

Rules for the calculation of iPSI

1. Identify all the cabinets in a country, taking into consideration all those governments formed either after (1) a change in the partisan composition of the government coalition, or (2) new elections. Caveat: changes of the head of government (i.e. Prime Minister) without meeting any of the previous requirements should NOT be considered.
2. So-called “gran coalitions”, i.e. coalitions bringing together the two most relevant parties (e.g. Germany, The Netherlands), should be considered. However, non-partisan, acting, provisional, *ad interim*, caretaker, technocratic, presidential, ecumenical (or national union), technocratic, or in-exile cabinets are to be IGNORED. In this context, when any of these governmental types last for a whole year, that year should be EXCLUDED from the calculations.
3. Identify the so-called “founding government”, that is, the cabinet appointed after the first free and fair elections have taken place following the instauration of democracy, independence, or after the approval of a new or revised version of a constitution by an interim Constituent Assembly. Caveat: cabinets formed after “breakaway elections” (e.g. those taking place immediately after the collapse of communism and constituting referenda on the previous regime rather than true expressions of political preferences) should NOT be included.¹
4. Years in which democracy collapses, for example due to a *coup d'état*, an invasion, etc., are NOT taken into consideration, except if in that same year there was a governmental change or elections were held.
5. Take the “percentage of ministers”, including the Prime Minister, for every government. Caveat: only ministers (i.e. persons) and not ministries should be counted. However, independents or non-partisan members should be excluded.
6. In the case of party mergers or electoral coalitions, the number of ministers belonging to each of the parties merged or within the coalition should be taken into consideration (when possible).
7. IGA is calculated by measuring the degree of “ministerial volatility” (MV). In particular, IGA follows Pedersen’s logic (and formula) but substitutes the percentage of votes for a party in a particular election for the percentage of ministers a party is awarded in a particular cabinet. Caveat: because scores at the extremes of the MV

¹ For a complete list of “founding elections and governments” see table A in the Appendix.

scale reflect wholesale alternation,² MV initial score (MV_{is}) needs to be standardized according to the following formula:

$$IGA = (MV_{is}-50)*2,$$

in all those instances when (and only when) it is lower than 50. If this is not the case, then MV_{is} holds (i.e. MV_{is} = IGA).

8. IFA is measured by the percentage of ministers belonging to a familiar combination of parties. In particular, the following rules apply:

- a) If the very same combination of parties has previously been in government together, then IFA = 100.
- b) If the government is based on an entirely new combination of parties, IFA = 0.
- c) In those instances when the new government only partly replicates a previous government, IFA = the percentage of ministers who belong to the “familiar” part of the previous government. Similarly, when one or more parties leaves a coalition cabinet, then IFA is calculated by subtracting the percentage of ministers belonging to the parties that left.

In all these cases, the contrast needs to be made with the previous government that is most similar in terms of the list and number of parties. Thus, for instance, a cabinet of Communists, Socialists and Greens should NOT be compared to the one with Communists, Socialists and Liberals, but to the one with Communists, Socialists, Greens and Populists. In those instances when there are several previous cabinets with the same number of parties, but not identical to the one analysed, then the cabinet closest in time should be considered.

Other caveats to be taken into consideration:

- i) In the case of party mergers, if a minister cannot be linked to any of the pre-merger parties then he/she is excluded from the counting unless all the merged parties had been previously in government together.
- ii) In the case of single party governments, IFA will equal 0 if such party has never governed before.
- iii) If, on the contrary, such party was part of a previous coalition, the percentage of ministers belonging to its previous coalition partners will be deducted from 100. Thus, in the case of the above-cited example, if the Social Democrats, who had 90 % of the ministers, decide to continue without the Greens, who controlled only one-tenth

² 100 = total alternation; 0 = no-alternation.

of the government, IFA = 90. In the opposite case, that is the Greens continue without the Social Democrats, IFA = 10.

10. IC is captured by the percentage of ministers belonging to parties that were already in government. Caveat: the ministers of a merged party are considered to be “old” if the predecessor parties governed before, otherwise they are considered to be new.

11. In those years when there have not been any governmental changes, the score for all three sub-indexes (i.e. IGA, IFA and IC) is 100.

12. In those cases where more than one governmental change takes place during the same calendar year, then IGA, IFA and IC are averaged for that particular year.

13. Finally, iPSI is calculated by combining these three sub-indexes into one unique (averaged) measurement.³

³ Scholars may consider presenting iPSI in two further alternative forms. The first one is using the standardized versions (*Z* scores) of the *original* variables. The second is projecting them onto a 0 to 1 scale. Researchers should be aware, though, of when the former scores will depend on the specific sample being analysed.

(Theoretical) Examples

In order to facilitate researchers' understanding of how the whole calculation process should be done, Table 1 presents information on the percentage of ministers (in brackets) per governing party in five different cabinets in a similar number of imaginary countries. Country A reflects the typical two-party system (e.g. Malta, United Kingdom) in which the party winning the elections forms a mono-color majority government. Country B displays the structure of competition in a typical two-block party system (e.g. Portugal, Hungary) in which a party (or block of parties) on the right is pitted against a party (or block of parties) on the left. Country C constitutes a clear example of a "two-and-a-half party system" (e.g. Germany). Two instances of more or less pluralist party systems are depicted in the last two countries (e.g. the Czech Republic and Poland, respectively).⁴

Table 1. Examples of government formation in 5 imaginary countries

Cabinet	Country A	Country B	Country C	Country D	Country E
1 st	A (100)	A (100)	A (60)-B (40)	A (60)-B (30)-C (10)	A (33.3)-B (33.3)-C (33.3)
2 nd	B (100)	B (80)-C (20)	C (70)-B (30)	D (100)	D (60)-E (40)
3 rd	A (100)	A (100)	A (75)-B (25)	A (45)-B (35)-E (20)	F (75)-G (25)
4 th	A (100)	B (100)	C (65)- B (35)	D (80)-B (20)	D (60)-E (30)-F (10)
5 th	B (100)	B (75)- C (25)	A (55)-B (45)	A (50)-B (25)-F (25)	H (100)

Following the instructions mentioned above, table 2 calculates the IGA, IFA and IC scores for each of the cabinets in each of the countries referred to in table 1.⁵ The final row computes the average for the different criteria, and therefore the iPSI, in each of the countries examined.⁶

Table 2. Calculations of iPSI (and final scores) in 5 fictional countries

Cabinet	Country A			Country B			Country C			Country D			Country E		
	IGA	IFA	IC	IGA	IFA	IC	IGA	IFA	IC	IGA	IFA	IC	IGA	IFA	IC
1 st	FG			FG			FG			FG			FG		
2 nd	100	0	0	100	0	0	70(40)	0	30	100	0	0	100	0	0
3 rd	100	100	100	100	100	100	75(50)	100	100	100	80	80	100	0	0
4 th	100	100	100	100	80	100	75(50)	100	100	80(60)	0	100	100	90	100
5 th	100	100	100	100	100	100	65(30)	100	100	90(80)	75	75	100	0	0
TOTAL	100	75	75	100	70	75	42.5	75	82.5	85	38.8	63.8	100	22.5	25
iPSI	250/3= 83.3			245/3= 81.7			200/3= 66.7			187.6/3= 62.5			147.5/3= 49.2		

⁴ At least until 2006

⁵ Had there been any years between elections or cabinet changes, all the three components of iPSI would have received a score of 100.

⁶ Had cabinet changes taken place during the same year, then the average scores of the three different sub-indicators would have been considered.

Appendix

Table A. Regime transition in European democracies

Country	Independence	Breakaway elections	Founding elections	Founding cabinets
Albania	20/XI/1912	31/III/1991*	24/VI/2001**	6/IX/2001
Andorra	-	-	12/XII/1993	31/I/1994
Armenia	23/VIII/1990	-	17/X/1991***	25/IX/1991
Austria I	-	16/II/1919*	17/X/1920	20/XI/1920
Austria II	-	-	25/XI/1945**	20/XII/1945
Belarus	25/VIII/1991	-	-	19/IX/1991
Belgium	-	-	16/XI/1919	2/XII/1919
Bulgaria	-	10/VI/1990*	13/X/1991	8/XI/1991
Croatia	25/VI/1991	22/IV/1990****	3/I/2000	27/I/2000
Cyprus	16/VIII/1960	-	II/1978***	8/III/1978
Czechoslovakia I	28/X/1918	-	18/IV/1920	25/V/1920
Czechoslovakia II	28/X/1918	-	26/V/1946	2/VII/1946
Czech Republic	1/I/1993	9/VI/1990****	6/VI/1992****	1/I/1993
Denmark	-	-	20/V/1910**	5/VII/1920
Estonia I	23/II/1918	7/IV/1918*	29/XI/1920	25/I/1921
Estonia II	6/IX/1991	-	20/IX/1992	21/XII/1992
Finland I	6/XII/1917	-	2/X/1917	6/XII/1917
Finland II	6/XII/1917	-	18/III/1945	17/IV/1945
France I	-	23/IV/1848*	13/V/1849	20/XII/1848
France II	-	8/II/1871*	20/II/1876	9/III/1876
France III	-	2/VI/1946*	10/XI/1946	16/XII/1946
France IV	-	-	23/VI/1968	10/VII/1968
Georgia	9/IV/1991	-	4/I/2004***	29/III/2004
Germany I	-	-	19/I/1919*	13/II/1919
Germany II	-	-	14/VIII/1919	20/IX/1949
Greece I	3/II/1830	-	18/VII/1875	15/X/1875
Greece II	3/II/1830	-	7/XI/1926	4/XII/1926
Greece III	3/II/1830	-	31/III/1946	4/IV/1946
Greece IV	3/II/1830	-	17/XI/1974**	21/IX/1974
Hungary	-	-	3/V/1990	23/V/1990
Iceland	17/VI/1944	-	19/X/1942****	21/X/1944
Ireland	21/I/1919	16/VI/1922*	27/VIII/1923	21/IX/1923
Italy	-	2/VI/1946*	18/IV/1948	23/V/1948
Kingdom of SHS	1/XII/1918	-	28/XI/1920*	1/VI/1921
Kosovo	17/II/2008	-	11/XI/2007	17/II/2008
Latvia I	18/XI/1918	18/IX/1920*	8/X/1922	27/I/1923
Latvia II	6/IX/1991	-	6/VI/1993**	4/VII/1993
Liechtenstein	-	-	7/II/1993	26/V/1993
Lithuania	6/IX/1991	-	25/X/1992	2/XII/1992
Luxembourg	-	4/VIII/1918*	26/X/1919	5/I/1920
Macedonia	8/IX/1991	-	11/XI/1990***	4/IX/1992
Malta	21/IX/1964	-	19/II/1962***	21/IX/1964
Moldova	27/VIII/1991	-	27/II/1994	5/IV/1994
Montenegro	3/VI/2006	-	10/IX/2006*	22/X/2007
The Netherlands	-	-	3/VIII/1918	9/XI/1918
Norway	7/VI/1905	-	16/IX/1903****	7/VI/1905
Poland I	11/XI/1918	26/I/1919*	5/XI/1922	16/XI/1922
Poland II	11/XI/1918	4/VI/1989*****	27/X/1991	23/XII/1991

Portugal I	-	-	28/V/1911*	3/IX/1911
Portugal II	-	25/IX/1975*	25/IV/1976	23/VII/1976
Romania	-	20/V/1990*	3/XI/1996	12/XII/1996
Russia	-	-	19/XII/1999**	20/XII/1999
San Marino I	-	-	14/XI/1920	14/XII/1920
San Marino II	-	5/IX/1943	11/III/1945	24/III/1945
Serbia	-	-	23/XII/2000	25/I/2001
Slovakia	1/I/1993	9/VI/1990****	6/VI/1992****	12/I/1993
Slovenia	25/VI/1991	12/IV/1990****	6/XII/1992	25/I/1993
Spain I	-	-	16/IV/1899**	25/IV/1899
Spain II	-	-	28/VI/1931*	16/XII/1931
Spain III	-	15/VI/1977*	1/III/1979	6/IV/1979
Sweden	-	-	1/IX/1917	19/X/1917
Switzerland	-	-	25/X/1896	1/I/1897
Turkey I	-	-	21/VII/1946	7/VIII/1946
Turkey II	-	-	15/X/1961	20/XI/1961
Turkey III	-	-	6/XI/1983	13/XII/1983
Ukraine	24/VIII/1991	-	24/III/1994	16/VI/1994
United Kingdom	-	-	14/XII/1918	10/I/1919

Notes: * Elections to the Constituent Assembly; ** Not a democracy yet; *** Presidential elections **** Still a part of another state (the Socialist Federal Republic of Yugoslavia, the Czechoslovak Federative Republic, Denmark, the United Kingdom, or Sweden, respectively); ***** Only one-third of the seats were freely contested.