The asymmetrical effect of polarization on the support for independence. The case of Catalonia

Appendix

Note on Dalton's index of polarization

Polarization at the party system level is measured here following Russell Dalton's index of perceived ideological polarization for both parties and voters:

$$Dalton's\ index\ of\ polarization = \sqrt{\sum_{j=1} w_j \left[\frac{(p_j - \bar{p})}{4.5}\right]^2}$$

where p_j is the party position and $\bar{p}$ is the average position of all political parties the respondent in the national axis as perceived by voters, and w_j is the party's vote share. The distance $p_j - \bar{p}$ is divided by 4.5 because it is the mean point in our indexes ranging from 1 to 10. For the national dimension, the survey question demands individuals to indicate their self-position and the perceived position of political parties in an index of Catalan nationalism from 1 to 10, where 10 is the maximum level of Catalan nationalism (and 1 is the opposite).

Table A1. Summary descriptives of the variables employed in the models

Variable	Obs	Mean	Std. dev.	Min	Max
Support for Independence (DV)	1,797	.4646633	.4988886	0	1
Main Ind. Variables					
Horizontal national polarization (inter-party distance)	1,129	3.512.865	.7898662	0	9
Vertical national polarization (party-voter distance)	1,116	366.065	1.174.418	0	9
Control factors					
Gender	1,873	.5072077	.5000816	0	1
Age					
18-29	1,872	.1463675	.3535687	0	1
30-39	1,872	.224359	.4172709	0	1
40-49	1,872	.1997863	.3999465	0	1
50-59	1,872	.1639957	.3703706	0	1
60-69	1,872	.1415598	.3486913	0	1
70-79	1,872	.0849359	.2788608	0	1
80+	1,872	.0389957	.1936365	0	1
Education					
Primary	1,873	.2050187	.4038231	0	1
High-School	1,873	.5627336	.4961814	0	1
University	1,873	.230646	.4213588	0	1
Profession					
Employed	1,873	.499733	.5001335	0	1
Unemployed	1,873	.1793914	.3837821	0	1
Retired	1,873	.2322477	.4223789	0	1
Student	1,873	.0485852	.2150566	0	1
House work	1,873	.0379071	.1910226	0	1
Town size	1,873	1.062.467	.8012048	0	2
Left-Right dimension					
Far left	1,873	.1932728	.3949705	0	1
Left	1,873	.3053924	.4606964	0	1
Center	1,873	.2893753	.4535935	0	1
Right	1,873	.0763481	.2656252	0	1
Far right	1,873	.0208222	.1428269	0	1
Born outside Catalonia	1,873	.7640149	721.161	0	99
Catalan speaker	1,873	.6583022	.4744055	0	1
Identity	1,804	3.694.568	1.102.286	1	5

Table A2. Logit models (odds ratio) to test the polarization effect on support for independence among voters from regionalist Catalan parties

	(1)		(2)		(3)		(4)	
	Coef.	Std. err.	Coef.	Coef.	Std. err.	Std. err.	Coef.	Std. err.
Horizontal national polarization (inter-party distance)	1.50**	0.28			0.64*	0.16	1.59*	0.44
Vertical national polarization (party-voter distance)			2.36***	0.35	1.17***	0.03	1.91***	0.40
Gender	0.70	0.18	0.66	0.17	0.66	0.17	0.73	0.20
AGE (cat ref: 18-29)								
30-39	0.79	0.38	0.71	0.35	0.72	0.36	0.84	0.43
40-49	1.05	0.53	0.86	0.45	0.91	0.47	1.24	0.68
50-59	0.76	0.39	0.60	0.32	0.64	0.35	0.88	0.50
60-69	0.56	0.36	0.46	0.30	0.47	0.31	0.64	0.44
70-79	0.27*	0.21	0.23*	0.18	0.25*	0.20	0.39	0.32
80+	0.11**	0.11	0.08**	0.08	0.09**	0.10	0.07***	0.07
ESTUDIOS2 (cat ref: University)								
Primary	0.36*	0.19	0.34*	0.18	0.33**	0.18	0.29**	0.16
High-School	0.50**	0.15	0.49**	0.15	0.46**	0.15	0.51**	0.17
PROFESION (cat ref: employed)								
Unemployed	2.10*	0.84	2.03*	0.83	2.14*	0.88	1.72	0.72
Retired	3.78*	2.22	4.40**	2.71	4.17**	2.58	4.02**	2.45
Student	1.11	0.69	1.43	0.89	1.50	0.94	1.70	1.10
House work	0.68	0.43	0.78	0.52	0.77	0.51	1.02	0.73
Town size	0.95	0.14	0.96	0.15	0.95	0.15	1.06	0.18
Born outside Catalonia	1.00	0.01	0.99	0.01	0.99	0.01	1.00	0.01
Catalan speaker	2.23**	0.78	2.56**	0.93	2.59**	0.94	2.12*	0.82
Identity	19.21***	7.03			13.16***	4.90		
Identity#Horiz Nat Polarization								
More Catalan							0.54***	0.06
As Spanish as Catalan							0.33***	0.05
Constant	0.09*	0.09	0.03***	0.03	0.07***	0.06	0.46	0.42
N	640		638		638		636	
Chi2	136.32		166.34		169.64		208.71	
Prob>Chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.2250		0.2763		0.2818		0.3507	
AIC	0.809		0.758		0.756		0.696	
BIC	-3510,780		-3529,780		-3526,622		-3538,365	
Nagelkerke	0.314		0.376		0.382		0.46	

Table A3. Logit models (odds ratio) to test the polarization effect on support for independence among voters from non-regionalist Catalan parties

	(5)		(6)		(7)	
	Coef.	**Std. err.**	**Coef.**	**Std. err.**	**Coef.**	**Std. err.**
Horizontal national polarization (inter-party distance)	0.02	0.06			0.00	0.02
Vertical national polarization (party-voter distance)			0.40	0.35	0.87	0.14
Gender	3.38	2.59	4.88*	4.38	3.37	2.63
AGE (cat ref: 18-29)						
30-39	0.61	0.59	0.81	0.91	0.59	0.60
40-49	0.19	0.21	0.16	0.19	0.19	0.21
50-59	0.13	0.17	0.27	0.39	0.14	0.20
60-69	0.41	1.18	1.42	3.63	0.59	1.51
70-79	0.21	0.64	0.59	1.62	0.26	0.73
80+	1.00	(empty)	1.00	(empty)	1.00	(empty)
ESTUDIOS2 (cat ref: University)						
Primary	1.49	2.25	0.82	1.47	0.95	1.46
High-School	1.13	1.35	1.22	1.60	0.75	0.92
PROFESION (cat ref: employed)						
Unemployed	3.05	2.47	4.15	3.79	3.15	2.57
Retired	0.66	1.83	0.19	0.45	0.51	1.24
Student	1.00	(empty)	1.00	(empty)	1.00	(empty)
House work	1.00	(empty)	1.00	(empty)	1.00	(empty)
Town size	0.58	0.25	0.75	0.38	0.66	0.30
Born outside Catalonia	0.34	0.34	0.38	0.49	0.37	0.40
Catalan speaker	0.36	0.31	0.41	0.39	0.34	0.29
Identity	6.05**	4.84	1.86	2.28	2.53	2.37
Constant	0.10	0.18	0.01	0.03	0.04	0.08
N	286		286		220	
Chi2	16.64		14.75		17.86	
Prob>Chi2	0.1636		0.2556		0.1627	
Pseudo R2	0.5206		0.4613		0.5589	
AIC	0.748		0.771		0.757	
BIC	-244,673		-242,778		-241,490	
Nagelkerke	0.569		0.510		0.606	