## Proportional representation with variablegeometry: Here is how to vote in the 28 member states

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The electoral system represents a fundamental contextual variable to be taken into account when studying an election. In fact, the electoral system can have an influence on the competitive strategies of political actors as well as on voters' voting behaviour (these are the so-called "psychological effects") further than clearly affect the transformation of the votes cast by the electorate into seats (the so-called "mechanical effect"). This is an element to shed light on since we are about to undertake the analysis of European elections.

What is the electoral system for the European Parliament elections? Is there a common system or each member state has its own system? With a decision of the Council (n. 772/2002) approved by the European Parliament (EP) in May 2002, the European Union has introduced some common principles to harmonize the elections for the EP, previously regulated under the jurisdiction of the member states. Undertaking this decision (that incorporates a legislative position already present in the treaty of Amsterdam), the EU has established that the members of the EP have to be elected with a system of proportional representation, using either the party list vote or the single transferable vote system. Member states may decide in the adoption of an election threshold albeit inferior to 5% on national basis. Member states can also decide how to subdivide the electoral areas although this cannot generally affect the proportional nature of the voting system. Based on these general principles, the electoral systems in the 28 member states have become more

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homogenous albeit they leave a lot of room for discretionary measures of the member states. Further than the number of electoral areas and the adoption of an election threshold, the states are allowed to decide on the age of eligible voters and candidates, the electoral formula (namely, the mechanism transforming votes into seats), the election method of single deputies, and the presence of sanctions for those who decide to abstain. Table 1 resumes the main features of the electoral systems for the EP in the 28 member states. Overall, it represents a proportional system with variable geometry and 28 national variants. This produces chaos of formulas and election thresholds that in turn offer different incentives and constraints in the various national contexts.

As we can see, the minimum age to be attained to become eligible voters is 18 years in Europe with the exception of Austria where voting age is 16. Greater variability can be observed for the minimum age of candidates, set at 25 years in Italy, Cyprus, and Greece. All the other countries have set a lower age of candidacy, granting eligibility for candidates at the age of 23 (Romania), 21 (Belgium, Ireland, and the majority of Eastern European countries), or even 18 (fifteen countries, among which France, Germany, the Netherlands, Spain, and Sweden). Moreover, in four countries (Belgium, Cyprus, Greece, and Luxembourg), voting is compulsory although any formal sanction is applied with the exception of Luxembourg. Here, abstainers receive a fine between  $100 \in$  and  $250 \in$  in case of first offence while for repeat offenders, the fine is increased up to  $500 \in -1,000 \in$ .

Besides the different eligibility criteria for voters and candidates and the rules on compulsory vote, the most interesting differences dealing with the evaluation of voting systems refer to the number of electoral districts, the electoral formula, and the election threshold. A comparative analysis of these elements allow us to classify the various systems based on their expected degree of "disproportionality" (Gallagher, 1991), namely of the distortion they are able to introduce in the transformation of votes into seats. A further variable to be taken into consideration for its marked ability to affect expected disproportionality is the number of available seats: the smaller this number, the greater the implicit disproportionality in the electoral system.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> More precisely, what has to be considered is the ratio between the number of electoral districts and the number of seats to be assigned, namely the magnitude of the district (M), given that the seats are allocated with respect to the district-specific result. If in one district, 100 votes are cast and 20 seats are to be assigned (M=20), the maximum implicit threshold of the system would be 5% (100/20=5); maximum five votes are needed to grant one seat. If the seats to be assigned are only 4, then the maximum implicit threshold will be 25% (100/4=25); to receive a seat, maximum 25 votes are needed. We are referring to the concept of maximum threshold because the real implicit threshold will depend on the specific distribution of the votes among the various candidates/parties.

Based on the characteristics mentioned insofar, it is possible to classify electoral systems on an ideal continuum ranging between proportionality and disproportionality. One end of the continuum (proportionality) represents systems with many seats to be assigned in a single national electoral district (very high M) using the Hare quota method without election threshold; the other end of the continuum represents electoral systems characterized by fewer seats to be assigned in many electoral districts (very low M) using D'Hondt formula and high election threshold.

In the vast majority of EU member states, representatives are elected with a unique national electoral district. Exceptions are represented by some big countries as Italy, the United Kingdom, France, Poland, and by two small but culturally heterogeneous countries as Belgium and Ireland where the seats are allocated through various electoral districts to protect local representativeness. Table 1 further reports the average magnitude values (M) in each country. This value is given by the ratio between the total available seats and the number of electoral districts. It can be observed a rather high degree of variability in the average value of M as it ranges between 2.75 registered in Ireland and the 96% computed in Germany. An additional difference can be detected in the electoral formulas. The mechanism of transformation of votes into seats characterized by the widest adoption is the D'Hondt method, used in 17 countries; the Hare quota method (and its variants Hagenbach-Bischoff and Droop) is the most proportional one and has been adopted by six countries; the Sainte-Lague method has been adopted by three countries; and finally, Ireland and Malta adopted the Single Transferable Vote (STV) method for their respective political elections as well. Only half of the countries have introduced an election threshold, generally set at 5% (9 cases<sup>3</sup>) or in fewer cases 4% (Austria, Italy, and Sweden), 3% (Greece), or 1.8% (Cyprus). For what concerns the selection of candidates, about two-thirds (18 out of 28) of the countries introduced a preference vote in their system, although following different specific procedures (open list, flexible list, or even panachage as in Luxembourg), while eight countries vote with a closed list (in which the order of candidates is decided by party officials).

In conclusion, it is possible to categorize the 28 electoral systems based on the previous considerations in terms of expected disproportionality in the transformation of votes into seats. As previously recalled, the electoral system represents a crucial variable to understand a specific party systems and its competitive dynamics. A relatively disproportional system will tend to overrepresent big parties and underrepresent smaller ones. As a conse-

<sup>&</sup>lt;sup>3</sup> In France, the election threshold of 5% is applied at the district level.

	Compulsory Expected vote tionality	NO Average	YES Average	NO	YES High	NO High	NO Average-Low	NO High	NO Average-Low	NO Average-High	NO Very Low	YES Average-Low	NO Very High	NO Average-Low	NO High	NO Average-High	YES High	NO High	NO
	Election of sin- gle deputies	Preference	Preference	Preference	Preference	Preference	Preference	Preference	Preference	Closed list	Closed list	Closed list	STV	Preference	Preference	Preference	Preference	STV	Preference
Der states	Election threshold	4%	ON	0 N	1.8%	5%	ON	ON	ON	5%	Q	3%	ON	4%	5%	5%	ON	0 N	Q
in the 28 mem	Electoral formula	D'Hondt	D'Hondt	Hare	Hare	D'Hondt	D'Hondt	D'Hondt	D'Hondt	D'Hondt	Sainte-Laguë/ Schepers	Droop	STV	Hare	Sainte-Laguë	Hagenba- ch-Bischoff	D'Hondt	STV	D'Hondt
	Average M	18	7	71	9	Ε	13	9	13	9.25	96	21	2.75	73*	8	Ξ	9	9	26
	N electo- ral consti- tuencies	-	ო	-	-	-	-	-	-	8	-	-	4	5	-	-	-	-	-
	Eligible candidate	18	21	21	25	18	18	21	18	18	18	25	21	25	21	21	18	18	18
mode mu	Eligible voters	16	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	N seats	18	21	17	Ŷ	Ξ	13	9	13	74	96	21	11	73	8	Ξ	9	9	26
	Country	Austria	Belgium	Bulgaria	Cyprus	Croatia	Denmark	Estonia	Finland	France	Germany	Greece	Ireland	Italy	Latvia	Lithuania	Luxembourg	MHigh	Netherlands

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Country	N seats	Eligible voters	Eligible candidate	N electo- ral consti- tuencies	Average M	Electoral formula	Election threshold	Election of sin- gle deputies	Compulsory vote	Expected didispropor- tionality
Poland	51	18	21	13	3.9231	D'Hondt	5%	Preference	Q	Very High
Portugal	21	18	18	-	21	D'Hondt	Q	Closed list	ON	Low
United kingdom	73	18	18	12	6.0833	D'Hondt**	Q	Closed list*	0 Z	High
C z e c h Republic	21	18	21	-	21	D'Hondt	5%	Preference	OX	Average
Romania	32	18	23	-	32	D'Hondt	5%	Closed list	ON	Average
Slovak	13	18	21	-	13	Hagenba- ch-Bischoff	5%	Preference	0 Z	Average-High
Slovenia	8	18	18	-	8	D'Hondt	Q	Preference	0 Z	Average
Spain	54	18	18	-	54	D'Hondt	Q	Closed list	0 Z	Very Low
Sweden	20	18	18	-	20	Sainte-Laguë	4%	Preference	0 Z	Average
Hungary	21	18	18	-	21	D'Hondt	5%	Closed list	ON	Average
* In Italy seats ** The system	adopted in	the elector	al district of	Northern Ire	eland is the	single transferabl	e vote (STV).			

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quence, these incentives will promote strategic behaviours both on the supply side (creation of electoral cartels and merges among small parties) and on the demand side (voters will tend not to support small parties and to prefer suboptimal political options with concrete possibilities of winning seats). We have thus quantitatively evaluated the 28 electoral systems in terms of their expected disproportionality by making use of a 7-points scale (ranging from "very high" to "very low"). A case of extreme proportionality is represented by Germany, whose 96 representatives in the EP are elected in a unique electoral district without election threshold. The electoral systems of Spain and-to a lesser extent—Netherlands, Portugal, and Bulgaria result highly proportional as well. On the other end of the scale, we situated Ireland, whose average M of 2.75 makes this system particularly disproportionate even in the absence of an election threshold. Similarly to Ireland, Poland results as a highly disproportionate system, considering its average M of 3.9, the adoption of the D'Hondt formula to assign the seats, and the national election threshold of 5%. Further countries characterized by a highly disproportionate system are Cyprus, Estonia, Malta, and Luxembourg. These countries elect only six deputies in the EP, and thus, the implicit threshold is so high to make irrelevant the adoption of an explicit one. France and the United Kingdom present respectively a "medium-high" and a "high" degree of disproportionality for a different reason. In these two countries, the high number of available seats is allocated in the various electoral districts (average M of about nine for France and six for the U.K.); moreover, the election threshold has been set at 5% (at the district level in France and at the national level in the U.K.), and the formula to allocate the seats is the D'Hondt method. Far less disproportionate results the Italian system: in this case, notwithstanding the territorial subdivision into five electoral districts, the allocation of the seats is conducted on national basis, and the election threshold is set at 4% with the Hare quota method.

## References

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