Freedom to Choose MPs: Electoral systems, Proportionality and Ballot Structure

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Abstract

Electoral systems are important to determine the personality, intelligence and interests of those elected to serve as members of parliament. However, when comparing electoral systems, most literature has neglected this issue and emphasized and measured other dimensions: disproportionality, effective number of parties, electoral thresholds and district magnitudes. This paper argues in favor of developing an index that measure another characteristic of an electoral system: voter’s freedom to choose. It analyses the criteria that such an index should satisfy and develops one such index that meets the criteria. Finally, this index is computed to compare several electoral systems, taking also into account the other traditional indexes.
It has been seen that the dangers incident to a representative democracy are of two kinds: danger of a low grade of intelligence in the representative body, and in the popular opinion which controls it; and danger of class legislation on the part of the numerical majority, these being all composed of the same class.”

John Stuart Mill, 1861

1. Introduction

Electoral systems are perhaps the most powerful set of rules in representative democracies. There is widespread agreement that they influence, although not mechanically, the number of political parties in parliament, the internal structure of these parties, the political stability, the proportionality of vote shares and seat shares. However, one topic has not received recent attention in the literature – the effect of electoral systems on the type of members of parliament elected. John Stuart Mill (1861), Thomas Hare (1859) and other prominent nineteenth century social reformers were perfectly aware that electoral systems were crucial in determining the personality, intelligence and interests of those elected to serve as members of parliament. However, political scientists in the twentieth century have not paid much attention to this topic.

Representative democracy is always deliberation under regulated competition. In fact the particular rules selected by each electoral system, shape decisively the nature of the political competition that takes place (Pereira, P. T. 2000). The most important dimensions that distinguish electoral systems are the dimension of the representative assembly, the existence or not of a legal threshold, the average magnitude of electoral jurisdictions, the formulae to translate votes into mandates, and the ballot structure.1 These dimensions have joint consequences on certain characteristics of the electoral systems.

One important and widely used empirical measure of electoral systems is the degree of disproportionality. It assumes the value zero if the proportion of votes that each and every party receives is equal to the proportion of seats. Several dimensions of the electoral system impinge on the degree of (dis)proportionality. In general, either the introduction of a legal threshold (or the increase of an existing one), the downsizing of the assembly, or the increasing number of electoral districts, have the effect of diminishing proportionality. In this sense it is possible to roughly maintain the degree of

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1 Arend Lijphart (1994) gives more importance to the former four dimensions, while Douglas Rae (1967,1971) emphasizes the latter three.
proportionality of an electoral system, with simultaneous changes in at least two dimensions. For example some countries, such as Holland and Israel, have only one district, and to avoid an excessive degree of proportionality introduce a legal threshold. On the other hand, other countries have multiple districts, which create effective thresholds so that they do not need to have a legal threshold to attain similar levels of proportionality.

Indexes, such as the proportionality ones, are very useful to analyze and predict the likely effect of changes in certain variables of the electoral systems. The emphasis on proportionality lies, in part, in that it is the main characteristic that separates the two big families of electoral systems: majoritarian and proportional. However, they are less useful when the aim of the analysis is to compare proportional systems.

Political scientists studying comparative politics have developed several indexes to measure the “fragmentation” of parliaments (effective number of parliamentary parties), the effective thresholds produced by district magnitude and the degrees of disproportionality of electoral systems. So far, it has been neglected the measurement of an important characteristic of an electoral system: the “ballot structure”.

The “ballot structure” has to do mainly with the constraints on the revelation of preferences of the citizen voter. Does she have just one or two votes? His he limited to vote in a closed party list or can he order the candidates? Can she vote in candidates of different parties or must she vote in a single party? In short, there are at least three important issues when considering the ballot structure. First, is the domain of choice: in whom can we vote? Second, is the accuracy of vote: to which candidate is our vote going to? Third, is the voter input information issue: does it count just the first, the first and the second, or all the ordinal preference vector of the voter?

There are several reasons why the analysis and measurement of different types of ballot structures is important. In a cross section analysis, it might explain, caeteris paribus, differences in electoral turnout of different countries. It would be expected that where political freedom to choose is higher the turnout would be higher. It could also be tested the hypothesis of a gender effect in politics. Insofar as party politics is male dominated, men tend to predominate in party lists, so it could be expected that when

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2 Some authors have analyzed ballot structures but without measuring it. Rae (1967) uses the term “ballot structure” referring to two possible situations: whether the voter can only vote for candidates in one party or candidates of several parties ("ordinal vote"). Our meaning of “ballot structure” is more encompassing than Rae’s concept (see below). Norris (2004) more recently also analyses ballot structures. Her work is very helpful for what follows. Nevertheless, our classification is somewhat different (see sections 3 and 4 below).
freedom to choose from the electorate is higher, the proportion of women as MPs would be also higher. In a time series perspective it could also be tested whether “freedom to choose” has a significant effect on decreasing turnout in major western democracies. Other hypothesis could also be tested.

Apart from the empirical usefulness of such index, there is a normative dimension, which is also very relevant. When appraising electoral systems, proportionality is considered a relevant normative criterium, for proponents or defenders of proportional systems. As stated above, and discussed in more detail in section 2 below, the disproportionality index should be complemented by a “freedom to choose” index to develop a better understanding of electoral systems and the existing tradeoffs between proportionality, government stability and “proximity” of voters and members of parliament.3

The structure of the paper is the following. In section 2, the indexes usually considered to appraise electoral systems are surveyed with a critical appraisal of the disproportionality index. In section 3, it is clarified the main different sets of ballot structures and how they translate into different approaches to the “freedom to choose”. Section 4 develops criteria that should be satisfied by any such index, develops a particular index and applies it to electoral systems of twenty-nine countries. Section 5 clarifies the importance of the dimension of “freedom to choose” to analyze electoral reform, from a normative point of view.

2. Measuring dimensions of electoral systems

Measuring the dimensions of electoral systems is important either to analyse the characteristics of the system or to predict the effects of a possible reform. Since parliamentary democracy, is based essentially in political parties it is natural that most indexes in the literature use the information of the vote shares or the seat shares in parliament of political parties. It will be argued in this section that, although important, this information is not sufficient for an appropriate appraisal of electoral systems.

3 William Riker (1982) see this tradeoff as a conflict between “liberalism” and “populism” while Mueller (1996) opposes “proportional representation” and “two-party government”. As clarified below more or less “voters’ freedom to choose” can not be accommodated in these dichotomies.
A measure of electoral systems is the index of disproportionality. Several indexes were suggested in the literature. Loosemary-Hanby (1971) suggested the following index:

\[
I_{LH} = \frac{1}{2} \sum_{i=1}^{n} |v^i - s^i|
\]

and Michael Gallagher (1991), more recently proposed

\[
I_{MG} = \sqrt{\frac{1}{2} \sum_{i=1}^{n} (v^i - s^i)^2}
\]

And Bernie Grofman and others suggested that instead of scaling by one half, one should scale the vote-seats deviations by the effective number of parties (Laakso and Taagepera 1979) given by:

\[
N^e = \left( \sum_{i=1}^{n} s^i \right)^{-1}
\]

Therefore, a more appropriate index for a cross-sectional analysis of countries with different electoral systems and different effective numbers of parties could be given by:

\[
I = \sum_{i=1}^{n} s^i \sum_{i=1}^{n} |v^i - s^i|
\]

Another important measure of electoral systems is district magnitude. In proportional representation systems, with several districts, the district magnitude is usually different from one district to another, so that the measure usually used is the average district
magnitude. This measure is simple and meaningful when having non-overlapping districts, but it becomes somewhat blurred when there are regional districts and a national district. In any case it is an essential measure discriminating electoral systems. As the average district magnitude decreases, systems are moving towards the majoritarian system with only one member per district. The probability that a small party can elect a member of parliament is increasingly smaller, given the “mechanical” and “psychological” effects combined.

In order to measure the former effect, political scientists have developed indexes of effective thresholds that can be defined independently of the existence of legal thresholds. A legal thresholds of representation means that if a political party does not have a minimum proportion of votes (e.g. 1% or 5%) it can not elect a member of parliament. Legal thresholds are usual when countries have only one electoral district or just a few in order to avoid an “excessive” fragmentation of parliaments. Most countries do not have legal thresholds but instead they have districts with a limited number of mandates so that it is appropriate to consider effective thresholds. As with disproportionality indexes, there are several measures of effective thresholds. The lower (or inclusion) threshold is the minimum percentage of votes a political party has to have so that, in the most favorable circumstances, can elect a member of parliament. The higher (or exclusion) threshold is the maximum percentage of votes, under the most adverse conditions, a party can have without being able to elect a MP. The effective threshold can be considered as an average of these two values, and is a function of the district magnitude, the number of political parties and the formula to translate votes into mandates. Taagepera and Shugart (1989) and Lijphart (1994 p.26) assume some strong assumptions: “that the number of parties be assumed to be about the same as the district magnitude, that the average magnitude fo the system as a whole be used, that the formulas also be roughly averaged, and most importantly, that the effective threshold be assumed half-way between the upper and lower thresholds”. With these assumptions the high threshold is the Droop quota \( \frac{100\%}{(M+1)} \) and the low threshold depends significantly on the formula considered. Lijphart considers as being (in percentage) one half of the Hare quota \( \frac{100\%}{2M} \), with M for mandates) so that the effective threshold is:

\[
T_{\text{eff}} = \frac{1}{2(M + 1)} + \frac{1}{4M}
\]
This means that as the number of mandates increase the threshold of representation decreases.\textsuperscript{4}

The average district magnitude, the dimension of the assembly, the effective number of parties, the disproportionality and threshold indexes, are the most common measures of electoral systems. They are important measures to compare different systems and to drive electoral reforms but they leave aside an important dimension of electoral systems: the ballot structure. Two systems, may have exactly the same measures in all those indicators but be deeply different if one uses a closed party list ballot and the method d’Hondt and the other the single transferable vote. In the first case the choice is among political parties alone, while in the latter it is also in different personalities. In the first case only the first preference on the political party is relevant, while in the second all the vector of ordinal preferences may be used as an input in the election process.

What seems to be needed is an index that measures the “freedom to choose” of the elector. Before attempting to address this issue it is necessary to clarify the different types of ballot structures.

### 3. Main types of ballot structure.

Electoral systems differ widely in the “input information” associated with the ballot structure for electing members of parliament (MPs). Although there is a wide variety of ballots, it is possible to discriminate ballot structures according to the following dimensions: i) number of votes, ii) vote in parties or in candidates (or both), iii) possibility or not of selecting and ordering candidates, iv) number of options that can be considered in one ballot.

For simplicity, let us start with systems where voters have only one vote. A relevant distinction here is whether voters can vote for individual candidates or in closed party lists. Voting in specific candidates has two important and distinct situations. In single-member districts, each party has one candidate, so that voters choose among candidates of different parties. In multi-member districts, voters can

\textsuperscript{4} This index is higher than the one suggested by Taagepera and Shugart. Note that in the particular case of majoritarian systems, Lijphart index assumes the value 0.5 (50%) which coincides with the higher threshold. He acknowledges that the effective threshold measure is not well adapted to majoritarian systems.
select a candidate across parties and within parties. In order to rank these three situations according to the voters’ freedom to choose candidates, the closed party-list ballot gives no real choice in the hands of the voter, the single-member district gives one-dimensional choice (of candidates), while the multi-member district with preferential voting, gives two dimensions of choice in the hands of the voter. In this last situation, the fact that the voter can choose simultaneously the party and the candidate, gives a greater role for the voters, but parties still play an important role since the menu of candidates is offered by the political parties. The increasing freedom to choose from voters is associated with a decreased freedom from political parties to select candidates, so that as the dimension of members per district decreases in preferential voting the domain of voter choice decreases.

The term candidate-ballot, will refer to the ballot used for a candidate in a single district member, candidate-party-ballot, to the ballot used in a multi-member district, when voters select one candidate within an open party list. In these two types of ballots, voters can choose among different candidates. The term party-ballot will apply to the multi-member closed party list situation. In party-ballot systems it is an exclusive decision of political parties the selection of candidates and the order of election, according to internal rules which, in each country, are different across political parties.

Most ballot structures only reveal the first preference of the voter, expressed as the party she supports (party-ballot), or the candidate she supports (candidate-ballots). This means that not only the voter has only one vote but he just makes one choice.

Other electoral systems, voters can express not only the first preference, but a larger subset of their preference vector within the set of candidates. Voters can choose among a subset of \( \bar{m} \cdot k \) candidates, where \( \bar{m} \) stands for average member per district and \( k \) is the effective number of parties/candidates. This includes three important situations. When \( \bar{m} = 1 \), which is the case of the Australia system known as “alternative vote”, where voters can rank the candidates of several parties, but only one is elected per district. This is the candidate-preference ballot, an the dimension of choice is \( k \). A second case is the open list proportional representation systems where voters may rank all the candidates of only one political party. This is the preference ballot and now the

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5 The same type of ballot can be associated with different electoral systems. The candidate-party-ballot, is associated to two relevant electoral systems. The proportional representation, party list with preferential vote in one candidate (“open list”) and the single non transferable vote (SNTV), where there are multi-member districts, voters vote in one candidate, and those with more votes are elected.
choice dimension is $m$. Finally, there is the more general case where voters can rank all the candidates of all political parties or independents. This happens in the single transferable vote systems of Ireland and Malta, where voters may rank all the candidates, which means that they can rank just one up to $m.k$. Hereinafter, this will be labeled as rank-ballot.  

<table>
<thead>
<tr>
<th>Ballot type</th>
<th>Number of votes</th>
<th>Vote in Party, Candidate (or both)</th>
<th>Maximum number of “Revealed preferences”</th>
<th>Ranking of candidates</th>
<th>Single Member districts (SM) or/and Multi-member (MM)</th>
<th>Who mainly selects the order of election?</th>
</tr>
</thead>
<tbody>
<tr>
<td>candidate-ballot</td>
<td>1</td>
<td>C</td>
<td>1</td>
<td>0</td>
<td>SMD</td>
<td>na</td>
</tr>
<tr>
<td>Candidate-party ballot</td>
<td>2</td>
<td>C, P</td>
<td>1</td>
<td>0</td>
<td>MMD</td>
<td>V</td>
</tr>
<tr>
<td>Party ballot</td>
<td>3</td>
<td>P</td>
<td>1</td>
<td>0</td>
<td>MMD</td>
<td>P</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>4</td>
<td>C, P</td>
<td>$m$</td>
<td>0</td>
<td>MMD</td>
<td>V</td>
</tr>
<tr>
<td>rank-ballot</td>
<td>5</td>
<td>C, P</td>
<td>$m.k$</td>
<td>1</td>
<td>MMD</td>
<td>V</td>
</tr>
<tr>
<td>Cand-pref. ballot</td>
<td>6</td>
<td>C</td>
<td>$k$</td>
<td>1</td>
<td>SMD</td>
<td>na</td>
</tr>
<tr>
<td>dual ballot</td>
<td>7</td>
<td>C, P</td>
<td>1</td>
<td>0</td>
<td>MMD/(MMD-SMD)</td>
<td>V, P</td>
</tr>
</tbody>
</table>

$m$ - average number of members in all districts, $k$ - number of candidates in a SMD.

na - not applicable

Table 1 The main types of ballot structures

Up until now ballot structures with only one ballot have been considered. However, in a significant number of electoral systems, voters have two ballots. This possibility covers two main situations where the voters go to the polls only once and receive two votes each. One is to elect a candidate in a single-member district, the other to elect the candidates in a party list multi-member district. This may lead either to a proportional electoral system (as in Germany) or to a mixed system of representation with some MPs being elected in multi-member PR districts and other MPs being elected in single-member districts (as in Italy). In both cases voters can discriminate between

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6. There are in fact several electoral systems that use rankings in different ways. The more important is the Single Transferable Vote, based in Thomas Hare (1859) pioneer work, that considers first, the first preferences for selecting candidates. There is also the Coombs method who considers first, the last preferences for excluding candidates. They are both ordinal methods and they can be considered under the rank-ballot classification. However, the Borda method, where candidates are ranked and scores added, means that a cardinality is introduced so that it is a method that can not be considered under the same label.

7. There are also electoral systems where voters have more than two votes, but they are not empirically relevant so that, for the sake of brevity, they will not be considered here.
the party and the candidate and may vote for different parties/candidates in the local and regional/national district. Therefore, in the dual-ballot (DB) cases, parties decide over the lists in the multi-member districts, but voters decide across candidates in the single-member districts. Therefore, dual-ballots are associated with mixed electoral systems and share characteristics of the candidate-preference-ballot and the party-ballot.

It is possible to summarize the main types of ballot structures with the help of table 1. Here, three situations are relevant: only political parties select the ordering (party-ballot), parties and voters share the ordering selection (dual ballot), or only voters select the ordering given the choice menu offered by political parties and independents (the other cases).

It is clear that freedom to choose candidates from voters and political parties differ across ballot structures.

4. An index of voter freedom to choose

The discussion above clarified that some systems give more freedom to choose to the voter, and a smaller role to political parties in deciding precisely the order and type of candidates to be elected. Clearly electoral systems with closed party lists, give a very small role to the voter, who just gives a “ticket” to the political party to appoint the selected candidates. On the other hand, a system such as the single transferable vote, gives a wide choice to the voter, both within and across political parties, indicating a much higher scope for voter choice. The issue is how to measure this different scope for choice. Before suggesting a particular index it is useful to clarify some criteria that any index of voters’ freedom to choose should satisfy.

One criterium is decreasing marginal “freedom to choose” as candidates in multi-member districts (MMD) and/or single-member districts (SMD) increase. This means that, caeteris paribus, the index should increase (but at a diminishing rate) if the number of candidates increase, independently if they increase in MMD, in SMD or in both. If, for example, there are six candidates in a single member district or two political parties in three-member districts with preferential voting (voter can choose the
candidate), the choice set has six candidates, and the index should report the same value.\textsuperscript{8}

Another is \textit{monotonicity} with respect to “the prevealed preferences’ proportion”. Caeteris paribus, the index should increase with the proportion of the voters’ revealed preferences in the choice domain.

In order to develop the index it is useful to introduce some notation.

MMD – Multi-member districts
SMD – Single-member districts

\( m^i \) - Number of MPs in district \( i \)
\( c \) - Number of MMD

\( m = \sum_{i=1}^{c} m^i \) - Number of MPs elected in MMD

\( \bar{m} = \frac{m}{c} \) - Average number of MPs in MMD.

\( s \) - Number of MPs elected in SMD and also number of SMD.

\( S = s + m \) - Number of MPs of the lower house of Parliament.

\( \alpha = \frac{m}{S} \) - Proportion of MPs elected in MMD.

\( d = s + c \) - Total number of districts.

\( k \) – Effective number of parties in the lower house.

\( t \) - Number of possible “revealed preferences”.

The number of “revealed preferences” depends obviously on the ballot structure. When the voter can only choose either one candidate, or one political party it assumes the value 1 (see Table 1). When the voter has two votes, or one vote that counts twice (for the party and for the candidate), it assumes the value 2. If the voter can rank the \( \bar{m} \) candidates of a party list, such as in an open preferential voting system with multiple choice, then \( t = \bar{m} \). If the voter can rank the candidates in single member districts, the choice is in fact the number of candidates that appear in the elections. However, to

\textsuperscript{8} In pratice, as seen below, since the effective number of parties in SMD is smaller than in MMD, the choice domain in MMD is greater than in SMD, \textit{provided} voters can choose the party candidate.
avoid the influence of minor candidates in the index, it is considered that the effective number of parties $k$ reveals the real possibilities of expressing ones preferences. Finally, as stated above, in the single transferable vote case voters can rank all candidates across political parties.

$$\begin{cases} 1 & \text{PartyBallot, CandidateBallot} \\ 2 & \text{DualBallot} \\ m - \text{PreferenceBallot} \\ k - \text{Cand.PrefereceBallot} \\ \bar{m}k & \text{RankBallot} \end{cases}$$

A possible index of voters’ freedom to choose, that satisfies the criteria stated above is given by:

$$I_{fc} = \frac{t}{k,m} \frac{m-1}{m} + \frac{t}{k} (1 - \alpha) \frac{k-1}{k}$$

which can be simplified to:

$$I_{fc} = \frac{t}{k} \left( \alpha \frac{m-1}{m} + (1 - \alpha) \frac{k-1}{k} \right)$$

It is a simple index with a straightforward interpretation. It considers the possibilities of having just single member districts, just multimember districts or both. An application of the index to several types of ballot structures and electoral systems is shown in table 2. Several conclusions can be drawn from the index of freedom to choose ($I_c$). First, it is no surprise that party ballot electoral systems are those where the freedom to choose is smaller. Here the role of political parties in selecting candidates and their order of election is total. However, the index enables a ranking of the “party ticket” systems. In Netherlands and Israel there is only one large multi-member district, while the other countries have several districts. The index rank countries inversely with the choice
domain (the product of average district magnitude with effective number of parties) since the vote input ($t$) is the same. Therefore, the “closest” to the citizen voter the higher the index value. In any case these systems lie well below any other electoral system.
<table>
<thead>
<tr>
<th>Ballot Structure</th>
<th>Country</th>
<th>Total Number of MPs</th>
<th>Number of SMD</th>
<th>Number of Districts</th>
<th>Number of MPs of SMD</th>
<th>Prop. of MPs</th>
<th>Mean District Magnitude</th>
<th>Effective Index</th>
<th>Index Prop. (Loosemary-Handy)</th>
<th>Revealed Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Party Ballot</td>
<td>Netherlands</td>
<td>150</td>
<td>0</td>
<td>1</td>
<td>150</td>
<td>100,00%</td>
<td>150</td>
<td>8100</td>
<td>95</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Israel</td>
<td>120</td>
<td>0</td>
<td>1</td>
<td>120</td>
<td>100,00%</td>
<td>120</td>
<td>6300</td>
<td>96</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Norway</td>
<td>165</td>
<td>0</td>
<td>19</td>
<td>165</td>
<td>100,00%</td>
<td>165</td>
<td>4300</td>
<td>95</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Portugal</td>
<td>230</td>
<td>0</td>
<td>22</td>
<td>230</td>
<td>100,00%</td>
<td>230</td>
<td>1040</td>
<td>83</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Romania</td>
<td>343</td>
<td>0</td>
<td>42</td>
<td>343</td>
<td>100,00%</td>
<td>343</td>
<td>73</td>
<td>92</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
<td>350</td>
<td>0</td>
<td>52</td>
<td>350</td>
<td>100,00%</td>
<td>350</td>
<td>23</td>
<td>93</td>
<td>1</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>Belgium</td>
<td>150</td>
<td>0</td>
<td>20</td>
<td>150</td>
<td>100,00%</td>
<td>150</td>
<td>75</td>
<td>96</td>
<td>1</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>Slovenia</td>
<td>90</td>
<td>0</td>
<td>8</td>
<td>90</td>
<td>100,00%</td>
<td>90</td>
<td>1125</td>
<td>54</td>
<td>1</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>Switzerland</td>
<td>200</td>
<td>0</td>
<td>26</td>
<td>200</td>
<td>100,00%</td>
<td>200</td>
<td>769</td>
<td>93</td>
<td>1</td>
</tr>
<tr>
<td>Dual Ballot</td>
<td>Ukraine</td>
<td>450</td>
<td>225</td>
<td>1</td>
<td>226</td>
<td>50,00%</td>
<td>450</td>
<td>199</td>
<td>86</td>
<td>2</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>Denmark</td>
<td>179</td>
<td>17</td>
<td>17</td>
<td>179</td>
<td>100,00%</td>
<td>179</td>
<td>1053</td>
<td>98</td>
<td>10,53</td>
</tr>
<tr>
<td>Dual Ballot</td>
<td>Russia</td>
<td>450</td>
<td>225</td>
<td>1</td>
<td>226</td>
<td>50,00%</td>
<td>450</td>
<td>199</td>
<td>89</td>
<td>2</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>Sweden</td>
<td>349</td>
<td>0</td>
<td>29</td>
<td>349</td>
<td>100,00%</td>
<td>349</td>
<td>1203</td>
<td>97</td>
<td>12,03</td>
</tr>
<tr>
<td>Candidate-ballot</td>
<td>Canada</td>
<td>301</td>
<td>301</td>
<td>0</td>
<td>301</td>
<td>0,00%</td>
<td>301</td>
<td>2</td>
<td>83</td>
<td>1</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>Czech Republic</td>
<td>200</td>
<td>0</td>
<td>8</td>
<td>200</td>
<td>100,00%</td>
<td>200</td>
<td>2500</td>
<td>89</td>
<td>25,00</td>
</tr>
<tr>
<td>Candidate-ballot</td>
<td>UK</td>
<td>659</td>
<td>659</td>
<td>0</td>
<td>659</td>
<td>0,00%</td>
<td>659</td>
<td>1</td>
<td>0,8</td>
<td>1</td>
</tr>
<tr>
<td>Candidate-ballot</td>
<td>USA</td>
<td>435</td>
<td>435</td>
<td>0</td>
<td>435</td>
<td>0,00%</td>
<td>435</td>
<td>1</td>
<td>0,94</td>
<td>1</td>
</tr>
<tr>
<td>Dual Ballot</td>
<td>Hungary</td>
<td>386</td>
<td>176</td>
<td>20</td>
<td>196</td>
<td>54,40%</td>
<td>386</td>
<td>197</td>
<td>0,86</td>
<td>2</td>
</tr>
<tr>
<td>Dual Ballot</td>
<td>New Zealand</td>
<td>120</td>
<td>65</td>
<td>1</td>
<td>66</td>
<td>45,83%</td>
<td>120</td>
<td>182</td>
<td>0,92</td>
<td>2</td>
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<tr>
<td>Dual Ballot</td>
<td>Germany</td>
<td>656</td>
<td>328</td>
<td>1</td>
<td>329</td>
<td>50,00%</td>
<td>656</td>
<td>1</td>
<td>0,94</td>
<td>2</td>
</tr>
<tr>
<td>Preference-ballot</td>
<td>Poland</td>
<td>460</td>
<td>52</td>
<td>52</td>
<td>460</td>
<td>100,00%</td>
<td>460</td>
<td>885</td>
<td>0,82</td>
<td>2</td>
</tr>
<tr>
<td>Dual Ballot</td>
<td>Japan</td>
<td>500</td>
<td>300</td>
<td>11</td>
<td>311</td>
<td>40,00%</td>
<td>500</td>
<td>161</td>
<td>0,86</td>
<td>2</td>
</tr>
<tr>
<td>Dual Ballot</td>
<td>Mexico</td>
<td>500</td>
<td>305</td>
<td>5</td>
<td>305</td>
<td>40,00%</td>
<td>500</td>
<td>164</td>
<td>0,92</td>
<td>2</td>
</tr>
<tr>
<td>Dual Ballot</td>
<td>Thailand</td>
<td>500</td>
<td>400</td>
<td>1</td>
<td>401</td>
<td>20,00%</td>
<td>500</td>
<td>125</td>
<td>0,88</td>
<td>2</td>
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<tr>
<td>Dual Ballot</td>
<td>Taiwan</td>
<td>334</td>
<td>234</td>
<td>2</td>
<td>236</td>
<td>29,94%</td>
<td>334</td>
<td>142</td>
<td>0,95</td>
<td>2</td>
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<tr>
<td>Dual Ballot</td>
<td>Korea</td>
<td>299</td>
<td>253</td>
<td>1</td>
<td>254</td>
<td>15,38%</td>
<td>299</td>
<td>118</td>
<td>0,84</td>
<td>2</td>
</tr>
<tr>
<td>Cand.-Pref-Ballot</td>
<td>Australia</td>
<td>148</td>
<td>148</td>
<td>0</td>
<td>148</td>
<td>0,00%</td>
<td>148</td>
<td>1</td>
<td>0,84</td>
<td>2</td>
</tr>
<tr>
<td>Rank-Ballot</td>
<td>Ireland</td>
<td>166</td>
<td>42</td>
<td>42</td>
<td>166</td>
<td>100,00%</td>
<td>166</td>
<td>393</td>
<td>0,88</td>
<td>13,3986</td>
</tr>
<tr>
<td>Rank-Ballot</td>
<td>Malta</td>
<td>65</td>
<td>13</td>
<td>13</td>
<td>65</td>
<td>100,00%</td>
<td>65</td>
<td>500</td>
<td>0,98</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Columns 2,3,4,6,8,10,12, for all countries except Portugal, Ireland and Malta, from Pippa Norris, CUP 2003

Data for Portugal, Ireland, Malta, and remaining columns collected or computed by the author.

Table 2 Countries ranked by increasing voter's freedom to choose MPs
On the other hand, countries adopting the single transferable vote, have the highest score in this index as should be expected. Australia with the “alternative vote”, reaches a score very close to STV systems, and this can be explained by the high number of “revealed preferences” and the fact that it only has single-member districts, where the voter can really choose and rank candidates.

A somewhat surprising result is the ballot structures associated with “first past the post” systems (UK and USA) which occupy a middle rank in this index. This is mainly a consequence of voters only revealing their first preference. Therefore, they denote a smaller “freedom to choose”, when compared with most dual ballot structures (excepting Ukraine and Russia) associated with mixed electoral systems where there is the personal dimension of voting in candidates in single-member districts, coupled with a vote in political parties.

5. Conclusion

That a measurement of voter’s “freedom to choose” is needed seems out of question, in order to be able to compare and evaluate electoral systems. This paper developed a possible index, that can be applied to all electoral systems and considers the voter “revealed preferences” in relation to the set of candidates. Empirical evidence shows that the index can not be univocally associated with ballot structures, electoral systems, proportionality indexes, effective number of parties or other measures of electoral systems. In fact, one of the aims of developing such an index is to be able to discriminate between similar electoral systems, or similar degrees of proportionality of different electoral systems.

Most discussion around the choice of electoral systems considers disproportionality indexes when the relevant normative criterium is the degree of similarity between vote shares and seat shares. Those who give importance to “populism” are fierce defendants of proportional representation at its highest level.

On the other hand, some authors argue that the higher the degree of parliament “fragmentation”, in part due to highly proportional electoral systems, the lower the government stability. For those who praise political stability above other normative criteria, the index of effective number of parties is a good indicator, since a low value for
this index denotes a less “fragmented” parliament likely associated with more formal political stability.\(^9\)

Another dimension of electoral systems that can not be reduced to proportionality or political “fragmentation” is the type of ballot structure. Some ballot structures give more power to the voters and less to the party elites who choose the MPs candidates, others give exclusive selection power to political parties and finally others have a more balanced weight of voters and parties in the selection process. As the quotation of John Stuart Mill clarifies there is a ‘danger of a low grade of intelligence in the representative body’ and this is related to three distinct factors. The ballot structure, “the popular opinion who controls it (the representative body)”, and the internal competition process within political parties. The first factor defines the relative importance of the other two. The importance of measuring the voters’ “freedom to choose” is precisely to weight the relative importance of voters and political parties in selecting candidates. A priori there is no presumption that a greater voter choice is beneficial. It would be if competition within political parties in selecting candidates is lacking (or distorted) and if citizens are well educated and not easily manipulated by populist candidates. It would not be if barriers to entry into party politics are low and/or citizens are not well prepared for democracy (perhaps because they have lived under an authoritarian regime for a long time). Perhaps not by accident some countries that have been under dictatorships (Portugal and Spain) have adopted the party ballot structure that gives a very small role to the voter.

Empirical evidence shows that more freedom to choose is neither necessarily associated with more political fragmentation (Malta has just two political parties) nor with political unstable governments (as the case of Ireland clarifies). For sure, it is more democratic, according to the word etymology, and it is worth being measured.

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\(^9\) It is worth to distinguish *formal* political stability from *informal* political stability. The formal is basically the capacity of governments to fulfill their normal legislative term (usually four years). It makes an emphasis on the parliament-executive relationship. The *informal* political stability has to do with small political conflict outside parliament (interest groups).
References


Laakso, M. and Taagepera, R. (1979) “Effective Number of Parties: a Measure With Application to West Europe” Comparative Political Studies 12, 3-7


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