Replication Adaptive Parties Appendix

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A Cases Included in the Analysis

A tibble: 1 x 2

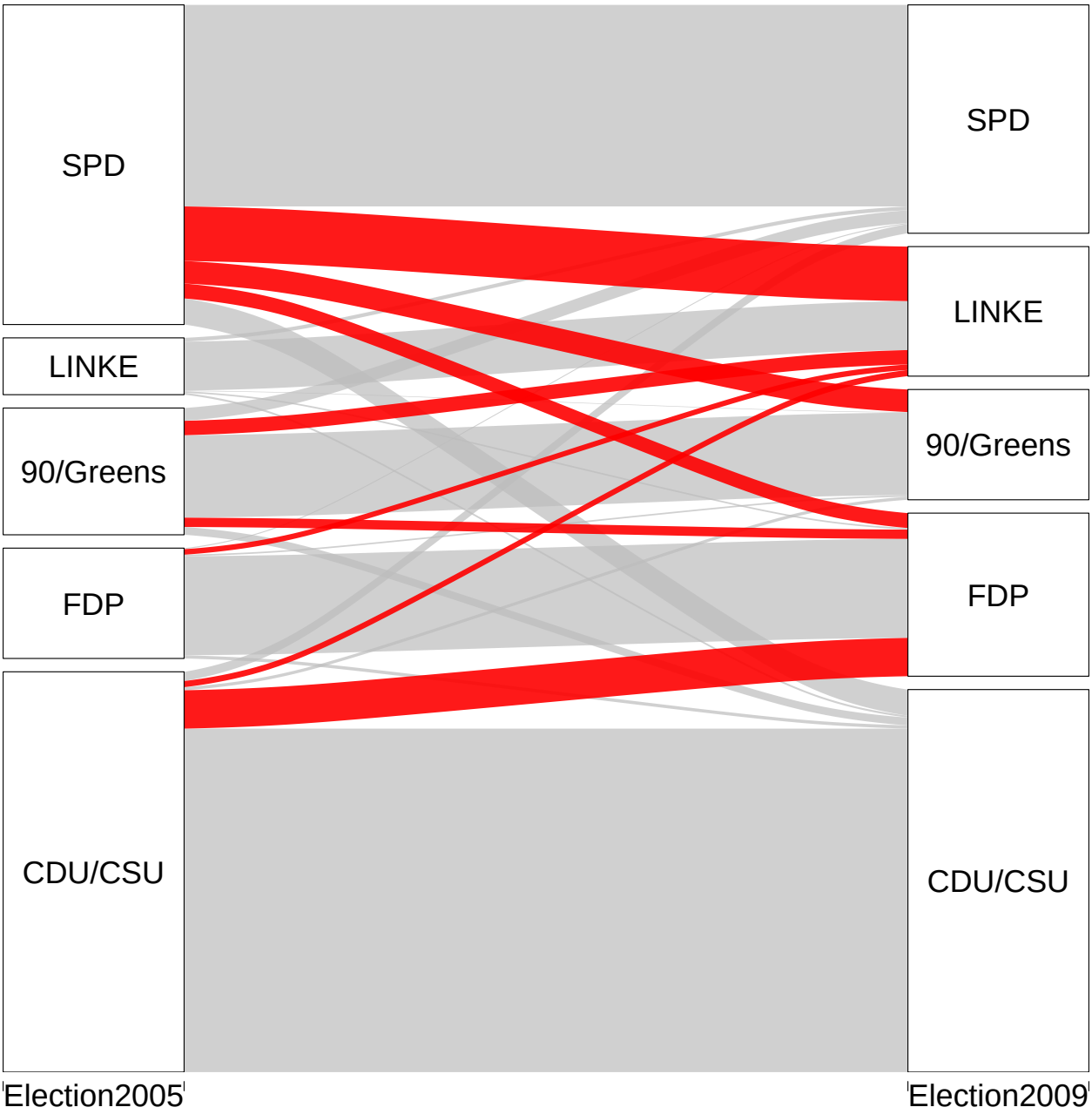
Number_Parties Number_Elections 1 72 84

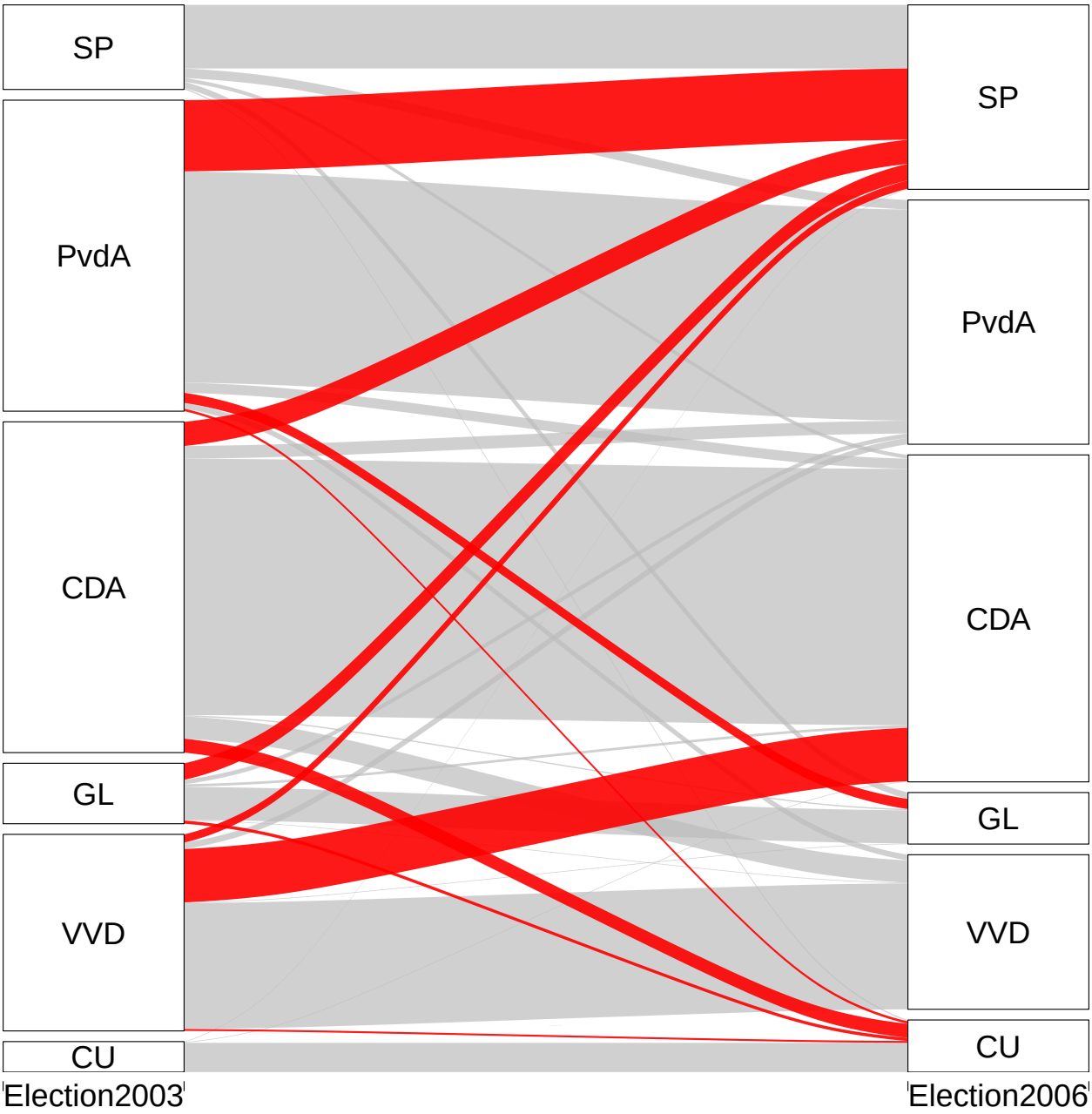
B Statistical Model and Measurement

B.2 Example of Voter Transitions

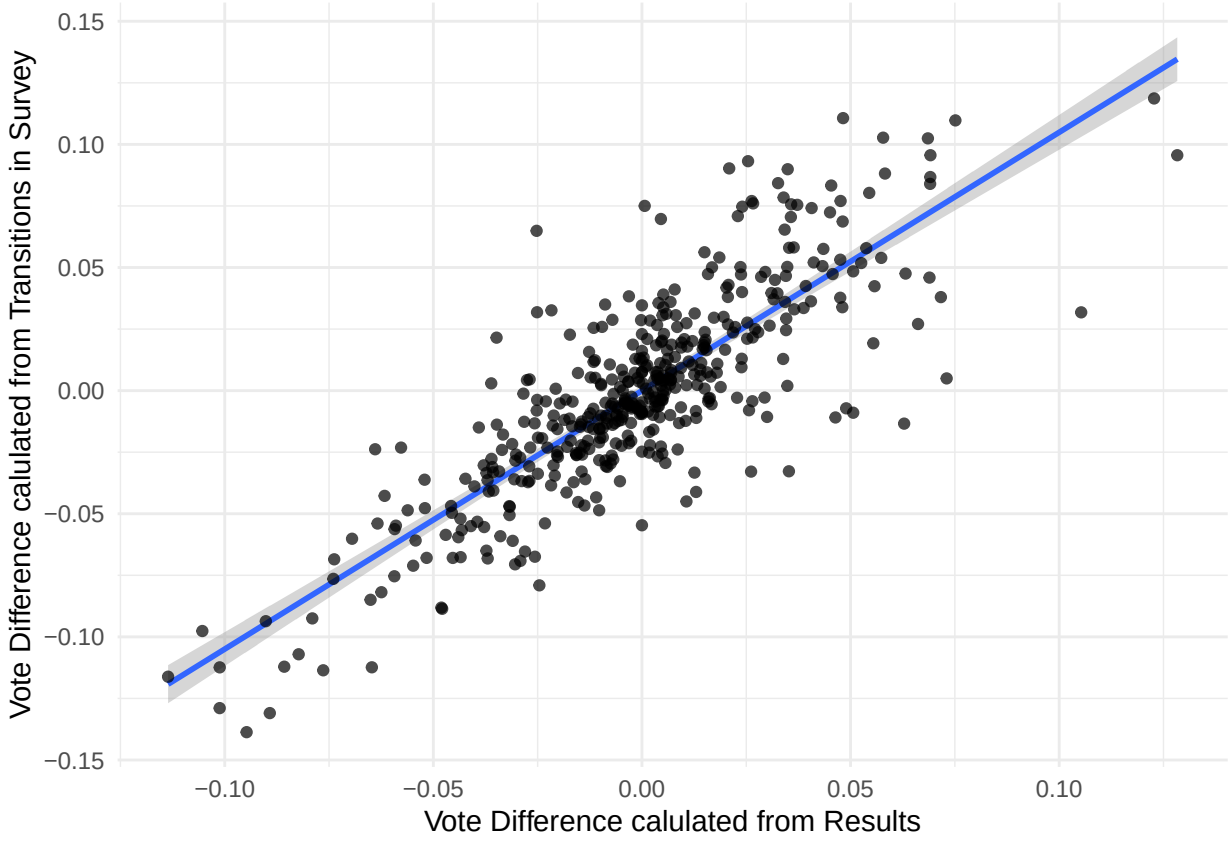
```
## Warning: Unknown levels in `f`: SDT
```

```
## Warning: Unknown levels in `f`: SDT
```


SPD
LINKE
90/Greens
FDP
CDU/CSU
Election2005
SPD
LINKE
90/Greens
FDP
CDU/CSU
Election2009

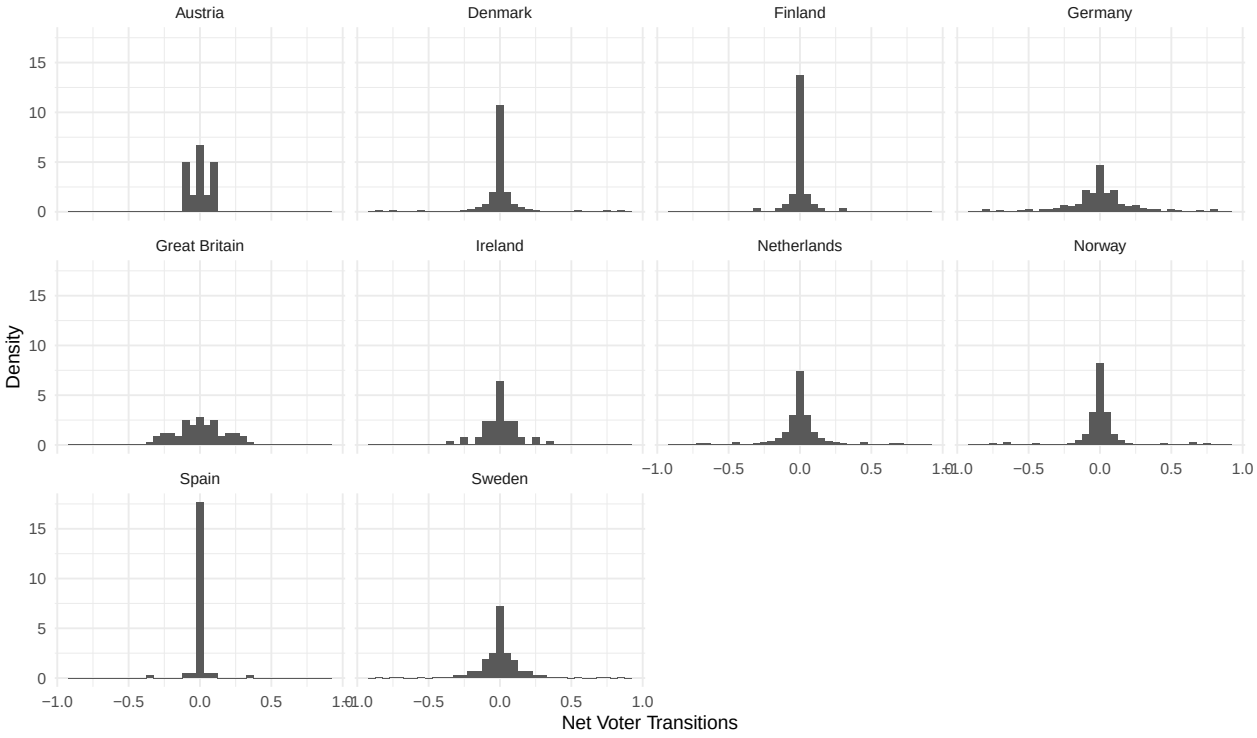

SP
PvdA
CDA
GL
VVD
CU
Election2003
SP
PvdA
CDA
GL
VVD
CU
Election2006

B.4 Validation of Voter Transitions



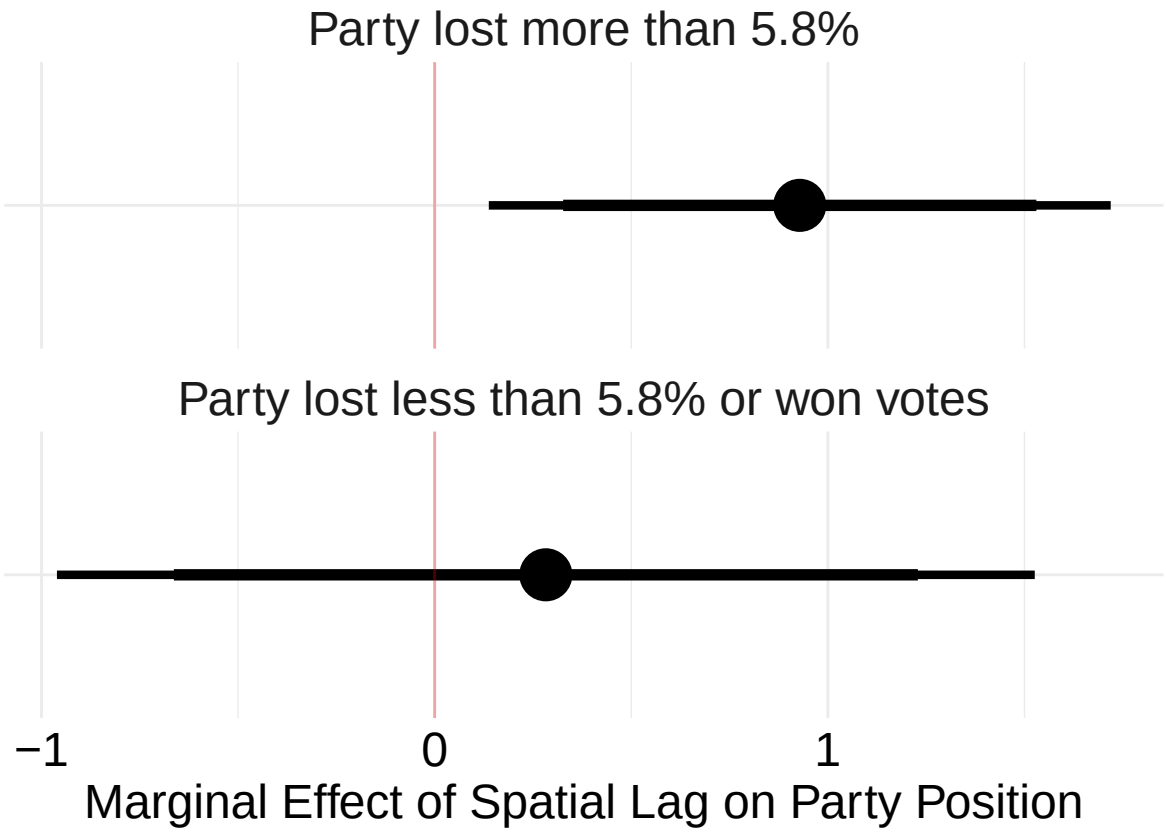
B.5 Distribution of Net Transfers

```
## Warning: Removed 12 rows containing non-finite values (stat_bin).
```

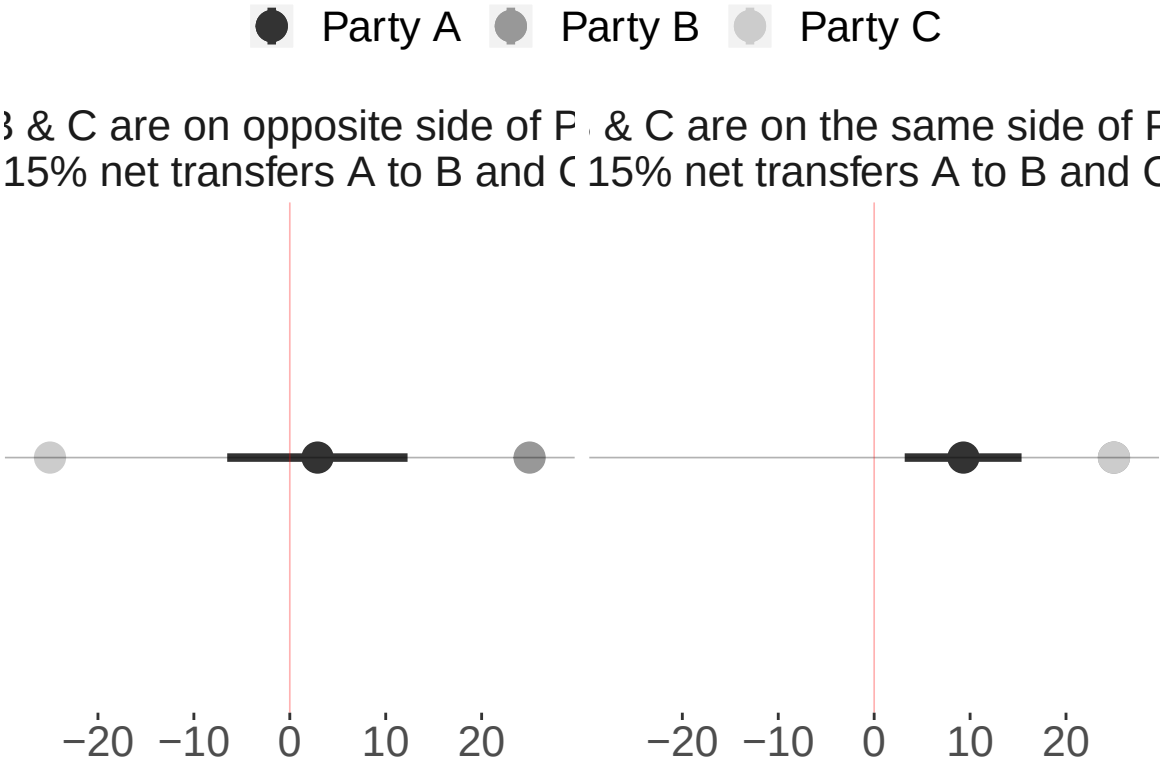

Austria
Denmark
Finland
Germany
Great Britain
Ireland
Netherlands
Norway
Spain
Sweden
Density
Net Voter Transitions
0
5
10
15
−1.0
−0.5
0.0
0.5
1.0

C Additional Material Main Results

C.1 Marginal Effect Plot



C.2Multiple Party Competition



D Robustness

D.1 Results using the log-Rile Index

```
##
## Attaching package: 'zoo'
## The following objects are masked from 'package:base':
##
##     as.Date, as.Date.numeric
```

D.2 Controlling for Public Opinion Shifts

D.3 Controlling for Reaction to Close Parties

D.4 Difference between Mainstream and Niche Parties

D.5 Fixed Effects Specification

	Country	Elec. Date	Num	Party Names
1	Austria	24/11/2002	4	The Greens, Austrian Social Democratic Party, Austrian Freedom Party, Austrian People's Party
2	Denmark	04/12/1973	5	Socialist People's Party, Social Democratic Party, Danish Social-Liberal Party, Liberals, Conservative People's Party
3	Denmark	08/09/1987	8	Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Progress Party
4	Denmark	08/12/1981	9	Left Socialist Party, Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Progress Party
5	Denmark	09/01/1975	8	Danish Communist Party, Socialist People's Party, Social Democratic Party, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Progress Party
6	Denmark	10/01/1984	9	Left Socialist Party, Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Progress Party
7	Denmark	10/05/1988	8	Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Progress Party
8	Denmark	11/03/1998	9	Christian People's Party, Red-Green Unity List, Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Conservative People's Party, Progress Part
9	Denmark	12/12/1990	8	Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Progress Party
10	Denmark	13/11/2007	7	Red-Green Unity List, Socialist People's Party, Social Democratic Party, Danish Social-Liberal Party, Liberals, Conservative People's Party, Danish People's Party
11	Denmark	15/02/1977	11	Centre Democrats, Justice Party, Left Socialist Party, Danish Communist Party, Socialist People's Party, Social Democratic Party, Danish Social-Liberal Party, Liberals, Christian People's Party, Con
12	Denmark	15/09/2011	8	Liberal Alliance, Red-Green Unity List, Socialist People's Party, Social Democratic Party, Danish Social-Liberal Party, Liberals, Conservative People's Party, Danish People's Party
13	Denmark	20/11/2001	8	Red-Green Unity List, Socialist People's Party, Social Democratic Party, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Danish People's Party
14	Denmark	21/09/1994	7	Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Conservative People's Party, Progress Party
15	Denmark	23/10/1979	10	Left Socialist Party, Socialist People's Party, Social Democratic Party, Centre Democrats, Danish Social-Liberal Party, Liberals, Christian People's Party, Conservative People's Party, Progress Party,
16	Finland	16/03/2003	7	Green Union, Left Wing Alliance, Finnish Social Democrats, Christian Democrats in Finland, National Coalition, Finnish Centre, Swedish People's Party
17	Finland	17/04/2011	8	Green Union, Left Wing Alliance, Finnish Social Democrats, Christian Democrats in Finland, National Coalition, Finnish Centre, True Finns, Swedish People's Party
18	Finland	18/03/2007	7	Green Union, Left Wing Alliance, Finnish Social Democrats, Christian Democrats in Finland, National Coalition, Finnish Centre, Swedish People's Party
19	Germany	02/12/1990	3	Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
20	Germany	03/10/1976	3	Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
21	Germany	05/10/1980	3	Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
22	Germany	06/03/1983	3	Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
23	Germany	16/10/1994	5	Alliance'90/Greens, Party of Democratic Socialism, Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
24	Germany	18/09/2005	5	Alliance'90/Greens, The Left. Party of Democratic Socialism, Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
25	Germany	19/11/1972	3	Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
26	Germany	22/09/2013	5	Alliance'90/Greens, The Left, Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
27	Germany	24/09/2017	6	Alliance'90/Greens, The Left, Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union, Alternative for Germany
28	Germany	25/01/1987	4	The Greens, Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
29	Germany	27/09/1998	5	Alliance'90/Greens, Party of Democratic Socialism, Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
30	Germany	27/09/2009	5	Alliance'90/Greens, The Left, Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
31	Germany	28/09/1969	3	Social Democratic Party of Germany, Free Democratic Party, Christian Democratic Union/Christian Social Union
32	Ireland	24/05/2007	6	Green Party, Labour Party, Progressive Democrats, Familiy of the Irish, Soldiers of Destiny, We Ourselves
33	Ireland	26/02/2016	5	Green Party, Labour Party, Familiy of the Irish, Soldiers of Destiny, We Ourselves
34	Netherlands	03/05/1994	5	Green Left, Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal
35	Netherlands	06/05/1998	5	Green Left, Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal
36	Netherlands	06/09/1989	4	Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal
37	Netherlands	08/09/1982	4	Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal
38	Netherlands	09/06/2010	6	Green Left, Socialist Party, Labour Party, People's Party for Freedom and Democracy, Christian Democratic Appeal, Christian Union
39	Netherlands	12/09/2012	8	Green Left, Socialist Party, Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal, Christian Union, Party of Freedom
40	Netherlands	15/05/2002	6	Green Left, Socialist Party, Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal
41	Netherlands	21/05/1986	4	Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal
42	Netherlands	22/01/2003	8	Green Left, Socialist Party, Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal, Christian Union, List Pim Fortuyn
43	Netherlands	25/05/1977	3	Labour Party, Democrats'66, People's Party for Freedom and Democracy
44	Netherlands	26/05/1981	4	Labour Party, Democrats'66, People's Party for Freedom and Democracy, Christian Democratic Appeal
45	Netherlands	29/11/1972	6	Labour Party, Democrats'66, People's Party for Freedom and Democracy, Catholic People's Party, Anti-Revolutionary Party, Christian Historical Union
46	Norway	07/09/1969	6	Socialist People's Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party
47	Norway	08/09/1985	7	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party, Progress Party
48	Norway	09/09/1973	6	Socialist People's Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party
49	Norway	10/09/2001	7	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party, Progress Party
50	Norway	11/09/1977	6	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party
51	Norway	11/09/1989	7	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party, Progress Party
52	Norway	12/09/2005	7	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party, Progress Party
53	Norway	13/09/1993	7	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party, Progress Party
54	Norway	14/09/1981	7	Progress Party, Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party
55	Norway	14/09/2009	7	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party, Progress Party
56	Norway	16/09/1997	7	Socialist Left Party, Norwegian Labour Party, Liberal Party, Christian People's Party, Conservative Party, Centre Party, Progress Party
57	Spain	09/03/2008	4	United Left, Spanish Socialist Workers' Party, People's Party, Convergence and Union
58	Sweden	14/09/2014	8	Green Ecology Party, Left Party, Social Democratic Labour Party, Liberal People's Party, Christian Democrats, Moderate Coalition Party, Sweden Democrats, Centre Party
59	Sweden	15/09/1968	5	Left Communists Party, Social Democratic Labour Party, People's Party, Right Party, Centre Party
60	Sweden	15/09/1985	5	Left Communists Party, Social Democratic Labour Party, People's Party, Moderate Coalition Party, Centre Party
61	Sweden	15/09/1991	6	Green Ecology Party, Left Party, Social Democratic Labour Party, Liberal People's Party, Moderate Coalition Party, Centre Party
62	Sweden	15/09/2002	7	Green Ecology Party, Left Party, Social Democratic Labour Party, Liberal People's Party, Christian Democrats, Moderate Coalition Party, Centre Party
63	Sweden	16/09/1973	5	Left Communists Party, Social Democratic Labour Party, People's Party, Moderate Coalition Party, Centre Party
64	Sweden	16/09/1979	5	Left Communists Party, Social Democratic Labour Party, People's Party, Moderate Coalition Party, Centre Party
65	Sweden	17/09/2006	7	Green Ecology Party, Left Party, Social Democratic Labour Party, Liberal People's Party, Christian Democrats, Moderate Coalition Party, Centre Party
66	Sweden	18/09/1988	5	Left Communists Party, Social Democratic Labour Party, People's Party, Moderate Coalition Party, Centre Party
67	Sweden	18/09/1994	7	Green Ecology Party, Left Party, Social Democratic Labour Party, Liberal People's Party, Christian Democratic Community Party, Moderate Coalition Party, Centre Party
68	Sweden	19/09/1976	5	Left Communists Party, Social Democratic Labour Party, People's Party, Moderate Coalition Party, Centre Party
69	Sweden	19/09/1982	5	Left Communists Party, Social Democratic Labour Party, People's Party, Moderate Coalition Party, Centre Party
70	Sweden	19/09/2010	7	Green Ecology Party, Left Party, Social Democratic Labour Party, Liberal People's Party, Christian Democrats, Moderate Coalition Party, Centre Party
71	Sweden	20/09/1964	5	Communist Party of Sweden, Social Democratic Labour Party, People's Party, Right Party, Centre Party
72	Sweden	20/09/1970	5	Left Communists Party, Social Democratic Labour Party, People's Party, Moderate Coalition Party, Centre Party
73	Sweden	21/09/1998	7	Green Ecology Party, Left Party, Social Democratic Labour Party, Liberal People's Party, Christian Democrats, Moderate Coalition Party, Centre Party
74	United Kingdom	01/05/1997	3	Labour Party, Liberal Democrats, Conservative Party
75	United Kingdom	03/05/1979	3	Labour Party, Liberal Party, Conservative Party
76	United Kingdom	05/05/2005	3	Labour Party, Liberal Democrats, Conservative Party
77	United Kingdom	06/05/2010	3	Labour Party, Liberal Democrats, Conservative Party
78	United Kingdom	09/04/1992	3	Labour Party, Liberal Democrats, Conservative Party
79	United Kingdom	09/06/1983	2	Labour Party, Conservative Party
80	United Kingdom	10/10/1974	3	Labour Party, Liberal Party, Conservative Party
81	United Kingdom	11/06/1987	3	Labour Party, Liberal Party, Conservative Party
82	United Kingdom	18/06/1970	3	Labour Party, Liberal Party, Conservative Party
83	United Kingdom	28/02/1974	3	Labour Party, Liberal Party, Conservative Party
84	United Kingdom	31/03/1966	3	Labour Party, Liberal Party, Conservative Party

Table 1: Elections and Parties included in the Analysis

	Model 1	Model 2	Model 3
W_{Losses} Rile	0.50^{***}	0.60^{***}	0.70^{***}
	(0.16)	(0.23)	(0.26)
Rile (t-1)	0.58^{***}	0.58^{***}	0.58^{***}
	(0.04)	(0.04)	(0.04)
W_{Losses} Rile × Vote Change (t-1)		0.39	
		(1.42)	
W_{Losses} Rile ×			
Vote Change (t-1) highest 66 %			−0.76
			(0.47)
Vote Change (t-1) low			-0.80^{***}
			(0.06)
Vote Change (t-1) high			-0.95^{***}
			(0.04)
Av. log-Rile Shift (t-1)	-0.21^{***}	-0.21^{***}	-0.21^{***}
	(0.04)	(0.04)	(0.04)
R^2	0.69	0.69	0.69
Adj. R^2	0.68	0.68	0.68
Num. obs.	414	414	413

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

Table 2: The reaction of parties to voter transtions. The table shows the results of spatial lag models estimated with OLS. The dependent variable of the model is the CMP log-rile index. Each specification includes country-fixed effects.

	Model 1	Model 2	Model 3
W_{Losses} Rile	0.89^{**}	0.82	1.07^{***}
	(0.38)	(0.58)	(0.26)
Rile (t-1)	0.74^{***}	0.75^{***}	0.74^{***}
	(0.04)	(0.04)	(0.04)
W_{Losses} Rile × Vote Change (t-1)		−0.49	
		(1.89)	
W_{Losses} Rile ×			
Vote Change (t-1) highest 66 %			−0.58
			(0.82)
Vote Change (t-1) low			-26.56^{***}
			(7.44)
Vote Change (t-1) high			-26.37^{***}
			(6.92)
Public Opinion Shift	8.43^{**}	8.34^{**}	8.18^{**}
	(3.77)	(3.97)	(3.74)
Avg. Rile Shift (t-1)	-0.26^{*}	-0.26^{*}	-0.26^{*}
	(0.14)	(0.15)	(0.15)
R^2	0.66	0.66	0.66
Adj. R^2	0.64	0.64	0.64
Num. obs.	253	253	253

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

Table 3: The reaction of parties to voter transtions, controlling for public opinion shifts. The table shows the results of spatial lag models estimated with OLS. The dependent variable of the model is the CMP rile index. Each specification includes country-fixed effects.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
W_{Losses} Rile	0.61***	0.58*	0.80***	0.46**	0.41	0.65***
	(0.17)	(0.30)	(0.19)	(0.19)	(0.30)	(0.21)
$W_{Distance}$ Rile	0.00**	0.00**	0.00**			
	(0.00)	(0.00)	(0.00)			
$W_{Neighbors}$ Rile				0.10**	0.10**	0.10**
				(0.04)	(0.04)	(0.04)
Rile (t-1)	0.72***	0.72***	0.72***	0.70***	0.69***	0.69***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
W_{Losses} Rile × Vote Change (t-1)		−0.18			−0.35	
		(1.33)			(1.22)	
W_{Losses} Rile ×						
Vote Change (t-1) highest 66 %			−0.62			−0.60
			(0.60)			(0.57)
Vote Change (t-1) low			−24.23***			−22.17***
			(4.07)			(3.59)
Vote Change (t-1) high			−25.52***			−23.37***
			(3.55)			(2.98)
Avg. Rile Shift (t-1)	−0.19**	−0.19**	−0.19**	−0.19**	−0.19**	−0.20**
	(0.09)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
R^2	0.66	0.66	0.66	0.66	0.66	0.67
Adj. R^2	0.65	0.65	0.65	0.65	0.65	0.65
Num. obs.	454	454	453	454	454	453

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

Table 4: The reaction of parties to voter transtions, controlling for reaction to close parties. The table shows the results of spatial lag models estimated with OLS. The dependent variable of the model is the CMP rile index. Each specification includes country-fixed effects

	Model 1	Model 2	Model 3	Model 4
W_{Losses} Rile	0.64	0.61	0.56*	0.83**
	(0.35)	(0.46)	(0.25)	(0.30)
Rile (t-1)	0.83***	0.83***	0.69***	0.69***
	(0.04)	(0.05)	(0.03)	(0.04)
W_{Losses} Rile ×				
Vote Change (t-1) highest 66 %		0.29		−0.84
		(1.14)		(0.78)
Vote Change (t-1) high		−0.34		−1.89
		(3.41)		(1.30)
R^2	0.77	0.77	0.57	0.57
Adj. R^2	0.75	0.75	0.55	0.55
Num. obs.	144	144	310	309

$^{***}p < 0.005$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 5: The reaction of parties to voter transtions for Mainstream Parties and Niche. The table shows the results of spatial lag models estimted with OLS. The dependent variable of the model is the rile index from the Party Manifesto. each specifcation includes country-fixed effects.

	Model 1	Model 2	Model 3
W_{Losses} Rile	0.51	0.51	0.77*
	(0.31)	(0.45)	(0.32)
Rile (t-1)	0.30***	0.30***	0.29***
	(0.06)	(0.06)	(0.06)
W_{Losses} Rile × Vote Change (t-1)		−0.29	
		(1.71)	
W_{Losses} Rile ×			
Vote Change (t-1) highest 66 %			−0.74
			(0.72)
Vote Change (t-1) low			2.79*
			(1.32)
R^2	0.10	0.11	0.12
Adj. R^2	-0.06	-0.06	-0.05
Num. obs.	472	454	453

$^{***}p < 0.005$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 6: The reaction of parties to voter transtions, including party fixed effects. The table shows the results of spatial lag models estimated with OLS. The dependent variable of the model is the CMP rile index. Each specification includes country-fixed effects