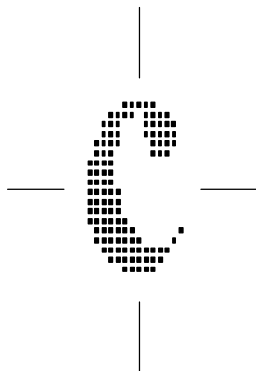


Smaller States and the New Voting Weights in the Council

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July 2000

Acknowledgments: This contribution has profited from helpful comments by Sanoussi Bilal, Marc Kilgour, Axel Moberg and Alfred Pijpers.



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Abstract

The current Intergovernmental Conference (IGC) of the European Union (EU) will introduce a number of institutional modifications. Among these is the allocation of new voting weights to EU states in the Council, which is significant especially in view of upcoming major rounds of enlargement. This contribution shows how voting weights have been attributed to member states in the past and discusses effects of different possibilities to re-weight votes. Among the options analyzed are the 1997 ‘Dutch Proposal’, the square root rule and the introduction of a double-majority clause. In analyzing these issues, the contribution places a particular emphasis on the balance of influence between larger and smaller EU states in the Council (for example, by providing information on the a priori voting power of EU states for different scenarios of new vote allocations).

Introduction

The scope of the current Intergovernmental Conference (IGC), originally aimed at conducting a thorough revision of the EU's institutional setup, is somewhat limited.¹ Nonetheless, several issues to be agreed upon in its course concern matters of crucial national interest.

This certainly is true for the challenge to agree on a new distribution of voting weights for member states in the Council of the EU. In the framework of the EU's institutional setup, the Council, in its various compositions, is one of the most decisive intergovernmental decision-making bodies. The shift from the (often informal) *de facto* unanimity requirement in this institution to a variant of majority voting – usually the qualified majority voting (QMV) rule – has certainly reinforced the relevance of the vote distribution. Even if members represented in the Council – and similarly in the Committee of Permanent Representatives (COREPER) and Working Groups linked to the Council² – are inclined to search for consensus in practice rather than to resort to a vote, the option to call a vote influences the bargaining patterns and the search for possible compromise solutions in these institutions. According to Moberg (1998), despite the important role of the Presidency in the framework of Council deliberations (or in bodies linked to it) in interpreting whether a qualified majority in support of an issue is present or not, the voting power of EU governments is essential. It is 'constantly in the minds of all participants and influences the alliances they try to form in the negotiations. Member states are aware that they can be outvoted, and this probably tends to stimulate consensus decisions' (p. 349).

This contribution, therefore, focuses on the issue of new voting weights for the Council, one of the issues to be tackled in this IGC.³ It is interesting, for example, to focus on variants of vote distributions that have been applied earlier, and to analyze possible effects of modified vote

1 The Cologne European Council, conducted on June 3-4, 1999, outlined three specific institutional challenges for the EU to be focused on in this IGC: (1) size and composition of the Commission; (2) weighting of votes in the Council (re-weighting, introduction of a dual majority rule, and threshold for qualified-majority decision-making); (3) a possible extension of qualified-majority voting in the Council. See Best (1999), p.1. These issues can also be found under point 53 of Presidency Conclusions (1999).

2 A thorough analysis of these institutions is Hayes-Renshaw and Wallace (1997).

3 For current challenges to the European Commission, see the contribution by Desmond Dinan (this volume). For those concerning the EU presidency, see the chapter by Geoffrey Edwards (this volume).

allocations in the Council. How have votes in the Council been distributed among the EU's member states in the past? What factors have influenced this distribution? Is the number of votes in the Council linearly – or rather in a logarithmic pattern – related to the population size of EU states? Or is it based on actors' economic (or political) leverage? How could the distribution of voting weights be adapted for a significantly enlarged EU? And if such propositions were to find the necessary support by EU governments in the framework of the ongoing IGC, what would their effects be on the balance of influence among individual EU governments, especially when comparing the leverage of the EU's smaller with its larger component units?

In order to analyze these issues, the article is divided into three main sections. Section one provides an overview of how voting weights in the Council have been attributed to the EU's member states in the past. It describes the very first vote allocation in the European Community (EC) and the adaptation to this distribution in the 1973 enlargement (which induced a re-weighting of members' votes). The section proceeds by providing data on the way votes have been allocated to new member states in the course of next stages of enlargement. Moreover, it presents and compares models that have been developed so far to assess the distribution of votes in the Council as a function of members' population size. In addition, it shows the relative degree of 'inequality' that results from such vote attributions. Section two follows up on this analysis and embeds the information as presented in section one into an analysis of the 'balance of influence' between smaller and larger states in the Council. In order to do this, an overview of governments' a priori voting leverage in the Council is given as it can be assessed on the basis of power indices (PIs). In addition, the section explores options for future vote allocations and describes their effects in terms of members' relative voting leverage. Section three is devoted more specifically to the effects of a possible double-majority clause for voting in the Council. This modification, in essence, would add a second decision 'threshold' to QMV, based on members' population size.

Generally, in order to keep the study 'tractable', the analysis in this contribution will not take other effects on EU decision-making into account, such as those resulting, for example, from agenda-setting power, inter-institutional relations or two-level game dynamics. However, the repercussions illustrated here may not only provide insights for the current discussions on the a priori leverage of states in the Council as they result from different vote allocations, but may potentially be used as 'building blocks' in studies that widen the scope of the analysis, for example, by accounting for inter-institutional relations).

1 Vote Allocations in the Council

Former enlargements of the EU (or the EC) have induced relative changes in the distribution of votes in the Council, but they were not usually accompanied by adaptations in absolute voting weights. With the exception of the first, 1973 enlargement – in which the UK, Denmark and Ireland joined the EC – member states' voting weights have not been adapted. Similarly, the definition of the QMV threshold has been relatively constant over time: in all stages of membership in the EU's history, the 'quota' or decision threshold for QMV was located at a level of about 71 percent of the total vote.⁴ The maintenance of this fraction for several different constellations of membership suggests that there may have occurred some more exact 'thinking behind the stage', instead of outcomes being exclusively the result of intergovernmental bargaining.⁵ Similarly, equal vote allocations for the largest states (including Germany and France) have been maintained through all enlargements. Figures on the distribution of voting weights, the requirement for QMV and the implied threshold for forming a 'blocking minority' over time are shown in table 1.

The number of votes for the largest states was increased from four to ten in the framework of the 1973 enlargement. Similarly, voting weights for the middle-sized states, Belgium and the Netherlands, were then raised from two to five. After the 1973 enlargement, however, voting weights remained constant for all EC states, and new members obtained votes corresponding to the number of votes held by EC members of comparable size.⁶

4 Hosli (1993).

5 On specific reasons for the definition of the quota in different constellations of membership and the relationship between the voting weights of larger and smaller members, see Moberg (1998), Midgaard (1999) and Best (1999).

6 See Moberg (1998).

Table 1

The Distribution of Votes and the QMV Quota in the Council, 1958 to the Present (Total Number of Votes; Percentages given in Brackets)

Member	1958-72	1973-80	1981-85	1986-94	Since 1995
Austria	-	-	-	-	4 (4.6)
Belgium	2 (11.8)	5 (8.6)	5 (7.9)	5 (6.6)	5 (5.7)
Denmark	-	3 (5.2)	3 (4.8)	3 (3.9)	3 (3.4)
Finland	-	-	-	-	3 (3.4)
France	4 (23.5)	10 (17.2)	10 (15.9)	10 (13.2)	10 (11.5)
Germany	4 (23.5)	10 (17.2)	10 (15.9)	10 (13.2)	10 (11.5)
Greece	-	-	5 (7.9)	5 (6.6)	5 (5.7)
Ireland	-	3 (5.2)	3 (4.8)	3 (3.9)	3 (3.4)
Italy	4 (23.5)	10 (17.2)	10 (15.9)	10 (13.2)	10 (11.5)
Luxembourg	1 (5.9)	2 (3.4)	2 (3.2)	2 (2.6)	2 (2.3)
Netherlands	2 (11.8)	5 (8.6)	5 (7.9)	5 (6.6)	5 (5.7)
Portugal	-	-	-	5 (6.6)	5 (5.7)
Spain	-	-	-	8 (10.5)	8 (9.2)
Sweden	-	-	-	-	4 (4.6)
United Kingdom	-	10 (17.2)	10 (15.9)	10 (13.2)	10 (11.5)
Total	17 (100)	58 (100)	63 (100)	76 (100)	87 (100)
Qualified Majority	12 (70.6)	41 (70.7)	45 (71.4)	54 (71.1)	62 (71.3)
Blocking Minority	6 (35.3)	18 (31.0)	19 (30.2)	23 (30.3)	26 (29.9)

Source: adapted from Hosli (1993)

For example, in the framework of the 1981 enlargement, Greece received five votes – the same number of votes as Belgium and the Netherlands had obtained earlier. Similarly, in 1986, Portugal received five votes and Spain eight (as Spain's population size was between that of the largest and the middle-sized members). Up until the 1995 enlargement – with the exception of the first constellation of membership – no country obtained four votes. This allocation occurred, however, for Austria and Sweden in the 1995 enlargement.

In order to illustrate the relationship between population size and number of votes in the Council, table 2 presents the population figures for member states at different points in time in the EU's history.⁷ The figures are for 1958, the first EC enlargement (1973), the 'Iberian' enlargement by Portugal and Spain (1986), and the 1995 enlargement.

⁷ The figures provided here are slightly different from data presented, for example, in the document Presidency Conclusions (1999). The population figures resorted to here are based on data collections by other organizations apart from Eurostat, including the United Nations Statistical Yearbook and the World Bank World Tables.

Table 2

Population Size and Votes in the Council, 1958-1995

	Population 1958 (in millions) ²⁾	Number of Votes 1958-72	Population 1973 (in millions)	Number of Votes 1973-80	Population 1986 (in millions)	Number of Votes 1986-94	Population 1995 (in millions)	Number of Votes since 1995
Austria	-	-	-	-	-	-	8.0	4
Belgium	9.2	2	9.7	5	9.9	5	10.1	5
Denmark	-	-	5.0	3	5.1	3	5.2	3
Finland	-	-	-	-	-	-	5.1	3
France	46.5	4	52.1	10	55.4	10	57.5	10
Germany ¹⁾	54.0	4	62.0	10	60.9	10	80.6	10
Greece	-	-	-	5	9.9	5	10.3	5
Ireland	-	-	3.1	3	3.6	3	3.6	3
Italy	50.5	4	54.8	10	57.2	10	56.9	10
Luxembourg	0.3	1	0.4	2	0.4	2	0.4	2
Netherlands	11.5	2	13.4	5	14.5	5	15.2	5
Portugal	-	-	-	-	10.3	5	9.9	5
Spain	-	-	-	-	38.9	8	39.1	8
Sweden	-	-	-	-	-	-	8.7	4
United Kingdom	-	-	56.3	10	56.6	10	58.0	10
Total	172.0	17	256.8	63	322.7	76	368.5	87
Average (Non-weighted)	28.67	2.83	28.53	7.0	26.89	6.33	24.57	5.8

Sources: Eurostat: Basic Statistics of the EU; United Nations Statistical Yearbook; World Bank World Tables.

1) Federal Republic of Germany for 1958, 1973 and 1986.

2) The figures are for the population censuses of the following years: 1960 (Luxembourg and the Netherlands), 1961 (Belgium, Germany and Italy).

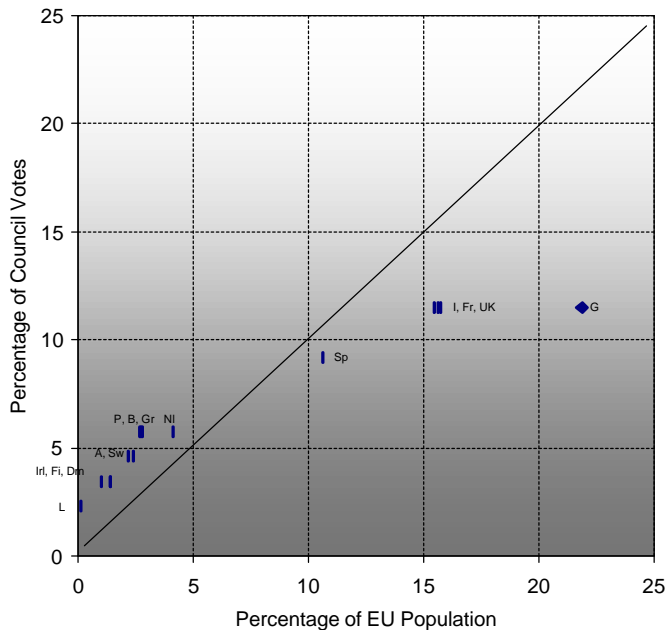
Hence, the relationship between population size and the number of votes allocated to member states has varied somewhat over time within groups of states of similar size. For example, in the framework of the first constellation of EC membership, population sizes of the large members ranged from 46.5 million (France) to 54 million (Germany). As of 1986, the respective range was between 55.4 million (France) and 60.9 million (Germany). Nonetheless, votes were allocated to both states on an equal basis, as both obtained four votes starting in 1958 (and ten in 1973).

Similarly, there was some variation in the group of the middle-sized states that currently hold five votes in the Council: the population size of these states was between 9.2 million (Belgium) and 11.5 million (Netherlands) in the late 1950s, and between 9.9 million (Belgium) and 14.5 million (Netherlands) in 1986. The small difference in the number of votes allocated to Denmark and Ireland as compared to Luxembourg is certainly interesting: Luxembourg with a population of 4 million obtained two votes in the Council in 1973, but Ireland and Denmark three votes each (with populations of 3.0 million and 5.1 million respectively). How can such distributions and variations within groups be analyzed more thoroughly and patterns be explained?

Figure 1 provides a graphical display of the distribution of votes in the Council as compared to total EU population after the 1995 enlargement. The graph illustrates the relatively favorable treatment of smaller states as compared to a purely 'proportional' distribution. Located 'above' the proportional line are members that are over-represented (as compared to population size) and 'below' the line those that are relatively underrepresented. The distance from the proportional line provides an indication of the relative extent of deviation for the individual cases. Clearly, the vote

distribution in the Council is essentially ‘progressive’, implying that the relative share of votes of smaller members is higher than that of larger states when compared to population size. A cluster of countries that includes Portugal, Belgium and Greece indeed appears to be rather favorably represented in terms of voting weights, whereas others, especially the larger members, are ‘underrepresented’ as compared to the proportional scheme.

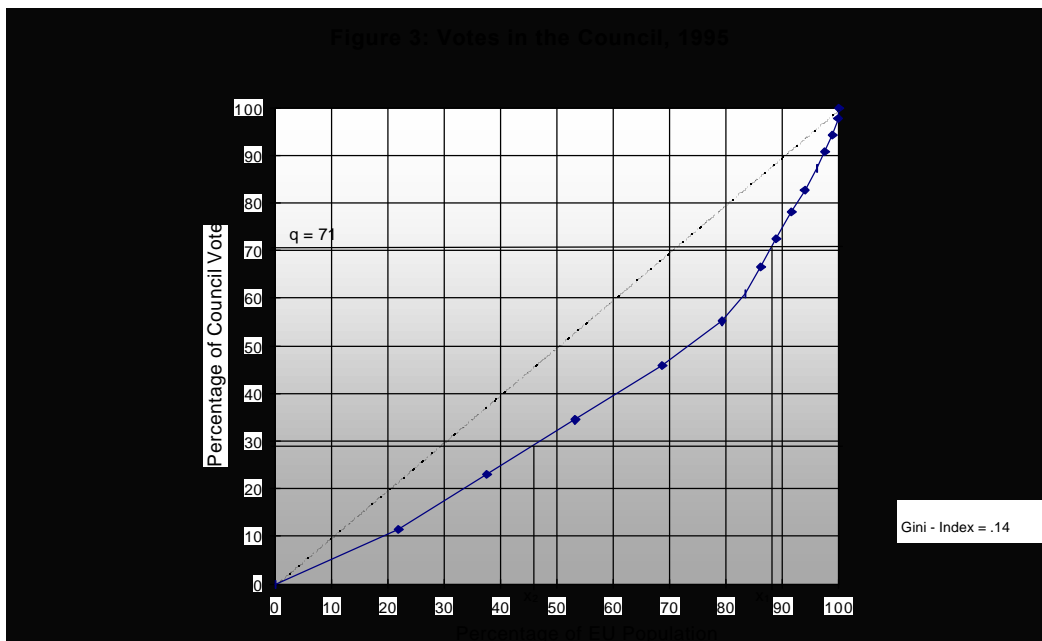
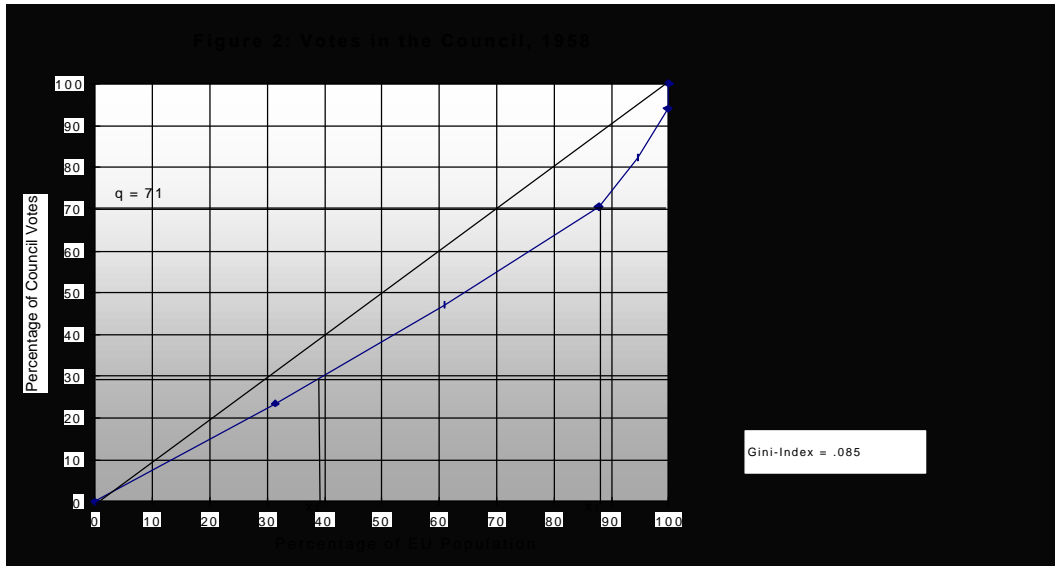
Figure 1: Share in Votes and Share in EU Population (Council, 1995)



Quite generally, the distribution of votes in a comparison between smaller and larger members can be illustrated nicely by the means of ‘Lorenz curves’,⁸ used here to illustrate the distribution of votes as compared to population size for different phases in the EU’s past. Subsequently, an overview will be given of population as compared to votes in the Council for 1958 and 1995. These graphical displays are especially apt to visualize relative changes in the degree of ‘proportionality’ of vote distributions. In addition, they will be used here to demonstrate another effect: the figures can graphically illustrate which (minimal) fraction of total EU population is required to either obtain the QMV threshold in the Council or to constitute a ‘blocking minority’. This information can be obtained by examining the intersection of the (Lorenz) curve with a horizontal line (on the y-axis) at 71 percent of the total vote. In order to look at the theoretical minimal fraction of EU population that can constitute a ‘blocking minority’ (and hence prevent a QMV decision), the distance between

8 Lorenz curves graphically illustrate the relationship between two variables as compared to a proportional distribution. They are, for example, particularly useful in displaying the structure of income distribution among citizens in a country (with the share in population shown on one axis and the share in income on the other), or an overview of shares of votes received in elections as compared to seats obtained in a national parliament. The degree of inequality can subsequently be expressed by the Gini-index (in a two-dimensional setup, the Gini-index measures the size of the area between the resulting Lorenz curve and the proportional 45-degree line).

the total (100 percent) and x_1 on the horizontal axis is measured. The intersection of the curve with a (horizontal) line at 29 percent of the total of weighted votes indicates the fraction in terms of the minimal percentage of EU population, as represented in the Council, which is necessary for the support of a proposal (distance to point x_2 , read off again from the total on the right-hand side).



Figures 2 and 3 confirm that the distribution of votes in the Council in both 1958 and 1995 favored smaller members, but the relative advantage for smaller states indeed appears to be more pronounced in 1995 than it was in 1958 (as the Lorenz curve has shifted ‘outward’ and away from a proportional distribution). The Gini-Index for the 1958 constellation of membership, indeed, is

.085, as compared to an index of .14 for 1995.⁹ These trends are largely due to the increased share of small and medium-sized members over time, a point that has rather often been stressed by the EU's larger states. A relatively common assumption hence was that QMV decisions, in an extreme situation, might even be taken on the basis of support by less than 50 percent of the EU's population (as represented in the Council) in the framework of the current system. However, Moberg (1998), based on an analysis of population figures, has illustrated that this is not the case. Figure 3 supports his finding: the minimal required fraction of EU population to obtain the QMV threshold was about 62 percent in the first constellation of Community membership, and decreased to about 54 percent in 1995.

How can such vote distributions be expressed by a mathematical formula? Generally, there are different plausible options to allocate voting weights to members in a committee based on selected variables (such as population size). For example, the relationship may simply be proportional: a one unit increase in population (usually as measured in millions) results in a one unit increase in the number of votes. In figures 2 and 3 above, this would imply that the distribution of votes would follow the proportional line starting in the origin of the two-dimensional display. This method of allocation, however, implies a risk that smaller members feel dominated by the larger ones. A more appealing solution in practice, therefore, is to resort to a progressive distribution, where smaller members obtain a more than proportional weight as compared to their population size (as this is practiced, for example, in the framework of second parliamentary chambers in federal systems, including the U.S., Germany and Switzerland). This system of representation has the advantage that it provides a protection for the smaller constituent units of a political system. Overrepresentation should be within reasonable limits, however, to prevent larger states from feeling dominated by the smaller ones, and to increase their perception of the 'legitimacy' of the system.¹⁰ Instead of allocating votes on the basis of population size, other 'weighting' factors might be used, such as a country's total geographical area or its economic power (as measured, for example, by members' GDP), or contributions to the organization's overall budget.¹¹

What method was used to distribute votes in the Council? What is the relationship that currently holds? Some analyses have been presented that model the number of votes in the Council as a function of another variable, especially population size. None of these studies were focused exclusively on assessing the vote distribution. Rather, the models were generated as a by-product of an analysis of other institutional issues. In spite of this, their most essential elements will be summarized here. Mika Widgrén (1994: 1155) applied a regression analysis to assess the relationship between population size and the number of votes in the Council. According to the author, in order to assess the number of votes, the logarithm of population size is multiplied by a small constant and raised to the power of 2.46 to derive the (logarithm of) the number of votes in the Council. As the author indicates, if the formula were to be applied to the current Council, Germany after reunification would obtain 12 votes instead of 10 (p. 1162).

9 A Gini-Index of zero indicates that the distribution is purely proportional.

10 On this, see Best (1999).

11 This variable is, for instance, used to allocate voting weights in the International Monetary Fund (IMF). Midgaard (1999) considers this option to be of limited applicability to the EU, however. On voting weights in different international institutions and organizations, see Zamora (1980). Weighting formulas as suggested for the United Nations General Assembly are discussed in Newcombe, Wert and Newcombe (1971) and Dixon (1983).

Berg and Lane (1996: 27-28) base their analysis on results developed earlier by Taagepera and Shugart (1989). Taagepera and Shugart's model established the 'cube root rule' of assembly size, according to which the size of an assembly may be estimated by taking the cube root of a state's population. The model by Berg and Lane, accordingly, takes the cube root of an EU member's population size as measured in millions, p .³³, multiplies it by 2.8 and subtracts 1.09 from this total to derive the number of votes in the Council. This formula, similarly, was obtained on the basis of regression analysis.

In a study that applies curve-fitting to the distribution of votes in the Council, Hosli and Wolffenbuttel (1999) derive the following formula to assess the relationship between population size and votes:

$$v = 1.73 p^{0.43} \quad (1)$$

where p stands for a state's population size (in millions) and v for its number of votes in the Council. This formula has the advantage that it is valid for different phases in the EU's history.

What are the results when these three formulas are applied to the distribution of votes in the Council? Table 3 provides the respective calculations for the 1986 and 1995 constellations of EC/EU membership.

Table 3
Estimates of Vote Distribution for the Council 1986 and 1995

Models EU Member States	Actual Number of Votes in the Council		Berg and Lane (1996) $v = -1.09260 + 2.80467 \sqrt[3]{p}$		Widgrén (1994) $\log v = 0.00633(\log p)^{2.465}$		Hosli and Wolffenbuttel (1999) $v = 1.73 p^{.43}$	
	1986	1995	1986	1995	1986	1995	1986	1995
Germany	10	10	9.9	11.0	10.4	12.1	10.1	11.4
United Kingdom	10	10	9.7	9.8	10.0	10.2	9.8	9.9
France	10	10	9.6	9.7	9.9	10.1	9.7	9.9
Italy	10	10	9.7	9.7	10.0	10.1	9.9	9.8
Spain	8	8	8.4	8.4	8.3	8.3	8.4	8.4
Netherlands	5	5	5.7	5.9	5.3	5.4	5.5	5.6
Greece	5	5	4.9	5.0	4.5	4.6	4.6	4.7
Belgium	5	5	4.9	5.0	4.5	4.5	4.6	4.7
Portugal	5	5	5.0	4.9	4.6	4.5	4.7	4.6
Sweden	-	4	-	4.7	-	4.3	-	4.4
Austria	-	4	-	4.5	-	4.1	-	4.2
Denmark	3	3	3.7	3.8	3.5	3.5	3.5	3.5
Finland	-	3	-	3.7	-	3.5	-	3.5
Ireland	3	3	3.2	3.2	3.1	3.1	3.0	3.0
Luxembourg	2	2	1.0	1.0	1.7	1.7	1.2	1.2

Hence, all three models capture the distribution of votes for 1986 rather closely (Widgrén's model, after rounding, even provides the exact number of votes for all states). In both the Berg and Lane

and the Hosli and Wolffenbuttel models, the Netherlands might have obtained 6 rather than 5 votes in 1986 already. All models, moreover, illustrate the following trend: Germany, after reunification, has left its ‘group boundaries’ (this is also true in 1995, albeit to a more moderate extent, for the Netherlands, Denmark and Finland). Two of the three models – not the one presented by Mika Widgrén – use a threshold at the level of 2 votes for Luxembourg.

Hence, all models are rather apt to ‘capture’ the vote distribution in the Council, and Mika Widgrén’s model turns out to make the most exact forecasts for the 1995 enlargement. Hence, the number of votes in the Council is indeed clearly related to population size. The following analysis, however, will apply the Hosli and Wolffenbuttel formula, not only because it is easy in its application, but also because it can assess all vote allocations since 1973 with relatively high accuracy. Estimates for the number of votes for earlier phases of the EU, on the basis of equation (1), are shown in tables 4a and 4b.

Table 4a
Calculations for 1973 (First Enlargement)

	Formula	Number of Votes
Germany (FRG)	1.73 (62.0) ^{.43}	10.20 (10)
United Kingdom	1.73 (56.2) ^{.43}	9.78 (10)
Italy	1.73 (54.8) ^{.43}	9.68 (10)
France	1.73 (52.1) ^{.43}	9.47 (9 or 10)
Netherlands	1.73 (13.4) ^{.43}	5.28 (5)
Belgium	1.73 (9.7) ^{.43}	4.60 (5)
Denmark	1.73 (5.0) ^{.43}	3.46 (3)
Ireland	1.73 (3.1) ^{.43}	2.87 (3)
Luxembourg	1.73 (0.4) ^{.43}	1.17 (1)

Table 4b
Calculations for 1986 (Iberian Enlargement)

	Formula	Number of Votes
Germany (FRG)	1.73 (60.9) ^{.43}	10.13 (10)
Italy	1.73 (57.2) ^{.43}	9.86 (10)
United Kingdom	1.73 (56.6) ^{.43}	9.81 (10)
France	1.73 (55.4) ^{.43}	9.72 (10)
Spain	1.73 (38.9) ^{.43}	8.34 (8)
Netherlands	1.73 (14.5) ^{.43}	5.46 (5 or 6)
Portugal	1.73 (10.2) ^{.43}	4.70 (5)
Greece	1.73 (10.0) ^{.43}	4.66 (5)
Belgium	1.73 (9.9) ^{.43}	4.64 (5)
Denmark	1.73 (5.1) ^{.43}	3.49 (3 or 4)
Ireland	1.73 (3.6) ^{.43}	2.97 (3)
Luxembourg	1.73 (0.4) ^{.43}	1.17 (1)

Note: In tables 4a and 4b, a threshold at the level of two votes applies.

A small divergence from the forecast occurs with respect to the situation of France for the 1973 distribution of votes, as France might then have obtained 9 rather than 10 votes. (Equal allocation

of votes to all large members, however, most likely was a politically determined choice; moreover, the deviation from the actual number of votes is rather small).

Different options for modified vote allocations can easily be derived from formula (1). For example, it is possible to either increase the constant (from 1.73) or the exponent (from .43), in order to enhance the relative leverage of the larger members as compared to the smaller ones. A widely discussed proposal to re-weight votes was tabled (and published) by the Dutch Presidency in 1997.¹² Essentially, the main option then proposed was a scheme in which the EU's four largest members – Germany, France, Italy and the UK – would have obtained 25 votes, Spain 20, the Netherlands 12, and Belgium, Greece and Portugal 10 votes each. Austria and Sweden, according to this scheme, would have obtained 8 votes, Denmark, Finland and Ireland 6, and Luxembourg 3 votes.¹³

If votes are related to population size exclusively, another possible option is to resort to the 'square root rule'.¹⁴ In this scenario, the square root of a member state's population size (as measured in millions) matters. Hence, according to this scheme, a population of one million inhabitants entitles a state to one vote, of four million to two, and of sixteen million to four votes. A variety of other options are possible in theory. Most proposals that have been presented in practice, however, appear to be rather close to the one tabled by the Dutch Presidency (Moberg 1998: 365).

What vote distributions would respective adaptations generate? An option for altering voting weights could be, for example, to raise the constant in equation (1) to 4. This would result in a distribution relatively close to the 'Dutch proposal', but with the significant difference that Germany would get 27 votes as compared to the other large members (23 votes), an option that might get little support in practice. By comparison, if the constant is reduced to the value of one and the exponent is increased to .5, the 'square root rule' results. Table 5 provides an overview of respective vote allocations for the example of an EU enlarged to 21 members.

12 This proposal is also discussed by Moberg (1998) and Best (1999). Annex 1 to Best (1999) displays the figures for both the 15-member EU and the scenario 'EU 26'.

13 Knut Midgaard (1999) demonstrates that the 'Dutch proposal' is rather close to an extrapolation of the distribution of votes of the first constellation of Community membership, but with an adaptation for the largest members: whereas the allocation among the six first members was on the basis (1,2,4), an extrapolation on the basis of (1,2,5) leads to figures that are very close to the 1997 proposal of the Dutch Presidency.

14 On this option, see Schmitter and Torreblanca (1997) and Moberg (1998).

Table 5
Current Vote Allocation, Possible Modifications and Enlargement (21 Members)

Votes in the Council	Formula $V = 1.73 \times p^{.43}$ (Current Allocation)		'Dutch Proposal'		$v = p^{.5}$ (‘Square Root Rule’)	
	Exact Allocation	Rounded Allocation ¹⁾	Exact Allocation	Rounded Allocation	Exact Allocation	Rounded Allocation
<i>Current Members:</i>						
Germany	11.48	11 (10)	-	25	9.03	9
United Kingdom	9.95	10	-	25	7.65	8
France	9.92	10	-	25	7.62	8
Italy	9.86	10	-	25	7.56	8
Spain	8.38	8	-	20	6.26	6
Netherlands	5.61	6 (5)	-	12	3.92	4
Greece	4.74	5	-	10	3.22	3
Belgium	4.68	5	-	10	3.18	3
Portugal	4.64	5	-	10	3.15	3
Sweden	4.41	4	-	8	2.97	3
Austria	4.23	4	-	8	2.83	3
Denmark	3.52	4 (3)	-	6	2.28	2
Finland	3.49	3	-	6	2.26	2
Ireland	3.00	3	-	6	1.90	2
Luxembourg	1.17	1 (2)	-	3	0.63	1
Total (15 Members)	89.04	89 (87)	-	199	64.45	65
71 percent	-	63 (62)	-	141	45.76	46
66.67 percent	-	59 (58)	-	133	42.97	43
(Simple) Majority	-	44	-	100	-	33
<i>Possible New Members:</i>						
Poland	8.32	8	-	20 ²⁾	6.21	6
Hungary	4.70	5	-	10 ²⁾	3.19	3
Czech Rep	4.72	5	-	10 ²⁾	3.21	3
Slovenia	2.33	2	-	3 ²⁾	1.41	1
Estonia	2.06	2	-	3 ²⁾	1.22	1
Cyprus	1.48	1 (2)	-	3 ²⁾	0.84	1
Total (21 Members)	112.70	112 (113)	-	248	80.50	80
71 percent	-	80 (80)	-	176	-	57
66.67 percent	-	75 (75)	-	165	-	53
(Simple) Majority	-	57	-	125	-	41

1) Note that the allocation of votes, except for the three new EU members as of 1995, was based on their population size preceding the 1986 enlargement.

2) Moberg (1998), Best (1999).

Compared to the current distribution of votes and to the ‘Dutch Proposal’, the range of votes in the framework of the square root rule would generally be compressed. In this scenario, Germany would obtain nine votes (or eight if equality among the largest members is considered to be politically preferable), the Netherlands four and Luxembourg one. This scheme would have the drawback that differentiation between countries with comparable population sizes is more difficult, but it would have the advantage of being a relatively straightforward and transparent formula that could determine vote distributions for several EU enlargements in the future.

How would the Dutch proposal and the square root rule affect the proportion of votes in the Council as compared to EU population size? Re-weighting according to the Dutch proposal would indeed result in an adapted distribution in which the ‘minimal’ population fraction for QMV, in the current constellation of EU membership, would be about 57 percent (whereas a ‘minimal blocking minority’ could be formed by about 14 percent of total EU population as represented in the Council).¹⁵ By comparison, the square root rule would push the minimal percentage for QMV up even further, to about 58 percent of total EU population. It is interesting to note, however, that the Gini-Index for either of these options would be .12. Hence, these adaptations do not generate the extent of proportionality that existed in 1958, but they could certainly reverse the trend of the last series of enlargements, by attributing a relatively higher share of the total vote to larger EU states.

15 Lorenz curves and the resulting estimates on minimum population fractions are given in Hosli (2000).

2 Voting Weights and Voting Power

In the following analysis, methods on the basis of the theory of simple games will be applied. They are especially helpful to address problems in the context of ‘constitutional analysis’ (i.e., for situations in which the distribution of actors’ preferences is not yet known). As regards an analysis of the EU, two options appear to be particularly interesting. One is to derive estimates on the probability that members will be able to form winning coalitions in the Council’s voting procedures.¹⁶ This is an interesting approach to assess the overall ‘efficiency’ of a voting system.¹⁷ For example, in the framework of the formal unanimity requirement, the relative extent of efficiency is usually comparatively low, as only one coalition in all possible coalitions among members can be winning (the ‘grand coalition’ that consists of all members). Simple majority rules increase ‘efficiency’, but may have the drawback of reducing members’ sense of the ‘legitimacy’ of the system. Enlargement will certainly have effects on both (as it will on the ever more important QMV rule).

In addition, it is helpful to see how weighted voting schemes translate into the relative a priori voting power of members. In this context, the two most well-known power indices that have been developed are likely to be the (normalized) Banzhaf index and the Shapley-Shubik index.¹⁸ Several other measures exist (e.g., see Holler 1981, 1998). But the two most well-known indices will be used subsequently, especially for the analysis of possible new vote distributions in the Council,¹⁹ in

16 This measure, essentially, is Coleman’s ‘power of a collectivity to act’. See Coleman (1971); Leech (2000).

17 For an application of this technique to the Council, see Hosli (2000).

18 Other applications using such indices in an analysis of international institutions include Leech (2000), Strand (1999), Strand and Rapkin (1999) and Strand (2000). Dennis Leech appears to give preference to the normalized Banzhaf index in his study, whereas Jonathan Strand is inclined to use the Johnston index.

19 Assessments made here essentially assume that representatives of all relevant actors are present at the time of the vote. This is likely to be a reasonable assumption when studying decision-making in the Council (or COREPER). Quite evidently, analyses along these lines are most relevant when assessing decisions in the framework of the EU’s Pillar I (this helpful comment has been provided by Alfred Pijpers).

order to gain some insights into the effects of adapted vote allocations on voting leverage.²⁰ These measures have the additional advantage that the quantitative effects of different propositions – whether re-weighting schemes or even the double-majority rule – can be made comparable to each other.

Assessments of power indices for the EU's past illustrate the increased need for EU governments to build coalitions with other states in the Council, largely due to the relative decrease in individual voting power that resulted from successive rounds of enlargement. Moreover, in the framework of voting power analysis, it is possible to try to derive 'fair' vote allocations for the Council.²¹ The subsequent analysis will use two well-known 'power indices' to assess the effects of new vote allocations.²²

As the results illustrate, the Shapley-Shubik index, in the analysis of the Council, attributes somewhat more influence to larger members than the (normalized) Banzhaf index does. In spite of this, the two indices generate rather close results. The calculations show that the square root rule is more favorable for Germany than the Dutch proposal would be, but both schemes enhance Germany's relative a priori voting power as compared to the current situation. By comparison, the relative leverage of the other large members is increased somewhat more by the Dutch proposal than by the square root rule. Spain would benefit to a rather moderate extent from a revision according to the Dutch proposal, whereas its situation would be moderately less favorable under the scheme of the square root rule.

The situation of the Netherlands, in relative terms, would be improved to a moderate extent by an application of either revised scheme. The position of Sweden, essentially, remains unaffected (as compared to the current situation) if the square root rule is introduced, and it would moderately deteriorate by an application of the Dutch proposal. All other middle-sized and smaller members, by contrast, would lose in terms of relative voting power by the introduction of either of these two modified schemes.

In terms of the 'balance of influence' between large and small members, table 6 illustrates that the share of larger members in overall voting power in the Council would increase to a similar extent by an application of the Dutch proposal and the square root rule. With both new schemes, the five largest members together would hold about 60 percent of total voting power (as compared to about 55 percent at present).

20 As mentioned above, the approach presented here will not attempt to take inter-institutional relations in the EU into account. For situations in which information on preferences is more readily available, it is not excluded, however, that the two approaches may be combined. On the properties and relative merits of these different techniques, see for example Holler and Widgrén (1999).

21 For such an endeavor, see especially Laruelle and Widgrén (1997).

22 For studies analyzing the capacity of EU members to affect the fate of blocking coalitions – especially in the framework of the 'Ioannina compromise' as compared to the regular current decision threshold – see especially Johnston (1995a, 1995b).

Table 6
Voting Power (Current Situation and Possible New Vote Allocations, 15 Members)

EU Members	Current Allocation			Dutch Proposal			Square Root Rule		
	Number of Votes	Nor-malized Banzhaf Index	Shapley-Shubik Index	Number of Votes	Nor-malized Banzhaf Index	Shapley-Shubik Index	Number of Votes	Nor-malized Banzhaf Index	Shapley-Shubik Index
<i>Larger states:</i>									
Germany	10	11.16	11.67	25	12.31	13.04	9	13.39	14.85
United Kingdom	10	11.16	11.67	25	12.31	13.04	8	12.08	12.63
France	10	11.16	11.67	25	12.31	13.04	8	12.08	12.63
Italy	10	11.16	11.67	25	12.31	13.04	8	12.08	12.63
Spain	8	9.24	9.55	20	10.10	9.98	6	9.34	9.18
<i>Middle-sized and smaller states:</i>									
Netherlands	5	5.87	5.52	12	6.26	5.70	4	6.41	6.06
Greece	5	5.87	5.52	10	5.20	4.93	3	4.74	4.44
Belgium	5	5.87	5.52	10	5.20	4.93	3	4.74	4.44
Portugal	5	5.87	5.52	10	5.20	4.93	3	4.74	4.44
Sweden	4	4.79	4.54	8	4.11	3.69	3	4.74	4.44
Austria	4	4.79	4.54	8	4.11	3.69	3	4.74	4.44
Denmark	3	3.59	3.53	6	3.09	2.89	2	3.09	2.76
Finland	3	3.59	3.53	6	3.09	2.89	2	3.09	2.76
Ireland	3	3.59	3.53	6	3.09	2.89	2	3.09	2.76
Luxembourg	2	2.26	2.07	3	1.34	1.32	1	1.67	1.54
Total	87	99.97	100.05	199	100.03	100	65	100.02	100.00
Qualified majority quota (71 percent of total)	62	-	-	141	-	-	46	-	-
Total larger member states	48	53.88	56.23	120	59.34	62.14	39	58.97	61.92
Total medium-sized and small member states	39	46.09	43.82	79	40.69	37.86	26	41.05	38.08

Table 7 extends the analysis for the two scenarios discussed above to an EU consisting of 21 members.²³ In order to compare effects among countries, just one index will be provided (the normalized Banzhaf index of voting power²⁴).

Calculations for an extended Union (here for the example of 21 members) are rather similar to those presented above for the EU's current membership. Essentially, the square root rule would

23 Although in the extrapolation of table 5, two votes were given to Estonia and Slovenia, we will here assume that they obtain 3 votes, in accordance with the figures presented in Council of the European Union (1999).

24 Under these relatively simple voting schemes (where a majority is required on one 'dimension'), members' capacity to affect the fate of coalitions that reach the QMV threshold will essentially be identical to their potential to influence blocking coalitions. This will be important later in this study when comparing effects described here with consequences of a possible double-majority clause.

benefit Germany most as compared to the current vote allocation, but also improve the situation of the other large states (including, although to a more moderate extent, Spain). By comparison, the Dutch proposal would increase the leverage of the larger members, but, for Germany, not to the same extent as the square root rule. In the example of a 21-member EU, the situation of the Netherlands would be moderately improved as compared to the current vote allocation if either the Dutch proposal or the square root rule were to be introduced. Austria and Sweden would also slightly benefit from the introduction of the square root rule. By comparison, the relative a priori voting leverage of other medium-sized and smaller members would decrease by the implementation of either of these two options to modify voting weights.

Hence, in the framework of a 21-member EU, the relative share of voting power of the five largest members would increase if either of the two main re-weighting schemes was applied (to approximately 55 percent of the total as compared to about 48 percent when the current system of vote allocation were to be maintained in the enlarged Union).

Table 7
Current and New Vote Allocations (21 Members, Normalized Banzhaf Index)

EU Members	Current location Voting Power	Dutch Proposal Voting Power	Square Root Rule Voting Power
<i>Current Larger states:</i>			
Germany	8.47	9.69	10.55
United Kingdom	8.47	9.69	9.67
France	8.47	9.69	9.67
Italy	8.47	9.69	9.67
Spain	7.03	8.04	7.55
<i>Current middle-sized and smaller states:</i>			
Netherlands	4.53	4.97	5.14
Greece	4.53	4.17	3.88
Belgium	4.53	4.17	3.88
Portugal	4.53	4.17	3.88
Sweden	3.72	3.34	3.88
Austria	3.72	3.34	3.88
Denmark	2.75	2.54	2.60
Finland	2.75	2.54	2.60
Ireland	2.75	2.54	2.60
Luxembourg	1.84	1.27	1.30
<i>New members:</i>			
Poland	7.03	8.04	7.55
Czech Republic	4.53	4.17	3.88
Hungary	4.53	4.17	3.88
Slovenia	2.75	1.27	1.30
Estonia	2.75	1.27	1.30
Cyprus	1.84	1.27	1.30
Total	99.99	100.04	99.96
Total larger member states (including Poland)	47.94	54.84	54.66
Total medium-sized and small member states	52.05	45.20	45.30

3 Effects of a Double-Majority Rule

Alternatively, another option could be introduced for voting in the Council that has been discussed rather intensively in the recent past: the double-majority rule. In the framework of the double-majority clause, decisions in the Council would not only require a given threshold in terms of weighted votes, but also the support of a specific fraction of the EU's total population (as represented by governments in the Council) to adopt proposals. This option might be easier to be accepted politically in smaller EU states (Moberg 1998), and indeed appears to be an alternative supported by various small members (Zbinden 1999). What would the effects of this system be on the relative a priori leverage of member states?

So far, the analysis presented in this contribution has been concerned with decision-making in the Council when a majority is required on one dimension (a qualified majority of the total vote). How would the distribution of a priori voting power change when a double-majority rule would be introduced? The scenario focused on here will analyze a double-majority system in which members' votes in the Council are weighted as at present and the second requirement for QMV is a given fraction of the EU's total population.²⁵ The double-majority rule was advocated earlier by Germany's Christian Democrats and has more recently gained attention in the political discussions on reforming the Council's voting procedures.²⁶ It is also mentioned as an option in the June 1999 Presidency Conclusions of the Cologne European Council, and in the July 1999 'Presidency Non-Paper'.²⁷

If this system were to be adhered to, what effects would it generate on the 'balance of influence' between large and small members in the EU, especially as compared to the current scheme and the re-weighting formulas discussed above? Intuitively, the Council's ability to reach decisions may be expected to decrease if a second threshold is introduced. Methodologically, the Council's relative 'capacity to act' can be calculated by assessing the fraction of winning coalitions that simultaneously meet both decision quotas. In an analogous way, voting power analysis for the double-majority scheme focuses on 'critical defections' in the framework of winning coalitions that

25 For an analysis of the effects of a double-majority rule on members' relative voting power – also for the option of a double-majority clause that implies a 'one member, one vote' rule in the Council in addition to a population threshold – see Hosli (1995).

26 For example, see Revision of Maastricht (1996), European Parliament (1997) and Moberg (1998).

27 See Presidency Conclusions (1999) and Council of the European Union (1999), respectively.

meet both requirements.²⁸ In order to make the estimates fully compatible with current discussions, the subsequent calculations will be based on population figures as provided in the document Council of the European Union (1999).²⁹

Table 8
Effects of a Double-Majority Rule (Normalized Banzhaf Index, 15 Members, Current Vote Allocation)

Member State	Percentage Share in EU Population (15 Members)	Voting Power Under Double-Majority Clause (Current Allocation in Addition to Given Percentage of EU Population)			
		Voting Power in Framework of QMV Coalitions		Voting Power in Framework of Blocking Coalitions	
		50	60	50	60
<i>Larger states:</i>					
Germany	22.0	11.16	11.28	18.83	19.46
United Kingdom	15.7	11.16	11.21	14.14	14.10
France	15.6	11.16	11.21	14.11	14.01
Italy	15.4	11.16	11.19	13.94	13.84
Spain	10.5	9.24	9.23	11.20	8.33
<i>Middle-sized and smaller states:</i>					
Netherlands	4.2	5.87	5.88	4.47	4.96
Greece	2.8	5.87	5.88	3.58	3.96
Belgium	2.7	5.87	5.87	3.55	3.89
Portugal	2.7	5.87	5.87	3.55	3.89
Sweden	2.4	4.79	4.75	3.06	3.27
Austria	2.2	4.79	4.75	3.04	3.13
Denmark	1.4	3.59	3.55	1.99	2.18
Finland	1.4	3.59	3.55	1.99	2.18
Ireland	1.0	3.59	3.55	1.80	1.92
Luxembourg	0.1	2.26	2.22	0.75	0.86
Total	100.1	99.97	99.99	100.00	99.98
Total larger member states	79.20	53.88	54.12	72.22	69.83
Total medium-sized and small member states	20.8	46.09	45.87	27.78	30.15

28 On this, see Hosli (2000).

29 It is noted in this document, however, that vote allocations were given on the basis of linear extrapolations as they had been reported during the Amsterdam IGC (see doc CONF/3815/97), with the addition of Malta. Population figures for most states were for 1997 (and for 1996 or 1995 for some members).

The results provided in table 8 illustrate that, as compared to the current system, the introduction of a double-majority rule would hardly affect members' capacity to be crucial for the formation of QMV coalitions, as figures on relative a priori power are very close to those under the current system. By comparison, if two decision quotas are to be met simultaneously, members' capacity to affect the formation of a 'blocking minority' under the QMV rule is changed. Generally, it has to be kept in mind that a double-majority clause along the lines discussed in this paper would constitute a 'double weighting' formula, as members' votes, in practice, would be weighted in terms of both the regular QMV provision and members' population size. The last two columns of table 8 provide the respective indices when the capacity of EU states to affect the fate of 'blocking coalitions' is assessed (the second quota being either 50 or 60 percent of total EU population).

With the 60 percent population quota, the relative influence of larger members is increased more than with the 50 percent threshold (as they may generally constitute a larger share of a potential blocking minority), but either option would clearly benefit larger members. Hence, whereas a double-majority clause would not generally affect the capacity of larger members to influence the formation of 'winning coalitions', it does crucially enhance their possibilities to form blocking minorities in the framework of the Council's decision procedures. By comparison, the relative leverage of the smaller and medium-sized members would deteriorate with a double-majority clause, although to a lesser extent for the Netherlands than for other members in this group.

In terms of the 'balance of influence' between larger and smaller members, table 8 illustrates that whereas the larger EU members currently constitute about 80 percent of total EU population, their share in relative voting power with respect to the formation of QMV coalitions would be about 54 percent under the double-majority clause (a fraction quite similar to the current system). In the context of blocking minorities, however, their collective leverage would be about 70 percent of total voting power. Hence, the relative influence of larger members to avoid proposals from being accepted in the Council would clearly increase with the double-majority clause as compared to the possible re-weighting schemes discussed above.

Conclusions

It is far from easy to agree on new voting weights in the Council. Institutions – and linked to this, the distribution of influence within them – are difficult to change (North 1990). New voting weights in the Council will certainly have repercussions on the balance of relative ‘voting strength’ among EU states (both current and future ones) and also affect patterns of coalition-formation in the Council. This paper provides a background analysis to different options that are currently being discussed for re-weighting votes in the Council or the introduction of a double-majority clause.

On the basis of ‘Lorenz curves’, the contribution illustrates the distribution of votes among EU governments in the Council as compared to their share in total EU population for the EU’s past and present, and evaluates the effects of modified vote allocations. These approaches have the advantage that the relative extent of ‘inequality’ as compared to a purely proportional distribution of votes can be shown in a rather straightforward way. In addition, such illustrations can graphically display how the distribution of votes among EU member states determines the size of the theoretical ‘minimal blocking minority’ (the minimal share of total EU population, represented in the Council, that can prevent a proposal from being adopted), or the ‘minimal qualified majority’ of EU population that can get a proposal accepted in the framework of the QMV rule. On the basis of this analysis, it is shown that the current vote allocation as compared to the one that existed in the first phase of the Community’s existence is more favorable to smaller members, but that the effect is not very pronounced. More specifically, the analysis indicates that in the current 15-member EU, it is not possible that a ‘majority’ of EU population as represented in the Council could be outvoted by a ‘minority’ of the EU’s population in the framework of the QMV rule.

In addition to this, the contribution shows how voting power analysis may be used to assess the effects of modified vote distributions in the Council. Currently, actors do not know what policy positions they will be advocating in the Council (or COREPER and Working Groups) in the future. Hence, they essentially act behind a ‘veil of ignorance’. A new voting scheme will thus be introduced without members knowing whether they will be in opposition to certain issues in the future or supportive of them, whether their preferences will be ‘extreme’ or in the ‘center’ of respective scales and hence, who their ‘coalition partners’ will be. An analysis of relative voting power for earlier constellations of EU membership – as it has been presented by different authors in the past – is here extended to study effects of alternative vote distributions (and of enlargement).

The ‘Dutch proposal’ and the ‘square root rule’, as this contribution shows, would increase the relative leverage of large EU members, although effects are more favorable to Germany under the square root rule (the reverse being true for the other larger members). Both options to modify the vote distribution would enhance the collective voting power of the larger EU states as compared to the medium-sized and smaller ones, attributing to them, in the framework of the current 15-member EU, about 60 percent of total voting power (as compared to about 54 percent at present).

Finally, the contribution focuses on some effects when a double-majority clause would be introduced: how would such an adaptation affect the relative influence of EU governments in the Council? How do these effects compare to those generated by re-weighting formulas? A double-majority clause, as this contribution illustrates, would influence the distribution of a priori voting power among members in the Council, but essentially only by affecting members’ capacity to be crucial in ‘blocking coalitions’ (rather than ‘winning coalitions’). The analysis demonstrates that as compared to different re-weighting schemes, the smaller and medium-sized EU members would lose relative a priori influence if a double-majority clause were to be introduced, but mostly in terms of their capacity to build blocking minorities. Hence, this scheme would significantly enhance the capacity of larger EU members to prevent bills from being passed, but not so much their ability to get proposals accepted.

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