# APPENDIX

# Appendix to Chapters 5 and 6

The sample includes 29 democracies (23 nation-states and 6 Australian states). Table A1 provides their values for simple and complex majoritarianism displayed in Chapters 5 and 6, as well as for the six variables on which these dimensions are based. The values are averages for the period from January 1993 to March 2018. The Australian state of Victoria has two separate values for the periods before and after the constitutional reform of 2003 (VIC1 and VIC2, respectively). The operationalization of the six constituent variables and the data sources are explained below.

# Operationalization

### Identifiability

The measure averages two variables. The first is the joint vote share of the two biggest electoral blocs. A bloc can be a single party or a pre-electoral coalition of several parties. The second is a dummy variable indicating whether the formed cabinet consists of a single bloc, so that no pre-electoral coalition is split up after the election and no additional parties were included in the government. Switzerland's value is set to zero, because the Magic Formula convention implies that there is no choice between alternative cabinets in an election (see Chapter 2). Since the focus is on party-based identifiability, the potential effects of direct presidential or prime-ministerial elections are neglected.

#### Clarity of responsibility

The measure is an index that ranks cabinet types according to the clarity they provide and averages the resulting scores for each country, weighed by the duration of the cabinets. The scores are as follows: 1 = single-party cabinet with a majority that controls all chambers of the assembly with robust veto power (i.e. all second chambers whose veto cannot be overridden with simple or absolute majorities in the first chamber); 0.75 = single-party cabinet with a majority in one of two chambers that have robust veto power; 0.5 = multiparty cabinets with majorities in all chambers with a robust veto power or single-party cabinets with minority status in all chambers with a robust veto; 0.25 = multiparty cabinets with majority in one of two chambers with a robust veto; 0.25 = multiparty cabinets with majority in one of two chambers with a robust veto; 0.25 = multiparty cabinets with majority in one of two chambers with robust veto power; 0 = multiparty cabinets with minority status in all chambers with robust veto power; 0 = multiparty cabinets with minority is not chambers with robust veto power; 0 = multiparty cabinets with minority status in all chambers with opwer.

Some closely aligned parties are counted as single parties, most notably the Flemish and Wallonian sister parties in Belgium, the Liberal and National Parties in Australia (unless their non-cooperation is explicit in a particular polity), and the two Christian sister parties (CDU and CSU) in Germany.

Country	Country Majoritarianism	ianism	Identifiability	Clear responsibility	Cabinet stability	District magnitude	Effective dimensions	Legislative flexibility
	Simple	Complex						
AUS	1.3	0.6	0.92	0.75	0.97	6.0	1.9	0.60
AUT	-1.1	-0.3	0.35	0.46	0.78	18.5	1.7	0.02
BEL	-0.9	0.2	0.23	0.50	0.85	19.9	2.1	0
CAN	0.5	-1.4	0.83	0.87	0.74	1.0	1.5	0.20
CHE	-0.6	1.1	0	0.50	0.96	15.9	1.4	1.00
DEU	0.0	0.0	0.67	0.39	0.95	14.0	2.0	0
DNK	-1.7	2.0	0.56	0.03	0.77	36.5	2.6	0.42
ESP	1.0	-0.6	0.88	0.67	0.95	10.3	1.1	0.35
FIN	-0.7	0.7	0.32	0.50	0.87	17.6	2.5	0
FRA	0.0	-1.3	0.67	0.50	0.88	1.0	1.9	0.01
GBR	0.9	-2.3	0.76	0.89	0.86	1.0	1.1	0.01
GRC	0.4	0.0	0.77	0.87	0.73	20.2	1.9	0.01
IRL	-0.4	-0.2	0.58	0.40	0.89	4.0	2.2	0.11
ISI	-0.7	-0.8	0.29	0.48	0.91	10.7	1.5	0
ISR	-2.7	0.6	0.23	0.40	0.46	42.2	2.1	0.06
ITA	-0.9	0.7	0.70	0.40	0.70	36.5	2.2	0.10
NAĮ	-0.8	0.0	0.72	0.45	0.68	20.5	1.8	0.10
LUX	-0.4	0.4	0.29	0.50	0.97	18.3	2.3	0

Table A1Country values for Chapters 5 and 6 (1993–2018)

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Country	Majoritarianism	ianism	Identifiability	Clear responsibility	Cabinet stability	District magnitude	Effective dimensions	Legislative flexibility
	Simple	Complex						
NLD	-0.9	1.2	0.37	0.41	0.85	110.9	2.3	0.02
NOR	-0.2	1.0	0.67	0.28	0.94	17.5	2.2	0.40
NSW	1.4	1.1	0.92	0.73	1.00	20.5	1.6	0.75
NZL	-0.3	-0.1	0.57	0.37	0.93	12.0	1.7	0.26
PRT	0.5	0.3	0.83	0.65	0.86	22.8	1.7	0.27
QLD	1.3	-1.6	0.90	0.85	0.92	1.0	1.3	0.23
SA	0.1	0.4	0.67	0.47	0.93	11.0	1.5	0.64
SWE	0.2	0.9	0.75	0.32	1.00	17.8	2.2	0.30
TAS	0.8	-1.5	0.82	0.67	0.93	5.5	1.2	0
VIC1	1.2	-1.4	0.95	0.89	0.84	1.0	1.6	0.17
VIC2	1.6	-0.1	0.90	0.83	1.00	5.0	1.6	0.50
WA	0.8	0.2	0.73	0.66	0.98	5.8	1.9	0.43

 Table A1
 Country values for Chapters 5 and 6 (1993–2018)

### Cabinet stability

The measure expresses each cabinet's length as the share of its maximal length, as defined by the constitutional maximum. A cabinet that starts at the beginning of a term and ends in the middle of the term has a length of 0.5. A cabinet that starts in the middle of a term and completes it, has a length of 1. The resulting values are averaged for each country, weighted by cabinet duration. A new cabinet is identified when elections take place or the party composition of the cabinet changes. No new cabinet is identified when only the prime minister is replaced or when a cabinet loses a vote of confidence but re-forms with the same composition of parties.

### Mechanical proportionality

The measure is an "effective district magnitude" (Taagepera and Shugart 1989) on a logged scale. When a directly elected second chamber exists, the respective values (in each point in time) are those for the more proportional chamber. In single-tier systems without a legal threshold and parallel multi-tier systems, the measure gives the average district magnitude, with magnitudes weighted by the share of parliamentary seats provided by a district. Compensatory multi-tier systems are treated like parallel multi-tier systems if the compensatory tier is too small to effectively compensate for the disproportionalities of the first tier. The compensatory tier is considered big enough if its share of seats is bigger than 1/(2M + 1), with M being the (average) magnitude of the lower tier (Gallagher and Mitchell 2005b: 16). The effective district magnitude is then considered to be the magnitude of the compensatory tier. When formal thresholds exist, they are translated into district magnitudes via the formula M = (75%/T) - 1 (Gallagher and Mitchell 2005a: 607; Lijphart 1997a: 74; Taagepera and Shugart 1989: 397). Some electoral systems are so complex that additional assumptions are necessary. Their specification is available upon request.

### Dimensionality

Data from (time-invariant) expert surveys on parties' issue-specific policy positions is used to compute an effective number of dimensions. The number of factors identified in a factor analysis of these positions is weighted by the size of the factors' eigenvalues. Seat shares are used to weight parties. When a directly elected second chamber exists, the value is that for the chamber with higher dimensionality (for the entire period under consideration).

### Legislative flexibility

The measure is an index that ranks cabinet types (under different forms of government) according to the potential for legislative flexibility they provide and averages the resulting scores for each country, weighted by the duration of the cabinets. The scores are as follows: 1 = assembly-independent government (Switzerland); 0.75 = one-party cabinet with "substantial" minority status; 0.5 = multiparty cabinet with "substantial" minority status; 0.25 = cabinet with "formal" minority status; 0 = majority cabinet. When a directly elected second chamber exists, the measure reflects the status in the chamber with greater flexibility. Since the focus is on party-based flexibility, the kind of flexibility possible in Tasmania's second chamber due to the dominance of independents is neglected.

The distinction between formal and substantive majority status was made as follows. Formal minority cabinets are those based on an explicit agreement—covering all relevant issues and allowing for only a few enumerated exceptions—with one or more opposition parties, so as to create majority support in the assembly. Substantive minority cabinets are those without an agreement, or with one that covers only a few issues, or an agreement that is not sufficient to create a majority in the relevant chamber of the assembly. Cabinets that grant support parties ministerial portfolios are treated as majority cabinets.

### Data sources

The data set is a revised and extended version of that used in Ganghof et al. (2015) and Ganghof et al. (2018). The primary data source for elections, first chambers, and cabinets in the nation-states is the ParlGov 2018 stable version (Döring and Manow 2018). For some cases, corrections or additions were made, which are available upon request. In particular, we recoded all Italian cabinets since 1994. The primary data source on the composition of symmetrical and directly elected second chambers for the nation-states is Eppner and Ganghof (2017). The data has been updated to incorporate changes until March 2018. The primary data sources on elections, parliaments, and cabinets in the Australian states are Campbell Sharman's Australian Politics and Elections Archive at the University of Western Australia (https://elections.uwa.edu.au/), Adam Carr's Election Archive (http://psephos.adam-carr.net/) and the electoral commissions of the respective states.

For the variables that required specific coding decisions, further documentation is available upon request. Pre-electoral coalitions were coded with the help of existing data sets (Döring and Manow 2018; Golder 2006), the academic literature, and press reports. Effective district magnitudes were computed on the basis of data from the Electoral System Change in Europe (ESCE) Project (http://electoralsystemchanges.eu/) and the countryspecific literature on electoral systems. The expert survey data for the nation-states comes from Benoit and Laver (2006) and that for the Australian states from an expert survey conducted by Alexander Pörschke in 2016 (Pörschke 2021) and first used in Ganghof et al. (2018). The minority status of cabinets in the relevant chambers of the assembly was coded on the basis of the general and country-specific literature, as well as press reports.

# Appendix to Chapter 7

# Details for the conditional logit analysis underlying Figure 7.2

### Sample

Switzerland is excluded from the set of 29 democracies, as there is no confidence relationship between the government and any chamber of the assembly. The analysis is extended back to January 1975 to capture more temporal variation. As explained in Chapter 7, Victoria and Western Australia enter the analysis as three and two separate observations, respectively.

### Data sources

The data sources are the same as for Chapters 5 and 6 (see "Appendix to Chapters 5 and 6").

### Data construction

We identify a new government formation opportunity when (a) a first chamber election takes place; or (b) the party composition of the government changes. We exclude opportunities in which a single party won a majority of seats in both chambers (or in a unicameral system), as well as those that resulted in caretaker governments. In the case of Japan, we also

exclude cases where a majority party in the first chamber controls more than two-thirds of the first chamber's seats (the quorum for overriding a second-chamber veto). We also exclude all government formations for which we were unable to assign policy positions to 15% or more of the parliamentary seats. In line with the general argument of this book, we do not treat replacements of the prime minister as a new government formation opportunity. While such replacements may sometimes result from coalition politics (i.e. a coalition party may demand the change of the prime minister of another party), they can also result from the fact that the party of the prime minister remains in control of the person that occupies the office and, thus, can replace it with another agent of the party. Finally, we drop all parties from the cabinet formation analysis that do not have at least two seats in at least one chamber of parliament. Altogether, 369 cabinet formations are included, with a total of 577,879 potential cabinets (see Table A2).

# Main explanatory variables

Veto Control is a dummy variable that takes the value one if a potential cabinet holds a majority in the second chamber. Restrictiveness is our index of the design of second chambers (in versions I or II). By interacting it with Veto Control, we can test if a higher Restrictiveness goes hand in hand with greater influence of Veto Control on cabinet formation. Since Restrictiveness does not vary between potential cabinets of one formation opportunity, it drops out of the estimation. The same is true for Veto Control when no symmetrical second chamber exists. Government formations in the absence of relevant veto institutions thus affect the estimation for the control variables.

# **Control variables**

We include the following control variables, all of which refer to certain features of a potential cabinet: (a) its first-chamber seat share; (b) its minority status in the first chamber; (c) an interaction of the two previous variables (see Druckman et al. 2005: 538); (d) its oversized status in the first chamber; (e) its number of parties; (f) whether the largest and (g) median parties in the first chamber are included; (h) its ideological range on the left-right dimension; and (i) a dummy that indicates if the potential cabinet would split a pre-electoral commitment of two parties (by leaving out at least one of the parties).

### Results

Table A3 shows the regression results. The three columns are for the same causal model but different measures of restrictiveness (compare Table 7.1). The first column is for Restrictiveness II and the basis for Figure 7.2. The second column is for the same index but uses the budget veto, rather than the no-confidence vote to determine whether the second chamber has constitutional power over the survival of the cabinet. The third column uses the leaner index Restrictiveness I. With these alternative indices, the substantive results remain unchanged.

# 174 APPENDIX

Country/ state (Australia)	Number of cabinet formations	Number of potential cabinets	First cabinet formation included	Last cabinet formation included
AUS	13	123	03 Nov. 1980	19 Jul. 2016
AUT	12	316	24 May 1983	18 Dec. 2017
BEL	17	4,623	06 Mar. 1977	11 Oct. 2014
CAN	4	60	04 Jun. 1979	30 Oct. 2008
DEU	13	315	15 Dec. 1976	14 Mar. 2018
DNK	21	20,075	13 Feb. 1975	28 Nov. 2016
ESP	7	5,241	05 Apr. 1979	29 Oct. 2016
FIN	21	5,867	30 Nov. 1975	13 Jun. 2017
FRA	11	8,965	17 Aug. 1976	18 Jun. 2012
GBR	2	382	11 May 2010	11 Jun. 2017
GRC	6	658	02 Jul. 1989	21 Sep. 2015
IRL	12	932	30 Jun. 1981	06 May 2016
ISL	15	1,073	01 Sep. 1978	30 Nov. 2017
ISR	38	286,554	20 Jun. 1977	30 May 2016
ITA	28	202,340	12 Feb. 1976	12 Dec. 2016
JPN	17	16,367	27 Dec. 1983	24 Dec. 2014
LUX	8	312	16 Jul. 1979	04 Dec. 2013
NLD	13	18,419	19 Dec. 1977	26 Oct. 2017
NOR	16	1,648	11 Sep. 1977	17 Jan. 2018
NSW	8	168	25 Mar. 1988	28 Mar. 2015
NZL	10	518	01 Mar. 1996	26 Oct. 2017
PRT	14	1,010	23 Jul. 1976	26 Nov. 2015
QLD	4	28	19 Aug. 1983	14 Feb. 2015
SA	15	165	12 Jul. 1975	17 Mar. 2018
SWE	15	1,457	07 Oct. 1976	02 Oct. 2014
TAS	14	82	11 Dec. 1976	03 Mar. 2018
VIC1	1	7	08 Apr. 1982	08 Apr. 1982
VIC1	2	10	01 Oct. 1988	21 Oct. 1999
VIC3	2	30	25 Nov. 2006	03 Dec. 2014
WA1	8	120	04 Feb. 1989	11 Mar. 2017
WA2	2	14	25 Feb. 1983	08 Feb. 1986
Total	369	577,879	13 Feb. 1975	17 Mar. 2018

 Table A2
 Number of cabinet formations and potential cabinets per country

	(1)	(2)	(3)
	Restrictiveness II	Restrictiveness II (using budget veto)	Restrictive- ness I
Veto Control	0.79***	0.54**	0.51**
	(0.26)	(0.25)	(0.26)
Veto Control x Restrictiveness	0.69***	0.64***	0.81**
	(0.21)	(0.22)	(0.32)
First-Chamber Seat Share of	-0.90	-0.99	-0.89
Coalition	(0.86)	(0.85)	(0.85)
Minority Coalition	-9.21***	-9.27***	-9.27***
	(0.79)	(0.78)	(0.78)
First-Chamber Seat Share of	16.56***	16.63***	16.65***
Minority Coalition	(1.61)	(1.61)	(1.60)
Oversized Coalition	-0.53***	-0.53***	-0.52***
o versized counton	(0.20)	(0.20)	(0.20)
Number of Parties in the Coalition	-1.07***	-1.07***	-1.08***
rumber of runtes in the counton	(0.09)	(0.09)	(0.09)
Largest Party in the Coalition	0.03	0.04	-0.00
	(0.19)	(0.19)	(0.19)
Median Party in the Coalition	0.95***	0.94***	0.96***
	(0.17)	(0.17)	(0.17)
Ideological Divisions in the Coalition	-0.60***	-0.59***	-0.59***
	(0.05)	(0.05)	(0.05)
Coalition splits Pre-Electoral Pact	-2.58***	-2.59***	-2.59***
	(0.27)	(0.27)	(0.27)
Observations	577,879	577,879	577,879
Countries	28	28	28
Cabinets	369	369	369
Ll	-1,052	-1,053	-1,054

Table A3 Conditional logit regression results

*Note*: Standard errors in parentheses. \*p < 0.1; \*\*p < 0.05; \*\*\*p < 0.01.