

A1: Districting Structure in Twenty Western Democracies

Country (year)	Total seats	Avg. DM	Med. DM	(min, max) DM	Compensatory Seats	No. of Districts
Canada (2011)	301	1.00	1	1	No	301
New Zealand (1993)	99	1.00	1	1	No	99
UK (2010)	650	1.00	1	1	No	650
Belgium (2010)	150	13.64	15	(4, 24)	No	11
Denmark (2007)	179	11.58	13	(2, 21)	0.22	12
Finland (2007)	200	13.33	12	(1, 34)	No	15
Greece (2007)	300	5.14	4	(1, 42)	0.04	56
Iceland (2009)	63	10.50	10.5	(10, 11)	0.14	6
Ireland (2011)	166	3.86	4	(3, 5)	No	43
Italy (2008)	630	22.50	21	(1, 44)	No	28
Luxemburg (2009)	60	15.00	15	(7, 23)	No	4
Malta (2008)	65	5.00	5	5	No	13
Norway (2009)	169	8.89	8	(4, 17)	0.11	19
Portugal (2009)	230	10.45	6	(2, 47)	No	22
Spain (2008)	350	6.73	5	(1, 35)	No	52
Sweden (2006)	310	10.69	9	(2, 36)	0.11	29
Switzerland (2007)	200	7.69	5.5	(1, 34)	No	26
Germany (2009)*	600	600.00	600	600	(1)	1
Israel (2009)	120	120.00	120	120	No	1
the Netherlands (2010)	150	150.00	150	150	No	1
New Zealand (1996)*	120	120.00	120	120	(1)	1

Note: The table includes sixteen west European democracies plus Canada, Israel and New Zealand organized by districting structure (SMD, districted PR, PR in a single district).

*Both Germany and New Zealand '96 are classified as mixed member proportional (MMP) systems (Shugart and Wattenberg 2001). Voters in these systems have two votes, personal and list (proportional) vote. The final allocation of seats in parliament is in proportion to the total share of list votes (overhang seats may apply). We thus consider these cases as single national district with magnitude equals to the size of parliament.

A2: Conversion of Votes to Seats: The Effect of Party Ideology

	Belgium	Denmark	Finland	Greece	Iceland	Ireland	Luxemburg	Norway	Portugal	Spain	Sweden	Switzerland	Pooled
Party LR	0.027	0.065	0.025	0.185	-0.182	-0.053	0.117	0.157	0.120	0.215	0.087	0.022	0.137
	(0.070)	(0.010)	(0.055)	(0.021)	(0.229)	(0.081)	(0.047)	(0.102)	(0.050)	(0.032)	(0.026)	(0.049)	(0.015)
	0.711	0.000	0.661	0.000	0.462	0.514	0.089	0.143	0.027	0.000	0.002	0.664	0.000
Ln(DM)	0.174	0.112	0.254	0.876	-4.482	-0.542	0.659	0.654	0.300	0.423	0.702	0.010	0.550
	(0.202)	(0.058)	(0.237)	(0.163)	(1.441)	(0.579)	(0.182)	(0.463)	(0.091)	(0.185)	(0.182)	(0.292)	(0.065)
	0.410	0.086	0.303	0.000	0.027	0.355	0.036	0.175	0.003	0.026	0.001	0.972	0.000
LRxDM	-0.011	-0.013	-0.012	-0.067	0.077	0.090	-0.033	-0.069	-0.035	-0.076	-0.034	-0.018	-0.051
	(0.025)	(0.006)	(0.021)	(0.014)	(0.105)	(0.058)	(0.022)	(0.043)	(0.019)	(0.018)	(0.010)	(0.021)	(0.006)
	0.652	0.042	0.582	0.000	0.495	0.127	0.230	0.127	0.090	0.000	0.002	0.386	0.000
Constant	0.565	0.106	0.228	-1.364	10.906	0.797	-1.175	-0.569	-0.222	-0.599	-0.753	0.980	-0.598
	(0.550)	(0.091)	(0.604)	(0.221)	(3.158)	(0.801)	(0.405)	(1.098)	(0.229)	(0.341)	(0.434)	(0.675)	(0.143)
	0.328	0.277	0.712	0.000	0.018	0.326	0.062	0.611	0.344	0.085	0.094	0.159	0.000
N	63	80	102	224	30	210	24	133	110	151	203	146	1,476
R-squared	0.02	0.06	0.01	0.35	0.18	0.10	0.34	0.02	0.08	0.51	0.10	0.06	0.10

Note: Dependent variable: CR, the conversion ratio of votes to seats. Explanatory variables are party ideology placement (Party LR), (logged) district magnitude, and an interaction term (LRxDM). The analysis includes all cases with variation in district magnitude with the exception of Italy which lacks data on party ideology on the relevant election year. Standard errors are clustered by districts. In bold p-value <0.05 (p-value below standard errors). The pooled model includes country fixed effects and clustered standard errors by districts.

Table A3: Voter Inequality and District Magnitude

	Belgium	Denmark	Finland	Greece	Iceland	Ireland	Italy	Luxemburg	Norway	Portugal	Spain	Sweden	Switzerland	Pooled
ln(DM)	-0.163	-0.311	-0.237	-0.088	-1.699	-0.238	-0.077	-0.091	-0.308	-0.186	-0.245	-0.250	-0.229	-0.167
	(0.064)	(0.029)	(0.040)	(0.017)	(0.704)	(0.074)	(0.010)	(0.037)	(0.067)	(0.056)	(0.044)	(0.028)	(0.077)	(0.017)
	0.030	0.000	0.000	0.000	0.061	0.002	0.000	0.094	0.000	0.003	0.000	0.000	0.007	0.000
Constant	1.026	1.373	1.167	0.988	4.285	1.109	1.003	0.705	1.433	1.210	1.215	1.163	1.130	1.087
	(0.154)	(0.074)	(0.104)	(0.019)	(1.543)	(0.095)	(0.032)	(0.083)	(0.158)	(0.137)	(0.076)	(0.062)	(0.179)	(0.037)
	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000
N	118	97	135	558	42	299	396	30	221	271	279	261	178	2,885
R-squared	0.05	0.18	0.07	0.04	0.08	0.02	0.02	0.01	0.07	0.06	0.07	0.10	0.12	0.05

Note: Dependent variable: abs(1-CR), the absolute difference from perfect conversion of votes to seats. Explanatory variable is (logged) district magnitude. Included are all countries with variation in district magnitude. Standard errors are clustered by districts. In bold p-value<0.05 (p-values below standard errors). The pooled model includes country fixed effects and clustered standard errors by districts (see robustness checks subsection for additional estimations).

Table A4: Conversion of Votes to Seats: The Effect of Party Size

	Belgium	Denmark	Finland	Greece	Iceland	Ireland	Italy	Luxemburg	Norway	Portugal	Spain	Sweden	Switzerland	Pooled
Vote-Share	3.794	10.994	2.081	2.826	66.929	4.497	4.304	1.466	7.897	8.223	5.463	5.874	4.382	3.991
	(1.520)	(0.332)	(0.936)	(0.180)	(12.485)	(1.368)	(0.393)	(1.166)	(1.762)	(2.616)	(0.364)	(0.943)	(1.454)	(0.672)
	0.032	0.000	0.045	0.000	0.003	0.002	0.000	0.298	0.000	0.005	0.000	0.000	0.006	0.000
ln(DM)	0.081	0.223	0.051	0.166	1.962	0.309	0.098	0.196	0.107	0.142	0.154	0.437	0.196	0.118
	(0.092)	(0.011)	(0.084)	(0.028)	(0.672)	(0.154)	(0.020)	(0.031)	(0.051)	(0.044)	(0.055)	(0.110)	(0.115)	(0.024)
	0.399	0.000	0.553	0.000	0.033	0.051	0.000	0.008	0.051	0.004	0.008	0.000	0.102	0.000
VSXDM	0.188	-2.356	0.611	-0.237	-28.455	-0.438	-0.413	0.481	-2.024	-1.894	-1.475	-1.678	-0.233	-0.435
	(0.595)	(0.146)	(0.333)	(0.133)	(5.642)	(1.079)	(0.122)	(0.567)	(0.744)	(1.054)	(0.222)	(0.416)	(0.625)	(0.267)
	0.759	0.000	0.089	0.082	0.004	0.687	0.002	0.459	0.014	0.087	0.000	0.000	0.713	0.129
Constant	-0.036	-0.496	0.107	-0.138	-4.217	-0.384	-0.158	-0.200	0.018	-0.302	-0.220	-0.475	-0.259	-0.079
	(0.258)	(0.023)	(0.243)	(0.028)	(1.491)	(0.198)	(0.064)	(0.086)	(0.120)	(0.107)	(0.055)	(0.248)	(0.284)	(0.050)
	0.890	0.000	0.667	0.000	0.037	0.059	0.022	0.102	0.885	0.010	0.000	0.065	0.372	0.139
N	118	97	135	558	42	299	396	30	221	271	279	261	178	2,885
R-squared	0.43	0.71	0.40	0.42	0.74	0.40	0.45	0.47	0.29	0.58	0.52	0.17	0.42	0.39

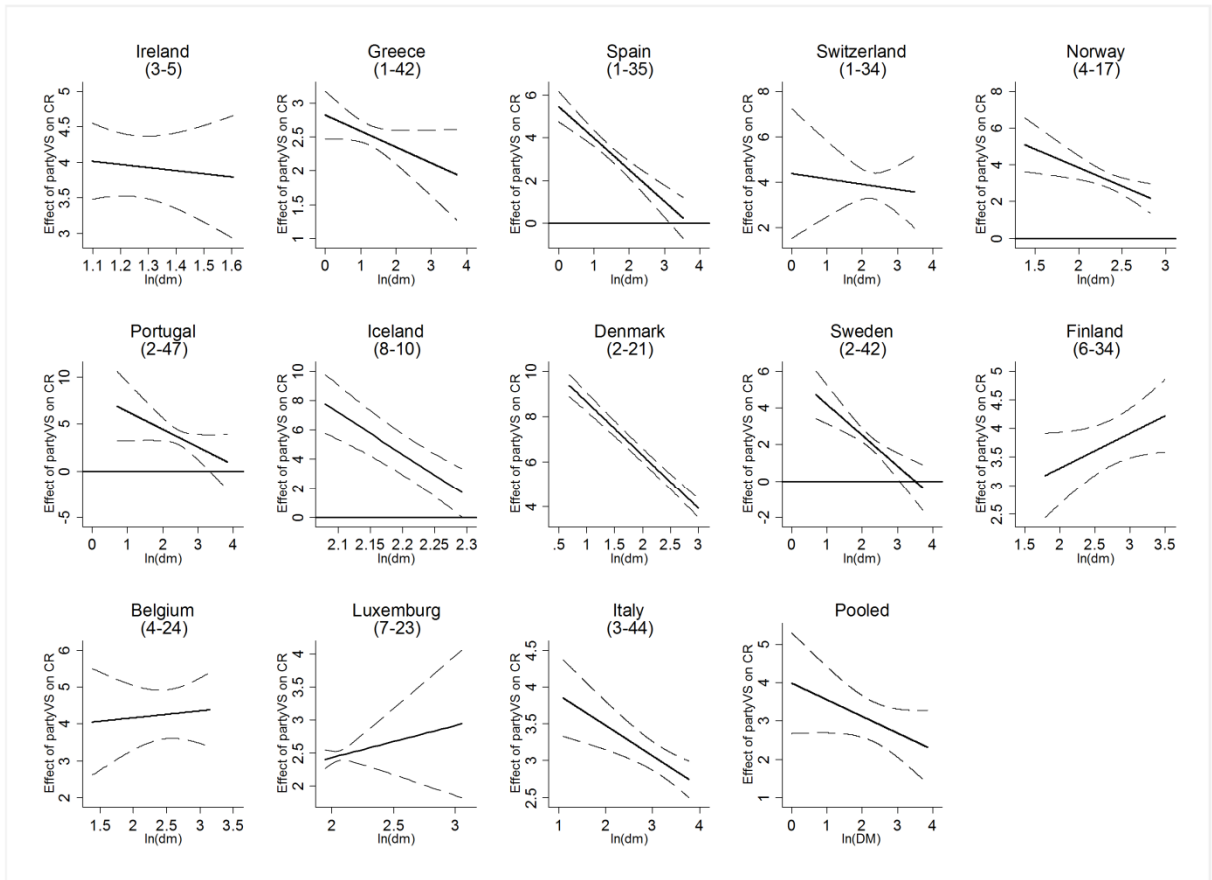
Note: Dependent variable: CR, the conversion ratio of votes to seats. Explanatory variables are party vote-share in a district, (logged) district magnitude, and their interaction (VS×DM). The analysis includes all cases with variation in district magnitude. In Bold p-value <0.05. Standard errors are clustered by district. The pooled model includes country fixed effects and clustered standard errors by country.

Table A5: Conversion of Votes to Seats: The Effect of Party Ideology (HLM)

	Belgium	Denmark	Finland	Greece	Iceland	Ireland	Luxemburg	Norway	Portugal	Spain	Sweden	Switzerland
Party LR	0.033	0.065	0.027	0.185	-0.182	-0.055	0.117	0.157	0.120	0.223	0.087	-0.001
	(0.041)	(0.054)	(0.072)	(0.021)	(0.319)	(0.098)	(0.064)	(0.090)	(0.057)	(0.037)	(0.039)	(0.036)
	0.430	0.226	0.708	0.000	0.568	0.572	0.069	0.082	0.035	0.000	0.026	0.970
ln(DM)	0.283	0.112	0.258	0.876	-4.482	-0.554	0.659	0.654	0.300	0.363	0.702	-0.270
	(0.162)	(0.183)	(0.318)	(0.146)	(1.843)	(0.608)	(0.271)	(0.459)	(0.221)	(0.133)	(0.200)	(0.223)
	0.080	0.542	0.418	0.000	0.015	0.362	0.015	0.154	0.175	0.006	0.000	0.227
LRXDM	-0.017	-0.013	-0.013	-0.067	0.077	0.091	-0.033	-0.069	-0.035	-0.072	-0.034	-0.008
	(0.015)	(0.016)	(0.027)	(0.014)	(0.144)	(0.063)	(0.024)	(0.040)	(0.021)	(0.011)	(0.016)	(0.012)
	0.239	0.426	0.638	0.000	0.593	0.145	0.169	0.080	0.093	0.000	0.038	0.539
Constant	0.354	0.106	0.217	-1.364	10.906	0.822	-1.175	-0.569	-0.222	-0.616	-0.753	1.488
	(0.453)	(0.596)	(0.853)	(0.222)	(4.081)	(0.949)	(0.723)	(1.043)	(0.607)	(0.437)	(0.483)	(0.560)
	0.435	0.859	0.799	0.000	0.008	0.386	0.104	0.585	0.715	0.159	0.119	0.008
N	63	80	102	224	30	210	24	133	110	151	203	146
Log likelihood	28.236	57.046	83.946	207.355	8.246	201.939	8.816	157.714	165.457	101.668	170.869	172.815

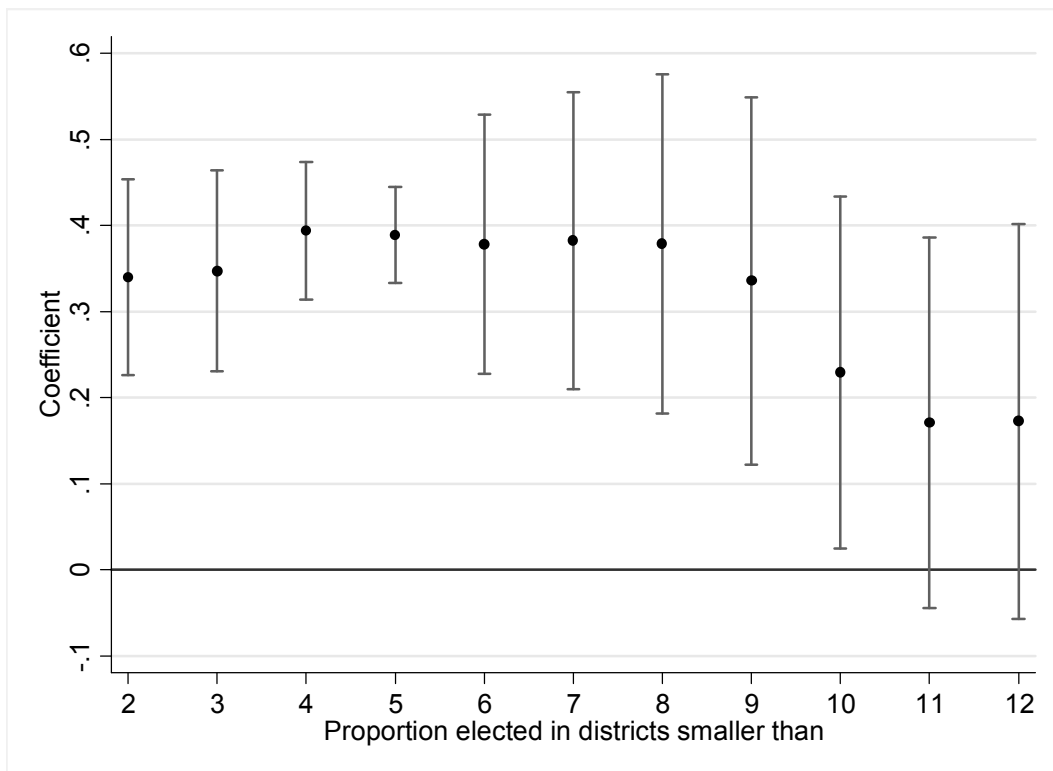
Note: Dependent variable: CR, the conversion ratio of votes to seats. Models are hierarchical with partially crossed random effects. Explanatory variables are party ideology placement (Party LR), (logged) district magnitude, and an interaction term (LRxDM). The analysis includes all cases with variation in district magnitude with the exception of Italy which lacks data on party ideology on the relevant election year. P-value <0.05 in bold (p-values below standard errors).

Figure A1. Conversion of Votes to Seats: The Effect of Party Size



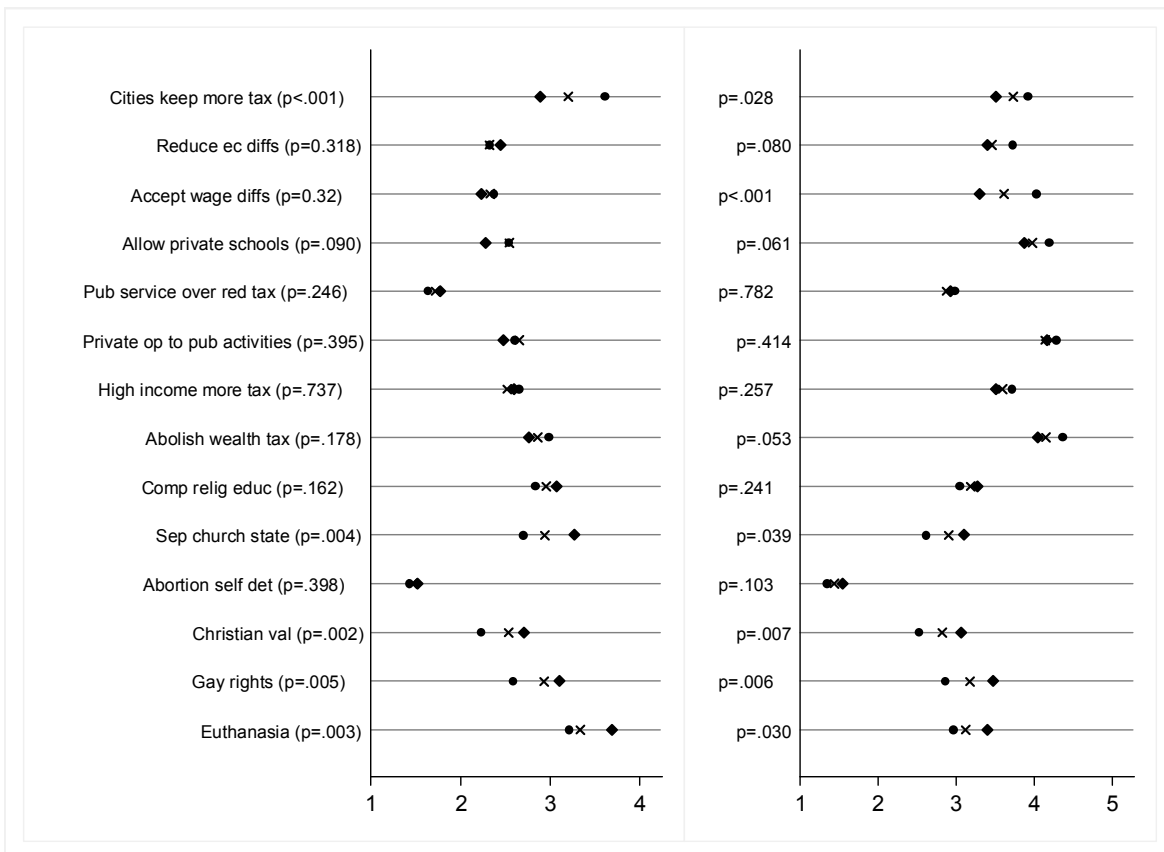
Note: minimum and maximum district magnitudes are reported under country names. The line represents the marginal effect of party vote share on CR, modified by district magnitude. 95% confidence intervals are marked. Standard errors are clustered by districts. The pooled model includes country fixed effects and clustered standard errors by districts. Estimation results are reported in Table A4. See robustness checks subsection for additional estimations.

Figure A2. Representational Inequality and Small Districts: Eleven Cutoff Points



Note: The figure is based on an extension of the estimation presented in Table 1. Dependent variable: RI. Data is at the national level. The coefficient presented (along with a 95% confidence interval) is the coefficient on the proportion of parliament elected in districts smaller than the magnitude noted. The central-tendency measure controlled for in this estimation is average district magnitude. Other control variables are the same as in Table 1.

Figure A3. Issue positions of co-partisans: Norway 2009



Note: Items are coded such that higher values on economic policies stand for free market orientation, and higher values on policies stand for conservative values. Diamonds denote the average respondent's position in the Oslo area, circles denote that position in Western Norway, and the vertical bars the average position among respondents nationwide. p-values for t-tests of difference between the two regions are marked next to each item.

Legend of policies:

- Cities keep more tax – Big cities should keep more of their own tax income than the present.
- Reduce ec diffs – Economic differences are still so large that in this country the government must see it as a main task to reduce them.
- Accept wage diffs – We should be willing to accept bigger differences in wage levels.
- Allow private schools – We should allow commercial private schools.
- Pub service over red tax – It is more important to develop public services than to reduce taxation.
- Private op to pub activities – Many public activities could have been done better and cheaper, if handed over to private operators.
- High income more tax – High incomes should be put under harder taxation than they are today.
- Abolish wealth tax – Wealth tax should be abolished.
- Comp relig educ – The teaching of Christianity should be compulsory in primary school.
- Sep church state – The church should be separated from the state.
- Abortion self det – Abortion should never be permitted.
- Christian val – We should promote a society where Christian values are more prominent.
- Gay rights – There should be equal adoption rights for homosexuals and heterosexuals.
- Euthanasia – We should allow euthanasia.