

Understanding the d'Hondt method

Allocation of parliamentary seats and leadership positions

SUMMARY

The allocation of seats in collegiate organs such as parliaments requires a method to translate votes proportionally into whole seats. The 'd'Hondt method' is a mathematical formula used widely in proportional representation systems, although it leads to less proportional results than other systems for seat allocation such as the Hare-Niemeyer and Sainte-Laguë/Schepers methods. Moreover, it tends to increase the advantage for the electoral lists gaining most votes to the detriment of those with fewer votes. It is, however, effective in facilitating majority formation and thus in securing parliamentary operability.

The d'Hondt method is used by 16 EU Member States for the elections to the European Parliament. Furthermore, it is also used within the Parliament as a formula for distributing the chairs of the parliamentary committees and delegations, as well as to distribute those posts among the national delegations within some political groups. Such proportional distribution of leadership positions within Parliament prevents domination of parliamentary political life by only one or two large political groups, ensuring smaller political groups also have a say on the political agenda. Some argue however that this limits the impact of the election results on the political direction of decision-making within Parliament and call for a 'winner-takes-all' approach instead.

Many national parliaments in the EU also distribute committee chairs and other posts proportionally among political groups (either using the d'Hondt method or more informally). Other Member States, however, apply a 'winner-takes-more' approach with only some committee chairs with particular relevance to government scrutiny being reserved for opposition groups, while in the US House of Representatives committee chairs have to come from the majority party.



In this briefing:

- Proportional representation and allocation of seats
- How d'Hondt operates
- The effects of d'Hondt
- The d'Hondt method in the elections to the European Parliament
- Allocation of chairs and other leadership positions in parliaments
- Main references

Proportional representation and allocation of seats

Electoral systems based on proportional representation emerged with the rise of representative democracy and the extension of electoral suffrage. While the primary aim of non-proportional systems (plurality and majority systems) is to produce stable governments, proportional representation seeks to ensure that the electoral output (votes) is reflected as closely as possible in the electoral outcome (seats). In 1899, Belgium became the first country to adopt a list system of proportional representation, followed by Finland and Sweden.

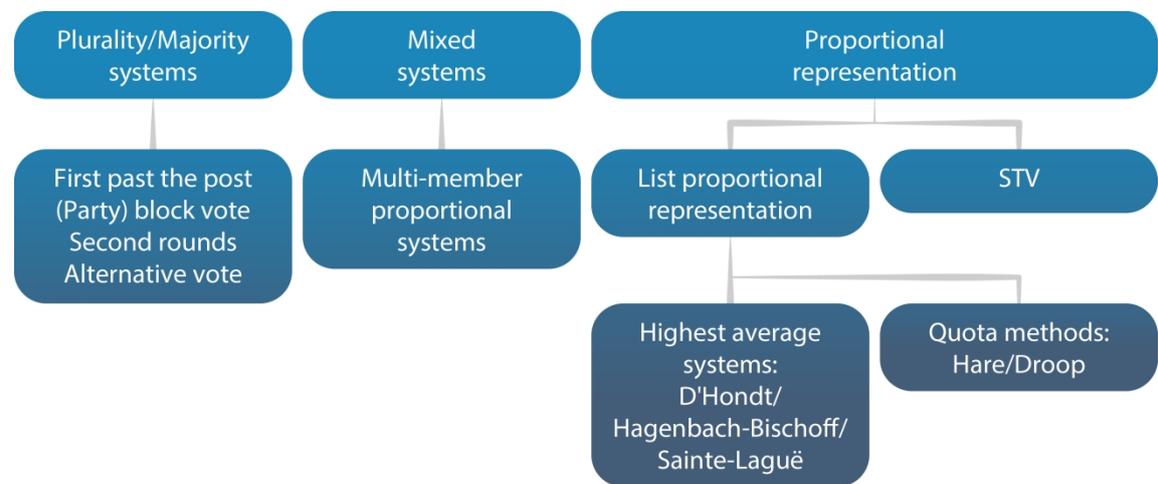
Proportional representation, together with the development of party politics, made it necessary to draw up mathematical methods for the allocation of seats. This is essential, since when several political parties run for election, the proportional share of the seats in a collegiate organ, based on the share of the votes cast, is only rarely a whole number. The challenge therefore lies in allocating an often pre-determined number of whole seats while ensuring that the collegiate organ is a 'microcosm' reflecting as closely as possible the composition determined by the electorate,¹ and likewise, that parliamentary organs (committees, bureau, etc.) are a mirror image of the political plurality in the parliament as a whole.

Proportional representation, plurality and majority systems

Whilst proportional representation systems try to minimise the distortion between a party's share of the vote and its share of parliamentary seats, plurality systems allocate seats to the candidate or candidates with the most votes, rather than assigning seats according to vote shares. In majority systems, candidates are not only required to win a plurality of votes, but rather an overall majority. In mixed systems (such as the multi-member proportional system), representatives are elected through a combination of proportional representation and plurality systems.

There are two main types of proportional representation system: list proportional representation – for which a number of different methods are used – and single transferable vote (STV).² For elections to the European Parliament, a system of proportional representation is prescribed by EU law (Article 1(1), [Direct Elections Act, as amended in 2002](#)).

Figure 1 – Electoral systems



How d'Hondt operates

There are two types of methods for list systems with proportional representation: **larger remainder systems** (also called 'quota methods') using subtraction (Hare and Droop methods)³ and **highest average systems** using divisors (d'Hondt, Hagenbach-Bischoff and Sainte-Laguë methods).

The d'Hondt method is named after Belgian lawyer and mathematician, Victor d'Hondt, who developed it in the 1880s as an attempt to better accommodate in parliament Belgium's different linguistic groups and political traditions. However, in the United States it is known as the 'Jefferson method' since Thomas Jefferson proposed its use back in 1792 for elections to the US House of Representatives.

Under the d'Hondt method, each party's total number of votes is repeatedly divided, until all seats are filled, by the divisor *1 + the number of seats already allocated* (i.e. 1, 2, 3, 4, etc.). Each division produces an average, and the list with the 'highest average vote' is awarded the first seat, the next highest the second seat, and so on, until all seats have been allocated (In Table 1, the highest average is marked in bold at each stage of the allocation process).

Table 1 – Simulation for the allocation of eight seats, with three parties

	Party A		Party B		Party C	
Votes received	10 000		6 000		1 500	
Order of seat allocation	Divisor	Average	Divisor	Average	Divisor	Average
1st	1	10 000	1	6 000	1	1 500
2nd	2	5 000	1	6 000	1	1 500
3rd	2	5 000	2	3 000	1	1 500
4th	3	3 333	2	3 000	1	1 500
5th	4	2 500	2	3 000	1	1 500
6th	4	2 500	3	2 000	1	1 500
7th & 8th	5	2 000	3	2 000	1	1 500
–	6	1 667	4	1 500	1	1 500
Total seats allocated		5		3		0

The d'Hondt method – like other highest average systems, but in contrast to subtraction or quota methods – not only allows the quantitative distribution of seats, but also their distribution according to an order of precedence, which is of particular importance where, for instance, parliamentary committee chairs and other leadership positions are distributed, enabling political groups to choose the posts of most interest to them according to the **order** resulting from the d'Hondt calculation. Precisely because the highest average systems also establish the order of seat allocation, the case could arise that there are two (or more) equal highest averages in particular for the allocation of the last seat. In this case, the seat allocation is either decided by lot, or by referring back to the number of votes received in the elections.

The effects of d'Hondt

Proportionality vs functionality

When allocating seats in a collegiate body the principle of the **equality of votes** has to be respected. This means not only that each voter has the same number of votes, but also that, as a general rule, each vote should have the same chance of influencing the outcome of the elections. The same applies regarding parliamentary seats: each seat needs in principle to have the same possibility to be converted into membership of a parliamentary organ. Any departure from the equality of votes or seats in terms of their chances to influence the final results has to be justified by the need to guarantee higher-ranking imperatives such as the prevention of excessive parliamentary fragmentation.

In this context, strict proportionality in seat allocation is not only impossible since this would lead to the allocation of parts of seats instead of whole seats, but is problematic also in terms of the **operability and functionality** of collegiate organs. This is because strict proportionality may increase fragmentation and thus impede the formation of stable parliamentary majorities.

The d'Hondt method leads to a less proportional allocation of seats than other formulae such as the Hare/Niemeyer or Sainte-Laguë/Schepers (modified d'Hondt) methods. In general, it tends to reinforce the advantage of the electoral lists gaining higher numbers of votes to the detriment of those that get fewer votes. It should be noted however that all methods for the allocation of seats necessarily lead to a certain number of votes not being taken into account for the allocation of seats, so that a certain degree of disproportionality is inherent to all electoral formulae.

In addition to different electoral formulae for the allocation of seats modifying a strictly proportional result, electoral thresholds are the prime example of a component in electoral systems leading to the ineffectiveness of certain votes (those cast for a party not reaching the threshold), with the aim of preventing excessive parliamentary fragmentation and thus of ensuring parliamentary functionality.

As well as the need to allocate whole seats, whose number is often pre-established (although in a few systems the number can be reduced or increased within certain margins, depending on voting results), methods for the allocation of seats seek to ensure a parliament's operability through facilitating **majority formation**. It should be noted in this sense that, in contrast to many other methods, d'Hondt ensures that an absolute majority in votes is always translated into an absolute majority in seats.⁴ On the other hand, while the d'Hondt method guarantees that a party that gains a majority of the votes will also be allocated the majority of seats, a party that has not obtained the majority of votes can nonetheless gain a majority of seats if all other parties have gained fewer votes.

Apparentement

Due to the fact that votes cast for smaller parties can be 'wasted' as they do not amount to enough to obtain a seat, in some countries such lists are allowed to 'pool' their 'wasted' votes, if they announce this before the election, so that they can obtain a seat together, although they had run as separate electoral lists. This is the case in the Netherlands and in Switzerland for example.

Further electoral elements with relevance for proportionality

The electoral formula used for the allocation of seats is not solely responsible for the degree of proportionality of the allocation of seats. Further elements of the electoral system – alone or in interaction with each other – also have a bearing on the

proportionality of the electoral outcome, such as the size of the constituency and of the collegiate body, the type of the ballot (closed, open, semi-open lists or single transferable vote), and the number of parties (whether a two-party system or several smaller parties are standing).

Constituency size and number of seats to be distributed

Of particular relevance is the **size of the constituency**. The larger the constituency, the more proportional is the allocation of seats compared with the share of votes cast,⁵ which is why many countries have chosen their entire national territory as one single constituency. Sub-division into multiple constituencies leads therefore to increasing disproportionality. It seeks however to promote a stronger bond between voters and representatives than in the case of a single (or multiple) large constituency.

Moreover, the higher the number of seats to be distributed, the higher the degree of proportionality, thus **larger assemblies** have a more proportional distribution of seats than smaller ones.

Overhang seats

In some countries, the size of the legislative assembly is pre-established only to a certain extent and the number of seats can be increased depending on the electoral results. This is the case in Germany, for instance, where **overhang seats** (*Überhangmandate*) can derive from the interaction between first and second votes, with the German electoral system combining proportional representation with majority voting (mixed-member proportional system). So that overhang seats do not lead to other parties losing seats, the total number of members of the Bundestag is increased beyond the initial 598 seats by the equivalent number of overhang seats.

The d'Hondt method in elections to the European Parliament

Member States are free to choose the electoral formula for the allocation of their share of seats in the European Parliament as long as the formula used ensures proportional representation (Article 1(1) [Direct Elections Act, as amended in 2002](#)). In 16 EU Member States, the d'Hondt method (or slight variations of it) is used for elections to the European Parliament: Austria, Belgium, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Hungary, Luxembourg, Poland, Portugal, Romania, Slovenia, Spain and the United Kingdom (except in Northern Ireland where STV is used).⁶

Whilst in the majority of Member States the national territory forms a single electoral constituency for the European elections, six Member States divided their territories into multiple constituencies for the [2014 European Parliamentary elections](#): Belgium, France, Ireland, Italy, Poland, and the United Kingdom.

Allocation of chairs and other leadership positions in parliaments

D'Hondt method within the European Parliament

[Parliament's Rules of Procedure](#) establish that 'the composition of the committees shall, as far as possible, reflect the composition of Parliament', and that 'the proportionality of the distribution of committee seats among political groups must not depart from the nearest appropriate whole number' (Rule 199 of the Rules of Procedure, and interpretation to it). As for the **distribution of the posts of committee chairs and vice-chairs**, Rule 15(2) states that they should be elected taking into account 'the need to ensure an **overall fair representation of Member States and political views**'.⁷ To this end, political groups distribute chairs and vice-chairs of parliamentary committees and delegations among themselves through an informal agreement using the d'Hondt

method, although the Rules of Procedure do not prescribe its use. The d'Hondt formula is also used to distribute those posts among the national delegations within some political groups.⁸

However, the proportionality sought with this informal agreement among the political groups has to be confirmed formally in a **majority vote** for the election of the committee bureaux in the committees' constituent meetings (Rule 204 RoP). As a result, committee Members can still vote down a candidate for the chair or vice-chair from a political group that has been informally 'assigned' the post according to the calculation using the d'Hondt method, and choose another one, from either the same or another political group, during the constituent meeting. This was the case in the constitution of several committees in the current, eighth, term, with the EFDD group's candidates losing the committee vote against candidates from other groups.

Parliament's Vice-Presidents are also nominated taking into account the size of the different political groups, although not in a strictly proportional manner through application of a mathematical formula.⁹ Since they are elected in plenary in the order of the number of votes received (usually in several rounds, under Rule 17), smaller political groups that have not forged an agreement with other political groups will normally not obtain a vice-presidency.

Allocation of reports in EP committees

The appointment of rapporteurs is not regulated in the Rules of Procedure, but committees use variations of a points system. Each political group receives a quota of points proportionate to its size. Reports and opinions are then distributed by the political group coordinators on the committee between the different political groups. The number of points each subject is worth depends on the importance of the topic and the type of report.¹⁰

Parliament's proportional allocation of chairs and vice-presidencies prevents the domination of parliamentary political life by only one or two large political groups, thus also giving smaller political groups a say on the political agenda. This is all the more important given the fact that no political group has yet had an absolute majority in the European Parliament. Experts have argued however that the combination of a proportional electoral system for the elections to the EP and the proportional allocation of positions within Parliament to a great extent prevents the outcome ('result') of the elections making a sufficient impact on decision-making within Parliament.¹¹ Therefore, some propose to replace the use of the d'Hondt system for the distribution of chairs and the (relatively) proportional distribution of vice-presidencies with a 'winner-takes-all' or at least 'winner-takes-more' system, so as to better reflect the political preferences of the majority of voters and to ensure a direct effect of the electoral results on agenda-setting and the direction of policy-making by Parliament.¹² A look at the rules and practices of national parliaments shows that this change would not be an exception in parliamentary practice (see below).

It should be noted in this context that there appears to be some tendency in the current term away from a strictly proportional distribution of leadership posts towards favouring a winning coalition, giving smaller political groups part of such a coalition a better standing than with the strict application of d'Hondt.¹³

Allocation of posts within national parliaments

The method for the allocation of seats on parliamentary committees, chairs, rapporteurships and so on is only very rarely expressly established in parliamentary

rules of procedure, but is most often determined by parliamentary practice and subject to negotiations between political groups.

Some national parliaments use the d'Hondt method too when allocating seats on their parliamentary committees or when distributing different official posts such as vice-chairs, committee chairs, etc. In the Finnish Parliament for instance, committee chairs are first quantitatively distributed immediately after the elections using the d'Hondt method, so that the number of chairs received by each parliamentary group is proportional to the number of parliamentary seats that it has gained. Then the largest parliamentary group chooses first which committee chairs it wants, then the second largest group, and so on until all chairs have been allocated.¹⁴ The German [Bundestag](#) calculates the distribution and the order of distribution of seats on parliamentary committees based on the Sainte-Laguë/Schepers method (modified d'Hondt method). In Austria, both the seats on parliamentary committees and the chairs and deputy chairs are distributed between the parliamentary groups according to the d'Hondt system, whereas rapporteurships are determined on a case-by-case basis.¹⁵

In some EU Member States' national parliaments, chairs of parliamentary committees are distributed proportionately among political groups but based on a political agreement between groups rather than using a specific formula. This is the case in Belgium, Denmark, Luxembourg, the Netherlands, Portugal,¹⁶ Romania, Sweden and for the select committees of the United Kingdom's House of Commons.¹⁷

The proportional distribution of committee chairs is however not the rule in all national parliaments. In the French *Assemblée nationale*, the bureau of each standing committee reflects the political make-up of the House and represent all of its members (Article 39(2), [Rules of Procedure](#)), which does not mean however that the chairs of the committees have to be distributed proportionately too. In fact, of the eight standing committees, seven are chaired by members from the majority political group, the only exception being the Committee on Finance. The Rules of Procedure provide that the Committee on Finance is chaired by a member from an opposition party (Article 39(3)). A similar rule aimed at ensuring more effective parliamentary scrutiny over the executive can be found in the Swedish Parliament, where the chair of the Committee on the Constitution is always held by a member from an opposition party. In Germany, parliamentary practice reserves the chair of the Budget Committee for an MP from an opposition group.

In some Member States, committee chairs are simply elected by majority, meaning that the political group holding the most seats in parliament (and thus in the committee concerned) provides the chair. However in some cases, like Spain, Slovakia, Latvia and Lithuania, majority parties do concede some of the chairs to oppositional party, although not in a strictly proportional manner, applying rather a 'winner-takes-more' approach. The most distinct case of majority party domination of leadership positions is the US House of Representatives, where all committee chairs have to be from the majority party ([Rule 5\(c\)\(1\) of the Rules of Procedure](#)).

Main references

Donatella M Viola (ed.), *Routledge handbook of European elections*, Routledge, 2016.

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Friedrich Pukelsheim, *Proportional Representation – Apportionment Methods and Their Applications*, Springer International Publishing, 2014.

Jochen Rauber, 'Das Ende der Höchstzahlen? Zuteilungsmethodik für Parlaments- und Ausschusssitze auf dem verfassungsrechtlichen Prüfstand', *NVwZ*, 2014, pp. 626-630.

Endnotes

- ¹ According to John Adams as quoted in HF Pitkin, *The concept of representation*, 1967, University of California Press, p. 60, a legislative assembly 'should be an exact portrait, in miniature, of the people at large as it should think feel, reason and act like them'.
- ² Under this system the voter has one vote but can rank the candidates in order of their first, second, third, etc. choice. To be elected, a candidate needs to receive a minimum number of votes.
- ³ 'Quota methods' operate by calculating a quota based on the relation between the total number of valid votes cast and the number of seats to be distributed. The quota is equivalent to the number of votes a party needs in order to win a seat. The number of votes cast for each electoral list is divided by the quota in order to calculate how many seats are to be allocated to each list. Usually any places which remain to be elected when no list has a complete quota left are distributed to the lists with the highest remaining fraction of a quota. See Electoral Reform Society, [European Democracies](#), London 2004.
- ⁴ J Rauber, '[Das Ende der Höchstzahlen? Zuteilungsmethodik für Parlaments- und Ausschusssitze auf dem verfassungsrechtlichen Prüfstand](#)', *NVwZ*, 2014, p. 628.
- ⁵ D Farrell, *Electoral systems: a comparative introduction*, 2011, p. 74.
- ⁶ D M Viola, *Routledge handbook of European elections*, London, 2016, p. 735. In the Netherlands, a quota system is used in a first step, whilst the remaining seats are allocated according to a highest average calculation. In France, the Hare system, combined with d'Hondt, is used in the overseas territories.
- ⁷ Article 15 of the Rules of Procedure is applicable to the committee bureaux by virtue of Rule 209.
- ⁸ A. Teasdale, '[d'Hondt system](#)', in A. Teasdale and T. Bainbridge, *The Penguin Companion to European Union*, 4th edition, London, 2012 (additional website entry).
- ⁹ See for the distribution of vice-presidencies and committee chairs in the EP, G. Sabbati, [European Parliament: Facts and Figures](#), European Parliamentary Research Service, March 2016.
- ¹⁰ See also R. Corbett, F. Jacobs, M. Shackleton, *The European Parliament*, John Harper, London, 2011, pp. 157-159.
- ¹¹ S. Hix, *What's wrong with the European Union and how to fix it*, Cambridge 2008, p. 139.
- ¹² Ibidem. pp. 142-143.
- ¹³ It should be noted in this sense that whilst the ECR group (70 seats at the beginning of the term) has one chair in the current legislature, ALDE managed to secure three chairs (with 68 seats in July 2014). See G. Sabbati, [Size of political groups in the new EP](#), European Parliamentary Research Service, July 2014.
- ¹⁴ European Centre for Parliamentary Research and Documentation (ECPRD), [ECPRD request No 2099](#) on the distribution of chairmanships in parliaments, 2012 (accessible only from within the EP).
- ¹⁵ [ECPRD request No 2158](#) on the Set-up and membership of parliamentary committees, 2012 (accessible only from within the EP).
- ¹⁶ In Portugal, rapporteurships for legislative dossiers are distributed according to the d'Hondt method and in some cases on an ad hoc basis.
- ¹⁷ H. White, '[Selecting the select committees – what happens next?](#)', Institute for Government, May 2015.

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