

Making Votes Count with Internet Voting

Online Supplement

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November 11, 2019

Table S1: Residual vote rate models without expatriates

Model	(1) All referendums	(2) Federal referendums	(3) Cantonal referendums
I-voting	-0.30 (0.09) [0.00]	-0.23 (0.12) [0.05]	-0.44 (0.10) [0.00]
Control for electoral participation	✓	✓	✓
Municipalities	45	45	45
Voting days	53	49	44
Referendums	284	138	146
Observations	12780	6210	6570

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. Contrary to the models reported in the paper, expatriates are not included as an artificial 46th municipality. All models control for electoral turnout. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets.

Table S2: Residual vote rate models without control for electoral turnout

Model	(1) All referendums	(2) Federal referendums	(3) Cantonal referendums
I-voting	-0.32 (0.09) [0.00]	-0.25 (0.11) [0.04]	-0.44 (0.10) [0.00]
Control for electoral participation	X	X	X
Municipalities	46	46	46
Voting days	53	49	44
Referendums	284	138	146
Observations	13064	6348	6716

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. Contrary to the models reported in the paper, these models do not control for electoral participation. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets.

Table S3: Additional robustness checks residual vote rate analysis:
Federal referendums only

Model	(1)	(2)	(3)	(4)
I-voting	-0.23 (0.12) [0.06]	-0.24 (0.13) [0.07]	-0.25 (0.12) [0.04]	-0.25 (0.14) [0.08]
Placebo treatment	0.06 (0.12) [0.59]			
Control for electoral participation	✓	✓	✓	✓
Additional covariates	X	✓	X	X
No simultaneous municipal contests	X	X	✓	X
Two-way clustered standard errors	X	X	X	✓
Municipalities	46	45	46	46
Voting days	49	46	49	49
Referendums	138	126	138	138
Observations	6348	5670	6264	6348

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. All models control for electoral turnout. Standard errors clustered by municipality (and, in model 4, by voting day) are shown in parentheses and p-values in square brackets. All models include federal referendums only.

Table S4: Additional robustness checks residual vote rate analysis:
Cantonal referendums only

Model	(1)	(2)	(3)	(4)
I-voting	-0.40 (0.11) [0.00]	-0.42 (0.11) [0.00]	-0.48 (0.10) [0.00]	-0.46 (0.14) [0.00]
Placebo treatment	0.25 (0.19) [0.19]			
Control for electoral participation	✓	✓	✓	✓
Additional covariates	✗	✓	✗	✗
No simultaneous municipal contests	✗	✗	✓	✗
Two-way clustered standard errors	✗	✗	✗	✓
Municipalities	46	45	46	46
Voting days	44	41	44	44
Referendums	146	130	146	146
Observations	6716	5850	6639	6716

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. All models control for electoral turnout. Standard errors clustered by municipality (and, in model 4, by voting day) are shown in parentheses and p-values in square brackets. All models include cantonal referendums only.

Table S5: Referendum outcomes analysis: No expatriates

Model	(1)	(2)	(3)	(4)
Dependent variable	Support Socialists	Support Greens	Support redistri- bution	Support cultural conservatism
I-voting	0.19 (0.27) [0.50]	-0.03 (0.49) [0.96]	-0.19 (0.51) [0.71]	-0.32 (0.61) [0.61]
Control for electoral participation	✓	✓	✓	✓
Municipalities	45	45	45	45
Voting days	53	53	35	28
Referendums	275	264	66	38
Observations	12375	11880	2970	1710

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. Contrary to the models reported in the paper, expatriates are not included as an artificial 46th municipality. All models control for electoral turnout. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets. All models include both cantonal and federal referendums.

Table S6: Referendum outcomes analysis: No control for turnout

Model	(1)	(2)	(3)	(4)
Dependent variable	Support Socialists	Support Greens	Support redistri- bution	Support cultural conservatism
I-voting	0.23 (0.27) [0.39]	0.06 (0.48) [0.90]	-0.19 (0.49) [0.70]	-0.18 (0.62) [0.78]
Control for electoral participation	X	X	X	X
Municipalities	46	46	46	46
Voting days	53	53	35	28
Referendums	275	264	66	38
Observations	12650	12144	3036	1748

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. Contrary to the results reported in the paper, the models do not control for electoral turnout. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets. All models include both cantonal and federal referendums.

Table S7: Referendum outcomes analysis: Placebo checks

Model	(1)	(2)	(3)	(4)
Dependent variable	Support Socialists	Support Greens	Support redistri- bution	Support cultural conservatism
I-voting	0.46 (0.38) [0.23]	0.19 (0.52) [0.71]	-0.03 (0.42) [0.94]	-0.37 (0.60) [0.55]
Placebo treatment	1.06 (0.72) [0.15]	0.61 (0.40) [0.13]	0.45 (0.75) [0.55]	-0.70 (0.36) [0.06]
Control for electoral participation	✓	✓	✓	✓
Municipalities	46	46	46	46
Voting days	53	53	35	28
Referendums	275	264	66	38
Observations	12650	12144	3036	1748

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. All models control for electoral turnout and include a placebo treatment that is coded 1 for the three voting days before a municipality's first i-voting trial, 0 otherwise. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets. All models include both cantonal and federal referendums.

Table S8: Referendum outcomes analysis: Additional controls

Model	(1)	(2)	(3)	(4)
Dependent variable	Support Socialists	Support Greens	Support redistri- bution	Support cultural conservatism
I-voting	0.12 (0.30) [0.68]	0.01 (0.54) [0.98]	-0.36 (0.52) [0.50]	0.00 (0.72) [1.00]
Control for electoral participation	✓	✓	✓	✓
Additional covariates	✓	✓	✓	✓
Municipalities	45	45	45	45
Voting days	50	50	32	25
Referendums	248	237	59	34
Observations	11160	10665	2655	1530

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. All models control for electoral turnout, per capita income (logged), population size (logged), unemployment rate, age group shares (20–34; 35–49; 50–65; and 65+), the share of foreigners (i.e., non-Swiss nationals), and vote shares for the Socialists and Greens in the previous national election (lower chamber). Standard errors clustered by municipality are shown in parentheses and p-values in square brackets. All models include both cantonal and federal referendums.

Table S9: Referendum outcomes analysis: No simultaneous municipal contests

Model	(1)	(2)	(3)	(4)
Dependent variable	Support Socialists	Support Greens	Support redistri- bution	Support cultural conservatism
I-voting	0.15 (0.28) [0.60]	0.05 (0.49) [0.92]	-0.19 (0.50) [0.71]	-0.28 (0.62) [0.65]
Control for electoral participation	✓	✓	✓	✓
No simultaneous municipal contests	✓	✓	✓	✓
Municipalities	46	46	46	46
Voting days	53	53	35	28
Referendums	275	264	66	38
Observations	12492	11991	3003	1722

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. All models control for electoral turnout. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets. All models include both cantonal and federal referendums but all observations (i.e., municipality-voting days) with a simultaneous municipal election or referendum are dropped.

Table S10: Referendum outcomes analysis: Only federal referendums

Model	(1)	(2)	(3)	(4)
Dependent variable	Support Socialists	Support Greens	Support redistri- bution	Support cultural conservatism
I-voting	0.22 (0.36) [0.55]	-0.30 (0.39) [0.44]	-0.46 (1.52) [0.77]	-0.58 (0.76) [0.45]
Control for electoral participation	✓	✓	✓	✓
Municipalities	46	46	46	46
Voting days	49	49	26	24
Referendums	133	130	30	32
Observations	6118	5980	1380	1472

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. All models control for electoral turnout. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets. All models include federal referendums only.

Table S11: Referendum outcomes analysis: Only cantonal referendums

Model	(1)	(2)	(3)	(4)
Dependent variable	Support Socialists	Support Greens	Support redistri- bution	Support cultural conservatism
I-voting	-0.02 (0.49) [0.97]	0.48 (0.68) [0.49]	-0.55 (0.60) [0.37]	1.86 (1.17) [0.12]
Control for electoral participation	✓	✓	✓	✓
Municipalities	46	46	46	46
Voting days	44	44	22	24
Referendums	142	134	36	5
Observations	6532	6164	1656	276

Note: The table shows coefficients from OLS regressions including municipality and referendum fixed effects as well as quadratic municipality-level time trends. All models control for electoral turnout. Standard errors clustered by municipality are shown in parentheses and p-values in square brackets. All models include cantonal referendums only.

Table S12: List of referendums used for the measurement of ‘support redistribution’

Voting day	ID	Issue description	Direction
12/2/2001	2001120210	Institute capital gains tax	Yes
3/3/2002	2002030303	36h work week	Yes
6/2/2002	2002060201	Right to basic social security	Yes
6/2/2002	2002060202	Tax hike for corporations and the well-off	Yes
10/27/2002	2002102701	Tax benefits for families	Yes
11/24/2002	2002112401	Lower rent control after renovations	No
11/24/2002	2002112403	Cut unemployment benefits	No
5/18/2003	2003051801	Measures to support social housing, including expropriations	Yes
5/18/2003	2003051802	Tax hike for corporations and the well-off	Yes
5/18/2003	2003051805	Rents should not only increase when mortgage interest rates increase, but also decrease when the latter decrease	Yes
5/18/2003	2003051807	Income-dependent health insurance premiums	Yes
2/8/2004	2004020801	Lower taxes for home buyers	No
2/8/2004	2004020802	Decrease tenants protection (tenants can be forced out of apartment if they cannot/do not want to buy the apartment)	No
2/8/2004	2004020803	Eliminate inheritance and gift taxes for spouses and direct descendants	No
5/16/2004	2004051601	Cuts to old-age pensions, increase women’s pension age to 65	No
5/16/2004	2004051603	Tax cuts that disproportionately favor the wealthy while harming the cantons	No
9/26/2004	2004092602	Determine rent increases after renovations by square meter (implying significant rent hikes)	No
9/26/2004	2004092606	Maternity leave	Yes
11/28/2004	2004112802	Prevent tax hike for corporations	No
11/28/2004	2004112804	Extension of federation’s right to levy income tax	Yes
4/24/2005	2005042403	Lower wealth tax	No
4/24/2005	2005042404	Lower income tax	No
4/24/2005	2005042406	Reduce unemployment benefits	No
4/24/2005	2005042408	Reduce benefits for the disabled	No
11/26/2006	2006112602	Increase family allowances	Yes
3/11/2007	2007031101	Improve elderly care	Yes
3/11/2007	2007031103	Single health insurance (no competition between private insurance companies); income-dependent premiums	Yes
6/17/2007	2007061705	Cuts to disability insurance	No

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Voting day	ID	Issue description	Direction
12/16/2007	2007121601	Tax break for corporations	No
12/16/2007	2007121604	Lower unemployment benefits; higher incentives for reintegration into work force	No
12/16/2007	2007121607	Tax hike for high-income earners	Yes
12/16/2007	2007121608	Temporary hike of wealth tax	Yes
2/24/2008	2008022402	Lower public transport fares	Yes
2/24/2008	2008022406	Tax breaks for corporations	No
6/1/2008	2008060101	Decrease gifts and donation tax	No
11/30/2008	2008113005	Citizens with annual income of less than ca. 120'000 CHF should be allowed to retire with 62	Yes
5/17/2009	2009051702	Lower corporate and dividends taxes	No
9/27/2009	2009092701	Reduce corporate taxes	No
9/27/2009	2009092704	Increase funding for social housing	Yes
9/27/2009	2009092707	Hike VAT tax rate to the benefit of disability insurance	Yes
3/7/2010	2010030704	Lower old-age pension payments	No
9/26/2010	2010092604	Cut unemployment benefits; increase social security contributions	No
11/28/2010	2010112808	Forbid degressive tax rates; federal minimum for cantonal income and wealth taxes	Yes
2/13/2011	2011021301	Tax amnesty	No
3/11/2012	2012031104	Tax break for prospective home owners	No
3/11/2012	2012031105	Six weeks of holidays as statutory minimum	Yes
6/17/2012	2012061701	Daycare centers	Yes
6/17/2012	2012061705	Tax break for prospective home owners	No
3/3/2013	2013030301	Lower public transport fares	Yes
3/3/2013	2013030303	Daycare centers, family policy	Yes
11/24/2013	2013112401	Prevent wage excesses	Yes
5/18/2014	2014051801	Lower public transport fares	Yes
5/18/2014	2014051805	Federal minimum wage	Yes
9/28/2014	2014092803	Single state health insurance instead of private market of health insurance providers	Yes
11/30/2014	2014113001	Getting rid of tax breaks for rich foreign nationals (canton-level)	Yes
11/30/2014	2014113004	Get rid of tax breaks for rich foreign nationals	Yes
6/14/2015	2015061401	Reduce rent control	No
6/14/2015	2015061403	Student allowances	Yes
6/14/2015	2015061404	New inheritance tax	Yes
2/28/2016	2016022801	Getting rid of tax breaks for companies newly settling in Geneva	Yes
2/28/2016	2016022805	Reduction of rent subsidies	No

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Voting day	ID	Issue description	Direction
2/28/2016	2016022806	Reduce canton’s contributions to health care premiums	No
2/28/2016	2016022807	Reduction of cantonal contributions to poor pensioners and poor disabled people	No
6/5/2016	2016060505	Tax break for certain rich foreign nationals	No
6/5/2016	2016060508	Basic income	Yes
9/25/2016	2016092504	Increase old-age pensions	Yes

Note: ID refers to the unique referendum identifier in the replication data. Direction = ‘Yes’ means that the yes vote share is used for the measurement of ‘support redistribution’; whereas direction = ‘No’ means that the no vote share is used for the measurement of ‘support redistribution’.

Table S13: List of referendums used for the measurement of ‘support cultural conservatism’

Voting day	ID	Issue description	Direction
3/4/2001	2001030401	Right to vote for foreigners	No
3/4/2001	2001030403	Switzerland should start membership negotiations with EU	No
12/2/2001	2001120208	Abolish the army	No
3/3/2002	2002030302	Switzerland should join the UN	No
6/2/2002	2002060206	Legalize abortion in first 12 weeks	No
6/2/2002	2002060207	Forbid abortion	Yes
11/24/2002	2002112402	Stricter asylum law	Yes
5/18/2003	2003051803	Shorter military duty; fewer soldiers; allowing women in the military	No
2/8/2004	2004020806	Lifelong detention of dangerous sexual and violent offenders	Yes
9/26/2004	2004092603	Facilitate naturalization of second generation foreign nationals	No
9/26/2004	2004092604	Facilitate naturalization of third generation foreign nationals	No
4/24/2005	2005042401	Right to vote and right to be elected for foreigners	No
4/24/2005	2005042402	Right to vote for foreigners	No
6/5/2005	2005060501	Schengen and Dublin treaties (strengthening of European cooperation and integration)	No
6/5/2005	2005060502	Civil partnerships	No
9/25/2005	2005092501	Extension of free movement of persons to new EU countries	No
9/24/2006	2006092409	Stricter aliens law	Yes
9/24/2006	2006092410	Stricter asylum law	Yes
11/26/2006	2006112601	Development aid to Eastern European states (imposed by the EU in return for market access)	No
3/11/2007	2007031102	Crack down on illegal advertisement posters	Yes
5/20/2007	2007052001	Increase equality between civil partnership and marriage in tax matters	No
11/30/2008	2008113004	Exemption from the statute of limitations for pedophile acts	Yes
11/30/2008	2008113007	Legalize marijuana	No
11/30/2008	2008113008	Liberal drug policy	No
2/8/2009	2009020805	Free movement of persons with Bulgaria and Romania	No
11/29/2009	2009112905	Outlaw minarets	Yes
11/28/2010	2010112805	Deport criminal foreign nationals	Yes

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Voting day	ID	Issue description	Direction
3/11/2012	2012031102	Restrict right to demonstrate to prevent violent excesses	Yes
6/9/2013	2013060902	Tighten asylum law	Yes
9/22/2013	2013092202	Abolish military conscription	No
2/9/2014	2014020904	Abortion should not be covered by health insurance	Yes
2/9/2014	2014020905	Immigration cuts	Yes
5/18/2014	2014051806	New fighter jets	Yes
11/30/2014	2014113005	Immigration cuts	Yes
2/28/2016	2016022809	Definition of marriage as union between man and woman; no discrimination of married couples versus unmarried couples	Yes
2/28/2016	2016022810	Deport criminal foreign nationals	Yes
6/5/2016	2016060511	Streamline asylum process; free legal counsel for asylum seekers	No
9/25/2016	2016092505	Strengthen intelligence service and surveillance capabilities	Yes

Note: ID refers to the unique referendum identifier in the replication data. Direction = ‘Yes’ means that the yes vote share is used for the measurement of ‘support for cultural conservatism’; whereas direction = ‘No’ means that the no vote share is used for the measurement of ‘support for cultural conservatism’.