
Grisons	125	106	84.80	Full sample of municipalities
Aargau	213	0	0.00	Excluded, data unavailable
Thurgau	80	22	27.50	Data received from 30% of municipalities
Ticino	135	127	94.07	Full sample of municipalities
Vaud	318	303	95.28	Full sample of municipalities
Valais	134	9	6.72	Data request sent to 30% of German-speaking municip.
Neuchatel	37	31	83.78	Full sample of municipalities
Geneva	45	41	91.11	Full sample of municipalities
Jura	57	9	15.79	Data received from 9 municipalities

Note: Number of municipalities in canton overall (N), number of municipalities from canton in sample (n), percentage of included municipalities (pct) and remarks on the sample. *Municipalities with less than 200 inhabitants are excluded in most of the cantons for reasons of election secrecy. Therefore, even when indicated as a canton that provided a "full sample," these municipalities are usually excluded. **Again, we generally excluded municipalities where less than 200 persons live. This is why the sample is slightly smaller than 30 percent in cantons where we received data from 30 percent of the municipalities.

Figure 1: Conservative voting in direct democratic ballots, municipalities included/excluded in analysis



Note: The index of conservative voting is built based on the voter support for a series of direct democratic votes on the topic of migration and by using factor analysis. The variable ranges from -2.76 (most liberal) to 3.51 (most conservative). The box plot displays the median, the first and third quartiles (the 25th and 75th percentiles), and the dots correspond to the scores of individual municipalities. More description on the index is provided in Section B.3.3 of the online appendix

Table 3: Modified and unmodified ballots, by ideological position of party

Party ideology	Modified ballots (n)	Unmodified ballots (n)	Percentage modified ballots (%)
Right	331349	327571	50.3
Center	155064	113256	57.8
Left	193297	200883	49.0
Other	7554	10202	42.5

Note: Valid cast modified and unmodified ballots in our data (1,168 municipalities).

Table 4: Modified and unmodified ballots, by party

Party	Modified ballots (n)	Unmodified ballots (n)	Percentage modified ballots (%)
FDP/PLR (PRD)	133881	105828	55.9
CVP/PDC	84471	47069	64.2
SP/PS	143350	142046	50.2
SVP/UDC	179505	193845	48.1
EVP/PEV	10587	11197	48.6
CSP/PCS	840	1027	45.0
PdA/PST	2269	3630	38.5
GPS/PES	42541	46000	48.0
SD/DS	461	780	37.1
EDU/UDF	6205	8710	41.6
Lega	10042	14290	41.3
Sol.	1524	4058	27.3
GLP/PVL	34368	34685	49.8
BDP/PBD	24798	19278	56.3
MCR	574	2760	17.2
Other	11848	16709	41.5

Note: Valid cast modified and unmodified ballots in our data (1,168 municipalities). The party abbreviations stand for the following Swiss parties. FDP: FDP.The Liberals; CVP: Christian Democrats; SP: Social Democratic Party; EVP: Evangelical People's Party; CSP: Christian Social Party; PdA: Swiss Party of Labour; GPS: Green Party; SD: Swiss Democrats; EDU: Federal Democratic Union; Lega: The Ticino League; Sol.: solidaritéS; GLP: Green Liberal Party; BDP: Conservative Democratic Party; MCR: Mouvement citoyens genevois.

B.3 Descriptive Statistics

Table 5: Descriptive statistics of the dependent variables

	Min	Max	Mean	SD
Negative preference votes	0.00	2.33	1.01	0.27
Positive preference votes	0.00	11.79	0.98	1.08
Cumulation	0.00	13.04	0.99	1.18
Panachage	0.00	12.64	0.98	1.12

Table 6: Descriptive statistics of the variables at the level of candidates and party lists

	Min	Max	Mean	SD
Relative list ranking	0.03	1.00	0.55	0.29
Age	1.00	3.00	1.93	0.82
Number of list positions	1.00	35.00	19.42	11.87
Non-Swiss name	0.00	1.00	0.12	0.33
Incumbent	0.00	1.00	0.04	0.20
Pre-cumulated	0.00	1.00	0.08	0.26
Male	0.00	1.00	0.65	0.48
Party position	1.00	4.00	2.08	0.91

Table 7: Descriptive statistics of the municipal-level variables

	Min	Max	Mean	SD
Proportion of naturalized population	0.00	0.23	0.07	0.04
Conservative attitudes	-2.76	3.51	-0.01	0.98

B.3.1 Dependent Variables

Negative preference votes The variable measures how many times a candidate is crossed off in relation to the average number of times candidates on the party list are crossed off. The variable is measured as follows:

$$\text{Negative preference votes} = \frac{\text{Number of cross-offs of candidate}_{ij} \text{ on party list}_j}{\text{Mean number of cross-offs of candidates on party list}_j}$$

Source: Own data collection upon cantonal and municipal offices.

Positive preference votes This is a relative measure of the number of positive preference votes (i.e. the sum of cumulation and panachage). To calculate the positive preference votes, we proceed as follows:

$$\text{Positive preference votes} = \frac{\text{Number of times candidate}_{ij} \text{ on party list}_j \text{ is added}}{\text{Mean number of times candidates from party list}_j \text{ are added}}$$

Source: Own data collection upon cantonal and municipal offices.

Votes from "panachage" This relative measure is calculated as follows:

$$\text{Panachage} = \frac{\text{Number of times candidate}_{ij} \text{ is added on other lists than party list}_j}{\text{Mean number of times candidates from party list}_j \text{ are added on other lists than party list}_j}$$

Source: Own data collection upon cantonal and municipal offices.

Votes from "cumulation" This is a relative measure that is built via the following calculation:

$$\text{Cumulation} = \frac{\text{Number of times candidate}_{ij} \text{ is added on party list}_j}{\text{Mean number of times candidates from party list}_j \text{ are added on party list}_j}$$

Source: Own data collection upon cantonal and municipal offices.

B.3.2 Independent Variables: Level of Candidates and Party Lists

Non-Swiss name This variable measures the origin of a candidate's name. It is a dummy variable that splits names into either (0) Swiss or (1) non-Swiss. We have coded candidate names using the online Register of Swiss Surnames (RSS). In the RSS, all citizens of a Swiss municipality are registered, from before 1800 until 1962. We classify candidates with a name that was registered before 1940 as "Swiss," and names registered after (or in) the year 1940 and those that are not listed in the RSS (i.e. the name has not been registered before 1962) as "non-Swiss." *Source*: Own coding based on RSS.

Non-Swiss name: Western and non-Western This refined variable of candidate names captures (0) Swiss names, (1) non-Swiss names from a Western country, and (2) non-Swiss names from a non-Western country. *Source*: Own coding based on the online databases RSS, "forebears" and "worldnames."

Non-Swiss name: language region This is a categorical variable distinguishing between: (0) Swiss name, (1) non-Swiss name from a German-speaking country (mainly names from Germany, Austria, Lichtenstein, and Luxembourg), (2) non-Swiss name from a French-speaking country (mainly names from France), (3) non-Swiss name from Italy, (4) non-Swiss name from other language regions. *Source*: Own coding based on the online databases RSS, "forebears" and "worldnames."

Relative list ranking This variable is a proportion measuring the list ranking of the candidate relative to the number of candidates on the party list. Formula used:

$$\text{Relative list ranking} = \frac{\text{List ranking candidate}_{ij} \text{ on party list}_j}{\text{Total number of candidates on party list}_j}$$

For pre-cumulated candidates calculations are based on the mean of the candidate's two list rankings. *Source*: Swiss Federal Statistical Office, own calculations.

Incumbent Status of candidate at the time of election as either (0) non-incumbent if the candidate does not have a seat in the Swiss National Council or (1) incumbent if the candidate has a seat in the Swiss National Council. *Source*: Swiss Federal Statistical Office.

Pre-cumulated indicates whether a candidate is listed only one time (0) or twice on the pre-printed party list (1). *Source*: Swiss Federal Statistical Office.

Male The variable is coded as (0) for female and (1) for male candidates. *Source*: Swiss Federal Statistical Office.

Age Measures the age of the candidate at the time of the election. The variable splits candidates into three categories based on their age: (1) 18-30 years, (2) 31-50 years, and (3) older than 50 years. *Source*: Swiss Federal Statistical Office, own calculations based on year of birth.

Ideological position of party ("Party position") The variable indicates the positions of the candidate's party on the left-right axis. Parties are coded as follows: (1) Right: Swiss People's Party, FDP.The Liberals, Swiss Democrats, Federal Democratic Union of Switzerland; (2) Center: Green Liberal Party, Conservative Democratic Party, Christian Democrats, Evangelical People's Party; (3) Left: Social Democratic Party, Green Party, Swiss Party of Labour; (4) other parties that are not classifiable along the left-right ideological dimension (e.g., Pirate Party Switzerland). We have also assigned smaller parties based on the literature as far as possible. *Source*: Own coding based on the literature.

Number of candidates on party list This variable indicates how many candidates ran on the candidate's party list. *Source*: Swiss Federal Statistical Office, own calculations.

Profession The variable classifies candidates' professions into three categories: (0) high-skilled (e.g., managers, doctors), (1) medium-skilled (e.g., teachers, social workers, journalists), and (2) low-skilled (e.g., construction workers, bakers). *Source*: Own coding of data from the Swiss Federal Statistical Office.

B.3.3 Independent Variables: Level of Municipalities and Cantons

Conservative attitudes An indicator generated via factor analysis on the basis of several variables measuring the voting behavior in direct-democratic votes. We consider five direct democratic ballots: (1) federal popular initiative "against mass immigration" (accepted 9.2.2014), (2) federal popular initiative "against the construction of minarets" (accepted 29.11.2009), (3) federal popular initiative "on the expulsion of foreign criminals" (accepted 28.11.2010), (4) federal popular initiative "for demo-

cratic naturalizations" (rejected 1.6.2008), and (5) federal popular initiative "for the regulation of immigration" (rejected 24.9.2000). *Source*: Swiss Federal Statistical Office.

Proportion of naturalized population This is the share of naturalizations in relation to the population size of a municipality. It is calculated as follows:

$$\frac{\text{Number of naturalized citizens in the municipality from 1991 until 2015}}{\text{Permanent residents in municipality 1.1.2015}}$$

Source: Swiss Federal Statistical Office.

Catholic This is a dummy variable measuring whether a majority of the population in a municipality is (0) protestant or (1) catholic. *Source*: Swiss Federal Statistical Office.

Language region of municipality The variable indicates the main language spoken in the municipality in the Swiss multi-lingual context. It is coded as follows: (1) German, (2) French, (3) Italian, (4) Romantsch. The classification is based on the census of the year 2000. *Source*: Swiss Federal Statistical Office.

Urbanization The measure for urbanization is based on the degree of urbanization (DEGURBA), which classifies municipalities into three categories: (1) densely populated area, (2) intermediate density area, and (3) thinly populated area. For the classification see: http://ec.europa.eu/eurostat/ramon/miscellaneous/index.cfm?TargetUrl=DSP_DEGURBA. *Source*: Swiss Federal Statistical Office.

Social assistance rate The share among the municipal population that relies on social assistance.

Crime rate The share of crime offenses in relation to the total population.

C Supplementary Tables and Figures for Main Analyses

Table 8: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and negative preference votes

	Model 1	Model 2	Model 3
Intercept	1.00^{***}	1.17^{***}	1.17^{***}
	(0.05)	(0.04)	(0.04)
Non-Swiss name	0.06^{***}	0.05^{***}	0.11^{***}
	(0.02)	(0.01)	(0.03)
Relative list ranking		0.40^{***}	0.40^{***}
		(0.02)	(0.02)
Incumbent		-0.46^{***}	-0.46^{***}
		(0.02)	(0.02)
Pre-cumulated		0.64^{***}	0.64^{***}
		(0.04)	(0.04)
Male		-0.01	-0.00
		(0.01)	(0.01)
Age: 30-50 years		-0.05^{**}	-0.05^{**}
		(0.02)	(0.02)
Age: 50+ years		-0.01	-0.01
		(0.02)	(0.02)
Party position = center		-0.01	-0.00
		(0.23)	(0.23)
Party position = left		0.02	0.02
		(0.23)	(0.23)
Non-Swiss name*Party position = center			-0.07^{*}
			(0.04)
Non-Swiss name*Party position = left			-0.09^{*}
			(0.03)
R^2	0.00	0.39	0.39
Adj. R^2	-0.12	0.32	0.32
N candidates	3236	3236	3236
RMSE	0.29	0.23	0.23

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from linear models. Fixed effects for cantons and party lists are included.

Table 9: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and positive preference votes

	Model 1	Model 2	Model 3
Intercept	1.00^{***}	0.17	0.17
	(0.19)	(0.17)	(0.17)
Non-Swiss name	-0.17^{*}	-0.13^{*}	-0.31^{**}
	(0.07)	(0.05)	(0.11)
Relative list ranking		-1.16^{***}	-1.16^{***}
		(0.06)	(0.06)
Incumbent		2.41^{***}	2.41^{***}
		(0.09)	(0.09)
Pre-cumulated		0.62^{***}	0.63^{***}
		(0.14)	(0.14)
Male		-0.03	-0.03
		(0.04)	(0.04)
Age: 30-50 years		0.21^{***}	0.21^{***}
		(0.06)	(0.06)
Age: 50+ years		0.17^{*}	0.17^{*}
		(0.07)	(0.07)
Party position = center		-0.03	-0.03
		(0.91)	(0.91)
Party position = left		-0.12	-0.12
		(0.91)	(0.91)
Non-Swiss name*Party position = center			0.16
			(0.14)
Non-Swiss name*Party position = left			0.29^{*}
			(0.14)
R^2	0.00	0.38	0.38
Adj. R^2	-0.12	0.30	0.30
Num. obs.	3283	3283	3283
RMSE	1.14	0.91	0.91

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

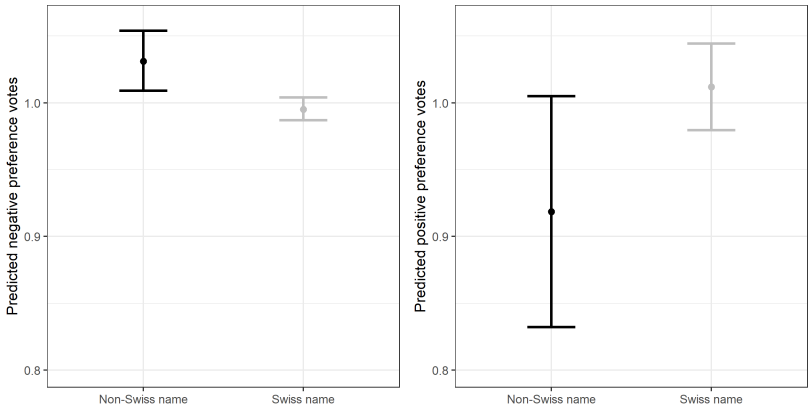
Note: Coefficients and standard errors (in parentheses) from linear models. Fixed effects for cantons and party lists are included.

Table 10: Predicted negative preference votes by candidate name (Swiss, non-Swiss)

Candidate name	Mean	SE	lower 95% CI	upper 95% CI
Swiss name	0.995	0.004	0.987	1.004
Non-Swiss name	1.031	0.012	1.009	1.054

Note: Predicted values are derived from a linear random intercept model. Control variables and fixed effects for cantons are included.

Figure 2: Predicted values of negative and positive preference votes by candidate name (Swiss, non-Swiss)



Note: Mean predicted values surrounded by 95% confidence intervals. Predicted values are derived from linear random intercept models. Control variables and fixed effects for cantons are included.

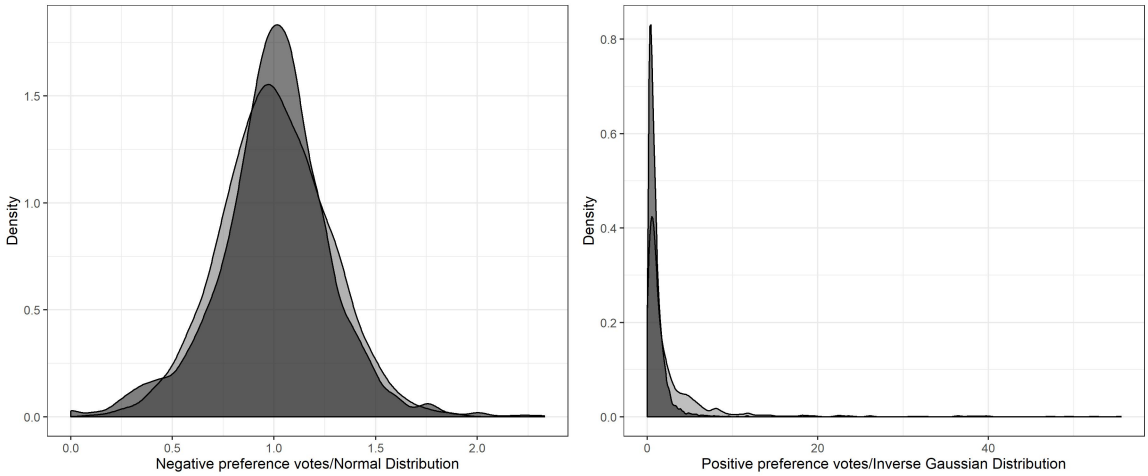
Table 11: Estimating the relationship between candidate name (different outgroups) and negative preference votes

	Model 1	Model 2
Intercept	0.89^{***}	0.89^{***}
	(0.06)	(0.06)
Non-Swiss name, Western	0.03^{*}	
	(0.01)	
Non-Swiss name, Non-Western	0.05^{*}	
	(0.02)	
Relative list ranking	0.39^{***}	0.39^{***}
	(0.02)	(0.02)
Incumbent	-0.38^{***}	-0.38^{***}
	(0.02)	(0.02)
Pre-cumulated	0.11^{***}	0.11^{***}
	(0.02)	(0.02)
Male	-0.00	-0.00
	(0.01)	(0.01)
Age: 31-50 years	-0.00	-0.00
	(0.01)	(0.01)
Age 50+ years	$0.02^{\cdot}$	$0.02^{\cdot}$
	(0.01)	(0.01)
Party position = center	-0.00	-0.00
	(0.01)	(0.01)
Party position = left	0.00	0.00
	(0.01)	(0.01)
Number of candidates on party list	0.08^{*}	0.08^{*}
	(0.04)	(0.04)
Non-Swiss name from German-speaking country		0.05
		(0.03)
Non-Swiss name, from French-speaking country		0.01
		(0.04)
Non-Swiss name, from Italian-speaking country		0.02
		(0.03)
Non-Swiss name, from other country		0.04^{**}
		(0.01)
AIC	-115.12	-102.83
Log Likelihood	89.56	85.42
N candidates	3236	3236
N party lists	352	352

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from linear random intercept models. Fixed effects for cantons are included.

Figure 3: Distributions of dependent variables



Note: The negative preference votes compared to a Normal Distribution (mean=1, sd= 0.25) and the positive preference votes compared to an Inverse Gaussian Distribution (mean=3, shape=0.8, dispersion=1).

Table 12: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and positive preference votes

	Model 1	Model 2	Model 3
Non-Swiss name	-0.15^{**}	-0.16^{***}	-0.27^{**}
	(0.06)	(0.05)	(0.09)
Relative list ranking		-1.24^{***}	-1.24^{***}
		(0.05)	(0.05)
Incumbent		1.31^{***}	1.31^{***}
		(0.16)	(0.16)
Pre-cumulated		0.37^{***}	0.36^{***}
		(0.08)	(0.08)
Male		-0.01	-0.01
		(0.03)	(0.03)
Age: 30-50 years		-0.15^{***}	-0.16^{***}
		(0.04)	(0.04)
Age: 50+ years		-0.19^{***}	-0.19^{***}
		(0.05)	(0.05)
Party position = center		$-0.08^{\cdot}$	$-0.08^{\cdot}$
		(0.05)	(0.05)
Party position = left		-0.03	-0.06
		(0.05)	(0.05)
Number of candidates on party list		-0.53^{*}	-0.53^{*}
		(0.23)	(0.23)
Non-Swiss name x party position = center			0.07
			(0.12)
Non-Swiss name x party position = left			0.19
			(0.12)
Intercept	0.02	0.44	0.44
	(0.04)	(0.33)	(0.33)
AIC	6221.15	5431.66	5432.78
Log Likelihood	-3088.58	-2684.83	-2683.39
N candidates	3263	3263	3263
N party lists	362	362	362

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficient and standard errors (in parentheses) from random intercept models with an inverse Gaussian distribution and log-link. Fixed effects for cantons are included.

Table 13: Predicted positive preference votes by candidate name (Swiss, non-Swiss)

Candidate name	Mean	SE	lower 95% CI	upper 95% CI
Swiss name	1.012	0.017	0.980	1.044
Non-Swiss name	0.919	0.044	0.832	1.005

Note: Predicted values are derived from a linear random intercept model. Control variables and fixed effects for cantons are included.

Table 14: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and votes from "cumulation" and "panachage"

	DV: cumulation	DV: panachage
Non-Swiss name	-0.12^{**}	-0.19^{***}
	(0.05)	(0.04)
Relative list ranking	-1.49^{***}	-1.29^{***}
	(0.06)	(0.05)
Incumbent	1.32^{***}	1.42^{***}
	(0.16)	(0.17)
Pre-cumulated	-0.76^{***}	0.40^{***}
	(0.17)	(0.08)
Male	-0.00	-0.00
	(0.04)	(0.03)
Age: 31-50 years	0.09^{**}	-0.14^{***}
	(0.04)	(0.04)
Age: 50+ years	0.07^{*}	-0.19^{***}
	(0.04)	(0.04)
Party position = center	-0.17^{***}	-0.10^{***}
	(0.04)	(0.04)
Party position = left	-0.07^{*}	-0.02
	(0.04)	(0.04)
Number of candidates on party list	-0.39^{*}	-0.56^{***}
	(0.21)	(0.20)
Intercept	1.24^{***}	1.16^{***}
	(0.30)	(0.29)
Num. obs.	2831	3170
Nagelkerke R^2	0.28	0.26
Generalized AIC	6360.39	5565.64

$^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from random intercept models with a zero-inflated inverse Gaussian distribution and log-link. Fixed effects for cantons are included.

Table 15: Estimating the relationship between candidate name (different outgroups) and positive preference votes

	Model 1	Model 2
Intercept	1.12^{***}	0.63^{***}
	(0.34)	(0.06)
Non-Swiss name, Western	-0.19^{***}	
	(0.05)	
Non-Swiss name, Non-Western	$-0.12^{\cdot}$	
	(0.07)	
Relative list ranking	-1.24^{***}	-1.22^{***}
	(0.05)	(0.05)
Incumbent	1.31^{***}	1.32^{***}
	(0.16)	(0.16)
Pre-cumulated	0.37^{***}	0.36^{***}
	(0.08)	(0.09)
Male	-0.01	0.00
	(0.03)	(0.03)
Age: 30-50 years	-0.15^{***}	-0.16^{***}
	(0.04)	(0.04)
Age 50+ years	-0.19^{***}	-0.20^{***}
	(0.05)	(0.05)
Party position = center	$-0.08^{\cdot}$	$-0.08^{\cdot}$
	(0.05)	(0.05)
Party position = left	-0.03	-0.02
	(0.05)	(0.05)
Number of candidates on party list	-0.53^{*}	-0.18^{***}
	(0.23)	(0.02)
Non-Swiss name from German-speaking country		-0.30^{**}
		(0.10)
Non-Swiss name, from French-speaking country		0.03
		(0.17)
Non-Swiss name, from Italian-speaking country		$-0.21^{\cdot}$
		(0.11)
Non-Swiss name, from other country		-0.16^{**}
		(0.05)
AIC	5433.14	5429.17
Log Likelihood	-2684.57	-2698.58
N candidates	3263	3263
N party lists	362	362

$^{***}p < 0.001, {}^{**}p < 0.01, {}^{*}p < 0.05, {}^{\cdot}p < 0.1$

Coefficient and standard errors (in parentheses) from random intercept models with an inverse Gaussian distribution and log-link. Fixed effects for cantons are included.

D Robustness Checks

Table 16: Candidates with a migration background and with roots abroad, results from candidate survey

Name	Migration background (definition BFS)	n	Share
Swiss	With migration background	9	0.08
Swiss	Without migration background, him/her or one parent born abroad	18	0.17
Swiss	Without migration background, no origins abroad indicated	80	0.75
Non-Swiss	With migration background	61	0.59
Non-Swiss	Without migration background, naturalized	1	0.01
Non-Swiss	Without migration background, him/her or one parent born abroad	27	0.26
Non-Swiss	Without migration background, no origins abroad indicated	15	0.14

Note: In this table "people with a migration background" are defined according to the official definition of the Swiss Federal Statistical Office (BFS). They use a relatively narrow definition. According to this definition, persons with a migration background living in Switzerland can be both Swiss nationals and foreigners, and they can be first and second generation immigrants. Our focus being on Swiss nationals only (as only they can vote and run for office in national elections), the definition of a first-generation person with a migration background includes individuals born outside of Switzerland who have either become Swiss by naturalization or were Swiss at birth with both parents foreign-born. A second-generation person with a migration background is born in Switzerland: she/he was either Swiss at birth with both parents foreign-born or she/he became Swiss by naturalization having a foreign-born mother or father (or both). We specify in the table the elements that show the roots abroad in more detail (e.g., born abroad, parents born abroad, naturalized).

Table 17: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and negative / positive preference votes, local level variation

	DV: negative preference votes	DV: positive preference votes
Intercept	0.93^{***}	1.17^{***}
	(0.04)	(0.03)
Relative list ranking	0.63^{***}	-1.55^{***}
	(0.01)	(0.01)
Incumbent	-0.27^{***}	2.26^{***}
	(0.01)	(0.02)
Pre-cumulated	0.15^{***}	0.27^{***}
	(0.01)	(0.01)
Male	-0.00	-0.03^{***}
	(0.01)	(0.01)
Age: 30-50 years	-0.00	-0.14^{***}
	(0.01)	(0.01)
Age: 50+ years	0.02^{***}	-0.07^{***}
	(0.01)	(0.01)
Party position = center	-0.00	0.08^{***}
	(0.01)	(0.01)
Party position = left	0.02^{**}	0.01
	(0.01)	(0.01)
Non-Swiss name	0.19^{***}	-0.29^{***}
	(0.02)	(0.02)
Number of candidates on party list	0.01^{*}	-0.02^{***}
	(0.00)	(0.00)
Degree of urbanization: intermediate density	-0.00	0.00
	(0.01)	(0.01)
Degree of urbanization: thinly populated	0.00	-0.00
	(0.01)	(0.02)
Language region municipality: French	0.01	-0.01
	(0.03)	(0.03)
Language region municipality: Italian	0.00	-0.01
	(0.05)	(0.07)
Language region municipality: Romantsch	0.00	-0.00
	(0.04)	(0.06)
Religion = Catholic	0.00	-0.00
	(0.01)	(0.01)
Social assistance rate	-0.00	0.00
	(0.00)	(0.00)
Crime rate	-0.00	-0.00
	(0.00)	(0.00)
Conservative attitudes	0.00	-0.00
	(0.00)	(0.01)

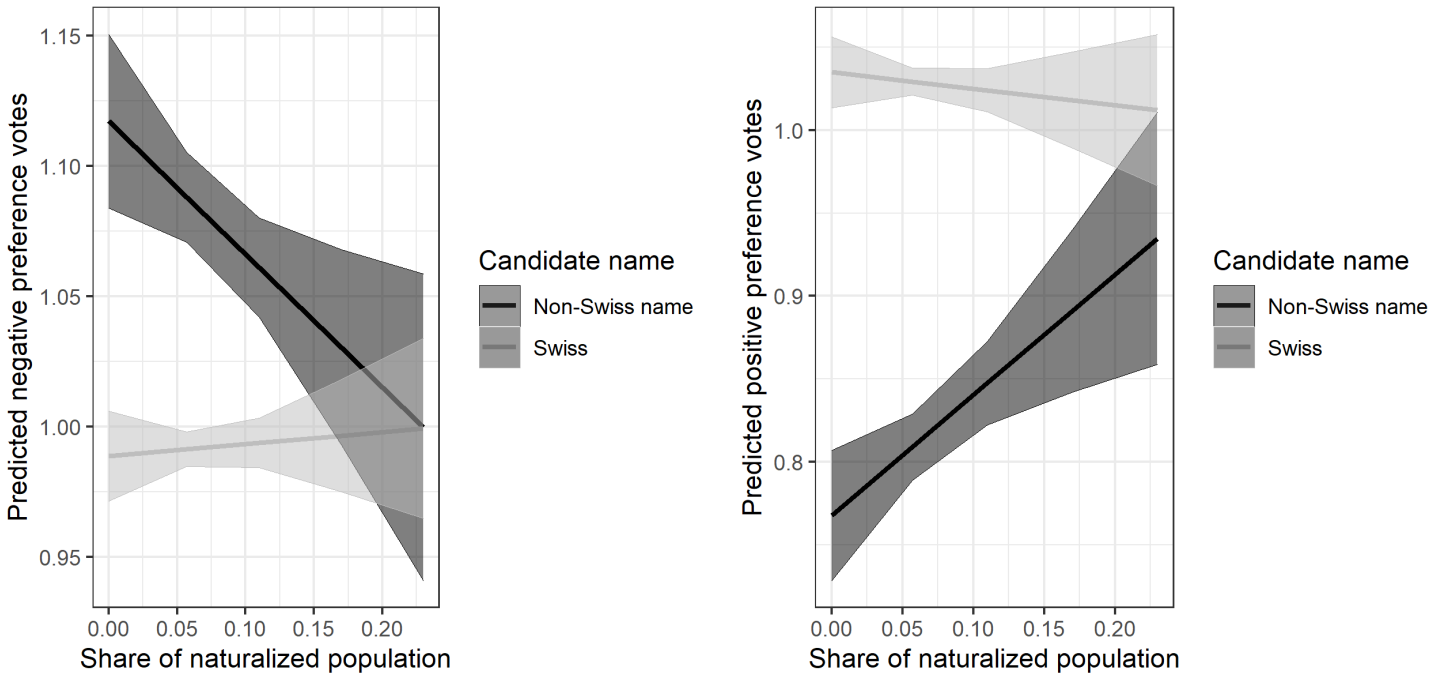
Table continued

	DV: Negative preference votes	DV: Positive preference votes
Share of naturalized citizens (centered)	0.05	-0.10
	(0.11)	(0.14)
Non-Swiss name x party position = center	-0.13^{***}	0.11^{***}
	(0.02)	(0.03)
Non-Swiss name x party position = left	-0.17^{***}	0.16^{***}
	(0.02)	(0.02)
Non-Swiss name x share of naturalized citizens (cent.)	-0.56^{**}	0.82^{***}
	(0.19)	(0.23)
AIC	607694.30	1148608.21
Log Likelihood	-303803.15	-574260.10
N candidate-municipality observations	196303	286332
N municipalities	1145	1146
N party lists	330	340

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from linear random intercept models (with cross-classified random effects). Fixed effects for cantons are included. 196,303 candidate-municipality observations are included in the model with negative preference votes as the dependent variable (party lists that have not received any negative preference votes by voters in a municipality are not considered); and 286,332 candidate-municipality observations are included in the model with the dependent variable positive preference votes (party lists that have not received any positive preference votes by voters in a municipality are not considered).

Figure 4: Interaction effect of candidate name (Swiss, non-Swiss) and the share of naturalized citizens in the municipality on negative and positive preference votes



Note: Mean predicted values surrounded by 95% confidence intervals.

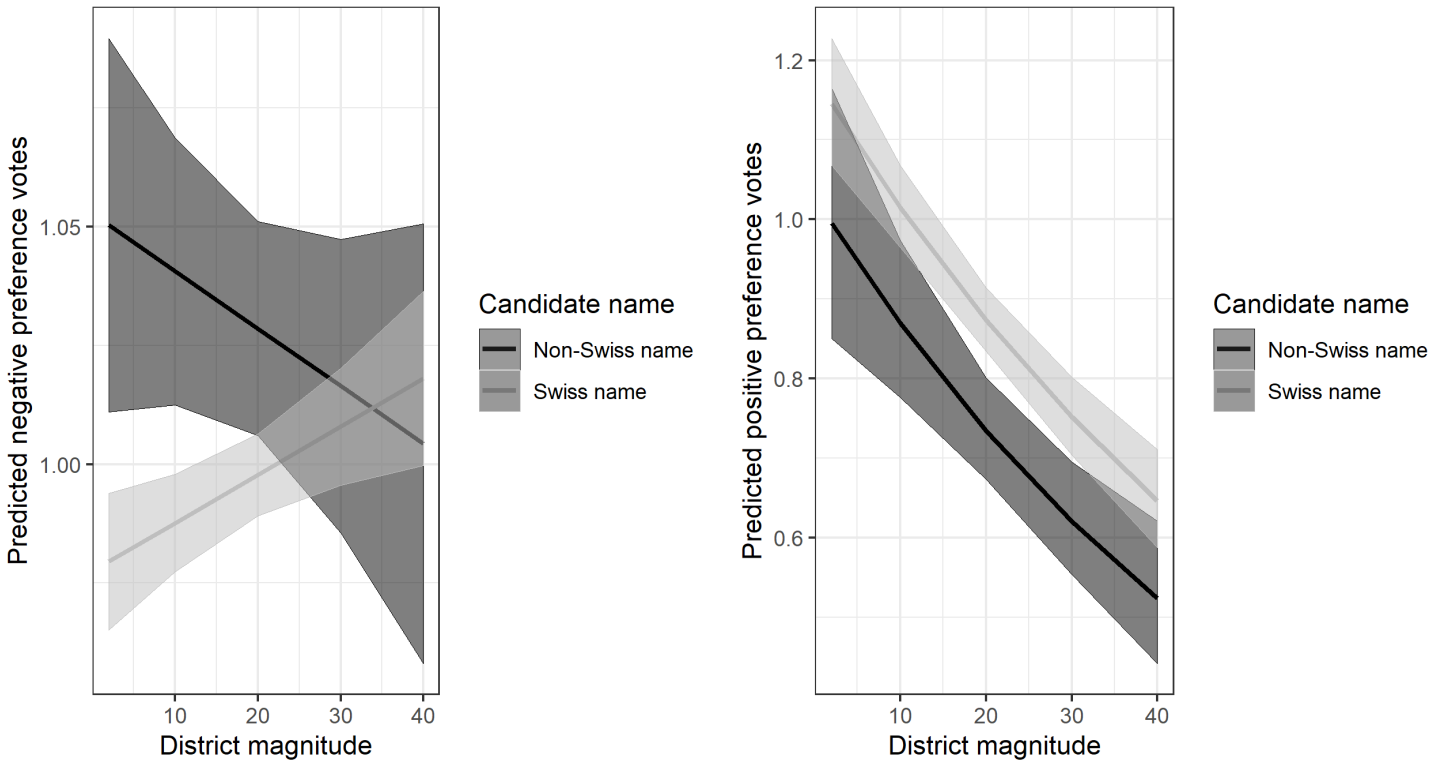
Table 18: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and negative / positive preference votes, with district magnitude

	DV: Negative preference votes	DV: Positive preference votes
Intercept	1.00^{***}	-0.04
	(0.01)	(0.05)
Non-Swiss name	0.03^{**}	-0.17^{***}
	(0.01)	(0.05)
Relative list ranking	0.39^{***}	-1.21^{***}
	(0.01)	(0.05)
Incumbent	-0.37^{***}	1.33^{***}
	(0.02)	(0.16)
Pre-cumulated	0.12^{***}	0.36^{***}
	(0.02)	(0.09)
Male	-0.00	-0.00
	(0.01)	(0.03)
Age: 30-50 years	0.00	-0.16^{***}
	(0.01)	(0.04)
Age: 50+ years	0.02^{*}	-0.20^{***}
	(0.01)	(0.05)
Party position = center	-0.00	-0.09^{*}
	(0.01)	(0.05)
Party position = left	0.00	-0.02
	(0.01)	(0.05)
District magnitude	0.00^{**}	-0.02^{***}
	(0.00)	(0.00)
Non-Swiss name x district magnitude	-0.00^{*}	-0.00
	(0.00)	(0.00)
AIC	-230.94	5435.76
Log Likelihood	129.47	-2703.88
N candidates	3236	3263
N party lists	352	362

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from a linear random intercept models (negative preference votes) and a random intercept model with an inverse Gaussian distribution and log-link (positive preference votes).

Figure 5: Interaction effect of candidate name (Swiss, non-Swiss) and district magnitude on negative and positive preference votes



Note: Mean predicted values surrounded by 95% confidence intervals.

Table 19: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and negative / positive preference votes, with profession

	DV: negative preference votes	DV: positive preference votes
Intercept	0.88^{***}	0.66^{*}
	(0.06)	(0.29)
Non-Swiss name	0.04^{**}	-0.18^{***}
	(0.01)	(0.04)
Relative list ranking	0.37^{***}	-1.25^{***}
	(0.02)	(0.06)
Incumbent	-0.37^{***}	1.37^{***}
	(0.02)	(0.17)
Pre-cumulated	0.11^{***}	0.36^{***}
	(0.02)	(0.08)
Male	-0.01	-0.02
	(0.01)	(0.03)
Age: 31-50 years	0.01	-0.18^{***}
	(0.01)	(0.04)
Age: 50+ years	0.04^{**}	-0.22^{***}
	(0.01)	(0.04)
Profession = medium-skilled	0.02	-0.14^{***}
	(0.01)	(0.04)
Profession = low-skilled	0.04^{***}	-0.15^{**}
	(0.01)	(0.05)
Party position = center	-0.01	-0.06
	(0.01)	(0.05)
Party position = left	-0.00	-0.01
	(0.01)	(0.05)
Number of candidates on party list	$0.07^{\cdot}$	-0.61^{**}
	(0.04)	(0.19)
AIC	-131.60	4654.03
Log Likelihood	98.80	-2294.01
N candidates	2839	2865
N party lists	348	358

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from a linear random intercept model (DV negative preference votes) and from a random intercept model with an inverse Gaussian distribution and log-link (DV positive preference votes). Fixed effects for cantons are included.

Table 20: Origin of candidate names, by ideological position of party

	Right	Center	Left
Swiss	1056	1011	796
	(91.90)	(88.20)	(80.60)
Hispanic	11	15	31
	(1.00)	(1.30)	(3.10)
Eastern European	11	4	15
	(1.00)	(0.30)	(1.50)
Southern European	18	19	23
	(1.60)	(1.70)	(2.30)
Yugoslavian	5	6	6
	(0.40)	(0.50)	(0.60)
Albanian	5	13	12
	(0.40)	(1.10)	(1.20)
Western European/Nordic/Anglo	30	54	44
	(2.60)	(4.70)	(4.50)
Indian	2	4	8
	(0.20)	(0.30)	(0.80)
Eastern Asian	1	1	7
	(0.10)	(0.10)	(0.70)
Arabic	4	9	14
	(0.30)	(0.80)	(1.40)
Central Asian	0.00	1	0.00
	(0.00)	(0.10)	(0.00)
Turkish/Kurdish	4	3	20
	(0.30)	(0.30)	(2.00)
(Other) African	0.00	2	7
	(0.00)	(0.20)	(0.70)
Unknown	2	4	5
	(0.20)	(0.30)	(0.50)

Source: Own coding based on the online databases RSS, “forebears” and “worldnames.” Number of candidates with name of that origin and their share (in parentheses).

Table 21: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and relative list ranking

	Model 1	Model 2	Model 3
Intercept	0.51^{***}	0.56^{***}	0.56^{***}
	(0.01)	(0.07)	(0.07)
Non-Swiss name	$0.03^{\cdot}$	$0.03^{\cdot}$	0.03
	(0.02)	(0.02)	(0.03)
Incumbent		-0.38^{***}	-0.38^{***}
		(0.03)	(0.03)
Pre-cumulated		-0.07^{***}	-0.07^{***}
		(0.02)	(0.02)
Male		0.06^{***}	0.06^{***}
		(0.01)	(0.01)
Age: 30-50 years		0.05^{***}	0.05^{***}
		(0.01)	(0.01)
Age: 50+ years		0.05^{***}	0.05^{***}
		(0.01)	(0.01)
Profession = medium-skilled		0.02	0.02
		(0.01)	(0.01)
Profession = low-skilled		0.03^{*}	0.03^{*}
		(0.01)	(0.01)
Party position = center		-0.01	-0.02
		(0.01)	(0.01)
Party position = left		-0.01	-0.00
		(0.01)	(0.01)
Number of candidates on party list		-0.08	$-0.08^{\cdot}$
		(0.05)	(0.05)
Non-Swiss name*Party position = center			0.06
			(0.04)
Non-Swiss name*Party position = left			-0.05
			(0.04)
AIC	1035.88	842.04	846.91
Log Likelihood	-495.94	-389.02	-389.45
N candidates	2884	2884	2884
N party lists	358	358	358

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from linear random intercept models. Fixed effects for cantons are included. Dependent variable is the relative list ranking of candidates (higher values indicate being placed lower on the ballot).

Table 22: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and negative preference votes, with proportion of candidates with non-Swiss names on party list

	Model 1	Model 2	Model 3
Intercept	0.90^{***}	0.90^{***}	0.90^{***}
	(0.06)	(0.06)	(0.06)
Non-Swiss name	0.05^{***}	0.06^{***}	0.12^{***}
	(0.01)	(0.02)	(0.03)
Relative list ranking	0.39^{***}	0.39^{***}	0.39^{***}
	(0.02)	(0.02)	(0.02)
Incumbent	-0.38^{***}	-0.38^{***}	-0.38^{***}
	(0.02)	(0.02)	(0.02)
Pre-cumulated	0.12^{***}	0.12^{***}	0.13^{***}
	(0.02)	(0.02)	(0.02)
Male	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)
Age: 30-50 years	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)
Age: 50+ years	0.02	0.02	$0.02^{\cdot}$
	(0.01)	(0.01)	(0.01)
Party position = center	0.00	-0.00	0.01
	(0.01)	(0.01)	(0.01)
Party position = left	0.01	0.01	$0.02^{\cdot}$
	(0.01)	(0.01)	(0.01)
Number of candidates on ballot	$0.07^{\cdot}$	$0.07^{\cdot}$	$0.07^{\cdot}$
	(0.04)	(0.04)	(0.04)
Proportion non-Swiss names on party list	-0.12^{**}	$-0.08^{\cdot}$	-0.09^{*}
	(0.04)	(0.04)	(0.04)
Non-Swiss name*Proportion non-Swiss		-0.09	-0.07
		(0.07)	(0.07)
Non-Swiss name*Party position = center			-0.08^{*}
			(0.03)
Non-Swiss name*Party position = left			-0.08^{**}
			(0.03)
AIC	-126.22	-122.42	-116.29
Log Likelihood	95.11	94.21	93.15
N candidates	3236	3236	3236
N party lists	352	352	352

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from linear random intercept models. Fixed effects for cantons are included.

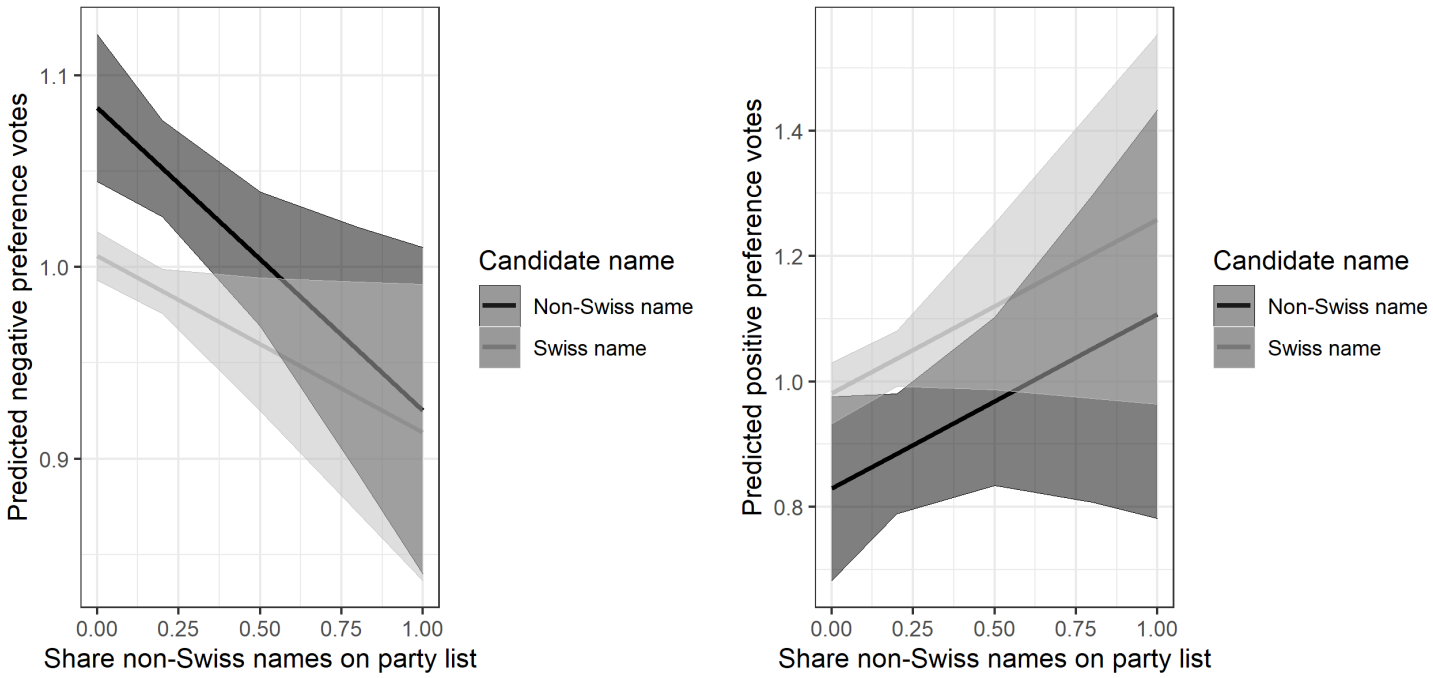
Table 23: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and positive preference votes, with proportion of candidates with non-Swiss names on party list

	Model 1	Model 2	Model 3
Intercept	1.36^{***}	1.36^{***}	1.36^{***}
	(0.22)	(0.22)	(0.22)
Non-Swiss name	-0.13^{**}	-0.15^{*}	-0.24^{*}
	(0.05)	(0.06)	(0.10)
Relative list ranking	-1.25^{***}	-1.25^{***}	-1.25^{***}
	(0.06)	(0.06)	(0.06)
Incumbent	2.04^{***}	2.04^{***}	2.04^{***}
	(0.08)	(0.08)	(0.08)
Pre-cumulated	0.24^{***}	0.24^{***}	0.24^{***}
	(0.07)	(0.07)	(0.07)
Male	-0.02	-0.02	-0.02
	(0.03)	(0.03)	(0.03)
Age: 30-50 years	-0.06	-0.06	-0.06
	(0.04)	(0.04)	(0.04)
Age: 50+ years	$-0.08^{\cdot}$	-0.08^{*}	-0.08^{*}
	(0.04)	(0.04)	(0.04)
Party position = center	0.05	0.05	0.05
	(0.04)	(0.04)	(0.04)
Party position = left	0.01	0.01	-0.01
	(0.04)	(0.04)	(0.05)
Number of candidates on ballot	-0.31^{*}	-0.31^{*}	-0.31^{*}
	(0.15)	(0.15)	(0.15)
Proportion non-Swiss names on party list	0.28^{*}	0.24	0.26
	(0.13)	(0.17)	(0.17)
Non-Swiss name*Proportion non-Swiss		0.12	0.04
		(0.26)	(0.27)
Non-Swiss name*Party position = center			0.10
			(0.13)
Non-Swiss name*Party position = left			0.17
			(0.12)
AIC	8609.82	8612.44	8619.60
Log Likelihood	-4272.91	-4273.22	-4274.80
N candidates	3283	3283	3283
N party lists	362	362	362

$^{***}p < 0.001, {}^{**}p < 0.01, {}^{*}p < 0.05, {}^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from linear random intercept models. Fixed effects for cantons are included.

Figure 6: Interaction effect of candidate name (Swiss, non-Swiss) and share of candidates with non-Swiss names on the party list on negative and positive preference votes



Note: Mean predicted values surrounded by 95% confidence intervals.

Table 24: Estimating the relationship between candidate name (Swiss vs. non-Swiss) and negative / positive preference votes, only lists gaining at least one seat in parliament

	DV: negative preference votes	DV: positive preference votes
Intercept	1.13^{**}	-0.62
	(0.36)	(1.35)
Non-Swiss name	0.08^{**}	-0.28^{***}
	(0.03)	(0.08)
Relative list ranking	0.52^{***}	-1.47^{***}
	(0.03)	(0.10)
Incumbent	-0.36^{***}	1.29^{***}
	(0.02)	(0.18)
Pre-cumulated	0.26^{***}	0.13
	(0.08)	(0.36)
Male	0.01	-0.01
	(0.02)	(0.05)
Age: 31-50 years	-0.12^{***}	-0.01
	(0.03)	(0.11)
Age: 50+ years	-0.10^{**}	0.07
	(0.03)	(0.11)
Party position = center	-0.03	$-0.12^{\cdot}$
	(0.02)	(0.07)
Party position = left	-0.01	-0.12
	(0.02)	(0.07)
Number of candidates on party list	0.02	-0.13
	(0.24)	(0.90)
AIC	90.51	1309.82
Log Likelihood	-14.25	-623.91
N candidates	1024	1023
N party lists	90	90

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\cdot}p < 0.1$

Note: Coefficients and standard errors (in parentheses) from a linear and an inverse Gaussian random intercept model. Fixed effects for cantons are included.