7

THE POLITICAL CONSEQUENCES OF ELECTORAL SYSTEMS

Electoral systems have political consequences. The truth of this statement is revealed in the burgeoning literature on electoral systems, which seeks to show precisely what these consequences are. This chapter explores the main findings of these studies, addressing the major points of disagreement between the authors. There are a number of consequences of electoral systems which we need to consider, among them: the effects on proportionality, on numbers of parties, and on the representation of women and minorities. These are dealt with in the first three sections.

In combination, these three consequences are said to play a major role in determining the overall stability of the system. As was discussed in chapter 1, it is usual to argue that, in choosing an electoral system, we face a trade-off: either the electoral system is proportional – facilitating the entry of minor parties and the representation of minority interests – and produces a situation where the governmental system is unstable, or the electoral system is non-proportional and the governmental system is much more stable. In section 7.4 we examine the extent to which this perception of a necessary trade-off is correct.

In addition to the macro-level effects of electoral systems, which in some part are all related to the issue of their proportionality profiles, in recent years there has been increasing attention to the micro-level effects of electoral system, in terms of both how voters

use them (e.g. strategic and split-ticket voting) and how parties are affected by them (e.g. variations in campaign style). Here, the attention is less on the question of proportionality (for the most part affected by district magnitude and electoral formula) and its consequences, and more on the issue of the mechanics of the vote, which, is affected mainly by ballot structure. These micro-level effects of electoral systems are considered in section 7.5. The chapter closes off, in section 7.6, with a discussion on the politics of electoral reform.

7.1 Proportionality profiles of different electoral systems

How proportional are proportional representation (PR) systems? The principal advantage which PR systems are supposed to have over non-PR systems is that, on average, they produce more proportional results, i.e. they minimize the distortion between the number of votes a party wins and the number of seats it ends up with in parliament. The previous chapters provided evidence in support of this. When we looked at the percentage differences between votes and seats, the ranking between the different systems appeared to tally with expectations, i.e. first past the post (FPTP) and the majoritarian systems produced the largest percentage differences; single transferable vote (STV), list and the two-votes systems produced the smallest.

It is now time to produce more systematic evidence, to apply a more rigorous test across a wide range of different electoral systems in various countries over a long period of time. This way we can get a true picture not only of whether PR systems produce more proportional results than non-PR systems, but also about which PR system is the more proportional.

Of course, things are not as easy as they may seem. The comparative assessment of the proportionality of electoral systems has been dominated by a series of debates (sometimes rancorous) over methodology: first, on the issue of which factors most affect levels of proportionality, and second, on the issue of which is the most appropriate index to adopt. Given the disagreement over measuring techniques, there should be little surprise that this produces different rankings for the various electoral systems.

For the most part, questions about the factors influencing proportionality revolve around the three main dimensions of electoral systems which have been discussed throughout this study: electoral formula, district magnitude and ballot structure. The seminal work by Douglas Rae in the 1960s produced the following findings: electoral formula has an effect on proportionality, district magnitude has an even greater effect and ballot structure has no effect. There has been little disagreement with these general conclusions, although Lijphart (1994) has recently found some evidence that ballot structure might be influential. Lijphart also adds other factors to the list of influences on proportionality, of which the most significant is assembly size, with larger parliaments being statistically associated with higher degrees of proportionality.

There is general agreement that district magnitude is 'the decisive factor' in determining proportionality (Taagepera and Shugart, 1989: 112; also Lijphart, 1994). There is far greater uncertainty about how to rank the different electoral formulae. In particular, there is a problem over how to include STV in any evaluation. As Lijphart (1986) has observed, for this reason many simply ignore STV altogether and focus instead on the list systems. Here there is general agreement that the largest remainder systems are the most proportional, followed by Sainte-Laguë, then d'Hondt (Lijphart, 1986; Loosemore and Hanby, 1971; Rae, 1967; see chapter 4, pp. 62–68, for descriptions of these systems).

The problems with assessing the proportionality of STV are twofold. First, the relatively low level of district magnitude (at least as used in Ireland, which is the usual focus of attention, and whose constituencies are never more than five seats), means that STV tends to be labelled less proportional, or – as the phrase goes – 'quasi-proportional' (Taagepera and Shugart, 1989: 207; Katz, 1984). One way around this problem is simply to ignore district magnitude and instead to focus on the theoretical aspects of how the different electoral formulae vary over proportionality. This is the approach adopted by Jean Blondel (1969); however, his conclusion that STV is the most proportional of the PR systems (and that largest remainder is the least) has not found general support.

The second problem with STV is that quintessentially it is a candidate-based system: unlike the list systems where voters are choosing between different parties, under STV voters choose between different candidates on the ballot paper. There are difficulties, there-

fore, in assessing STV with measures of proportionality which are based on vote and seat shares for *parties* (see Gallagher, 1975; Mair and Laver, 1975). In consequence, as Rae (1967: 38) notes: '[i]t is not quite clear how this arrangement is likely to compare with other PR formulae'. And, rather than attempting a specific rank for STV, Rae (1967: 111) can only conclude that 'in general, [it] behaves like any other sort of proportional representation. It operates quite proportionally'. Lijphart (1994:159; 1986) suggests a way around the problem. He makes the 'simplifying assumption' that voters cast their votes entirely within party lines (which is pretty much the case in Malta), and that therefore the vote can be construed as a 'party vote'. This leads to the following ranking of the main PR formulae, from most to least proportional:

- Largest remainder-Hare; Sainte-Laguë.
- Largest remainder-Droop; STV; modified-Sainte-Laguë.
- D'Hondt; largest remainder-Imperiali.

This ranking is based on a theoretical assessment of the likely electoral outcomes from using each of these formulae. The problem next becomes one of how to assess the degree to which reality matches up with theory. Prima facie, it might appear a relatively straightforward exercise to plot the trends in proportionality for each of these formulae across a range of countries over time. In fact, it is not so simple for two main reasons: first, we need access to a suitable measure, or index, of proportionality, and second, we need a ranking which can take account of all the possible influences on proportionality, not just electoral formula, but also district magnitude and other lesser influences like assembly size. Both of these issues have featured prominently in the literature on electoral system effects (for a recent review, see Lijphart, 1994).

Over the years, a number of different measures of proportionality have been developed by Rae (1967 – the Rae index), Loosemore and Hanby (1971 – the Loosemore-Hanby index), Gallagher (1991 – the Least-squares index), and Lijphart (1994 – the Largest-deviation index). They will not be discussed here. In his comprehensive overview, Lijphart (1994: 67) finds that all four indices are 'highly and significantly correlated', but he has a clear preference for Gallagher's Least-squares index.[1] Table 7.1 makes use of the Least-squares index to rank the proportionality of electoral systems used in

Table 7.1 **Levels of disproportionality and the effective number of parties under different electoral systems**

Rank and country	*Electoral formula*	*District magnitude*[c]	*Period*	*No. of elections*	*Level of disproportionality*	*Effective no. of parties*
1. Germany	LR-Hare[a]	497	1987	1	0.67	3.47
2. Israel	LR-Hare	120	1951–69	6	0.86	4.92
3. Netherlands	d'Hondt	100–50	1946–89	14	1.31	4.59
4. Austria	LR-Hare[b]	20.3	1971–90	6	1.43	2.42
5. Italy	LR-Droop/Imperiali[b]	17.9	1946	1	1.56	4.39
6. Sweden	modified Sainte-Laguë[a]	349.3	1970–88	7	1.67	3.40
7. Denmark	LR-Hare[a]	148.5–75	1945–88	19	1.80	4.52
8. Sweden	modified Sainte-Laguë	8.3	1952–68	6	2.36	3.11
8. Switzerland	d'Hondt	8.2	1947–87	11	2.36	5.10
9. Germany	d'Hondt[a]	36.6–496.9	1949–83	10	2.50	3.19
10. Israel	d'Hondt	120	1949, 1973–88	6	2.59	3.97
11. Italy	LR-Imperiali[b]	19.6	1958–87	8	2.71	3.62
12. Finland	d'Hondt	13.2	1945–87	13	2.86	5.03
13. Luxembourg	d'Hondt	14	1945–89	10	3.11	3.30
14. Belgium	d'Hondt[a]	23.5	1946–87	15	3.23	4.63
15. Ireland	STV	3.8	1948–92	15	3.43	3.52
16. Sweden	d'Hondt	8.2	1948	1	3.51	3.06
17. Austria	LR-Droop[b]	6.6	1945–70	8	3.61	2.25
18. Italy	reinforced LR-Imperiali[b]	18.8	1948–53	2	3.64	3.06
19. Norway	modified Sainte-Laguë[a]	165	1989	1	3.65	4.23
20. Malta	STV	5–5.1	1947–81	10	3.76	2.47

21. Greece	LR-Droop[b]	5.1	1989–90	3	4.06	2.36
22. Costa Rica	LR-Hare	6.4–8.1	1953–90	10	4.07	2.43
23. Portugal	d'Hondt	12.4	1975–87	7	4.25	3.05
24. Norway	modified Sainte-Laguë	7.8	1953–85	9	4.38	3.26
25. Iceland	d'Hondt[a]	52–60.3	1946–87	14	4.52	3.70
26. USA	FPTP	1	1946–90	23	5.41	1.92
27. Japan	limited vote	4–9	1946–90	18	5.74	3.04
28. France	d'Hondt	5.8	1986	1	7.23	3.90
29. Norway	d'Hondt	7.5	1945–49	2	8.53	2.93
30. Australia	majoritarian	1	1946–93	20	8.84	2.49
31. Spain	d'Hondt	6.7	1977–89	5	8.95	2.72
32. UK	FPTP	1	1945–92	14	10.76	2.51
33. New Zealand	FPTP	1	1946–93	17	11.11	1.96
34. Greece	d'Hondt[a]	5.3–6.7	1974–85	4	11.21	2.08
35. Canada	FPTP	1	1945–88	15	11.33	2.37
36. France	majoritarian	1	1958–81, 1988	8	13.86	3.45
37. India	FPTP	1–1.2	1952–84	8	17.76	2.15

Notes: [a] A two-tiered electoral system. In this case the higher level is decisive so this has been selected (see Lijphart, 1994: Table 2.5).
[b] A two-tiered electoral system. In this case the lower tier is decisive so this has been selected (see Lijphart, 1994: Table 2.4).
[c] Wherever the district magnitude changes, the range is provided here.

The countries have been ranked according to different levels of disproportionality. The disproportionality index used is the Least-squares index developed by Gallagher (1991; Lijphart, 1994: 60–1). It is calculated as follows: square the vote–seat differences for each party (ignoring 'others'); sum them; divide the total by two; and then take the square root. The index of effective number of parliamentary parties was derived by Laakso and Taagepera (1979; Lijphart, 1994: 67ff.). It is calculated as follows: 1 divided by the sum of the squared percentage seats for each party.

For the most part, these data are available in Lijphart (1994; appendix B). I am grateful to Arend Lijphart for having made available his more detailed tables of statistics on disproportionality and party system trends per country per election. Wherever possible the data have been updated to take account of recent elections.

Sources: Lijphart (1994); electoral returns.

twenty-seven democracies over the post-war period. (Strictly speaking, the ranking is of levels of 'disproportionality': those countries with lowest levels of disproportionality are located towards the top.)

One thing to note immediately from Table 7.1 is how, on a number of occasions, a country has more than one entry, indicating that the electoral formula has been changed. In truth, if we were to take account of all possible electoral changes (e.g. including such factors as ballot structure or assembly size; see Lijphart, 1994) we would have a substantially more complex table. Given the importance of district magnitude for overall proportionality, this is also provided in the table. In chapter 1, reference was made to Dieter Nohlen's assertion that 'fundamental' electoral system change is rare, occurring only 'in extraordinary historical situations' (Nohlen, 1984: 218). In chapter 5, we saw how this 'rule' required some qualification, especially given the dramatic processes of electoral reform in established democracies like Italy, Japan and New Zealand. In Table 7.1, however, it is evident that electoral system change (albeit not necessarily 'fundamental') is even more widespread than many may believe.

When we look, first, at the different electoral formulae, in some respects the ranking in Table 7.1 works pretty much as expected. The non-proportional systems (FPTP, the majoritarian systems and Japan's former limited vote system) are the least proportional systems, located in the bottom third grouping in the table. Largest remainder-Hare is the most proportional system, for the most part located in the top third grouping. (Sainte-Laguë does not appear anywhere in the table because, apart from its recent adoption by New Zealand, it has not been used since the Scandinavian countries moved over to modified-Sainte-Laguë; see chapter 4, p. 64.) STV also fits the ranking predicted by Lijphart: the Irish and Malta cases are both located in the middle grouping of countries. Research on STV in Australia (Senate and state elections) also places that country in the middle ranking (Farrell *et al.*, 1996).

Ranking the remaining electoral systems – largest remainder-Droop, modified-Sainte-Laguë, d'Hondt and largest remainder-Imperiali – is less easy, reflecting the effects of variations in district magnitude, two-tier districting (see chapter 4, p. 69) and other factors which influence overall proportionality. For instance, the third place ranking for the Netherlands – a d'Hondt system – while against expectations,

is understandable when we remember the particularly large district magnitude which is used (see p. 68). The Israeli case is instructive. A combination of largest remainder-Hare and a very large district magnitude ensured that country's number two ranking throughout the 1950s and 1960s. Its overall ranking slipped to number ten on the list with the switch to d'Hondt in the 1970s.

In general, the ranking of electoral systems with regard to district magnitude (or constituency size) also tallies well with expectations, as shown most accurately by the location of all the single-member countries, i.e. those with a district magnitude of one, at the bottom of the table. In his detailed and sophisticated analysis of this evidence, Lijphart (1994: 110) finds district magnitude to have the greatest effect on overall proportionality.

As Douglas Rae (1967) observes, the proportionality of different electoral systems relates to their short-term or 'proximal', effects. Electoral systems also have 'distal' or long-run, effects, as revealed by the numbers of parties in the political system and the representation of women and minorities. The next two sections deal with each of these in turn.

7.2 Electoral systems and party systems

We might expect – almost by definition, as it were – that electoral systems which are more proportional should coincide with more fragmented party systems. In the 1950s the French political scientist, Maurice Duverger (1954), put forward the proposition that non-proportional electoral systems (he referred specifically to FPTP) 'favour' two-party systems, while proportional electoral systems 'favour' multi-party systems. There are two parts to this argument which can be summarized by looking at the case of non-proportional electoral systems. First, there is the fact that, because it is more difficult for smaller parties to win seats under non-PR systems, the *mechanics* of these systems are bound to result in fewer parties in parliament. Second, there is also a *psychological* aspect, in the sense that voters are aware of the fact that a vote for a smaller party is a wasted vote and therefore they are less inclined to bother voting for them, thereby further compounding the difficulties for smaller parties (Blais and Carty, 1991).

Duverger's propositions have spawned a fascinating debate between political scientists over the issue of whether they should be

considered to have law-like status (for a sample, see Duverger, 1986; Riker, 1986; Sartori, 1986). The main point at issue is that of causality: is multi-partism a consequence or a cause of proportionality? For instance, there are plenty of historical examples of multi-party systems which preceded the decision to opt for a PR electoral system, among them are Belgium, Denmark, Germany and Norway.

While clearly there is a 'chicken and egg' problem over causality, this should not distract us from the fact that wherever there is a proportional electoral system there is a greater likelihood of finding more parties represented in the parliament, and wherever there is a non-proportional electoral system, we are more likely to find a two-party system. Obvious examples of the latter include the US Congress, dominated by the Republicans and the Democrats, and the UK House of Commons, dominated by the Conservatives and Labour. Of course, given that in the British case there are clearly more than two parties in the parliament – in fact, currently there are nine! – this indicates the need for appropriate 'counting rules' for parties.

Markku Laakso and Rein Taagepera have devised an index which measures the 'effective' number of parties, based on the number of parties in parliament and their different sizes.[2] Using this index, for instance, the UK party system can be characterized as a '2.51-party system', reflecting the vote of the Liberal Democrats and the various Nationalist parties. The final column in Table 7.1 gives the scores across a range of countries. While there are cases where we find more parties than would be expected (e.g. non-proportional France with 3.45 parties) or fewer parties than expected (e.g. proportional Austria with 2.42 parties), for the most part the scores fit in well with expectations. The most proportional systems – those located in the top third of the table – average about four parties in parliament; those countries located in the middle grouping of the table average 3.2 parties, and the least proportional systems average 2.6 parties. In general, over the post-war period, those countries using non-proportional electoral systems average 2.3 parties, while the PR countries average 3.6 parties (Gallagher *et al*, 1995: 289; Lijphart, 1994: 96).

7.3 The representation of women

There are a number of steps which can be taken to resolve the evident problem of the underrepresentation of women (and other categories of voters) in a political system. For instance, in 1993 the British Labour

Party introduced quota rules on the nomination of women candidates, forcing certain constituency parties to have all-women shortlists in the event of a vacancy. Similar steps have been taken by parties in other countries (Norris, 1994). The Labour Party quota rules proved controversial and, after a successful court challenge, were subsequently dropped in 1996. Quota rules have also been used to ensure the better representation of minority groupings. An alternative method is to provide a certain number of parliamentary seats for minorities, as is the case of the Maori seats in New Zealand (Lijphart, 1986a). Another example was in Ireland in the 1920s and 1930s when the upper house of the parliament included a number of seats for Protestants, designed as a means of placating the minority population in what was predominantly a Catholic state. As was suggested in chapter 4, one other mechanical approach available in PR list systems (particularly with closed lists) is to place a certain number of women or minority candidates high on the party list and thereby ensure that more of them will be successfully elected (Darcy *et al.*, 1994). The remainder of this section deals with the issue of women's representation which has tended to attract most attention.

We saw in the previous section how proportionality affected the number of parties in a system. In similar fashion, there is good reason to expect that the representation of women is also affected by the degree of proportionality of an electoral system. For instance, in recent research on the issue of women's representation, Pippa Norris (1996) has identified a 'modest increase' in the proportion of women MPs in all western democracies, the greatest increase being in proportional systems. She finds a relationship between proportionality and women's representation. All democracies where women comprise at least a quarter of the parliamentary membership use PR list electoral systems, with district magnitude having the greatest effect on women's representation.

Table 7.2 shows a clear relationship between the proportionality of the electoral system and the number of women legislators in the parliament: in general, the lowest representation of women is in those systems ranked low on the index of proportionality. The average representation of women is 16.9 per cent: in PR systems this rises to 20 per cent; in non-PR system it plummets to 10.4 per cent. Inevitably there are some countries where the representation of women is lower or higher than would be expected. For instance, the higher than average proportion of women legislators in non-

Table 7.2 **Women legislators in the lower house**

Country	*Electoral formula*	*Year*	*Women MPs (%)*	*PR ranking*[c]
Sweden	modified Sainte-Laguë[a]	1994	40.3	6
Norway	modified Sainte-Laguë[a]	1993	39.4	19
Finland	d'Hondt	1991	39.0	12
Denmark	LR-Hare[a]	1990	33.0	7
Netherlands	d'Hondt	1994	31.3	3
Germany	LR-Hare[a]	1994	26.3	1
Austria	LR-Hare[b]	1990	21.3	4
New Zealand	FPTP	1993	21.2	33
Canada	FPTP	1993	18.0	35
Switzerland	d'Hondt	1991	17.5	8
Spain	d'Hondt	1993	16.0	31
Italy	LR-Imperiali[b]	1994	15.1	11
Costa Rica	LR-Hare	1994	14.0	22
Ireland	STV	1992	12.1	15
USA	FPTP	1994	10.8	26
Belgium	d'Hondt[a]	1991	9.4	14
Israel	d'Hondt	1992	9.2	10
UK	FPTP	1992	9.2	32
Portugal	d'Hondt	1991	8.7	23
Australia	majoritarian	1993	8.2	30
India	FPTP	1991	7.3	37
France	majoritarian	1993	6.1	36
Greece	LR-Droop[b]	1993	6.0	21
Japan	limited vote	1993	2.7	27
Malta	STV	1992	1.5	20
Average			16.9	

Notes: [a] A two-tiered electoral system. In this case the higher level is decisive so this has been selected (see Lijphart, 1994: Table 2.5).
[b] A two-tiered electoral system. In this case the lower tier is decisive so this has been selected (see Lijphart, 1994: Table 2.4).
[c] For details on the PR ranking, see Table 7.1.
Sources: Table 7.1; Lane (1995); Lijphart (1994); Norris (1996).

proportional New Zealand reflects that country's use of party quotas. Canada is also higher than expected, reflecting a high turnover in the membership of the parliament (Norris, 1996).

The rather disappointing record in Ireland, with just 12.1 per cent women MPs, and, even more spectacularly, the Malta figure of 1.5

per cent women MPs have led some authors to speculate on whether STV might be less effective than other PR systems in promoting the representation of women (Hirczy, 1995; Lane, 1995). In fact, research tends to suggest that it is not so much STV as an electoral system which is to blame for this low proportion of women legislators; rather, it stems from 'the failure of party elites to recruit them in greater numbers' (Lane, 1995: 152). In other words, it is not the electoral system which is at fault so much as the party selection committees (also Kelley and McAllister, 1983).

Not only do proportional systems increase the chances for women to gain adequate representation in parliament, there is also evidence of a possible spillover effect in terms of the general promotion of women's interests, though we should be cautious about attaching too much importance to this. In his comprehensive review of the evidence, Arend Lijphart (1994a: 6) has found that 'better representation of women appears to result in better advancement of their interests [in terms] ... of the quality of family policy'. He refers to an index of family policy which has been developed by the political sociologist, H. L. Wilensky, where, on a scale of 0–12 (the maximum score), the average score for non-PR systems in the postwar years is 2.5; the average score for PR systems is 7.9.

7.4 A possible trade-off: does greater proportionality imply greater instability?

In the previous three sections we have seen a great deal of evidence to support the contention that PR systems tend to produce more proportional results. In general, parliaments elected under proportional electoral systems tend to be more representative of society than is the case for those parliaments elected under non-proportional systems. This can also be seen in terms of the number of parties in the parliament and in the representation of women.

While few would dispute that having a more representative assembly is a good thing, there is considerable dispute over the degree to which such an assembly can operate effectively. As we saw earlier, this issue is usually presented in terms of a trade-off: either you can have a representative parliament which elects a similarly representative government, or you can have strong and stable government; you cannot have both at the same time. This is a very persuasive argument

and involves a number of inter-related points. In this section, we deal with four of the main points supporting the argument that PR promotes instability. These are as follows:

1 PR produces coalition governments which are unstable by virtue of being made up of several parties, and therefore governments tend to change more often.
2 Coalition governments are not accountable, having been formed on the basis of backroom deals between party leaders after the election; the parties' manifesto promises are forgotten in the rush to gain power; the voters' wishes are ignored.
3 PR systems ensure the easy entry of small and extremist parties into parliament, threatening the stability of the government, particularly in those cases where the extremists hold the balance of power in the parliament.
4 PR systems are more complex than non-PR systems, adding an extra burden to the voters and raising the question of whether they really understand what is going on.

To counteract the first main area of criticism, to rigorously assess the stability of government in terms of how long it stays in office is fraught with difficulties (e.g. Laver and Schofield, 1991). What defines a change of government: an election, a new prime minister, a cabinet reshuffle? For instance, according to some definitions, the British Conservatives' replacement of Margaret Thatcher by John Major in 1990 constituted a change of government. Furthermore, allowance must be made for systems like Germany where it is difficult to unseat a government in mid-term or Switzerland where a government cannot be touched in mid-term.

Table 7.3 provides some indication of the variations in government longevity and their relation to coalition (see also Gallagher *et al.*, 1995: 327–8). As expected, with 94.7 per cent of its elections producing a legislative majority for one party, Britain lies on the more stable end of the spectrum. The significant point, however, is that it does not have the *most* stable record. It is equalled or surpassed by Austria, Iceland, Ireland, the Netherlands and Luxembourg, all of which use PR and have far less frequent single-party majorities in parliament. In other words, the evidence in Table 7.3 suggests that while FPTP helps to promote governmental longevity (and hence

Table 7.3 **Parliamentary majorities and government stability, 1945–92**

	Number of governments	*Per cent of governments where one party controls legislative majority*
France	53	1.9
Italy	51	0.0
Switzerland	47	0.0
Finland	39	25.6
Belgium	37	8.1
Denmark	27	0.0
Germany	24	0.0
Norway	23	26.1
Sweden	22	13.6
United Kingdom	19	94.7
Iceland	19	0.0
Ireland	19	36.8
Austria	18	5.6
Netherlands	17	0.0
Luxembourg	15	0.0

Source: Derived from Gallagher *et al.* (1995: Table 12.2).

'stability'), it is quite possible for PR systems to have the same result.

The second main area of criticism of coalition governments is that they are undemocratic. There are two parts to this argument. First, coalitions are produced after the election as a result of meetings in smoke-filled rooms between party leaders. The voters' 'word' on which party or parties should form the government is peripheral to the outcome; what matters is who can strike the better deal. As always it is easy to find examples of coalition governments being formed in this way, but equally there are examples of coalition bargains between parties being struck *before* the election, so voters know what they are voting for. For that matter, in systems where coalitions are the norm, voters may be well aware of the likely coalition arrangements that will emerge after the election. In short, the whole process of coalition formation can be entirely predictable: 'Thus we should not get too bewitched by an image of the political future of most European states being settled not by the electorate but by the wheeling and dealing of party leaders' (Gallagher *et al.*, 1995: 303). Furthermore, as Geoffrey K. Roberts (1975: 221) has noted: 'British experience in 1974 demonstrates that even the plurality system is no

guarantee that post-election manoeuvres may not be required as a preliminary to the formation of a government.'

In addition, coalitions are said to be undemocratic because they make a mockery of manifesto pledges. At least in the case of single-party governments, a voter can hold the government to account if it does not fulfil campaign pledges. The evidence shows that, on the whole, British governments have a good record of implementing manifesto proposals (Rallings, 1987; Rose, 1980). To date, there have been no studies of the record of coalition governments elsewhere in Europe, and '[o]n the face of things we would expect a lower proportion of pledges to be honored in coalition systems, since different coalition partners may well make conflicting pledges on the same theme; thus one is inevitably bound to be broken' (Gallagher *et al.*, 1995: 347). Of course, such a situation need not arise wherever coalition arrangements are agreed before the election, allowing the partners to coordinate their policy proposals.

While FPTP may have a good record in producing safe legislative majorities and therefore in facilitating the implementation of manifesto promises, there is a question mark over the extent to which this is a sufficient indicator of government stability. For instance, the government may be stable because it has a majority of seats, but how *representative* is it? In other words, to what extent is it stable in terms of numbers of votes? The UK government elected in 1992 had the support of just 41.9 per cent of those who voted. By contrast, other governments elected around the same time were far more representative of public opinion, e.g. Austria (1990), 74.9 per cent; the Netherlands (1989), 67.2 per cent; Finland (1987), 58.8 per cent; Ireland (1992), 58.4 per cent; and Germany (1990), 54.8 per cent. Another aspect of 'stability' which is worth noting is the issue of continuity of government policies. The adversarial nature of British politics is characterized by sharp shifts in policy as governments change (Finer, 1975). By contrast, the more 'consensual' nature of coalitional systems – due to the need to strike deals between parties – ensures a far greater degree of policy consistency over time (Lijphart, 1984).

The third main area of criticism of proportional electoral systems is that, by making it easier for smaller parties to win seats in parliament, these systems facilitate the rise of extremist parties. This not only increases the risk of hung parliaments, with governments being hostage to the vagaries of extremist politicians, but it also

Table 7.4 **The electoral performance of the extreme Right in western Europe**

PR rank and country	*Electoral system*	*1980s vote (%)*	*Parties competing in 1990s*
1. Germany	list PR	—	Republicans
3. Netherlands	list PR	0.6	Center Democrats
8. Switzerland	list PR	3.2	Swiss Democrats
11. Italy	list PR	6.4	Italian Social Movement
14. Belgium	list PR	1.3	(Flemish Block), National Front
36. France	majoritarian	6.5	National Front

Note: See Table 7.1 for details on the PR rank.
Sources: Table 7.1; Gallagher *et al.* (1995: 200).

affects the stability of the political system by giving undue representation to politicians and parties whose views are abhorrent to the majority of citizens.

It may be the case that extremist parties are more commonly found in proportional systems, but how much of this is due to the fact that proportional systems are more common than non-proportional systems? Extremist parties can also achieve prominence in non-proportional systems, in particular wherever they can take advantage of a geographical concentration in their support base. As we see in Table 7.4 – taken from a recent comparative assessment of these new parties (Gallagher *et al.*, 1995) – five of the six prominent examples of the rise of extreme right parties have occurred in proportional systems; the sixth case is France, where Jean Marie Le Pen and his National Front have made shock waves in a majoritarian-based system. The other point worth remarking on in Table 7.4 is the lack of any apparent relationship between the degree of proportionality of the electoral system (as shown by the PR ranking) and the relative success of extreme right parties.

There is little doubt, however, that proportional systems can make life easier for extremist politicians and parties. One could always develop a defence of PR along the lines that, in a democracy, all views and opinions should have equal rights of expression and that, morally therefore, such parties should be facilitated, not blocked. One could even make the argument that, by allowing extremists into the parliament, the electoral system might be playing a moderating role,

encouraging such parties to work within the system, rather than seeking to overthrow it.

Of course, such arguments may have a moral force, but they do not really answer the criticism that PR facilitates the entry of extremism. If the objective is to try to prevent extremist parties and politicians from being elected, then what can proportional systems do to meet it? In fact, there are two ways of meeting this objective, both of which are currently in use: one is to apply quota rules (see pp. 70–71), such as the German 5 per cent rule. This ensures that smaller parties are excluded from parliament, and, since extremist parties usually are smaller, this affects them. The second method is to pass a law banning certain categories of parties, as used in Germany to prevent the rise of neo-Nazi parties.

At this point, the critic of proportional electoral systems might raise the following set of objections: these legal blocks on parties are hardly cast-iron guarantees against the danger of extremists 'breaking through'; non-proportional systems provide a more effective, and simpler, means of achieving the same result; and, in any event, operating such legal restrictions is somewhat against the principle of proportionality and is, therefore, contradictory. Each of these points has some validity. The only counter to them is to remind ourselves that, to date, the entry of extremist parties has not exactly been a mad rush (as indicated by Table 7.4), and this places a question mark over the degree to which we need to be unduly concerned about them.

The final area of criticism of PR systems is that, because they are more complex, they are more likely to confuse voters. The voters may not be entirely certain of what their vote means and of how the final election result has been calculated. After all, it is far easier to understand how a politician has been elected because he or she had more votes than anyone else, than it is to make sense of how modified-Sainte-Laguë produced a certain number of seats for your preferred party. If the voters are more uncertain, more confused, then perhaps there is a greater likelihood of their being alienated by the complexities of the system.

One problem with such an argument is that it reveals a rather low expectation of voters. Why should they be more confused under PR systems? And, for that matter, why should it matter that the voters do not understand precisely how the final election result has been produced? Surely, the fact that the result is more proportional should have a higher priority than whether the complexities of the system are

understood. Setting aside these objections, it is useful to examine the evidence of voter trends under different electoral systems. The issues of voter confusion and/or alienation could be said to manifest themselves in terms of greater numbers of invalid votes (also referred to as 'spoiled', or 'informal', votes) or in terms of lower voter turnout. Table 7.5 provides some indication of how these have varied across the different systems in recent years. Needless to say, invalid votes and low turnout can have many causes, such as the rise of anti-party sentiment generally or the fact that, in some systems (notably Switzerland and the USA), voters are called upon to vote too often. In some cases where laws are operating which require voters to turn out to vote (notably Australia, Belgium, Greece and Luxembourg), it is to be expected that the turnout figures are artificially inflated.

There are two points worth making about Table 7.5. First, there is little evidence to support the assumed negative relationship between the proportionality of the electoral system (which, in this instance, can be taken to mean its 'complexity') and numbers of invalid votes or size of turnout. Some of the most proportional systems have both high turnout and low numbers of invalid votes (e.g. Denmark, Germany and the Netherlands). In the case of turnout, if we take the twenty countries where turnout is not compulsory, Britain – with one of the simplest electoral systems – has one of the worst records of turnout; only seven countries have worse turnout figures in recent elections (Finland, France, Ireland, Japan, Portugal, Spain and Switzerland). This tallies with Lijphart's more comprehensive analysis (1994a: 6–7) which reveals that average voting participation is about nine percentage points higher in PR systems than in non-PR systems.

Second, for the most part, the percentages of invalid votes are hardly very significant. Indeed, with the exception of Italy (5.9 per cent), in none of the cases where there is voluntary turnout, does the percentage rise above 1.6 per cent. (The Italian case is somewhat unusual in that, while there is no compulsory voting law as such, there is a practice of recording the names of those people who have not voted.) We would expect higher proportions of invalid votes in compulsory turnout systems where voters are forced to vote against their will (e.g. McAllister and Makkai, 1993), and this is demonstrated in Table 7.5 where invalid votes range between 4.6–6.1 per cent.

Table 7.5 **Invalid votes and voter turnout under different electoral systems**

Country	*Election*	*Invalid votes (%)*	*Turnout (%)*	*PR ranking*[a]
Belgium	1987	6.1	93.4*	14
Italy	1987	5.9	90.5	11
Luxembourg	1989	4.8	87.3*	13
Australia	1987	4.6	93.8*	30
Greece	1989	1.9	84.5*	21
Austria	1986	1.6	90.5	4
Portugal	1987	1.6	72.6	23
Japan	1986	1.5	71.4	27
Spain	1986	1.4	70.6	31
France	1988	1.3	66.2	36
Sweden	1988	1.1	86.0	6
Iceland	1987	1.0	90.1	25
Germany	1987	0.8	84.3	1
Ireland	1989	0.8	68.5	15
Israel	1988	0.8	79.7	10
Canada	1988	0.6	75.5	35
Denmark	1988	0.6	85.7	7
Malta	1987	0.6	96.1	20
New Zealand	1987	0.5	87.2	33
Finland	1987	0.4	72.1	12
Netherlands	1986	0.3	85.8	3
Norway	1985	0.1	84.0	19
UK	1987	0.1	75.4	32
Switzerland	1987	0.0	46.1	8

Notes: [a] For details on PR ranking, see Table 7.1.
* Countries operating compulsory voting rules.
The countries have been ranked in terms of percentage of invalid votes.
Sources: Table 7.1; Mackie and Rose (1991).

In sum, the evidence of a trade-off between the proportionality of an electoral system and measures of governmental or system stability is, for the most part, conspicuous by its absence. On the contrary, it would seem more accurate to conclude from this discussion that, if anything, proportional electoral systems are associated with greater degrees of stability. Indeed, in his comprehensive analysis of the post-war records of different systems in terms of the performance and effectiveness of democracy, Arend Lijphart concludes (1994a: 8):

> the conventional wisdom is wrong in positing a trade-off between the advantages of plurality and PR systems. The superior performance of

PR with regard to political representation is not counterbalanced by an inferior record on governmental effectiveness; if anything, the record of the PR countries on macro-economic management appears to be a bit better than that of the plurality systems – but not to the extent that the differences are statistically significant. The practical conclusion is that PR is to be preferred over plurality since it offers both better representation and at least as effective public policy-making.

7.5 The strategic effects of electoral systems

In some senses, the debate on the proportionality and party system effects of electoral systems is generally complete; it is difficult to see what there is left to say about these issues. Accordingly, in recent years, attention has started to shift to other aspects of possible electoral system influence. It could be argued that all the issues dealt with in the previous sections share in common a concern with the macro-level effects of electoral systems, in terms of how they influence the electoral process in a global sense. An alternative perspective is to assess the micro-level effects of electoral systems. Here the concern is less with the *electoral* effects of electoral systems and more with their *strategic* effects. Specifically, it can be expected that both the politicians and the voters will operate differently under different electoral systems. We begin with the politicians.

In order to assess the strategic effects of electoral systems on politicians it is useful to draw a distinction between *party-based* and *candidate-based* electoral systems: the former personified by closed list systems like Spain (see pp. 72–74 above), the latter including FPTP, STV and open list systems. In essence, this relates to one aspect of ballot structure which has not so far been considered, namely the degree of electoral choice it facilitates; the scope for voters to choose between different candidates. It is not just the question of whether the ballot structure is categoric or ordinal; also relevant is the degree of ordinality of the system, or the degree of 'intra-party electoral choice' it facilitates (Katz, 1980). Where the system allows high levels of intra-party choice (as best represented by STV), there is a tendency for parties to campaign in a decentralized fashion; there is more emphasis on the campaigns of individual candidates and, on occasion, this can result in faction-fighting between candidates. In short, then, there are significant differences in

the nature of a party's campaign depending on the electoral system (Katz, 1980).

This issue can be taken a stage further to assess the nature of parliamentary representation. In chapter 1, a distinction was drawn between the 'principal-agent' and 'microcosm' conceptions of representation, the former supported by opponents of PR, the latter by its proponents. This debate is focusing specifically on the question of representation in the *aggregate*, in terms of the collective assembly of parliament. An alternative perspective is to focus on the representative role of *individual* MPs. In his famous address to the voters of Bristol in 1774, Edmund Burke set out two competing concepts of the role of the representative in his or her constituency: as a *delegate* of the voters or a *trustee*. According to the first type, the MP is said to listen closely to the views of the voters. There are even suggestions that he or she is 'mandated' by the voters to take certain decisions. According to the second type, in the trustee role – favoured by Burke – the MP is elected to act on the behalf of the constituency as a whole. He or she is better placed than anyone to weigh up the often conflicting views of his or her voters, and come to a considered decision, without needing to always check back with the voters.

In party-based electoral systems, where the voter is choosing between parties and not candidates, there is little scope for mandating the politicians (apart, that is, from the mandate given to the parties), and therefore we can expect a greater tendency for politicians to act as trustees. Indeed, in such systems, the principal 'voting-constituency' of the individual politician is not the voters, but rather the 'selectorates' who determine whether he or she will appear on the list, and in which rank position. By contrast, in candidate-based electoral systems, where the MPs are clamouring for precious personal votes (in some cases, such as under STV, in direct competition with fellow party candidates), we can expect a greater tendency for MPs to act as delegates.

Evidence in support of this argument is provided by a survey of the activities of Members of the European Parliament (MEPs). Given that there is a large range of different electoral systems used to elect the MEPs, the European Parliament provides a useful laboratory to test the influence of electoral systems on parliamentary representation. This study found that MEPs elected under candidate-based electoral systems – and particularly systems which were constituency-based (namely the UK and Ireland) – were more

inclined to have regular contact with individual voters. By co
the MEPs elected under party-based systems were prone t
closer links with organized interests. The study concluded that 'individual voters are better – or at least more frequently – served by representatives elected under district based systems and where voters can choose candidates' (Bowler and Farrell, 1993: 64).

Ballot structure can also have an effect on the strategic calculations of voters. In a system where voters can make only a single, categoric decision on which candidate (in the case of FPTP), or party (in the case of closed PR list) to support, the voting exercise is relatively straightforward. The voter selects the appropriate candidate or party and votes accordingly. There is some limited scope for strategic voting under the FPTP electoral system. Take the scenario of a voter who likes a particular candidate but knows full well that this candidate does not stand a chance of being elected. This could be a situation where the candidate in question is expected to come in a bad third in the constituency race. The voter has one of three options: to vote for the candidate anyway despite the fact that this vote will be wasted; not to bother voting, or to vote for the candidate expected to come second, on the grounds that *anyone* would be better than the sitting MP. This last option opens up the possibility of what is referred to as 'tactical voting'. Survey evidence reveals that in the UK an increasing number of voters stuck in 'safe' seats have been making use of this option. According to the analysis of Niemi *et al.* (1992; 1993), the level of tactical voting had risen to about one in six voters in 1987. This figure has been disputed by Evans and Heath (1993), who put the level of tactical voting at closer to 6 per cent. According to subsequent analysis of the 1992 election by Evans (1994), tactical voting was found to have increased to 9 per cent, suggesting that even when using a more conservative measure, the phenomenon does appear to be on the increase.

The scope for strategic voting increases once we start to complicate the electoral process and, in particular, when we take account of more complex electoral systems. For instance, where there are different levels of election occurring at the same time, the voter can take advantage of this situation and vary his or her support for the different parties. This phenomenon of 'split-ticket' voting, or 'ticket-splitting', is particularly acute in the USA where voters increasingly split their votes between the Republicans and the Democrats, providing one indicator of the extent to which American parties are 'in

decline'. According to Martin P. Wattenberg (1994: 23), '[t]icket-splitting has assumed massive proportions compared to the rate just two decades ago, and only a small minority of the electorate now believes that one should vote strictly on the basis of party labels'. Split-ticket voting can be expected wherever there are two or more levels of election coinciding (e.g. on the Australian case, see Bowler and Denemark, 1993). It is also a feature of the two-vote system. As the evidence presented in chapter 5 revealed (see Table 5.3), over the years the German Free Democrats have successfully exploited split-ticket voting to cushion themselves against the danger of falling below the 5 per cent threshold.

There are clear limits to the strategic options available to voters in the systems discussed so far. What is unique about preferential electoral systems – such as the alternative vote, STV and certain types of open list system – is that they provide such large scope for voters to express more complex and nuanced preferences. Voters can switch and change between one candidate and another at will (and, in STV, between one party and another). There is plenty of scope to retain loyalty for the Conservative Party, for example, while, at the same time, giving a preference to a Green candidate whose policies appear attractive. In short, then, under preferential electoral systems (characterized by an ordinal ballot structure) there is great scope for voters to act strategically (Bowler, 1996; Bowler and Farrell, 1996). As we saw in chapter 6, there is plenty of evidence from the Irish case over the years that voters have made use of their vote transfers strategically, for instance, to influence the possible formation of a coalition government (see pp. 124–26).

7.6 The politics of electoral reform: a multitude of preferences

Given the plethora of different electoral systems in operation throughout the world, it is difficult to escape from the conclusion that each one is ultimately the product of particular national circumstances and actors. Despite the best efforts of learned electoral system specialists to offer kindly words of advice to 'electoral engineers' on specific features of existing electoral systems that might warrant incorporation (Lijphart, 1994; Taagepera and Shugart, 1989; Sartori, 1995), it is difficult to disagree with Pippa Norris's (1995a: 4) observation that

'electoral systems are rarely designed, they are born kicking and screaming into the world out of a messy, incremental compromise between contending factions battling for survival, determined by power politics'.

Given the 'messy' nature of electoral reform, what causes countries with long-established electoral systems to opt for reform? Up until relatively recently, with the exceptions of countries like France or Argentina, the bias was very much in favour of keeping the existing electoral system regardless of its faults. The abiding principle was: '[f]amiliarity breeds stability' (Taagepera and Shugart, 1989: 218). Dunleavy and Margetts (1995: 11) suggest that such a view reflected an 'orthodoxy' in the literature favouring the *status quo*: '[s]een against this type of argument, 1993–94 appears as an *annus mirabilis* in which three established liberal democracies – Italy, Japan, and New Zealand – radically changed their voting systems'.

It is difficult to establish exactly what has caused electoral reform to become so high on the agenda of politics. In a review of the debates in Israel, Italy, Japan, New Zealand and the UK, Pippa Norris (1995a: 7) discerns three long-term factors which these countries (or some combination of them) share in common and which, at least in part, appear to have played a role in triggering demands for electoral reform: (1) electoral change (and, in particular, the weakening of electoral alignments); (2) 'political scandals and/or government failures which rock public confidence in the political system'; and (3) the ability of voters (in Italy and New Zealand) to use referendums to force the hands of politicians. Norris comments: 'Long-term conditions created the potential for change, and electoral reform is seen as completing a process of democratization which would put an end to deep-rooted failures in the political system.'

Dunleavy and Margetts (1995) distinguish between 'plurality rule' countries and PR countries, and they suggest that the specific motivations for change have been influenced by the nature of the existing electoral system in each case. In the case of plurality countries, the process of electoral change – and, specifically, the rise of new parties – increased the disproportional tendencies of the electoral system, as well as the amount of attention to these disproportional tendencies. As has been discussed in chapter 2, the FPTP system can operate quite proportionally in a two-party system, such as the USA, but as the system becomes more fragmented (e.g. as shown by the increased

vote of the Liberals/Liberal Democrats in the UK), the inherent disproportional tendencies of the electoral system become evident.

In PR countries, the push for electoral reform has had different root causes. Here, by definition, there is less concern about the proportionality of the system. According to Dunleavy and Margetts (1995), there is, instead, a concern about questions of accountability and parliamentary representation, relating either to the large electoral districts in PR list systems or to the degree of party control over the candidate lists. They refer to four cases: Italy, Japan, Israel and the Netherlands. While in general this is a credible argument, one can take issue with certain aspects of detail. For instance, the (now defunct) Japanese single non-transferable vote system could hardly be categorized as 'proportional' (Shiratori, 1995), and the catalyst for change in Italy and Japan had rather more to do with issues of political corruption generally than with the specifics of parliamentary accountability.

Electoral reform is now a much more realistic proposition than a decade ago. Some countries have changed their system and others (the UK included) are considering it. It is, therefore, both relevant and important to complete our examination of the different electoral systems with a brief assessment on whether we can decide on which is best. There is some disagreement on this issue among the specialists on electoral systems. They tend to break down into two main camps: those who suggest that the aim should be for 'simple' electoral systems, and those who tend to favour more complex electoral systems.

In the first camp, for instance, there is Giovanni Sartori (1995) who favours the (French) second ballot system. Blais and Massicotte (1996) also express a preference for majoritarian systems. In both cases the argument in favour of majoritarian systems revolves around the importance of government stability. There is also the idea that when choosing between electoral systems, a guiding principle should be 'simple is best'. While agreeing with this principle, Taagepera and Shugart (1989: 236) tend, however, to hedge their bets, stating that they have 'no emotional attachment to any electoral system'. Their starting point is that electoral systems are best left alone: '[k]eeping the ills we know of may be better than leaping into the unknown'. However, in the circumstances of adopting electoral rules in a newly democratizing country, Taagepera and Shugart (1989: 236) indicate a preference for small, multi-member constituencies, with some kind of

proportional electoral formula. They also stress the need to keep it simple: there should be 'no complexities such as adjustment seats, thresholds, multi-stage elections, or multi-tiered seat allocations'. Ultimately, in the closing sentence of their book they express a guarded preference for STV.

In the second camp, Arend Lijphart shows no apparent concern about the complexity of certain electoral systems. In his advice to would-be electoral reformers, he stresses the virtues of such features as two-tier districting, national legal thresholds, vote transferability and *apparentement* (Lijphart, 1994: 145). While Lijphart does tend to agree with Taagepera and Shugart that in the case of existing electoral systems the preference should be for 'incremental improvements, not revolutionary upheaval' (ibid.: 151), his advice for 'electoral engineers in the new democracies' is to examine 'all the options' (ibid.: 152). Dunleavy and Margetts are even more explicit in making a virtue of electoral system complexity. They suggest that the reforms of the early 1990s (in Italy, Japan and New Zealand) reflect an 'apparent convergence of liberal democracies' (Dunleavy and Margetts, 1995: 26) towards what they call 'mixed' electoral systems (referred to in chapter 5 above as the two-vote system). Contrary to Sartori's (1994: 75) dismissal of the two-vote system as 'a bastard-producing hybrid', Dunleavy and Margetts (1995: 27) are inclined to see it in a much more positive light: 'It combines the accountability strengths of plurality rule in single-member constituencies with the offsetting proportional qualities of regional or national lists.'

Even in this short review, we can see that there is little agreement between the various specialists: Blais and Massicotte and Sartori favour majoritarian systems (and especially the second ballot system); Taagepera and Shugart reveal a sympathy for STV; Lijphart appears to favour list systems with two-tier districting; Dunleavy and Margetts see a 'convergence' towards the two-vote system. If the specialists cannot agree on which is best, it is hardly surprising that the politicians have come up with such a wide range of different electoral systems.

7.7 Conclusion

The study of electoral systems can reveal a lot about political behaviour. The proportionality of the system plays a significant role

in deciding who wins and who loses in the election game, on the constellation of parties in parliament (and therefore also in government), and on the characteristics of the individual MPs. In turn, this raises questions relating to the degree of stability of the government and political system, though, as we have seen, the evidence in support of the argument that proportionality produces instability is tenuous. In this respect, then, we have a conclusion which favours proportional electoral systems because apparently we can have both! We can have a proportional electoral system and, at the same time, a stable political system.

Is it possible to be more specific about which proportional system is preferable? Apart from the issue of proportionality and its consequences, we have seen how electoral systems can have other effects, in terms of the nature of parliamentary representation, styles of election campaigning by parties and candidates, and the strategic actions of voters on polling day. It is clear that candidate-based electoral systems, and particularly those which facilitate preferential voting, provide greater scope for voters to act strategically when voting; they also help to tie the politicians into a closer relationship with their voters, encouraging closer attention to constituency work. In short, what this amounts to is a suggestion that, of all the existing systems considered in this book, the STV system perhaps comes closest to an ideal electoral system. It combines the virtues of proportionality with those of preferential voting. It is a system which politicians, given a choice, would probably least like to see introduced, but which voters, given a choice, should choose.

Notes

[1] The Least-squares index is calculated as follows: square the vote–seat differences for each party (ignoring 'others' – usually parties with less than 0.5 per cent of the vote); sum them; divide the total by two; and then take the square root (Gallagher, 1991; Lijphart, 1994: 60–1). The principal advantage of this index over the others is that it is not so easily distorted by the presence of small parties (a particular problem with the Rae index), nor has it too many problems with systems containing large numbers of parties (a particular problem with the Loosemore-Hanby index).

[2] The index of 'effective' number of parliamentary parties is calculated as follows: 1 divided by the sum of the squared percentage seats for each party.