

Table A1. Resident Population of Swiss Cantons, 1850-2020 ¹⁾ (20-Year Intervals, 2020 in Italics)

YEAR	1850	1870	1890 ²⁾	1910	1930	1950	1970	1990	2010 ³⁾	2020
CANTON										
Aargau (AG)	199852	198718	193580	230634	259644	300782	433284	507508	611 466	694 072
Appenzell Innerrhoden (AI)	11272	11922	12888	14659	13988	13427	13124	13870	15688	16293
Appenzell Ausserrhoden (AR)	43621	48734	54109	57973	48977	47938	49023	52229	53017	55309
Basel-Stadt (BS)	29698	47040	73749	135918	155030	196498	234945	199411	184 950	196 735
Basel-Land (BL)	47885	54026	61941	76488	92541	107549	204889	233488	274 404	290 969
Bern (BE)	413468	450537	482976	587100	633161	742513	916035	958192	979 802	1 043132
Fribourg (FR)	99891	110409	119155	139654	143230	158695	180309	213571	278 493	325 496
Genève (GE)	64146	88791	105509	154906	171366	202918	331599	379190	457 715	506 343
Glarus (GL)	30213	35208	33825	33316	35653	37663	38155	38508	38 608	40 851
Grisons (GR)	89895	92103	94810	117069	126340	137100	162086	173890	192 621	200 096
Jura (JU)	44833	50964	53703	58777	55613	59430	67261	66163	70 032	73 709
Luzern (LU)	132843	132153	135360	167223	189391	223249	289641	326268	377 610	416 347
Neuchâtel (NE)	70753	95425	108153	133061	124324	128152	169173	163985	172 085	175 894
Nidwalden (NW)	11339	11701	12538	13788	15055	19389	25634	33044	41 024	43 520
Obwalden (OW)	13799	14443	15043	17161	19401	22125	24509	29025	35 585	38 108
Schaffhausen (SH)	35300	37642	37783	46097	511187	57515	72854	72160	76 356	83 107
Schwyz (SZ)	44168	47733	50307	58428	62337	71082	92072	111964	146 730	162 157
Solothurn (SO)	69674	74608	85621	117040	144198	170508	224133	231746	255 284	277 462

St. Gallen (SG)	169625	190674	228174	302896	286362	309106	384475	427501	478 907	514 504
Thurgau (TG)	88908	93202	104678	134917	136063	149738	182835	209362	248 444	282 909
Ticino (TI)	117759	121591	126751	156166	159223	175055	245458	282181	333 753	350 986
Uri (UR)	14505	16095	17249	22113	22968	28556	34091	34208	35 422	36 819
Valais (VS)	81559	96722	101985	128381	136394	159178	206563	249817	312 684	348 503
Vaud (VD)	199575	229588	247655	317457	331853	377585	511851	601816	713 281	814 762
Zug (ZG)	17461	20925	23029	28156	34395	42239	67996	85546	113 105	128 794
Zürich (ZH)	250698	284047	337183	503915	617706	777002	1107788	1179044	1373068	1553423
Total	2.392.740	2.655.001	2.917.754	3.753.293	4.066.400	4.714.992	6.269.783	6.873.687	7.870.134	8.670.300

1) The table reflects the geographical cantonal borders as of 1990. For instance, resident population figures for the canton of Jura are reported separately since the inception of the Confederation, despite its official recognition as a canton in 1979. Changes in population figures can be influenced by geographical reallocations. Detailed information regarding developments in the various cantons can be found, for example, in Eidgenössische Volkszählung 1990 (Federal Census 1990), 1.203-00.

2) Due to the unavailability of population figures for 1890, the data presented are for the year 1888.

Sources: Federal Statistical Office; STATPOP; <https://www.bfs.admin.ch/bfs/en/home/statistics/population.assetdetail.18344223.html>. 3) Please note the following additional clarification provided: “Starting with 2010 [there was a] change in the methods of production and the concept of the permanent resident population: the permanent resident population includes henceforth all persons in the asylum process who have been residing in Switzerland for 12 months or more”

Table A2: Number of Swiss Citizens Eligible to Vote, 1850-2020

Year	1850	1890	1910	1930	1950	1970	1990	2010	2020
Canton									
Appenzell Innerrhoden (AI)	3590	3114	3076	3307	3663	3704	9169	11267	11992
Appenzell Ausserrhoden (AR)	--	12560	13564	13255	14233	13413	33318	37442	39014
Aargau (AG)	39257	39572	49726	67244	87537	107827	317787	391210	430390
Basel-Stadt (BS)	2689	12209	22387	41410	61332	66174	130751	113666	114110
Basel-Land (BL)	8200	11575	15810	24792	32228	51409	154952	185737	190173
Bern (BE)	75416	112286	141879	194767	245829	278429	656751	707615	740316
Fribourg (FR)	--	29074	31812	36547	46125	50857	136401	180715	206634
Genève (GE)	12123	18925	27881	43446	58316	74991	193882	236294	269707
Glarus (GL)	7549	8236	8191	9758	11082	10509	23710	25792	26523
Grisons (GR)	--	22147	25616	30719	37511	42116	115175	134459	139811
Jura (JU)	--	--	--	--	--	--	44186	50331	53998
Luzern (LU)	43566	31309	38826	50970	64866	77746	210997	254770	279593
Neuchâtel (NE)	12716	25025	31009	36099	40102	43056	99209	109068	112735
Nidwalden (NW)	2813	2875	3197	3831	5510	6998	22951	30039	31384
Obwalden (OW)	3488	3677	4119	5962	6235	6944	19153	24783	27060
Schaffhausen (SH)	6114	8081	9219	13280	17136	18742	46860	49017	52414
Schwyz (SZ)	12163	12183	13882	16598	20383	24266	71373	96746	105912
Solothurn (SO)	13857	18474	26904	39515	51194	59983	152871	170568	180755
St. Gallen (SG)	33287	51824	64471	70965	84371	96340	263579	306065	324730
Thurgau (TG)	20643	24083	28784	35420	43295	45441	125346	157562	174656
Ticino (TI)	21950	37632	40439	38858	48067	57679	173346	209535	222826
Uri (UR)	4516	4117	5072	5863	8263	9572	23684	25966	26870
Valais (VS)	20359	27403	30442	36098	46066	56695	160954	201509	226960
Vaud (VD)	38918	61552	71540	90241	113030	129238	340077	402587	454341
Zug (ZG)	3974	5771	6600	8931	11714	16551	54431	71005	77921
Zürich (ZH)	58800	79827	109197	176315	236882	286295	745447	867568	946889
Total	445988	663531	823643	1094191	1394970	1634975	4326360	5051169	5467714

Notes: 1) Figures for 1870 are not available, as the actual official registration of the number of voters started in 1879. An exception is the number of voters concerning the 1848 vote, for which respective figures are available. 2) Since there was no vote in 1850, the figures given for this year relate to the first vote ever taken in the Confederation: the approval of the first Federal Constitution. The vote took place on different dates in August and September 1848. However, the Cantons of Appenzell Outer-Rhodes, Freiburg and Graubünden seem not to have voted on the issue. The other figures on the number of eligible voters were reconstructed based on Segesser (1965).

Sources: Compiled by the authors using data from the Swiss Federal Chancellery, Federal Statistical Office, and Schaub and Bühlmann (2022). We extend our gratitude to Albert Rwelamira, who initially helped us assemble this data, which was later supplemented by information extracted from <http://www.admin.ch/ch/d/pore/va/liste.html>. As comparable data for 1870 is unavailable, the figures presented cover the period from 1850 to 1990 at 20-year intervals (except for 1870) up to 2010, with an additional column for 2020. In January 1879, however, the total number of eligible voters in Switzerland was recorded as 636,996 (Schaub and Bühlmann 2022). Figures for 2010 and 2020 are based on the Swissvote dataset, utilizing data related to the first referendum held in these years.

Table A3: Cantonal Shares in the Total of Eligible Voters, Switzerland 1850-2020

Year	1850	1890	1910	1930	1950	1970	1990	2010	2020
Canton									
Appenzell Innerrhoden (AI)	0.80	0.47	0.37	0.30	0.26	0.23	0.21	0.22	0.22
Appenzell Ausserrhoden (AR)	0.00	1.89	1.65	1.21	1.02	0.82	0.77	0.74	0.71
Aargau (AG)	8.80	5.96	6.04	6.15	6.28	6.60	7.35	7.74	7.87
Basel-Stadt (BS)	0.60	1.84	2.72	3.78	4.40	4.05	3.02	2.25	2.09
Basel-Land (BL)	1.84	1.74	1.92	2.27	2.31	3.14	3.58	3.68	3.48
Bern (BE)	16.91	16.92	17.23	17.80	17.62	17.03	15.18	14.01	13.54
Fribourg (FR)	0.00	4.38	3.86	3.34	3.31	3.11	3.15	3.58	3.78
Genève (GE)	2.72	2.85	3.39	3.97	4.18	4.59	4.48	4.68	4.93
Glarus (GL)	1.69	1.24	0.99	0.89	0.79	0.64	0.55	0.51	0.49
Grisons (GR)	0.00	3.34	3.11	2.81	2.69	2.58	2.66	2.66	2.56
Jura (JU)	0.00	0.00	0.00	0.00	0.00	0.00	1.02	1.00	0.99
Luzern (LU)	9.77	4.72	4.71	4.66	4.65	4.76	4.88	5.04	5.11
Neuchâtel (NE)	2.85	3.77	3.76	3.30	2.87	2.63	2.29	2.16	2.06
Nidwalden (NW)	0.63	0.43	0.39	0.35	0.39	0.43	0.53	0.59	0.57
Obwalden (OW)	0.78	0.55	0.50	0.54	0.45	0.42	0.44	0.49	0.49
Schaffhausen (SH)	1.37	1.22	1.12	1.21	1.23	1.15	1.08	0.97	0.96
Schwyz (SZ)	2.73	1.84	1.69	1.52	1.46	1.48	1.65	1.92	1.94
Solothurn (SO)	3.11	2.78	3.27	3.61	3.67	3.67	3.53	3.38	3.31
St. Gallen (SG)	7.46	7.81	7.83	6.49	6.05	5.89	6.09	6.06	5.94
Thurgau (TG)	4.63	3.63	3.49	3.24	3.10	2.78	2.90	3.12	3.19
Ticino (TI)	4.92	5.67	4.91	3.55	3.45	3.53	4.01	4.15	4.08
Uri (UR)	1.01	0.62	0.62	0.54	0.59	0.59	0.55	0.51	0.49
Valais (VS)	4.56	4.13	3.70	3.30	3.30	3.47	3.72	3.99	4.15
Vaud (VD)	8.73	9.28	8.69	8.25	8.10	7.90	7.86	7.97	8.31
Zug (ZG)	0.89	0.87	0.80	0.82	0.84	1.01	1.26	1.41	1.43
Zürich (ZH)	13.18	12.03	13.26	16.11	16.98	17.51	17.23	17.18	17.32
Total	99.98	99.98	100.02	100.01	99.99	100.01	99.99	100.01	100.01

Source: Own calculations based on Table A2.

Table A4: Shares and Cumulative Shares of Swiss Eligible Voters per Canton. 1850-1990 (Ranked by Relative Size)

1850			1890			1910			1930			1950			1970			1990		
Canton	Share	Cumulative Share	Canton	Share	Cumulative Share	Canton	Share	Cumulative Share	Canton	Share	Cumulative Share	Canton	Share	Cumulative Share	Canton	Share	Cumulative Share	Canton	Share	Cumulative Share
BE	16.91%	0.17	BE	16.92%	0.17	BE	17.23%	0.17	BE	17.80%	0.18	BE	17.62%	0.18	ZH	17.51%	0.18	ZH	17.23%	0.17
ZH	13.18%	0.30	ZH	12.03%	0.29	ZH	13.26%	0.30	ZH	16.11%	0.34	ZH	16.98%	0.35	BE	17.03%	0.35	BE	15.18%	0.32
LU	9.77%	0.40	VD	9.28%	0.38	VD	8.69%	0.39	VD	8.25%	0.42	VD	8.10%	0.43	VD	7.90%	0.42	VD	7.86%	0.40
AG	8.80%	0.49	SG	7.81%	0.46	SG	7.83%	0.47	SG	6.49%	0.49	BS/BL	6.71%	0.49	BS/BL	7.19%	0.50	AG	7.35%	0.48
VD	8.73%	0.57	AG	5.96%	0.52	AG	6.04%	0.53	AG	6.15%	0.55	AG	6.28%	0.56	AG	6.60%	0.56	BS/BL	6.60%	0.54
SG	7.46%	0.65	TI	5.67%	0.58	TI	4.91%	0.58	BS/BL	6.05%	0.61	SG	6.05%	0.62	SG	5.89%	0.62	SG	6.09%	0.60
TI	4.92%	0.70	LU	4.72%	0.62	LU	4.71%	0.63	LU	4.66%	0.66	LU	4.65%	0.66	LU	4.76%	0.67	LU	4.88%	0.65
TG	4.63%	0.74	FR	4.38%	0.67	BS/BL	4.64%	0.67	GE	3.97%	0.69	GE	4.18%	0.71	GE	4.59%	0.71	GE	4.48%	0.70
VS	4.56%	0.79	VS	4.13%	0.71	FR	3.86%	0.71	SO	3.61%	0.73	SO	3.67%	0.74	SO	3.67%	0.75	TI	4.01%	0.74
SO	3.11%	0.82	NE	3.77%	0.75	NE	3.76%	0.75	TI	3.55%	0.77	TI	3.45%	0.78	TI	3.53%	0.79	VS	3.72%	0.77
NE	2.85%	0.85	TG	3.63%	0.78	VS	3.70%	0.79	FR	3.34%	0.80	FR	3.31%	0.81	VS	3.47%	0.82	SO	3.53%	0.81
SZ	2.73%	0.88	BS/BL	3.58%	0.82	TG	3.49%	0.82	NE	3.30%	0.83	VS	3.30%	0.84	FR	3.11%	0.85	FR	3.15%	0.84
GE	2.72%	0.90	GR	3.34%	0.85	GE	3.39%	0.85	VS	3.30%	0.87	TG	3.10%	0.87	TG	2.78%	0.88	TG	2.90%	0.87
BS/BL	2.44%	0.93	GE	2.85%	0.88	SO	3.27%	0.89	TG	3.24%	0.90	NE	2.87%	0.90	NE	2.63%	0.91	GR	2.66%	0.90
GL	1.69%	0.95	SO	2.78%	0.91	GR	3.11%	0.92	GR	2.81%	0.93	GR	2.69%	0.93	GR	2.58%	0.93	NE	2.29%	0.92
NW/OW	1.41%	0.96	AI/AR	2.36%	0.93	AI/AR	2.02%	0.94	SZ	1.52%	0.94	SZ	1.46%	0.94	SZ	1.48%	0.95	SZ	1.65%	0.94
SH	1.37%	0.97	SZ	1.84%	0.95	SZ	1.69%	0.96	AI/AR	1.51%	0.96	AI/AR	1.28%	0.96	SH	1.15%	0.96	ZG	1.26%	0.95
UR	1.01%	0.98	GL	1.24%	0.96	SH	1.12%	0.97	SH	1.21%	0.97	SH	1.23%	0.97	AI/AR	1.05%	0.97	SH	1.08%	0.96
ZG	0.89%	0.99	SH	1.22%	0.98	GL	0.99%	0.98	NW/OW	0.89%	0.98	NW/OW	0.84%	0.98	ZG	1.01%	0.98	JU	1.02%	0.97
AI/AR	0.80%	1.00	NW/OW	0.99%	0.99	NW/OW	0.89%	0.99	GL	0.89%	0.99	ZG	0.84%	0.99	NW/OW	0.85%	0.99	AI/AR	0.98%	0.98
FR	0.00%	1.00	ZG	0.87%	0.99	ZG	0.80%	0.99	ZG	0.82%	0.99	GL	0.79%	0.99	GL	0.64%	0.99	NW/OW	0.97%	0.99
GR	0.00%	1.00	UR	0.62%	1.00	UR	0.62%	1.00	UR	0.54%	1.00	UR	0.59%	1.00	UR	0.59%	1.00	GL	0.55%	0.99
JU	--	--	JU	--	--	JU	0.00%	1.00	JU	0.00%	1.00	JU	0.00%	1.00	JU	0.00%	1.00	UR	0.55%	1.00

Source: Own calculations based on Table A3.

Data Cleaning

Source data: CDC – Centre for Research on Direct Democracy n.d., available at <https://www.c2d.ch>

Overview of steps taken

Date changed from ddmmyyyy to just year

- Variable “Margin” created $o = \text{“Yes_Votes”} - \text{“No_Votes”}$
- DataFrame “swiss_find” created. This checks whether some cases are accidentally excluded because of missing data.
 - There are no instances where the referendum type is National and the result is labeled “Not provided” or “Unknown” (1215 other instances of this)
 - Exclude all cases without a recorded result

Number of cases: 6191 (running count)

- Change results from “Yes” and “No” to 1 (yes) and 0 (no)
 - Exclude all cases from before 1848

Number of cases: 6188 (running count)

- Search for instances where the referendum is national but data on the total electorate are not recorded: 41 instances
 - Most are more recent referendums (2018 onward)
- Exclude all nonnational referendums

Number of cases: 670 (running count)

- Input data on Total electorate for instances where it is missing and where data are available on the official www.bk.admin.ch website page for the referendum
- Search for instances where the referendum is national but data on Total Electorate are not recorded; there are now just 19 instances
 - All on or before 1877

- Search for instances where the referendum is national but data on invalid or empty votes are not recorded; 57 instances
- Input data on invalid or empty votes where they are missing and where data are available on the official www.bk.admin.ch website page for the referendum
- Search for instances where the referendum is national but data on invalid or empty votes are not recorded; 32 instances
 - All on or before 1891
- Create the variable “Turnout”; this could be manually input from official data but would take far longer; $o = (\text{Yes votes} + \text{No votes} + \text{Invalid Votes} + \text{Empty Votes} / \text{Total Electorate}) * 100$
- Exclude any data that still miss Total_Electorate, Invalid, or Empty vote data.

Number of cases: 638 (running count)

- Check for instances where the vote margin is less than 0 but the measure is recorded as passing; This should be impossible; there are 0 instances
- Check for instances where the vote margin is above 0 but the measure is recorded as failing; This would imply that the vote won the popular vote but failed owing to not receiving enough cantonal support.
 - There are 10 such instances; sufficient data for 9 cases
- Create the variable “Margin_per_Elect”; an attempt to counter the effect of electorate growth as accounting for increases in margins.