



Appendix II

	OECD	VP rigidity formula	Euclidean distance for $\ lower-upper\ $	VP rigidity with Euclidean distance for $\ lower-upper\ $	Relevant articles
Albania	0	$2/3 + e$ (all members)		0.677	177
Argentina	0	$2/3 (lower) + 2/3 \times \ lower-upper\ + 0.5$ (convention)	0.165	1.277	30
Armenia	0	$2/3$ parl.		0.67	202–208
Australia	1	$0.5 (lower) + 0.5 \times \ lower-upper\ + 0.5$ (ref.) + e (maj. of states' voters)	0.165	1.093	128
Austria	1	$2/3$	0.251	0.667	44 but also 42–45
Belgium	1	$2/3 (lower) + 2/3 \ lower-upper\ + e (2/3 present)$	0.045	0.707	46, 77, 195–77, 198
Benin	0	$3/4 + 0.5$ (ref.) – e (other route) + e (all members)		1.25	154–156
Bhutan	0	$3/4$ of parl. + $0.5 - e$ (king or ref.)		1.24	2, 33–35
Bolivia	0	$2/3 + 0.5$ (ref.)	0.054	1.167	411
Botswana	0	$2/3$		0.667	88–89
Brazil	0	$3/5 (lower) + 3/5 \ lower-upper\ + e$ (two rounds)	0.153	0.702	60
Bulgaria	0	$3/4 + e$ (3 ballots) – e (alt route: $2/3$ 2x) + e (all members for maj.) + e (at least 2 months before discussion)		0.77	153–163
Burundi	0	$4/5 (lower) + 4/5 \ lower-upper\ - e$ (alt route: pres. can send to ref.) + e (abs. maj. to initiate amendment) + e (all members for maj.)	0.375	1.11	297–300

(cont.)

		OECD	VP rigidity formula	Euclidean distance for lower-upper	VP rigidity with Euclidean distance for lower-upper	Relevant articles
	Canada	1	0.5 + 2/3 + e (50% pop. representation) – e (alt: instead of senate, pass 2x in house > 180 days apart)	0.401	1.167	35, 38–49, 52
	Cape Verde	0	2/3 members – e (pres. cannot refuse to prom.) + e (all members for maj.)		0.667	173, 179, 309–315
	Chile	1	3/5 (lower) + 3/5 lower-upper + 0.5 (pres.) – e (can override pres.) + e (all members for maj.)	0.15	1.19	127–129
268	Colombia	0	0.5 (lower) + 0.5 lower-upper + e (two discussions) – e (alt: can do constituent assembly) – e (alt: ref.)	0.092	0.536	155, 374–379
	Comoros	0	2/3 + 2/3 (councils) – e (alt: councils or ref.) + e (all members for maj.)		1.333	42
	Costa Rica	0	2/3 + e (multiple debates and delays) + 0.5 (pres.) + e (all members for maj.)		1.187	195–196
	Croatia	0	2/3 + e (maj. vote to decide yes/no on amendment) + e (maj. draft approval) + e (all members for maj.)		0.697	87, 147–150
	Cyprus	0	2/3 (turkish community) + 2/3 (greek community) + e (all members for maj.)		1.343	182

	Czech Republic	1	$3/5 \text{ (lower)} + 3/5 \text{lower-upper} + e \text{ (all members for maj.)}$	0.461	0.887	9, 39, 41, 62, Appendix B #8
	Denmark	1	$0.5 + 0.5 \text{ (post-election)} + 0.5 \text{ (ref.)} + e \text{ (40% voters say yes)}$		1.51	88
	Dominican Republic	0	$2/3 + e \text{ (maj. in both houses)} + e \text{ (two chambers)} + e \text{ (maj. present in both houses for joint session)}$	0.551	0.697	93, 99, 120, 267–272
	East Timor	0	$2/3 + e \text{ (120 days advance notice for proposals)}$		0.677	154–157
	Ecuador	0	$2/3 \text{ (of NA)} + (0.5 \text{ ref.}) + e \text{ (time)}$		1.18	84, 103, 106, 120, 441–444
	El Salvador	0	$2/3 + e \text{ (agreement by } 0.5 + 1 \text{ members for proposal)}$		0.677	246, 248
269	Estonia	1	$3/5 \text{ (parl.)} + 0.5 \text{ (ref.)} + e \text{ (time between 3 readings)} + e \text{ (3 readings)} + e \text{ (all members for maj.)} - e \text{ (alt)} - e \text{ (alt)}$		1.11	78, 161–168
	Finland	1	$0.5 \text{ (first vote)} + 2/3 \text{ (second vote, post elections)} - e \text{ (alt)}$		1.157	73, 94, 95
	France	1	$0.5 \text{ (lower)} + 0.5 \text{lower-upper} + 0.5 \text{ (ref)} + e \text{ (time for bill consideration: tabling delays)} - e \text{ (alt path)}$	0.171	1.086	42, 89
	Georgia	0	$2/3 + e \text{ (amendment suggestion needs 50% of members)} + e \text{ (delay for discussion after draft pub.)} + e \text{ (all members for maj.)}$		0.697	68.4, 102, 103
	German Federal Republic	1	$2/3 \text{ (lower)} + 2/3 \text{lower-upper} + e \text{ (all members for maj.)}$	0.281	0.864	79
	Ghana	0	$2/3 + e \text{ (pub. 2x in gazette, 3 months apart)} + e \text{ (3 readings)} + e \text{ (2/3 at second AND third reading)} + e \text{ (all members for maj.)}$		0.707	289–292

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		OECD	VP rigidity formula	Euclidean distance for lower-upper	VP rigidity with Euclidean distance for lower-upper	Relevant articles
	Greece	1	0.5 (first vote) + 3/5 (second vote after elections) – e (alt path for revisions: 3/5 + 0.51) + e (two rounds of votes in first round [mult. Readings])	1.1	110	
	Guatemala	0	2/3 + 0.5 + e (all members for maj.)	1.177	173, 277–281	
	Guyana	0	Maj. + ref. + e (2–6 months to submit to ref.) – e (alt route: 2/3)	1	66, 164	
270	Honduras	0	2/3 + e (all members for maj.) + e (ratify in subsequent session)	0.687	5, 218, 373, 374	
	Hungary	1	2/3 + e (all members for maj.)	0.677	s, 1.2, 8.3	
	Iceland	1	0.5 (first vote) + 0.5 (second vote, post elections) + e (pres. confirms)	1.01	79	
	India	0	0.5 (lower) + 0.5 lower-upper + e (2/3 members present)	0.099	0.56	368
	Indonesia	0	0.5 (lower) + 0.5 lower-upper + e (2/3 members present)	0	0.51	37
	Ireland	1	0.5 (lower) + 0.5 lower-upper + 0.5 (ref.)	0.17	1.085	46–47
	Italy/Sardinia	1	0.5 (lower) + 0.5 lower-upper + e (two debates) + e (time: 3 months between debates) + 0.5 (ref.) – e (alt route: 2/3, no ref.)	0.17	1.095	138 (referendum Art. 75)

	Israel	1	0.5 (lower house)		0.5	
	Jamaica	0	0.5 (lower) + 0.50 $\ \text{lower-upper} \ $ + e (all members for maj.) + e (wait 3 months for debate)	0.024	0.532	49
	Japan	1	2/3 (lower) + 2/3 $\ \text{lower-upper} \ $ + 0.5 (ref.) + e (all members for maj.)	0.208	1.315	96
	Kenya	0	2/3 (lower) + 2/3 $\ \text{lower-upper} \ $ + e (3 readings) + e (certificate) + e (all members for maj.)	0.04	0.723	94.3, 255, 256, 257
	Korea, Republic of	1	2/3 + 0.5 (ref.) + e (maj. to introduce amendment) + e (delay of 20 days to consider amendments) + e (all members for maj.)		1.197	128–130
271	Kyrgyz Republic	0	2/3 + e (time: 6 months or less to adopt amendments after proposal) + e (3 readings) + e (2 months between readings) + e (all members for maj.)		0.707	74.2, 97.6, 114
	Latvia	1	2/3 + e (2/3 present) + e (3 readings)		0.687	76–79
	Lebanon	0	2/3 + e (time: 4 months) + e (all members for maj.)		0.687	65, 76–79
	Lesotho	0	0.5 (lower) + 0.5 $\ \text{lower-upper} \ $ + 0.5 (ref.) + e (time: limit for holding ref.) – e (alt: 2/3)	0	1	85
	Liberia	0	2/3 (lower) + 2/3 $\ \text{lower-upper} \ $ + 2/3 (ref.) + e (2/3 approval for ref.) + e (time: 1 year wait for ref.) + e (all members for maj.)	0.19	1.49	87, 91–93
	Lithuania	1	2/3 + e (time: 1-month delay) + e (signs and promulgates) + e (all members for maj.)		0.697	67, 147, 148, 149

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		OECD	VP rigidity formula	Euclidean distance for $\ lower-upper\ $	VP rigidity with Euclidean distance for $\ lower-upper\ $	Relevant articles
272	Luxembourg	1	2/3 + e (two rounds of votes) + e (3 months between votes) – e (can substitute ref. for second round of voting) + e (all members for maj.)		0.687	114
	Macedonia (Former Yugoslav Republic of)	0	2/3 + e (second round of voting: need maj.) + e (all members for maj.)		0.687	129–131, amend. 18
	Malawi	0	2/3 + e (all members for maj.)		0.677	195–197, schedule
	Malaysia	0	2/3 (lower) + 2/3 $\ lower-upper\ $ + e (3 readings) + e (all members for maj.)	0.39	0.947	159, 161e
	Mali	0	2/3 (NA) + 0.5 (ref.)		1.17	118
	Mauritius	0	2/3 + e (all members for maj.)		0.677	46–47
	Mexico	1	2/3 (lower) + 2/3 $\ lower-upper\ $ + 0.5 (states) – e (half members for maj.)	0.083	1.212	135
	Moldova	0	2/3 + e (6 months between initiative and passage) + e (all members for maj.)		0.687	63, 141–143
	Mongolia	0	3/4 + e (all members for maj.)		0.76	26, 68–70
	Montenegro	0	2/3 + e (public hearing [1 month+]) + e (two votes of 2/3) + e (all members for maj.)		0.697	155–157

	Mozambique	0	2/3 NA		0.67	291, 292, 295
	Namibia	0	2/3 (lower) + 2/3 lower-upper – e (alt route: ref. if second chamber does not approve) + e (all members for maj.)	0.21	0.807	131, 132
	Nepal	0	2/3 + e (all members for maj.)		0.677	148
	Netherlands	1	1/2 (lower) + 1/2 lower-upper + 2/3 (lower) + 2/3 lower-upper	0.124	1.312	137–142
	New Zealand	1	Maj.		0.5	See text at right
	Nicaragua	0	3/5 + e (commission)		0.61	141, 191–195
	Niger	0	3/4 + 0.5 (ref.) – e (alt: 4/5)		1.24	173–175
	Norway	1	2/3 + e (previous proposal)		0.677	112
	Pakistan	0	2/3 + 1/3 lower-upper + e (all members for maj.)	0.513	0.848	238, 239
273	Panama	0	Maj. (abs.) + maj. (abs., second) + e (gazette) + e (3 readings) – e (alt)		1.01	313–314
	Papua New Guinea	0	2/3 parl. + e (time)		0.68	13, 14
	Paraguay	0	0.5 (lower) + 0.5 lower-upper + 0.5 (ref.) + e (180 days to call ref.)	0.184	1.102	289–290
	Peru	0	Abs. maj. + 0.5 ref. – e (alt: 2/3)		0.99	32, 101.4, 206
	Philippines	0	3/4 (lower) + 3/8 lower-upper + 0.5 (pleb.) + e (60–90 days to hold pleb.) – e (alt: constitutional convention) – e (initiative)	0.411	1.394	17
	Poland	1	2/3 (lower) + 2/3 lower-upper + e (adopt twice) + e (60 days to adopt second time)	0.212	0.828	235
	Portugal	1	2/3 + e (all members for maj.)		0.677	284–289

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	OECD	VP rigidity formula	Euclidean distance for lower-upper	VP rigidity with Euclidean distance for lower-upper	Relevant articles
274	Romania	0 2/3 (lower) + 2/3 lower-upper + 0.5 (ref.) – e (alt: 3/4 joint session) + e (all members for maj.)	0.124	1.249	150–152
	Senegal	0 0.5 (lower) + 0.5 (ref.) – e (alt: 3/5) + e (second chamber)	1		71, 103
	Sierra Leone	0 2/3 + e (publish in \geq 2 issues of gazette, at least 9 days apart) + e (3 readings) + e (all members for maj.)	0.697		108
	Slovakia	1 3/5 + e (all members for maj.)	0.61		84.4, 152.1
	Slovenia	1 2/3 + e (2/3 approval of proposal) + e (all members for maj.)	0.687		168–171
	Solomon Islands	0 2/3 + e (two readings) + e (give bill to speaker 4 weeks in advance) + e (all members for maj.)	0.697		61
	Somalia	0 2/3 of both chambers + e (committee) + 0.5 ref.	1.17		57, 63, 71
	South Africa	0 2/3 + e (30 days before bill publish in gazette) + e (submit to provincial legislatures) + e (submit comments to speaker) + e (wait 30 days for introducing or tabling) + e (all members for maj.)	0.048	0.717	74

Spain	1	3/5 (lower) + 3/5 lower-upper – e (alt: joint session) – e (alt: can pass 2/3 in the lower house and maj. in upper) + e (all members for maj.)	0.096	0.6576	75, 87, 166–169	
Surinam	0	2/3 NA		0.667	72, 83, 181(2)	
Sweden	1	0.5 (first vote) + 0.5 (second vote) + e (9- month delay between two votes) – e (alt: abs. maj. + ref.) – e (alt: 3/4 with maj. present)		0.99	8.5.14–17, 8.8.21	
Switzerland	1	0.5 (people) + 0.5 (cantons) – e (alt: parl. route)	0.239	0.99	4.2.138, 4.2.139, 4.2.140, 4.2.142, 6.1.192–195	
275 Taiwan before 2000	0	3/4 + e (3/4 present) – e (alt procedure)		0.75	Additional articles to the Constitution of the Republic of China (Fourth Revision); Art. 27 and 174 of the Constitution	
Taiwan after 2000	0	3/4 + 0.5 + e (ref. turnout) + e (3/4 present)		1.27	Additional Article 12 (replaces 174) (previously discussed in Art. 27, 30, 174, additional Art. 1)	
Thailand	0	0.5 (lower) + 0.5 lower-upper + e (maj. of all members) + e (3 readings) + e (15-day delay between second and third readings)	0	0.53	291	

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	OECD	VP rigidity formula	Euclidean distance for lower-upper	VP rigidity with Euclidean distance for lower-upper	Relevant articles
276	Trinidad And Tobago	0 $2/3 \text{ (lower)} + 2/3 \ \text{lower-upper}\ + e \text{ (all members for maj.)}$	0.37	0.923	18.4, 54
	Tunisia	0 $1/2 \text{ pres.} + 2/3 \text{ (assembly)} + e \text{ (initial approval by maj.)} - e \text{ (alt route)}$		1.167	76–78
	Turkey before 1987	1 $2/3 + 0.5 \text{ (pres.)} + e \text{ (two rounds of debate)} + e \text{ (all members for maj.)}$		1.19	
	Turkey after 1987	1 $3/5 + 0.5 \text{ (pres.)} + e \text{ (two rounds of debate)} + e \text{ (all members for maj.)} - e \text{ (alt: } 2/3)$		1.11	
	Ukraine	0 $2/3 + e \text{ (maj. approval in previous round)} + e \text{ (all members for maj.)}$		0.687	154–159
	United Kingdom before 1911	0 $0.5 \text{ (lower)} + 0.5 \ \text{lower-upper}\ $	0.551	0.776	
	United Kingdom after 1911	1 0.5 (maj. in LH)		0.5	
	Uruguay	0 0.5 (ref.)	0.035	0.5	331
	USA	1 $2/3 \text{ (lower)} + 2/3 \ \text{lower-upper}\ + 3/4 - e \text{ (alt)} - e \text{ (alt)} + e \text{ (all members for maj.)}$	0.123	1.489	5
	Yugoslavia (Serbia)	0 $2/3 + e \text{ (all members for maj.)}$		0.677	203–205 + AD97
	Zambia	0 $2/3 + e \text{ (public in gazette)} + e \text{ (3 readings)} + e \text{ (all members for maj.)}$		0.697	79