Online Appendix for

Determinants of Government Membership at the Subnational Level: Empirical Evidence from Large Cities in Germany (1999–2016)

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Table A1. List of cities in Hesse and North Rhine-Westphalia with more than 100,000 inhabitants

Name of state	Name of city	No. of inhabitants (2019)
Hesse	Darmstadt	159,878
Hesse	Frankfurt am Main	763,380
Hesse	Kassel	202,137
Hesse	Offenbach am Main	130,280
Hesse	Wiesbaden	278,474
Hesse		*∑ = 1.534,149 (24.4 % of population in Hesse)*
North Rhine-Westphalia	Aachen	248,960
North Rhine-Westphalia	Bergisch Gladbach	111,846
North Rhine-Westphalia	Bielefeld	334,195
North Rhine-Westphalia	Bochum	365,587
North Rhine-Westphalia	Bonn	329,673
North Rhine-Westphalia	Bottrop	117,565
North Rhine-Westphalia	Dortmund	588,250
North Rhine-Westphalia	Duisburg	498,686
North Rhine-Westphalia	Düsseldorf	621,877
North Rhine-Westphalia	Essen	582,760
North Rhine-Westphalia	Gelsenkirchen	259,645
North Rhine-Westphalia	Hagen	188,686
North Rhine-Westphalia	Hamm	179,916
North Rhine-Westphalia	Herne	156,449
North Rhine-Westphalia	Köln	1.087,863
North Rhine-Westphalia	Krefeld	227,417
North Rhine-Westphalia	Leverkusen	163,729
North Rhine-Westphalia	Moers	103,902
North Rhine-Westphalia	Mönchengladbach	261,034
North Rhine-Westphalia	Mülheim an der Ruhr	170,632
North Rhine-Westphalia	Münster	315,293
North Rhine-Westphalia	Neuss	153,896
North Rhine-Westphalia	Oberhausen	210,764
North Rhine-Westphalia	Paderborn	151,633
North Rhine-Westphalia	Recklinghausen	111,397
North Rhine-Westphalia	Remscheid	111,338
North Rhine-Westphalia	Siegen	102,770
North Rhine-Westphalia	Solingen	159,245
North Rhine-Westphalia	Wuppertal	355,100
North Rhine-Westphalia		*∑ = 8.270,108 (46.1 % of population in North Rhine-Westphalia)*
Hesse + North Rhine-Westphalia		*∑ = 9.804,257 (11.8 % of population in the Federal Republic of Germany)*

Note: Cities are ordered alphabetically within the respective German state. City's population (no. of inhabitants) for 2019 is retrieved from the Federal Statistical Office of Germany. Excluding the city state population of Berlin, Bremen, and Hamburg due to their status as being involved both in local and state politics in the same territorial unit, the

population in cities with more than 100,000 inhabitants in 2019 is 20.440,505. Therefore, the cases under study represent 43.7 % of the German population living in large cities.

Table A2. Descriptive statistics of actually formed and potential local coalitions in Hessian and North Rhine-Westphalian cities with at least 100,000 inhabitants (1999-2016)

	Formed coalitions / Potential coalitions				
	N	Min.	Max.	Average	SD
Party-level characteristics					
Mayor's party	92 / 80629	0 / 0	1 / 1	0.88 / 0.50	0.33 / 0.50
Distance to mayor's party	92 / 80629	0.008 / 0	0.52 / 2.16	0.16 / 0.74	0.11 / 0.35
Distance to the median	92 / 80629	0.01 / 0	0.52 / 1.98	0.19 / 0.68	0.10 / 0.33
Seat share coalition	92 / 80629	41.38 / 1.11	87.10 / 100	55.49 / 50.27	7.64 / 22.42
Seat share coalition squared	92 / 80629	17.12 / 0.01	75.86 / 100	31.37 / 30.30	9.48 / 23.35
Incumbent party	92 / 80629	0 / 0	1 / 1	0.86 / 0.77	0.35 / 0.42
Coalition-level characteristics					
Minimal winning coalition	92 / 80629	0 / 0	1 / 1	0.75 / 0.03	0.44 / 0.16
Number of parties in coalition	92 / 80629	2 / 2	4 / 15	2.33 / 6.23	0.56 / 2.16
Incumbent coalition	92 / 80629	0 / 0	1 / 1	0.23 / 0.0009	0.42 / 0.03

Table A3. Determinants of local government membership in Hessian and North Rhine-Westphalian cities with more than 100,000 inhabitants, 1999-2016 (conditional and mixed logits)

	Clogit	Clogit	Clogit	Mixed logit		Mixed logit		Mixed logit	
				Mean	SD	Mean	SD	Mean	SD
	(1)	(2)	(3)	(4)		(5)		(6)	
Party-level characteristics									
Mayor's party	1.11**		1.12**	1.79**				1.79**	
	(0.42)		(0.41)	(0.57)				(0.57)	
Distance to the mayor's party		-3.77**				-4.61**			
		(1.33)				(1.73)			
Distance to median			-0.97					-1.43	0.64
			(1.28)					(1.69)	(2.32)
Seat share coalition	0.88***	0.94***	0.89***	5.55**	0.19	4.95***	0.19	5.71***	-0.01
	(0.19)	(0.20)	(0.19)	(1.81)	(0.12)	(1.49)	(0.11)	(1.71)	(0.17)
Seat share coalition squared	-0.75***	-0.79***	-0.76***	-4.97**	0.55**	-4.42**	0.48**	-5.13**	0.59**
	(0.17)	(0.17)	(0.17)	(1.64)	(0.20)	(1.35)	(0.17)	(1.56)	(0.18)
Incumbent party	-0.64	-0.54	-0.67	-0.74	0.67	-0.61	0.53	-0.76	0.27
	(0.49)	(0.46)	(0.49)	(0.78)	(1.81)	(0.69)	(1.76)	(0.76)	(3.05)
Coalition-level characteristics									
Minimal winning coalition	1.59***	1.52***	1.58***	1.53***		1.47***		1.54***	
	(0.33)	(0.34)	(0.33)	(0.41)		(0.40)		(0.41)	
Number of parties in coalition	-2.13***	-1.75***	-2.02***	-2.89***		-2.30***		-2.75***	
	(0.22)	(0.26)	(0.26)	(0.35)		(0.35)		(0.39)	
Incumbent coalition	1.49***	1.40***	1.47***	1.99***		1.93***		1.95***	
	(0.36)	(0.36)	(0.36)	(0.49)		(0.48)		(0.49)	
Number of formation opportunities	92	92	92	92		92		92	
Potential coalitions	80,629	80,629	80,629	80,629		80,629		80,629	
AIC	402.35	401.60	403.75	376.91		380.94		380.00	
BIC	467.44	466.68	478.14	469.88		473.92		491.57	

Note: Standard errors in parentheses. SD: standard deviation. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table A4. Robustness Checks I

	Model RC1	Model RC2	Model RC3
Party-level characteristics			
Mayor's party	1.13**		1.14**
	(0.41)		(0.41)
Distance to the mayor's party		-3.02*	
		(1.45)	
Distance to median			1.10
			(1.53)
Seat share coalition	0.87***	0.92***	0.86***
	(0.19)	(0.20)	(0.19)
Seat share coalition squared	-0.74***	-0.78***	-0.73***
	(0.16)	(0.17)	(0.16)
Incumbent party	-0.66	-0.53	-0.64
	(0.49)	(0.46)	(0.50)
Coalition-level characteristics			
Minimal winning coalition	1.56***	1.52***	1.56***
	(0.33)	(0.34)	(0.33)
Number of parties in coalition	-2.01***	-1.77***	-2.13***
	(0.22)	(0.26)	(0.27)
Incumbent coalition	1.45***	1.39***	1.46***
	(0.35)	(0.36)	(0.35)
Congruence to regional government			
Number of formation opportunities	58,837	58,837	58,837
Potential coalitions	92	92	92
AIC	392.97	397.06	394.46
BIC	455.85	459.94	466.32

Note: All models are conditional logit models. Models RC1-RC3 exclude all potential local coalitions comprising anti-system parties. Standard errors in parentheses. * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.

Table A5. Robustness Checks II

	Model RC4	Model RC5	Model RC6
Party-level characteristics			
Mayor's party	1.14**		1.13**
	(0.41)		(0.40)
Distance to the mayor's party		-3.28*	
		(1.34)	
Distance to median			-0.77
			(1.34)
Seat share coalition	0.90***	0.95***	0.90***
	(0.20)	(0.20)	(0.20)
Seat share coalition squared	-0.75***	-0.78***	-0.75***
	(0.16)	(0.17)	(0.17)
Incumbent party	-1.09*	-0.98*	-1.11*
	(0.51)	(0.48)	(0.51)
Coalition-level characteristics			
Minimal winning coalition	1.49***	1.46***	1.49***
	(0.33)	(0.34)	(0.33)
Number of parties in coalition	-2.40***	-2.06***	-2.30***
	(0.23)	(0.28)	(0.28)
Incumbent coalition	1.28***	1.26***	1.27***
	(0.37)	(0.37)	(0.37)
Congruence to regional government	1.77***	1.62***	1.76***
	(0.38)	(0.37)	(0.38)
Number of formation opportunities	80,629	80,629	80,629
Potential coalitions	92	92	92
AIC	382.58	384.98	384.24
BIC	456.96	459.36	467.92

Note: All models are conditional logit models. Models RC4-RC6 control for the effect of potential local coalitions being congruent to the regional government. Standard errors in parentheses. $* = p < 0.05$; $** = p < 0.01$; $*** = p < 0.001$.