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Power ranking of the members of the Agricultural Committee of the European Parliament

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ABSTRACT

We aim to identify the most influential members of the Agricultural Committee of the European Parliament (COMAGRI). Unlike previous studies that were based on case studies or interviews with stakeholders, we analyse the voting power of MEPs using a spatial Banzhaf power index. We identify critical members: members whose votes are necessary to form winning coalitions. We found that rapporteurs, EP group coordinators and MEPs from countries with high relative Committee representations, such as Ireland, Poland or Romania are powerful actors. Italy emerges as the most influential member state, while France seems surprisingly weak.

JEL codes: D71, D72, Q18

Keywords: European Parliament, Common Agricultural Policy, voting games, Banzhaf index, voting game over a convex geometry

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Az Európai Parlament Agrárbizottsága tagjainak a befolyásossági rangsora

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ÖSSZEFOGLALÓ

A célunk, hogy azonosítsuk az Európai Parlament Agrárbizottságának (COMAGRI) a legbefolyásosabb tagjait. Eltérően korábbi tanulmányoktól, amelyek mélyinterjúkon, vagy esettanulmányokon alapulnak, mi egy térbeli hatalmi indexet, az ún. Banzhaf indexet használunk a szavazási erő meghatározására. Azonosítjuk a kritikus szavazókat, akik egy nyerő (döntőképes) koalíció létrehozásához szükségesek. Rapportőrök, csoport koordinátorok és a bizottságban felülreprezentált országok, mint pl. Írország, Lengyelország, vagy Románia képviselői befolyásos szereplőknek bizonyultak. Olaszországnak vannak a legbefolyásosabb képviselői, ezzel szemben a francia delegáltak meglepően gyengék.

JEL: D71, D72, Q18

Kulcsszavak: Európai Parlament, közös mezőgazdasági politika, konvex szavazási játékok, Banzhaf index

Power ranking of the members of the Agricultural Committee of the European Parliament

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The power ranking of the members of the Agricultural Committee of the European Parliament

Abstract

We aim to identify the most influential members of the Agricultural Committee of the European Parliament (COMAGRI). Unlike previous studies that were based on case studies or interviews with stakeholders, we analyse the voting power of MEPs using a spatial Banzhaf power index. We identify critical members: members whose votes are necessary to form winning coalitions. We found that rapporteurs, EP group coordinators and MEPs from countries with high relative Committee representations, such as Ireland, Poland or Romania are powerful actors. Italy emerges as the most influential member state, while France seems surprisingly weak.

Keywords: European Parliament, Common Agricultural Policy, voting games, Banzhaf index, voting game over a convex geometry

Discussion about the content as well as the future of the Common Agricultural Policy (CAP) of the European Union (EU) has been high on the political agenda in the last decades and generated much academic interest as well. CAP reforms have been subject to comprehensive analysis both from political and policy aspects. In his landmark book, "The Perfect Storm" on the 2003 Fischler reform, Swinnen (2008) shares the view that this has been the most radical reform of the CAP since its creation. Ten years later, another, more moderate CAP reform, the "Imperfect Storm" (Swinnen, 2015a) took place. Swinnen (2015a) identifies four key domains of this reform: first, the drivers and the assessment of the reform (Swinnen, 2015b); second, the factors influencing policy outcomes, including internal, like the Multi-annual Financial Framework (Matthews, 2015), as well as external factors, like the WTO negotiations (Swinbank, 2015); third, the content, including direct payments (Sahrbacher, Balmann, & Sahrbacher, 2015) or the so-called greening (Erjavec, Lovec, & Erjavec, 2015); finally, the institutional aspects, with focus on the role of the European Parliament after the entering into force of the Treaty of Lisbon (Fertő & Kovács, 2015; Olper & Pacca, 2015). The 2013 CAP reform was the first one in which the EP was a co-legislator with the Council, which partly explains why the decision-making of the CAP in the European Parliament is mostly unexplored.

Throughout the last CAP reforms and the EU's legislation on agricultural policy, scholars focused on the external and internal stakeholders, their motivations and influence on the policy and legislative outcomes. Similarly, the driving forces, constraints and achievements of reforms have been part of the political and academic discourse. On the other hand, the decision-making of the CAP, the role and influence of various stakeholders on the legislative

outcome is still unexplored. This is especially true for the European Parliament and its members.

This article aims at filling this gap by analysing the role of the Members of the European Parliament's Committee on Agriculture and Rural Development (COMAGRI) in the CAP legislation through quantifiable power scores. Contrary to previous studies on intra-EP structures, like committees or EP Groups (Whitaker, 2005), we concentrate on the decision-making at the level of individual EP members.

In particular, we provide the *voting power* ranking of the MEPs – both Members and Substitute Members – of COMAGRI based on their policy positions along two dimensions: ideological spectrum of national parties and the local significance of agriculture. Our choice is supported by results that show MEPs voting behaviour influenced by ideology (the MEP's party group affiliation) and also nationality (Cencig & Sabani, 2017). We position members in the *ideology space* given by these dimensions. For the first, we use the left-right measure (ParlGov[1]) of the members' national political parties (Döring & Manow, 2018); for the latter, the share of employment in agriculture in the NUTS 2 region of the MEP's place of birth. The Banzhaf index we use calculates the probability that a given voter was instrumental *if* the committee has made a decision.

[1] The ParlGov dataset is a well-established source that contains various kinds of information on all EU and most OECD democracies. The left/right classification of party positions is created by expert surveys. The definition of left/right follows standards established by (Castles & Mair, 1984), (Huber & Inglehart, 1995) and (Kenneth & Laver 2006).

Influence on EU decision making

There is a broad literature on the role and influence of EP committees. Westlake (1994, p. 191) describes the Standing Committees as the "legislative backbone" of the European Parliament. Many authors emphasise the increasing role of committees in shaping EU legislation. Besides, Mamadouh and Raunio (2003) find that the allocation of the rapporteurship measures the power of Committee members[2]. Neuhold (2001) argues that the key players in the EP committees are the committee chairmen, the vice-chairs – holding the formal positions in the committees –, as well as the rapporteurs, also draftsmen of opinion, shadow rapporteurs and party coordinators in the committees. Kaeding and Obholzer (2012) also emphasised the crucial role of EP group coordinators in the legislative process at the EP committee level. In line with Benedetto (2005), Marshall (2010) also states that rapporteurs are one of the most powerful actors of the committee, but also added that the distribution of influence among ordinary members of the committees is still unclear. Ringe (2009) provides a general description and analysis of EP politics focusing on the individual level.

Regarding the role of COMAGRI in the EP, Greer and Hind (2012) concludes that the COMAGRI plays a key role in agricultural legislation. Fertő and Kovács (2015) corroborated this finding. Pokrivcak, Crombez and Swinnen (2006) looked at the impact of voting rules and Member States' preferences in COMAGRI in connection to the Common Agricultural Policy reforms.

[2] Note that Mamadouh and Raunio investigate the legislative powers of the committees, hence they focus on the activity of MEPs when measuring power.

In the following, we introduce our methods: the power index approach and the policy space of the voters, then present our data and results. We close by a brief discussion of the results.

Methodology

The Agricultural Committee and its members can easily find themselves in the line of fire of the various interest groups supporting or rejecting genetically modified products and agricultural subsidies – just to mention two of the hottest topics. In a representative democracy, the agency problem naturally arises, and MEPs are prime targets for lobbyists – if they are not already agents of one of the interest groups. Whom should a non-governmental organisation try to convince to get the greatest effect? Or what is the number of MEPs a lobbyist needs to likely succeed? Our model enables us to answer these and similar questions. Here we introduce and explain the spatial voting power method we use.

Groups of voters having the majority to make decisions are called *winning coalitions*; groups that do not are *losing*. We are interested in the *critical* voters, who can turn a winning coalition into a losing one by changing their `yes' votes to `no'. Voting power is the probability that one is a *deal maker*. We compare the power of different MEPs and are therefore interested in the conditional probability: what is the probability that a particular voter is a deal maker *if* a deal has been made – another stream of literature focuses on comparing different voting mechanisms and so the (unconditional) probabilities of being able to make a deal. Felsenthal, Machover & Zwicker (1998) call the first power as a *prize*- or P-power, the second power as *influence*- or I-power. For P-power the voters share a fixed prize, such as the

overall benefit from lobbying effort and the total power always adds up to 1; I-power estimates the probability that the implemented policy follows the sole interest of a particular voter and is often normalised in such a way that a dictator's power is 1. P-power models the office-seeking, while I-power the policy seeking behaviour of voters (Felsenthal & Machover, 2004, p. 11). I-power can not only compare the powers of different players in a voting situation but also how these change across different mechanisms. Since the mechanism does not change in the studied period, for computational convenience, we focus on P-power. Henceforward, we use the expressions 'influence' and 'power' interchangeably as a reference to P-power. P-power is commonly measured by the Shapley-Shubik index (Shapley & Shubik, 1969), but, incidentally, for non-weighted voting, the Shapley-Shubik index coincides with the normalised version of the Banzhaf measure: the Banzhaf index (Banzhaf, 1965), which is easier to calculate.

We are not the first to measure the actors' voting power in legislative and political decisions (Felsenthal & Machover, 2004). In the context of EU, most papers deal with the power of Member States in the Council of the European Union (Herne & Nurmi, 1993) – better known by its former name: the Council of Ministers – studying the fairness of voting weights before the Lisbon Treaty (Le Breton, Montero, & Zaporozhets, 2012), and how existing members' powers changed due to the extensions of the Union (Felsenthal & Machover, 1997; Hosli, 1993) or changes in the voting rules (Barr & Passarelli, 2009; Felsenthal & Machover, 2001; Kóczy, 2012). It is important to stress that most of these models study voting power *a priori*, that is, without taking policy positions into account, motivated by the assumption that we do not know the subject of voting and therefore the voters' policy positions in advance. When we study voting in the COMAGRI, this approach is neither informative nor appropriate:

members have clear policy positions that we can approximate by their political inclinations and their agricultural affinity. We present a model with this information taken into account.

We model voting situations by simple cooperative games, where *power* is the payoff. Formally, let N denote the set of voters and $\mathcal{W}$ the set of *winning coalitions*. We are interested in those members i of winning coalitions $C \in \mathcal{W}$ that can turn the coalition into losing $C\backslash\{i\} \notin \mathcal{W}$ by refusing their support. We call such voters *critical*. Let $\mathcal{W}_i = \{C \subseteq N \mid C \in \mathcal{W}, C\backslash\{i\} \notin \mathcal{W}\}$ denote the set of winning coalitions where voter i is critical and let $\eta_i = |\mathcal{W}_i|$ denote the number of such coalitions. Then the Banzhaf index is defined as

$$\beta_i = \frac{\eta_i}{\sum_{j \in N} \eta_j}.$$

Calculating the power indices of symmetric voting bodies is not very interesting as the powers are also symmetric. In this case, however, we have two aspects that break the symmetry: we know who the voters are and – to some extent – how they will vote; moreover, there is a substitution mechanism to replace absent members by substitutes — the first we model by spatial voting, the second by a Monte Carlo simulation.

Preference space

The standard version of the Banzhaf index ignores the voters' policy preferences. It practically assumes that cooperation among any group of MEPs is equally likely. This could not be further from reality! It is reasonable to assume that a decision – a CAP policy position – that is acceptable to both a liberal (ALDE) and a conservative (ECR) MEP, is acceptable to

more central, moderate (S&D and EPP) MEPs too, *as long as they have a comparable interest in agriculture*. In the so-called *games on convex geometries* (Edelman, 1997) it is presumed that only *convex coalitions* may form. Convexity means that for each dimension of the ideology space, we specify a range (i.e. an interval), and only those members whose positions fall into both ranges may form a coalition. The Banzhaf index has already been extended to games over convex geometries (Bilbao, Jiménez, & López, 1998).

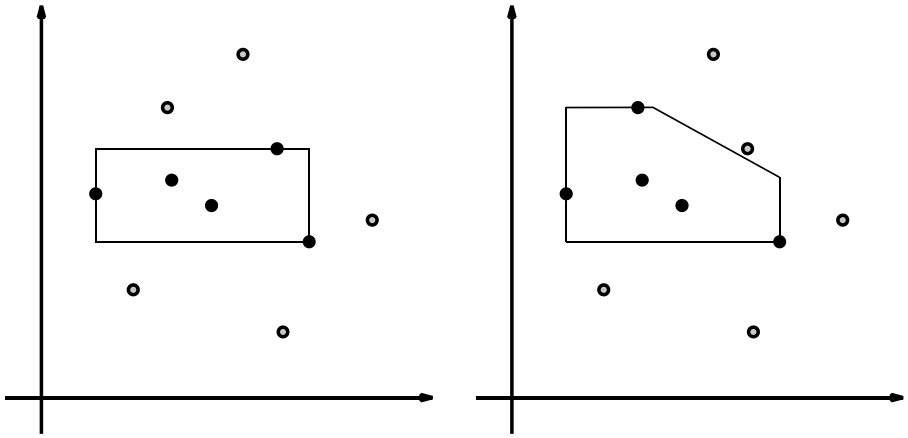


Figure 1 Convex (on the left) and concave coalitions (on the right). Note that the coalition on the right is convex in the Euclidean sense, but not as a voting group.

To establish the convex geometry, we treat COMAGRI members as points on the ideology space where the horizontal axis (x) represents the ideological position of the national parties of COMAGRI members, and the vertical axis (y) represents the share of agricultural employment of their NUTS 2 regions. In the two-dimensional ideology space for each convex coalition, we can draw a rectangle containing all members, and *no other voters* (see Figure 1). For expositional simplicity, we identify coalitions with the smallest of such rectangles: for each side of the rectangle, there is at least one voter located on that side. Note that it may

happen that a voter is located at the corner of a rectangle thereby fixing two sides of it. Hence, the boundary of a rectangle can be formed by 2, 3 or 4 voters.

Where are the critical players? A coalition is winning if it has at least the majority of votes. If one of the voters switches her vote to 'no' – by our convexity assumption this can only be one of the voters on the boundary of the rectangle – the new coalition becomes losing only if it minimally meets the majority requirement. Therefore, a voter is critical if the coalition is *minimal winning*, and he is located on the boundary of the corresponding rectangle. We calculate the influence of each COMAGRI member by finding all rectangles corresponding to minimal winning coalitions and checking how frequently a particular MEP is on the boundary of such rectangles. Kóczy and Sziklai (2015) applied a similar methodology for the power ranking of the cardinals in the Papal Conclave in 2013.

Example

Let us illustrate the method by the following example. Figure 2 shows a policy space with seven actors labelled with capital letters. We look for convex coalitions with at least 4 members, but for a player to be critical, the coalition must be losing without the player. In short, we are looking for coalitions with *exactly* 4 players. Algorithmically, we fix one node, then iterate through the nodes to set each side of the rectangle.

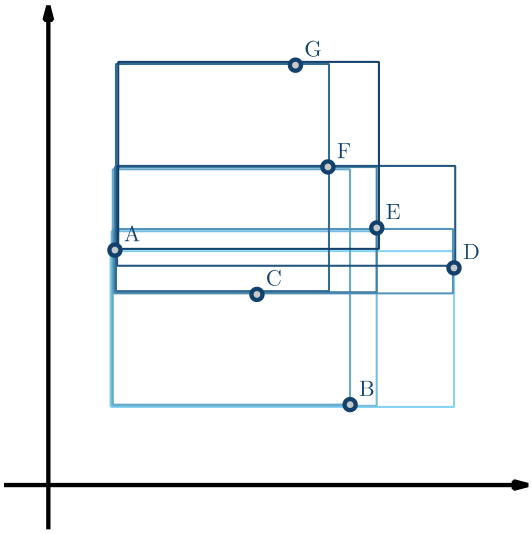


Figure 2 Convex minimal winning coalitions through voter A. For sake of clarity the rectangles are slighlty shifted.

Let us look at Player A. The coalition ABEF has precisely 4 players, but it is not convex, as any proposition that both A and E and both B and F find acceptable is also acceptable for C. We argue that the coalition is actually ABCFE – and in this coalition, A is no longer critical.

Now let us find all 4-player coalitions containing A. The algorithm explained by Kóczy & Sziklai (2015) is a little more formal, but the main idea is to try to find rectangles by adjusting the sides. We first take the most Southern point, B, the most Eastern point, D and then try to find a matching on the Northern side for the rectangle so that (i) A is contained in it, (ii) it is convex and (iii) it has exactly 4 members. Fortunately, ABCD is such a rectangle. There are no other options, so we take the next most Eastern point, E. Again, ABCE is a suitable rectangle. The next most Eastern point is B, but this time we must go as high up North as F to get ABCF. The next most Eastern point is F, but if F is on the Eastern side of the rectangle,

[KL1] megjegyzést írt: Az A a sarkon van!

then B is not included, so this may not work; therefore all the options are exhausted with B. The next most Southern point is C, here we find rectangles ACDE, ACEF and ACFG. For D we only have ADEF, at last for A, AEFG. A is not critical in any other rectangle.

When all the options with A are exhausted, one must look at the next most Western point C and start generating further rectangles: BCDE, BCEF, BCFG, CDEF, and CEFG. Next comes G with BEFG and DEFG. Finally, F with BDEF. With this we have generated all the rectangles, now we only need to check which members correspond to internal and which to borderline points. Eventually we get 8, 8, 8, 7, 8, 7, 6 instances when A to G are critical, consequently the Banzhaf-indices are 0.153, 0.153, 0.153, 0.134, 0.153, 0.134, and 0.115.

Replacements

In the committees of the EP, a system of substitution ensures sufficient participation. When a member is absent, a substitute replaces her. At such a time the member does not participate in the voting and therefore cannot be critical either. Instead, the substitute votes and as a voter, he may also be critical for certain issues. We must, therefore, consider substitutions and substitutes.

Each committee has a pre-selected list of substitutes. There is no official priority ranking among substitutes; there are no first, second, etc. substitutes, the mechanism to invite substitutes is not regulated and is not transparent. Past participation data, if available, may help us to estimate a member's or a substitute's availability: his or her probability of

participation in voting; otherwise, we must work with uniform probabilities. Irrespective of the probabilities used we must consider every possible constellation, that is, every possible instance of the Committee where absent members are replaced by substitutes. Considering that a voting session consists of 46 representatives in the 2014-2019 EP term where some members are replaced with substitute members, the number of different possible configurations is astronomical. Thus, we estimate the Banzhaf indices by using a *Monte Carlo method*.

Monte Carlo simulation

Since the number of possible member-substitute constellations is very high (over $4x10^{26}$ for a 46-member Committee), an exact calculation is not feasible, so we estimate the Banzhaf indices by using a *Monte Carlo method* we explain in the following.

Based on the roll-call votes of the first half of the 2014-2019 EP Term, we derive participation rates for each Member and Substitute. Given the observed probabilities on the Members' and Substitutes' participation, we randomly generate an instance of the Committee: First, we determine for each member if he or she is present, using the probability of presence. Substitutes are selected proportionally to their probability of presence.

Since some of the members are substituted, different winning coalitions can form. For such an instance, we can efficiently calculate the Banzhaf index. We take the average of these indices for 100 000 such simulations as an estimate of the expected Banzhaf index (see Appendix A). The method is not entirely new, Matsui & Matsui (2000) have already applied it

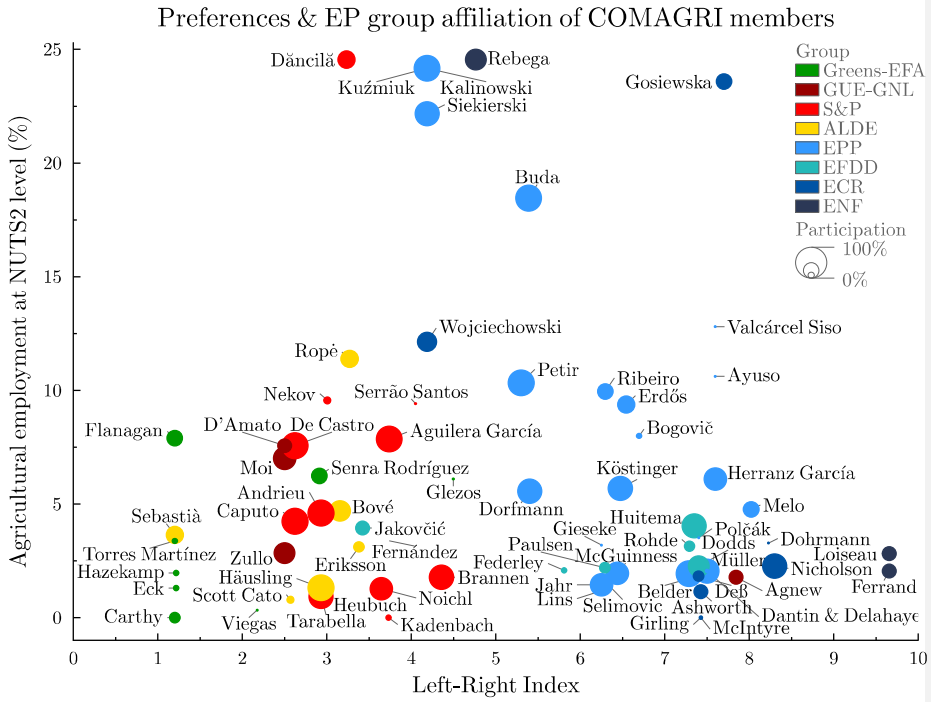
for weighted majority games, but we are the first to use it for voting games over convex geometries. In the following, we explain how we create the preference space. Note that generalised weighted voting games (Kóczy & Pintér, 2011) are also defined using an expected value over different voting scenarios, but with a fixed probability of absence, the model can be studied analytically.

In the 8th EP term between 2014 and 2019, the COMAGRI had 46 Members and the same number of Substitute Members. The ideological and national distribution of Members and Substitutes in EP Committees reflect the weight of EP Groups and the Member States in the Parliament. It is important to note that substitution in EP committees is not on a Member-to-Substitutes relationship, but any Substitute Member can replace any missing (standing) Member. In the power ranking of COMAGRI Members and Substitutes, we finally ranked 71 members: the number of MEPs who participated in the 15 COMAGRI roll-call votes in the first half of this EP-term.

Data

The dataset of this analysis contains three sources of information. The first source of the dataset is the ideological position of the MEPs based on the left-right ideological orientation of their national parties (Döring & Manow, 2016). The second pillar of the dataset is the percentage of agricultural employment (Eurostat, 2015) in the NUTS2 region of the MEP. These two constitute the two dimensions of the ideology space. The third source of information is the participation rates of the members derived from roll-call votes of heterogeneous

legislative proposals and amendments in the COMAGRI during the first two years of the 8th EP-term (see Figure 3).



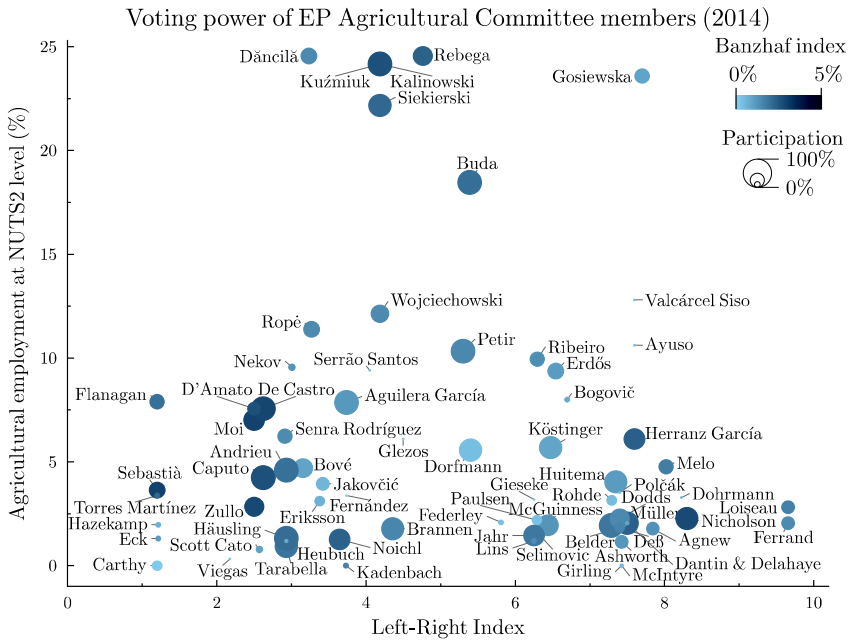
3. FIGURE THE POLITICAL GROUP AFFILIATION, POLICY POSITION AND PARTICIPATION RATE OF COMAGRI MEMBERS.

Results

At first glance, the results, presented in detail in Appendix A, are in line with our intuition. Members with low absence rates are generally ranked higher than members with high absence rates. Similarly, high substitution probability comes with better ranking. The interesting cases are the exemptions. How come that some members with relatively high absence value, like Rosa D'Amato[3] (47%) and Jordi Sebastiá (33%) are influential while a member like Dorfmann (7%) who is almost always present is virtually powerless? The answer comes from the spatial position of these players. Kóczy and Sziklai (2015) observed that players close to the centre of the ideology space are rarely critical, while those with relatively extreme positions in one dimension and moderate positions in the other one are likely to do well and become an influential member. Our results (see Figure 3) corroborate this finding. COMAGRI members with either extreme ideological or extreme agricultural positions[4] are the most influential ones. In particular, 8 out of the top 10 MEPs in our ranking – Sebastiá, Moi, De Castro, Zullo, Caputo, Kuzmiuk, D'Amato, Herranz García, – are all located in such policy positions.

[3] Note that D'Amato is a Substitute, which explains her 'high' absence. It is more surprising that she is present in 53% of the votes.

[4] 'Extreme agricultural position' refers to the fact that according to our measure the member in question is positioned on the extremes, meaning that he or she was born in a NUTS 2 region with either a very high or very low share of agricultural employment and thus is presumed to have either a very high or very low agricultural affinity. It does not mean that the member is a fundamentalist.



4. FIGURE VOTING POWER OF THE EP AGRICULTURAL COMMITTEE MEMBERS (2014)

Formal positions

Previous research reveals the importance of 'strong' persons in EU politics and decision-making. Now, we provide an overview of this fact for the European Parliament's agri-committee. First, we look at the formal Committee positions, the chair and the vice-chairs. We see in Appendix A that in the power ranking, Chair Siekierski takes the 14th position (among the 71 members). He is the most powerful member of those with formal positions.

Three out of four vice-chairs, Eric Andrieu (19th/71), Viorica Dăncilă (30th/71) and Janusz Wojciechowski (33th/71), are ranked above average while Clara Eugenia Aguilera García (41th/71) is ranked slightly below. The average rank of members with formal positions is 27.4

which is considerably higher than 36 - the average rank for the whole Committee. In this sense our empirical findings are in line with Neuhold (2001).

There are three differences that we should note. Firstly, Neuhold (2001) identified key players by analysing interviews and reviewing legislative files, which is a notably different approach than what we follow in this paper. Secondly, here the relative importance of members with formal positions comes mostly from their conscientiousness – they are almost always present (have 13.3% absence rate versus 24.8% for the rest). In comparison, their average rank without substitutions is slightly below group average (28.2 versus 23.5). Finally, with the exception of Eric Andrieu, all members with formal positions have distinctively high agricultural affinity. Given the purpose of the Committee this bias is hardly surprising.

Rapporteurships

We also look at the rapporteurships in the legislative files we analyse. We see that only two MEPs – De Castro and Nicholson – have more than one legislative proposal. Our calculations show that the ranking of rapporteurs – bold in Appendix A – concentrate on the top of the list. In particular, De Castro takes the 3rd position, and 7 out of 12 rapporteurs, Nicholson (5th), Dantin (10th), Sikierski (14th), Hausling (16th), Tarabella (20th) and Melo (23th, all out of 71) are in the first half of the ranking. The average rank of rapporteurs (26.45) is again significantly higher than the average rank of the whole group (36). We conclude that members with high voting power tend to become rapporteurs. These results seem to confirm findings of earlier research revealing the importance of rapporteurs in the EP committees

(Benedetto, 2005; Ringe, 2009, Marshall, 2010). Again, let us emphasize the differences between our and the existing methodologies. Benedetto (2005) draw his conclusions based on case studies, while Ringe (2009) and Marshall (2010) rely mostly on interviews with stakeholders and partly on the quantitative analysis of legislative votes.

Party coordinators

Party coordinators of EP Groups in the committees – underlined in Appendix A – play a vital role in the legislative process (Kaeding & Obholzer, 2012; Neuhold, 2001). Our analysis reinforces this view as five out of seven EP Group coordinators are in the first half of the ranking with an average rank of 26.14. Four of them rank in the top 25, including the coordinators of the two main EP Groups, EPP (21st) and S&D (3rd).

Table 1 The participation of the different EU member states in the COMAGRI also compared to their power in the Council of the European Union (Kóczy, 2012)

Country	#MEPs	Share of MEPs	Avg. part. Rate	Weighted share of members	Share of (weighted) subs	Share of weighted MEPs	Share of total power	Share of power in the Council of the EU
Italy	5	10.87%	92%	13.10%	10.15%	12.72%	14.51%	10.24%
Germany	5	10.87%	91%	12.93%	11.49%	12.74%	13.19%	14.43%
Spain	4	8.70%	79%	8.94%	6.51%	8.63%	11.10%	7.56%
UK	5	10.87%	70%	10.02%	9.00%	9.89%	10.28%	10.95%
Poland	5	10.87%	83%	11.76%	0.00%	10.24%	9.68%	6.43%
France	5	10.87%	76%	10.79%	2.49%	9.72%	9.50%	11.27%
Romania	3	6.52%	82%	7.03%	0.00%	6.12%	5.92%	3.74%
Portugal	1	2.17%	60%	1.71%	14.18%	3.32%	3.74%	2.28%
Ireland	3	6.52%	62%	5.32%	0.00%	4.64%	3.51%	1.44%
Netherlands	2	4.35%	57%	3.22%	7.66%	3.79%	3.46%	3.27%
Austria	1	2.17%	93%	2.65%	3.83%	2.80%	2.60%	2.02%
Croatia	1	2.17%	100%	2.85%	10.15%	3.79%	2.15%	1.39%
Sweden	2	4.35%	37%	2.08%	11.49%	3.30%	2.12%	2.18%
Belgium	1	2.17%	93%	2.65%	0.00%	2.31%	1.94%	2.42%

Lithuania	1	2.17%	67%	1.91%	0.00%	1.66%	1.50%	1.20%
Bulgaria	0	0.00%	0%	0.00%	5.17%	0.67%	1.28%	1.82%
Hungary	1	2.17%	67%	1.91%	0.00%	1.66%	1.13%	2.21%
Denmark	1	2.17%	40%	1.14%	1.34%	1.17%	1.05%	1.59%
Slovenia	0	0.00%	0%	0.00%	3.83%	0.50%	0.82%	1.09%
Czech Republic	0	0.00%	0%	0.00%	1.34%	0.17%	0.38%	2.30%
Greece	0	0.00%	0%	0.00%	1.34%	0.17%	0.12%	2.37%
Finland	0	0.00%	0%	0.00%	0.00%	0.00%	0.00%	1.57%
Slovakia	0	0.00%	0%	0.00%	0.00%	0.00%	0.00%	1.56%
Latvia	0	0.00%	0%	0.00%	0.00%	0.00%	0.00%	1.08%
Estonia	0	0.00%	0%	0.00%	0.00%	0.00%	0.00%	0.98%
Cyprus	0	0.00%	0%	0.00%	0.00%	0.00%	0.00%	0.92%
Luxembourg	0	0.00%	0%	0.00%	0.00%	0.00%	0.00%	0.88%
Malta	0	0.00%	0%	0.00%	0.00%	0.00%	0.00%	0.85%

Nationality

Cencig & Sabani (2017) argue that the members' nationalities may play a role in their voting behaviour. In Table 1, we present a detailed overview of participation for the different Member States. The first two columns show how many of the 46 representatives a country delegates to the Committee, both in absolute and in percentage terms, followed by their average participation rates in the 15 roll-call votes. With an average participation of about 76%, those countries with higher attendance effectively increase their representation (Column 4) making Italy the most significant player taking five out of the top ten positions. Column 5 shows the choice of substitutes by nationality weighted by the participation probabilities.

Column 6 shows the overall participation by country, resulting in an aggregated power index (Column 7)[5]. It is quite remarkable how a high participation rate for members, a high probability of substitution from a given country can increase overall presence and with a fortunate

[5] As an important technical note we must stress that the aggregating the power of a state's individual representatives is not the same as voting *en bloc*. We therefore do not assume coordinated voting at the country level.

location in the ideology space all these translate into a high total power for Italy, Poland, Portugal, Romania and Spain – especially in comparison with the power share in the Council of the European Union that is often seen as the overall benchmark of a country's power in the EU (Column 8). Where there are winners, there are also losers, including Germany, Sweden, France or the countries not represented at all in COMAGRI.

Political groups

A similar analysis of the different political groups of the EP reveals the – hardly surprising – dominance of the European People's Party (EPP) and the Progressive Alliance of Socialists and Democrats (S&D). It is a little more surprising that the high power is to a large extent due to a high level of discipline: a high, nearly 90% participation rate of members.

Table 2 The participation and power of the different political groups of the EP. The share of EP seats is calculated for MEPs belonging to one of the groups only.

Country	#MEPs	Share of MEPs	Avg. part. Rate	Weighted share of members	Share of (weighted) subs	Share of weighted MEPs	Share of total power	% of EP seats
EPP	13	28.26%	88%	32.66%	27.01%	31.93%	28.10%	29.60%
S&D	9	19.57%	89%	22.78%	10.34%	21.17%	20.58%	25.78%
ECR	5	10.87%	76%	10.79%	12.84%	11.06%	12.58%	10.10%
Greens-EFA	4	8.70%	79%	8.94%	15.33%	9.77%	10.10%	6.96%
EFD	3	6.52%	73%	6.26%	10.15%	6.77%	9.84%	6.14%
GUE-NGL	4	8.70%	45%	5.13%	10.34%	5.80%	8.11%	7.09%
ENF	3	6.52%	62%	5.30%	0.00%	4.61%	5.54%	5.05%
ALDE	5	10.87%	57%	8.14%	13.98%	8.90%	5.16%	9.28%

There is another reason why participation is important: S&D substitutes are rarely invited. Looking at smaller parties, we find that participation rates are lower, as low as 45% for European United Left – Nordic Green Left (GUE-NGL) by which the representatives effectively halve their influence.

Europe of Freedom and Direct Democracy (EFDD) shows a very strong performance for one of the smallest political groups: despite having only 3 members in COMAGRI, the group has nearly 11% aggregated influence. Finally, we also note the weak performance of the Alliance of Liberals and Democrats for Europe (ALDE) and Europe of Nations and Freedom (ENF) due to low participation rates.

Outlook for 2019-2024

Beyond the theoretical interest for the last parliamentary period, our method enables us to make predictions for the new, 2019-2024 period – with some limitations. We base our calculations on three sources of data. As soon as the new members and substitutes of COMAGRI are known, their party positions together with their region of origin, determine their locations in the policy space. With these data, we can calculate the *members'* powers, thus ignoring substitutes (see Figure 5). Such a calculation is relevant for major decisions, where members try to be present if at all possible.

This analysis ignores the frequent substitutions; hence our estimations are only theoretical. With the help of presence data, we can perform a more in-depth analysis. Given our data of

the earlier period, we know the average absence rate of members. This way, we can bring in substitutes into our calculations, but this model does not allow to further differentiate among members. As the statistics of the new Committee start to come in, we can update these calculations with individual-level participation data. There are apparent differences among members in their presence rates as well as among substitutes in their substitution rates. Party affiliation, nationality, agricultural affinity or other factors may explain these.

Although formulating any hypothesis on how the Committee will actually vote for a particular proposal is futile as it depends on many factors, it is still worth to examine the ideological positions of the most influential members. The 12 most powerful members' positions (the upper quartile) seem politically balanced along the classical left-right division. Two of them lean to the right side of the ideological spectrum belonging to the first quartile (Q1) in the ranking by the ParlGov index, while four to the left (Q4) – the remaining six falls into the middle (Q2-Q3). The average position (4.31) leans to the left compared to the average (5.23) and the median (5.94). Agricultural affinity, however, paints a remarkably different picture. Seven out of the twelwe members can be described as having a very high agricultural affinity (Q1), while the other five fall in the middle (Q2-Q3), no member in the top 12 belong to the bottom quartile. Even their average (15%) would fall in the highest quartile (8%+). The nationality of the most influential members are also interesting. There are four Romanians, four Italians, and one from Hungary, Poland, Spain and Ireland each – the Eastern and Southern block is remarkably overrepresented. It would be interesting to see, how these nations, especially Romania and Italy, fare in the legislative negotiations during the 9th EP term in the Committee.

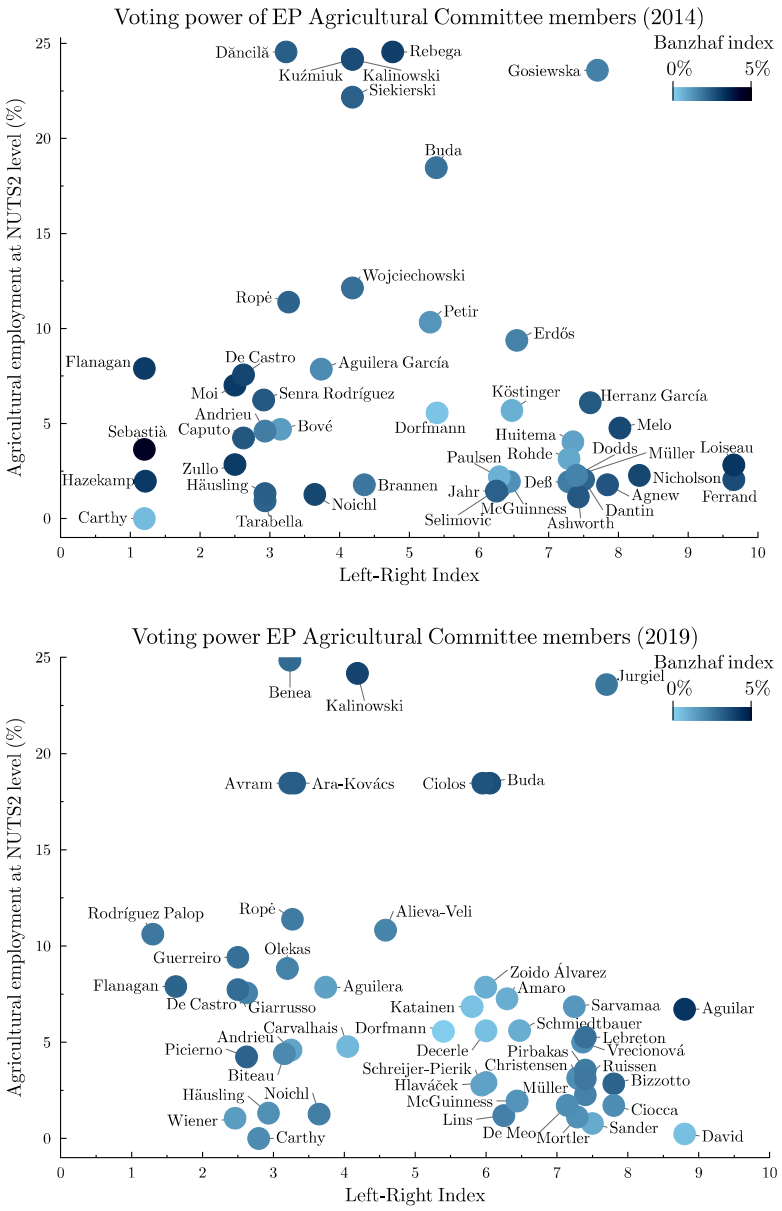


Figure 5 Voting powers of COMAGRI members in the 2014-19 and 2019-24 periods without substitutions. In order to have an undistorted picture, Benea's agricultural affinity (45.8%) was lowered.

Discussion, conclusions

The article analyses the voting power of the Members of the Committee on Agriculture and Rural Development of the European Parliament using the Banzhaf index on a spatial voting game. This approach is novel as it goes beyond the allocation of committee seats and shows that policy positions may have a substantial impact on one's influence in committee decisions. We have taken the political left-right position and the home region's agricultural employment level as the two indicators. The first is a traditional choice in describing political positions, the latter was recommended by one of the referees. We do not claim that these would directly determine how an MEP would vote on agricultural matters, but the overall picture we get is fairly robust to the choice of agricultural indicators – even at the individual members' level, the differences are rarely dramatic.

Our main findings are the following. We confirm the conclusions of Neuhold (2011) that members with formal positions – i.e. the chair, vice-chairs – have a relatively high power in the analysed EP Committee, although part of the power comes from the fact that these members are very disciplined in attending the voting sessions. Second, following previous research (Benedetto, 2005; Marshall, 2010), we also confirm high power indices for the rapporteurs of the analysed legislative files. Third, the party coordinators, who are the key members of EP Groups at the committee level and have a big say in formulating the legislative proposals (Kaeding & Obholzer, 2012) are also highly ranked, which again correlates with the main findings of previous empirical investigations. Fourth, our results show that the most powerful Member States (Germany, France, Italy and UK) along with countries of high ag-

ricultural importance (Spain, Poland, Romania) delegate the most powerful politicians. However, the distribution of power is uneven. Out of the 10 most powerful committee members, five are Italians, two are Spanish, while France, Poland and UK have one members each; interestingly French and German representatives are less influential. This is the reason why Italy displays 50% more power than that of France despite having the same number of Committee members. Future research can be extended to the calculation of power indices based on plenary roll-call votes. The comparison of the two intra-EP decision-making stage, committee and plenary, may reveal the power gains or losses of COMAGRI members in the legislative process.

A suitable "profiling" of new members could give more reliable estimates of individual presence data and a better estimate of power in the Committee.

Finally, in Appendix B, we list the members and substitutes that are present in both terms. If we disregard absence, the differences of the Banzhaf-values represent how the members' potential power change from one term to another. Due to the different configuration of the members' positions in the ideology space, some members gain (e.g. Carthy, Kalinowski or Buda) some members lose (e.g. De Castro) influence. When absence data become available, one can conduct a more precise analysis.

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Appendix A

Table glossary

Position: Member's formal position in the Committee

Left-Right: Left-Right ideology (ParlGov, 1-left;10-right)

Part.: Probability of participation (%)

NUTS 2: Agricultural employment at NUTS 2 level (Eurostat, 2015)

Rapporteurs are marked with boldface.

Party coordinators are underlined.

Rank	Name	Position	Member State	EP Group	Part. (%)	Left-Right	NUTS 2 (%)	Banzhaf index (%)
1	Jordi Sebastià	Member	Spain	Greens-EFA	67	1.20	3.64	3.01
2	Giulia Moi	Member	Italy	EFD	87	2.50	7.01	2.99
3	**Paolo De Castro**	Member	Italy	S&D	100	2.62	7.56	2.90
4	Marco Zullo	Member	Italy	EFD	80	2.50	2.84	2.83
5	**James Nicholson**	Member	UK	ECR	93	8.30	2.27	2.81
6	Nicola Caputo	Member	Italy	S&D	100	2.62	4.24	2.70
7	Zbigniew Kuźmiuk	Member	Poland	ECR	100	4.19	24.17	2.69
8	Rosa D'Amato	Substi-tute	Italy	EFD	53	2.50	7.56	2.69
9	Esther Herranz García	Member	Spain	EPP	87	7.60	6.10	2.38
10	**Michel Dantin**	Member	France	EPP	93	7.50	2.05	2.36
11	Jarosław Kalinowski	Member	Poland	EPP	87	4.19	24.17	2.35
12	Maria Noichl	Member	Germany	S&D	87	3.65	1.27	2.33

13	Laurențiu Rebega	Member	Romania	ENF	80	4.76	24.55	2.33
14	**Czesław Adam Siekierski**	Chair	Poland	EPP	93	4.19	22.17	2.19
15	Estefanía Torres Martínez	Substi-tute	Spain	GUE-NGL	20	1.20	3.38	2.19
16	**Martin Häusling**	Member	Germany	Greens-EFA	100	2.93	1.32	2.09
17	Daniel Buda	Member	Romania	EPP	100	5.39	18.46	2.08
18	Luke Ming Flanagan	Member	Ireland	GUE-NGL	60	1.20	7.90	2.03
19	Eric Andrieu	Vice-Chair	France	S&D	100	2.93	4.60	2.03
20	**Marc Tarabella**	Member	Belgium	S&D	93	2.93	0.93	1.94
21	Albert Deß	Member	Germany	EPP	100	7.29	1.94	1.89
22	Peter Jahr	Member	Germany	EPP	87	6.25	1.45	1.86
23	**Nuno Melo**	Member	Portugal	EPP	60	8.02	4.76	1.76
24	Philippe Loiseau	Member	France	ENF	53	9.66	2.82	1.71
25	Karin Kadenbach	Substi-tute	Austria	S&D	20	3.73	0.00	1.66
26	Bas Belder	Substi-tute	Netherlands	ECR	40	7.40	1.83	1.62
27	Paul Brannen	Member	UK	S&D	93	4.36	1.78	1.57
28	Marijana Petir	Member	Croatia	EPP	100	5.30	10.33	1.55
29	Ulrike Müller	Member	Germany	ALDE	80	7.40	2.27	1.52
30	Viorica Dăncilă	Vice-Chair	Romania	S&D	67	3.23	24.55	1.51
31	Bronis Ropė	Member	Lithuania	Greens-EFA	67	3.27	11.39	1.50
32	Edouard Ferrand	Member	France	ENF	53	9.66	2.05	1.50
33	Janusz Wojciechowski	Vice-Chair	Poland	ECR	73	4.19	12.13	1.50
34	Maria Lidia Senra Rodríguez	Member	Spain	GUE-NGL	60	2.91	6.24	1.47

35	Sofia Ribeiro	Substi-tute	Portugal	EPP	60	6.29	9.95	1.43
36	Norbert Lins	Substi-tute	Germany	EPP	20	6.25	1.19	1.41
37	John Stuart Agnew	Member	UK	EFD	53	7.84	1.78	1.33
38	Mairead McGuinness	Member	Ireland	EPP	87	6.44	1.95	1.28
39	Momchil Nekov	Substi-tute	Bulgaria	S&D	27	3.01	9.56	1.28
40	Richard Ashworth	Member	UK	ECR	53	7.43	1.14	1.25
41	**Clara Eugenia Aguilera García**	Vice-Chair	Spain	S&D	100	3.74	7.86	1.22
42	Jan Huitema	Member	Netherlands	ALDE	93	7.35	4.04	1.15
43	Stefan Eck	Substi-tute	Germany	GUE-NGL	20	1.22	1.31	1.14
44	Diane Dodds	Member	UK	S&D	60	7.40	2.27	1.14
45	Norbert Erdős	Member	Hungary	EPP	67	6.54	9.37	1.13
46	Molly Scott Cato	Substi-tute	UK	Greens-EFA	27	2.57	0.78	1.01
47	José Bové	Member	France	Greens-EFA	80	3.16	4.70	0.96
48	Beata Gosiewska	Member	Poland	ECR	60	7.70	23.59	0.96
49	Angélique Delahaye	Substi-tute	France	EPP	13	7.50	2.05	0.94
50	**Elisabeth Köstinger**	Member	Austria	EPP	93	6.47	5.69	0.94
51	Maria Heubuch	Substi-tute	Germany	Greens-EFA	13	2.93	1.19	0.84
52	Franc Bogovič	Substi-tute	Slovenia	EPP	20	6.70	8.00	0.82
53	**Anthea McIntyre**	Substi-tute	UK	ECR	13	7.43	0.00	0.76
54	Anja Hazekamp	Member	Netherlands	GUE-NGL	20	1.21	1.97	0.69

55	Peter Eriksson	Substi-tute	Sweden	Greens-EFA	40	3.38	3.11	0.69
56	**Jasenko Selimovic**	Member	Sweden	ALDE	33	6.29	1.61	0.68
57	Ivan Jakovčić	Substi-tute	Croatia	ALDE	53	3.42	3.94	0.60
58	Jørn Dohrmann	Substi-tute	Denmark	ECR	7	8.23	3.28	0.59
59	Jens Rohde	Member	Denmark	ALDE	40	7.29	3.15	0.46
60	Ramón Luis Valcárcel Siso	Substi-tute	Spain	EPP	7	7.60	12.81	0.42
61	Pilar Ayuso	Substi-tute	Spain	EPP	7	7.60	10.62	0.41
62	Julie Girling	Substi-tute	UK	ECR	7	7.43	0.00	0.40
63	Herbert Dorfmann	Member	Italy	EPP	93	5.40	5.56	0.40
64	Fredrick Federley	Substi-tute	Sweden	ALDE	20	5.81	2.08	0.38
65	Stanislav Polčák	Substi-tute	Czech Re-public	EPP	7	7.40	3.52	0.38
66	**Marit Paulsen**	Member	Sweden	ALDE	40	6.29	2.20	0.36
67	Ricardo Serrão Santos	Substi-tute	Portugal	S&D	7	4.05	9.42	0.29
68	Miguel Viegas	Substi-tute	Portugal	GUE-NGL	7	2.18	0.33	0.26
69	Matt Carthy	Member	Ireland	GUE-NGL	40	1.20	0.00	0.20
70	Emmanouil Glezos	Substi-tute	Greece	GUE-NGL	7	4.50	6.10	0.12
71	Jens Gieseke	Substi-tute	Germany	EPP	7	6.25	3.19	0.10

APPENDIX B

	2014-19 term				2019-24 term				
	Left-right (1-left; 10-right)	Agricultural employment percentage 2015, NUTS 2 level	Banzhaf	member(m)/ sub(s)	Left-right (1-left; 10-right)	Agricultural employment percentage 2015, NUTS 2 level	Banzhaf	member(m)/ sub(s)	Change
Anja HAZEKAMP	1.21	2.0%	3.2%	m	1.62	2.0%	n.a.	s	n.a.
Bronis ROPÉ	3.27	11.4%	2.3%	m	3.27	11.4%	2.4%	m	0.1%
Clara Eugenia AGUILERA	3.74	7.9%	1.5%	m	3.74	7.9%	1.4%	m	-0.1%
Daniel BUDA	5.39	18.5%	2.0%	m	6.05	18.5%	3.6%	m	1.7%
Eric ANDRIEU	2.93	4.6%	1.8%	m	3.25	4.6%	1.3%	m	-0.5%
Franc BOGOVIČ	6.70	8.0%	n.a	s	6.70	8.0%	n.a.	s	n.a.
Fredrick FEDERLEY	5.81	2.1%	n.a	s	5.81	2.1%	n.a.	s	n.a.
Herbert DORFMANN	5.40	5.6%	0.3%	m	5.40	5.6%	0.2%	m	-0.1%
Jan HUITEMA	7.35	4.0%	1.0%	m	7.35	4.0%	n.a.	s	n.a.
Jarosław KALINOWSKI	4.19	24.2%	2.8%	m	4.19	24.2%	3.9%	m	1.2%
Luke Ming FLANAGAN	1.20	7.9%	3.1%	m	1.62	7.9%	3.0%	m	-0.1%
Mairead McGUINNESS	6.44	1.9%	1.4%	m	6.44	1.9%	1.7%	m	0.3%
Marc TARABELLA	2.93	0.9%	2.3%	m	2.93	0.9%	n.a.	s	n.a.
Maria NOICHL	3.65	1.3%	2.9%	m	3.65	1.3%	2.3%	m	-0.6%
Martin HÄUSLING	2.93	1.3%	2.4%	m	2.93	1.3%	1.8%	m	-0.6%
Matt CARTHY	1.20	0.0%	0.5%	m	2.79	0.0%	2.0%	m	1.5%
Norbert LINS	6.25	1.2%	n.a	s	6.25	1.2%	2.3%	m	n.a.
Paolo DE CASTRO	2.62	7.6%	2.9%	m	2.62	7.6%	2.2%	m	-0.7%
Peter JAHR	6.25	1.4%	2.4%	m	6.25	1.5%	n.a.	s	n.a.
Ulrike MÜLLER	7.40	2.3%	1.6%	m	7.40	2.3%	2.2%	m	0.6%
Zbigniew KUŹMIUK	4.19	24.2%	2.8%	m	7.70	24.2%	n.a.	s	n.a.