

## Council Decision Rules and European Union Constitutional Design

Madeleine O. Hosli\*

Received 1 December 2007; Accepted 29 January 2008

**Abstract** In the recent past, the choice of adequate voting weights and decision rules for the Council of the European Union (EU) has been a highly contested issue in EU intergovernmental negotiations. In general terms, the selection of a threshold for qualified majority votes (QMV) in the Council constitutes a trade-off in terms of decreased sovereignty for individual governments versus an increased collective ‘capacity to act’. This paper compares the effects of the proposal tabled by the Convention on the Future of Europe with the Nice Treaty provisions and the Lisbon Treaty, in terms of both the efficiency of decision-making and the distribution of relative voting power within the EU of twenty-seven member states. In addition, the paper shows how with the current size of EU membership, the EU risks being unable to reach intergovernmental agreement. Accordingly, a challenging issue for the future of the EU is to move towards reasonable provisions that allow its own constitution – if ever adopted – to get amended.

**Keywords** Council of the European Union, decision rules, constitutional design, capacity to act, power indices

**JEL classification** C15, C71, D70, D71

### 1. Introduction

In June 2003, the ‘Convention on the Future of Europe’ came to a close. The challenge of institutional reform had been significant for several years, and progress, generally, was by incremental steps. ‘Amsterdam leftovers’ had partially turned into ‘Nice leftovers’, as the December 2000 Nice Summit meeting had far from resolved all of the outstanding institutional challenges facing the EU. The 2002–2003 Convention dealt with a vast range of issues in a novel fashion, involving a variety of societal actors. Institutional reform was just one element of the broad range of discussions that took place in the Convention, although a rather central one.<sup>1</sup>

Some crucial institutional issues, however, even after the conclusion of the Convention, remained unresolved. In mid-December 2003, one of the most important stumbling blocks for the potential acceptance of the draft constitutional treaty turned out to be the central issue of allocating voting weights in the Council of the EU. As *The Economist* claimed, even before the failure of the December 2003 EU summit meet-

---

\* Leiden University, Department of Political Science, P.O. Box 9555, NL-2300RB Leiden, the Netherlands. Phone +31715273456, E-mail: hosli@fsw.leidenuniv.nl.

<sup>1</sup> For an elaborate overview of the institutional aspects dealt with by the Convention, see Dinan (2003).

ing, “The single most controversial issue concerns the balance of power between EU countries in the Council of Ministers”. (The Economist, 22 November 2003, p. 35)

At the 2000 Nice summit meeting, a re-weighting of votes in the Council of the EU, sometimes still called the ‘Council of Ministers’, had been decided after lengthy negotiations on the issue. Cleavages were then especially evident between larger and smaller EU states about appropriate voting weights for the EU Council. Insiders have provided descriptions of the tedious bargaining processes that led to the outcomes of the Nice negotiations (e.g. Galloway 2001, Moberg 2002). The results in terms of vote allocations appeared to be determined by ‘power politics’ rather than any careful background reflection.

In view of the central importance of voting weights in the Council of the EU, this paper mainly deals with modes of majority voting in this institution. The Nice re-weighting of votes had largely been triggered by a dissatisfaction among large EU states with what they perceived to be a considerable overweighing of the influence of small and medium-sized countries in EU decision-making (e.g. Moberg 2002). The provisions agreed upon at Nice also foresaw a moderate increase in the voting threshold applicable in the framework of qualified majority votes (QMV), thereby enhancing the capacity of EU states to block decisions (e.g. Felsenthal and Machover 2001, Leech 2002). In percentage terms, the required share of votes needed for proposals to be accepted was increased from the then prevalent level of just over 71 percent to approximately 74 percent of the total, in a projection of enlargement to twenty-seven EU member states. An important rationale for EU states in the respective intergovernmental negotiations was maintenance of their own capacity to veto (or at least their ability to block decisions together with some like-minded states). The collective effect of such an adapted decision quota, however, is a likely decrease in the Council’s capacity to act (e.g. Paterson and Silárszky 1999, Felsenthal and Machover 2001, Leech 2002, Hosli and Machover 2004).<sup>2</sup> The lengthy nature of the bargaining process that characterized the Nice negotiations, as well as similar discussions in the framework of the Convention, strengthen conjectures that reaching intergovernmental agreement within the EU may, in the future, be a rather tedious endeavor. Unanimous decision-making, as this paper demonstrates, is rendered significantly more difficult when membership is expanded. Evidently, the calculations provided in this paper provide simple ‘averages’ that ignore other specific conditions – such as effects of collective ‘learning’ and the related possibility of governmental preference convergence. Such developments might facilitate rather than complicate collective decision-making in the EU, even on the basis of expanded membership (e.g. Golub 1999, 2002, 2007). Empirically, indeed, decision-making in the EU, even under the Nice Treaty provisions, seems to have slowed down less than such calculations would posit (e.g. Hagemann and De Clerck-Sachsse 2007).

Nonetheless, this paper claims that enlargement by ten new members in May 2004 and two more members in January 2007 has made QMV decisions more difficult to reach. In addition, it can be expected to render unanimous intergovernmental agree-

---

<sup>2</sup> Interestingly, applying spatial approaches to the analysis of decision-making in the EU Council, Tsebelis and Yatağanas (2002) derive similar results.

ment in the EU rather difficult to achieve and is hence likely to prolong respective negotiations, whether on day-to-day issues (regarding taxation, for example) or in the 'broader' and more general context of treaty reform (what might in the long-term future be seen as 'constitutional amendment'). In addition, the paper contends that at present, a 'status quo bias' is likely to exist in all areas formally requiring unanimity in the Council of the EU. In a normative sense, given the significance of the enlargement, it might indeed be important – despite critiques raised against this suggestion by several member state governments – not only to replace the unanimity requirement with QMV for various issues areas, but also to find ways to adapt a possible future EU constitution itself on the basis of a decision threshold lower than unanimity. If not, it is likely that an EU constitution, if it is ever going to see the light of day, might develop into a somewhat rigid and static construct, unable to respond to new demands and challenges. Evidently, any basic polity-building process involves decisions on how future reform of a constitution should be undertaken as well as agreement on the original make-up of such a constitution.

In terms of 'day-to-day' decision-making, the suggestion made by the Convention to allow for a double-majority system, in which proposals in the Council can pass when they are supported by a majority of EU states, representing three-fifths of the EU's population, was rather surprising. Clearly, abolishing voting weights, in a radical departure from the voting system applied since the late 1950s, would not only considerably have increased the relative influence of larger EU states (e.g. see Felderer, Paterson and Silárszky 2003, Felsenthal and Machover 2003), but it would also strongly have enhanced the capacity of the Council to act (e.g. Felsenthal and Machover 2003). Intergovernmental acceptance of such a system would undoubtedly have been astonishing, since such a change would clearly decrease EU states' potential to block decisions, an aspect that is, as some authors have pointed out (e.g. Johnston 1995, Moberg 2002), certainly salient to individual governments. Could governments of EU member states ever have accepted such a drastic change? Apparently, the system adopted during the Convention was not necessarily based on broad support: it was "proposed by the Convention on the Future of Europe in June, which claimed to be an open and democratic exercise. But the new voting system was decided upon at the last minute by the convention's praesidium (steering committee)...". (The Economist, November 29, 2003, p. 34) Whereas this comparatively straightforward decision rule – in contrast to the more complex construct agreed upon at Nice – might be desirable in terms of transparency and an increased capacity of the Council to act, it was likely to be a political non-starter; it is hardly imaginable that governments would be willing to accept such a sharp decrease in their capacity to prevent EU decisions from being adopted. Similarly, whereas later on, the square root rule as an allocation formula for the EU Council, as suggested notably by the Polish government, would have increased transparency of vote allocation (e.g. Kirsch, Słomczyński and Życzkowski 2007, Słomczyński and Życzkowski 2007) and in fact, efficiency of Council decision-making, it could not pass the required political hurdles. It seems that the effects of such novel rules might not be easily discernible for the public and therefore again seem to be somewhat 'opaque'.<sup>3</sup>

<sup>3</sup> For the double-majority rule, this argument has been made by Felderer, Paterson and Silárszky (2003).

However, a fairly simple allocation rule would certainly help improve transparency, and possibly general political legitimacy, of EU decision-making.

Evidently, any institutional design, including the one for the Council of the EU, is faced with conflicting requirements. Generally, institutions need to offer an adequate reflection of citizens' interests in order to be perceived as 'legitimate' constructs. This reasoning would also lend support to the introduction of vote allocations that attribute equal indirect voting power to each EU citizen (e.g. Laruelle and Widgrén 1998, Słomczyński and Życzkowski 2007). However, institutions also need to be 'efficient' in the sense of enabling majorities to reach decisions. Finally, institutions need to protect the interests of minorities – whether these are cultural, geographic or linguistic, for example. Clearly, all of these requirements are crucial for the current and future EU. However, they are partially conflicting: enhancing the degree to which minority interests are protected in Council decision-making, for example, is likely to decrease 'efficiency' (in the sense of enabling majorities to reach decisions). In addition, maintaining current member state veto rights in areas such as taxation – a position traditionally strongly defended by the UK government, for example – will evidently, with a large number of EU states, slow down the EU's capacity to act in this domain. A similar logic undoubtedly applies to decision-making in the challenging and developing field of the EU's Common Foreign and Security Policy (CFSP).

This article focuses on the Council of the EU and examines the effects of earlier voting rules applied, the provisions agreed upon at the Nice summit meeting and the rules regarding the double-majority clauses contained in the Convention proposal and later, in an adapted form, in the Constitutional and Lisbon treaties. The paper contends that the combined effect of both unanimity and QMV with enlargement has been, and will be in the future, to decrease the 'efficiency' of decision-making in the Council, in the sense of lowering the *a priori* chances of legislative proposals to be adopted within this institution. This implies that the interests, and relative sovereignty, of individual member states are protected, but also that previous enlargements are likely to have counterbalanced decisional 'efficiency gains' generated by the extension of QMV to policy areas previously subjected to the unanimity rule. *Ceteris paribus*, the effect of this will be that, in future, it will be more difficult than it is now to change the *status quo* even in 'day-to-day' EU decision-making, due to the lower probability that decisions will be supported by a required Council majority.<sup>4</sup> Given the importance of the voting threshold (e.g. Leech 2002, Plechanovová 2004, Słomczyński and Życzkowski 2007), it seems that discussions at the Nice summit meeting had somewhat overemphasized the issue of vote re-weighting, as little attention was paid to the crucial issue of the actual level of the QMV threshold. In addition, the Nice summit did not generate clear allocation rules for actual vote distributions. Rather, the allocation of voting weights in the Council and the projected distribution of seats in the European Parliament appeared to be the product of simple *ad hoc* political bargaining (e.g. Taagepera and Hosli 2006).

This paper will reflect on both the capacity of the Council of the EU to act and

<sup>4</sup> Of course, depending on the constellation of preferences of EU member states in the Council, the European Parliament and the European Commission, for example, it may still be true that some issues are accepted rather swiftly, also in the framework of an EU of 27 members or more. On average, however, this paper claims that it will be more difficult to reach the required threshold.

the capacity of the EU to adapt its possible constitutional provisions in the future. In this sense, an examination of the effects of the institutional provisions, in combination with enlargement, on both ‘rules on decisions’ and ‘rules on rules’ is offered. Methodologically, the article departs from the assumption that future distributions of member state preferences in the EU are not known with any degree of accuracy today, as these distributions tend to vary according to the policy domain concerned as well as over time. Hence, the paper employs a simple ‘baseline’ model in order to assess the EU Council’s capacity to act and the capacity of the EU to reform itself in the future.

By presenting these calculations, the paper emphasizes that the ability of the Council to act is not solely determined on the basis of whether decisions are made according to the unanimity or QMV rule, but that this institution<sup>5</sup> is also affected by other important factors, notably voting weights, the level of the QMV threshold and the number of EU states.<sup>6</sup> In order to present and discuss these respective effects, the paper is structured as follows. Section two focuses on the challenges of constitutional design, highlighting trade-offs regarding decision-making efficiency, legitimacy, flexibility, and protection of minority rights, since they are certainly important to the EU’s design as regards institutional change; section three describes ways to measure decision-making ‘efficiency’ by employing the concept of ‘decision probability’; section four illustrates how different options regarding decision thresholds affect the Council’s overall ‘capacity to act’ and demonstrates these effects in terms of decision probability and the relative distribution of influence among EU states resulting from the Nice, Convention and Lisbon Treaty provisions; section five summarizes the main findings and concludes.

## **2. The flexibility of constitutional design**

Changing the EU’s ‘decision rules’, through processes of treaty reform, currently still requires agreement among all EU governments, and subsequent domestic ratification. This procedure is also applicable to the recent Lisbon Treaty. Clearly, the Convention on the Future of Europe was a novel way to start adapting decision rules and institutional provisions for the EU, but governments of EU member states, in the subsequent Intergovernmental Conference (IGC), were still able to ‘open up’ the entire negotiation package and approve, or avoid, insertion of specific elements into the draft constitutional treaty. ‘Constitutional rules’ for the EU currently need to be agreed upon unanimously by the governments of EU member states. Evidently, this will be increasingly difficult in the future in view of the recent substantial expansion of EU membership and possible further increases in the future. In this sense, ‘rules on rules’ for the EU will be difficult to adapt if respective provisions are not changed – including decisions on the choice of EU decision rules themselves.

As outlined above, ideally, constitutions are designed to meet various, partially contradicting challenges. Most importantly, they need, on the one hand, to represent the interests of a majority of the constituents and, on the other hand, to protect the

---

<sup>5</sup> Although the term ‘Council’ is used here, the same logic, of course, applies to deliberations within the Committee of Permanent Representatives (COREPER) or working groups linked to the Council, for example.

<sup>6</sup> These aspects are emphasized in Leech (2002). For alternative solutions to the current vote allocation in the Council and their possible effects, see Plechanová (2004).

wishes of minorities (such as different language, cultural or religious groups), while still remaining flexible in terms of their capacity to make decisions, reform themselves, and adapt to new challenges and circumstances.

In federal as well as 'quasi-federal' political systems, such trade-offs among different objectives tend to be both crucial and politically salient, since the overall constitutional design needs to protect the interests of individual system components in order to provide them with incentives to remain within the given structure. Traditionally, the United States, based on a federal setup, has its member states represented on an equal basis in the Senate, the parliament's 'upper house', in spite of the fact that their population sizes vary considerably. Accordingly, representation in the Senate is on the basis of territory rather than population. By comparison, in the U.S. Congress, states are represented according to population, with smaller states being represented more favorably.<sup>7</sup> Other federal systems are based on similar patterns of representation. This is true for Australia, Canada, Germany and Switzerland. A challenge for such systems is to protect the rights of their constituent units – states, provinces, cantons, or *Länder* – while still allowing for sufficient efficiency in federal decision-making. Moreover, the inclusion of provisions for constitutional amendment and reform presents a particular conundrum for these systems.

Canada's Constitution Act, proclaimed on 17 April 1982, provided a formula regarding procedures for its own amendment. The compromise reached among the Canadian provinces is contained in section 38 of the Act, stating that amendments require "... resolutions of the legislative assemblies of at least two-thirds of the provinces that have, in the aggregate, according to the then latest general census, at least fifty percent of the population of all the provinces" (38(1)b).<sup>8</sup> The effects of this provision in terms of the balance of influence among Canadian provinces, and the inherent flexibility of the system, have been analyzed extensively by D. Marc Kilgour and Terrence Levesque (1984). Despite the current widespread opposition of member state governments to this suggestion, it seems highly likely that, in view of its future size, the EU will need a similar provision regarding amendments of its own possible future constitution if it is to avoid gridlock (in spite of the fact that the EU may rather be a 'quasi-federation' and hence not be fully comparable to the examples of federations as discussed here).

In James Buchanan and Gordon Tullock's seminal work, *The Calculus of Consent* (1962), decision-making costs, generally, are assumed to increase with the number of players involved. According to the authors, a reduction in the relevant requirement for making decisions – a decrease in the 'decision threshold' – enhances the capacity of an institution to act. This approach resembles Coleman's analysis of the 'power of a collectivity to act' (Coleman 1971), to be discussed and applied in more detail below. Unanimity rules ensure that all voters endorse a specific issue and no one gets outvoted,<sup>9</sup> as Buchanan and Tullock emphasize, but they imply relatively high costs

<sup>7</sup> For an early analysis of this issue, see Robert Dahl (1956).

<sup>8</sup> Evidently, this formula resembles the 'double-majority' clause envisaged by the EU Convention as regards 'day-to-day' decision-making, but with reversed decision thresholds regarding population and number of provinces.

<sup>9</sup> However, members may receive 'side-payments' in order to induce them to support a proposal. Moreover, they may 'log-roll', i.e. trade their votes, obtaining support on an issue crucial to them in exchange for a

regarding the process of reaching agreement (e.g. negotiation and transaction costs). From the perspective of individual voters, in the framework of majority votes, the risk of being adversely affected by a collective decision contradicting one's own preferences is most extensive under the simple majority rule (i.e. 50 percent of the total plus 1 vote). The higher the decision threshold, the better is the protection of individual interests, but the lower is the capacity of the collectivity to act.

In federal systems, the attribution of a relatively favorable pattern of representation to smaller units may generally increase the sense of the 'fairness' amongst its citizens (as long as it is not perceived by citizens of larger states as tilting the balance of influence towards smaller entities). In such systems, smaller groups – characterized by specific cultural or linguistic ties for example – are able to block decisions they consider to be detrimental to their own interests. Accordingly, such groups may choose the option of 'voice' rather than 'exit'<sup>10</sup> within the federal structure. However, it seems likely that the protection of the interests of individual components in a system has an optimum beyond which the flexibility of the system decreases, leading ultimately to a situation in which the system is no longer capable of generating decisions (or of reforming itself).

Similarly, in the EU, smaller states may need to have a certain minimum clout in the decision-making process in order to enable their citizens to feel content with the overall system. The risk of feeling dominated by larger states is ever present in smaller EU states and appears to constitute a realistic threat to the perceived legitimacy of the EU's institutional setup. Indeed, negotiations leading to the Treaty of Nice illustrated the extent to which smaller and medium-sized EU states were willing to defend their voting weights, fearing 'marginalization' in the EU's decision-making process, and voicing concern about possible increases in the relative power of the largest states (e.g. Moberg 2002). Larger EU states, in turn, felt there was an increasing domination of the large by the small, presenting this finding as a rationale for why their citizens considered the extant system to be lacking 'legitimacy'. It is, in fact, this discussion that spurred the debate on the need to re-weight votes in the Council (see Best 2000).

A considerable range of studies has assessed the relative 'swiftness' of EU decision-making, employing various methodological tools, and providing some empirical evidence. For example, Golub (1999, 2002) found, analyzing EU directives, that the introduction of QMV, combined with enlargement, had not caused a slow-down in EU decision-making over time. But could the effects be more pronounced when more members join? König and Bräuninger (2002), in their analysis of regulations in addition to directives, contended that, in cases in which QMV applies, the relative swiftness of decision-making does indeed slow down with enlargement. A similar finding was provided in Schulz and König (2000). Recently, however, both Golub (2007) and Hagemann and De Clerck-Sachsse (2007) found that the EU does not operate much slower, even after the 2004 enlargement.

Most studies agree that the enhanced role of the EP in EU decision-making proce-

---

vote on an issue they consider to be of lesser importance. On effects of log-rolling more generally, e.g. see Tullock (1976).

<sup>10</sup> For a succinct distinction between 'voice' and 'exit', and on the importance of the concept of loyalty, see Hirschman (1970).

dures is likely to have increased democratic 'legitimacy'. But, evidently, it may also have slowed down the swiftness of EU decision-making. This is a significant trade-off that was highlighted, for example, in Golub (1999), Schulz and König (2000) and König and Bräuninger (2002). If the capacity of the EU to act is to remain constant over time, increasing powers for the EP – desirable in terms of strengthening the EU's democratic foundations – may need to be counterbalanced by decreasing decision-making costs in the Council (i.e. by lowering the threshold in Council decision-making rather than increasing it). In this sense, the suggestion made by the Convention would provide a helpful remedy to past trends.

A somewhat more radical option would be the introduction of a 'one state, one vote' rule combined with simple majority voting – without a second quorum regarding population size – in the Council, similar to the model of the U.S. Senate. Whereas such a provision would certainly enhance decision efficiency in the EU, it is impossible to implement politically (e.g. see Baldwin et al. 2001). The suggestion resulting from the Convention, however, amounted to almost such a simple majority clause, by abolishing the voting weights of individual EU states and allocating one vote to each state (while providing for a second quorum, the 60 percent of population provision).

Different versions of potential double-majority rules have been studied extensively (e.g. Baldwin and Widgrén 2004). In what ex-post appears to be rather impressive foresight, Turnovec (1997) analyzed effects of various double-majority voting schemes for an EU expanded to twenty-seven member states – providing respective estimates for exactly the members that make up the current EU-27.

How can the likelihood that decisions are taken in the Council be assessed in a manner that provides a 'baseline' scenario? One possibility might be to use spatial models of decision-making (e.g. as presented by Steunenberg et al. 1999) in an assessment of the probability that, with different preference constellations, a required majority threshold can be reached in the Council. However, another possibility consists of using the decision threshold in order to assess the likelihood that winning coalitions form *ceteris paribus*, ignoring other possible influences. This approach is based on the assumption of Independent Coalition Culture (ICC). Accordingly, EU states are assumed to vote independently in the Council and generally, to vote for or against a proposal with a probability of one-half.

### **3. Voting weights, winning coalitions and 'efficiency' in Council decision-making**

How will 'efficiency' of decision-making be measured in this article? The main focus of the analysis is on the probability that, within a committee, winning coalitions can be formed. Accordingly, the following sections analyze 'efficiency' by calculating the probability that a randomly selected coalition among EU member states can meet the required decision quota (here the majority requirement in the Council's voting procedures, assuming independence of vote choices and the probability of each voter voting 'yes' or 'no' to be  $p = 0.5$ ). The approach essentially provides figures on the proportion of winning coalitions in all possible coalitions among EU member states, using Coleman's measure of the 'power of a collectivity to act' (Coleman 1971). For similar

approaches, see Buchanan and Tullock (1962), Kilgour and Levesque (1984), Peters (1996), König and Bräuninger (1998, 2002), Baldwin et al. (2000, 2001), Paterson and Silárszky (2003), Felsenthal and Machover (2001, 2003), Hosli and van Deemen (2002) or Plechanovová (2004). The measure provided in this article thus largely neglects political variables and the resulting estimates on the likelihood that specific coalitions form among members on the basis of particular preference configurations.<sup>11</sup> It aims to provide measures of ‘decision-making efficiency’, valid over longer time spans and for a broad variety of issue areas. With this, it provides somewhat ‘pessimistic’ assessments regarding the probability of reaching decisions in the Council, as in reality vote choices of governments in the Council of the EU may not be fully independent of each other. In practice, the figures presented here provide estimates on the length of time negotiations within the Council may take. Formal votes in the Council can be taken at the end of a lengthy bargaining process (both inter-institutional within the EU and among member states represented in the Council) and empirically, have a sharp bias towards ‘yes’ votes due to the fact that ‘no’ votes tend to rather be demonstrations of opposition against an EU decision for domestic audiences than an actual revelation of preferences.

The technique used here focuses on the concept of winning coalitions, assuming ICC; formally, the existence of a winning coalition can best be conceptualized in the framework of the theory of simple games (e.g. see van Deemen 1997). A simple game is an ordered pair of sets  $G = (N, W)$ , where  $N$  denotes the full player set and  $W$  is a set of coalitions (or subsets of  $N$ ). An element of  $W$  is termed a winning coalition (correspondingly, the set of losing coalitions is generally denoted by  $L$ ).<sup>12</sup>

A weighted threshold game is a simple game in which a voting weight is assigned to each player. In such a game, a coalition is winning when the sum of the voting weights of the coalition members is larger than, or equal to, the decision threshold (the ‘quota’ of the game). A weighted threshold game  $G$  is represented by  $G = [q; w_1, w_2, \dots, w_n]$ , with  $q$  denoting the decision quota and  $w_i$  player  $i$ 's voting weight. Formally, in a weighted threshold game, a winning coalition satisfies the condition

$$S \in W \text{ iff } \sum_{i \in S} w_i \geq q. \quad (1)$$

In words, coalition  $S$  is winning if and only if the sum of the weights of the players in the respective coalition equals or exceeds the decision threshold.

In a committee of size  $n$ , the total number of possible coalitions (combinations) among members, including the ‘grand coalition’ and the coalition containing the ‘empty set’, is  $2^n$ . Subsequently, the number of winning coalitions – for the EU Council in our case – will be denoted by  $|W|$ . When no restrictions on coalition-formation

<sup>11</sup> In this sense, the calculations provide ‘baseline’ estimates - almost to be compared to a regression line in regression analysis; see Leech 2002.

<sup>12</sup> The following axioms apply with respect to winning coalitions: (1) any coalition which contains a winning sub-coalition is itself winning; formally, if  $S \in W$  and  $S \subseteq T$ , then  $T \in W$  (monotonicity requirement); (2) there are winning coalitions:  $W \neq \emptyset$ ; (3) the empty coalition is not winning ( $\emptyset \notin W$ ). Axioms (2) and (3) ensure that trivial games are excluded. (See van Deemen 1997). On legislatures and simple games also see Rapoport (1970: 207-21).

are introduced, according to the ICC approach, the measure for relative efficiency,  $\lambda$ , can simply be expressed with Coleman's index of the power of a collectivity to act (Coleman 1971):<sup>13</sup>

$$\lambda = \frac{|W|}{2^n} \quad (2)$$

The analysis needs to be adapted, however, when a double-majority clause applies. Formally, as an extension of equation (1), the double-majority requirement is given by

$$S \in W \text{ iff } \sum_{i \in S} w_i \geq q_1 \wedge \sum_{i \in S} p_i \geq q_2. \quad (3)$$

Applied to the EU,  $q_1$  may denote the voting weight threshold,  $w_i$  the voting weight of Council member  $i$ ,<sup>14</sup>  $p_i$  member  $i$ 's share in the EU population total, and  $q_2$  the second decision quorum (the threshold in terms of the required share in total EU population). Winning coalitions in the Council under the double-majority clause, according to equation (3), require that both decision quotas be met simultaneously.

By comparison, the Treaty of Nice has introduced a 'triple majority clause' (see Felsenthal and Machover 2001): it requires a qualified majority of voting weights and, generally, a simple majority of the EU states for decisions to pass. In addition to this, verification could be requested that the votes represent at least 62 percent of the EU population total. Effects of this rule have been analyzed extensively in Felsenthal and Machover (2001), for example, who demonstrate, *inter alia*, that the requirement regarding a majority of member states was superfluous – at least before the 2004 enlargement – since there was no winning coalition in the EU-15 that satisfied the first two requirements while not being composed of a majority of member states.

#### 4. Former decision rules and the Nice, Convention and Lisbon provisions

Evidently, QMV, as compared to the unanimity rule, tends to increase the Council's 'capacity to act' – a point often emphasized by practitioners (e.g. Moberg 2002). Using the method of assessment applied above, how 'efficient' is decision-making in the Council under the provisions of the Treaty of Nice as compared to those of the Convention and its later, modified, version?

In order to allow for a comparison over time, the distribution of votes among EU states and the QMV threshold is shown in Table 1 for the various stages in the EU's history (see Hosli 1993, Paterson 1997, Felsenthal and Machover 1998, 2001),<sup>15</sup> and includes the Nice, Convention and Lisbon provisions. As can be seen, the Nice re-weighting of votes was the first instance of an increase in the voting weights of larger EU states since the re-weighting of votes that accompanied the 1973 enlargement.

<sup>13</sup> In the computer program provided by Bräuninger and König (2001), this index is aptly referred to as 'decision probability'.

<sup>14</sup> Note, however, that according to the draft constitutional treaty as well as the Constitutional and the Lisbon treaties, votes of EU states would be non-weighted.

<sup>15</sup> Note, however, that the use of QMV was limited in practice because of the 'Luxembourg compromise'. This compromise was resorted to in the 1960s after the French 'policy of the empty chair' and led to the requirement of unanimity whenever a member state's 'crucial national interests' were considered to be at stake.

**Table 1.** The distribution of votes and the qualified majority threshold in the Council of the EU

	Pop.**	1958-1972				1973-1980				1981-1985				1986-1994				1995-2004				Treaty of Nice			Convention			Lisbon Treaty		
		1958-1972	1973-1980	1981-1985	1986-1994	1995-2004	1958-1972	1973-1980	1981-1985	1986-1994	1995-2004	1958-1972	1973-1980	1981-1985	1986-1994	1995-2004	1958-1972	1973-1980	1981-1985	1986-1994	1995-2004	Voting weights	No. of states	Pop.*	No. of states	Pop.*	No. of states	No. of states	Pop.*	No. of states
Austria	8.30	-	-	-	-	-	-	-	-	4	-	-	-	-	4	10	1	1.68	1	1.68	1	1.68	1	1.68	1	1.68	1	1.68	1	1.68
Belgium	10.58	2	5	5	5	5	5	5	5	5	12	12	12	12	12	12	1	2.14	1	2.14	1	2.14	1	2.14	1	2.14	1	2.14	1	2.14
Bulgaria	7.68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1	1.55	1	1.55	1	1.55	1	1.55	1	1.55	1	1.55	1	1.55
Cyprus	0.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	0.16	1	0.16	1	0.16	1	0.16	1	0.16	1	0.16	1	0.16
Czech Republic	10.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	1	2.08	1	2.08	1	2.08	1	2.08	1	2.08	1	2.08	1	2.08
Denmark	5.45	-	3	3	3	3	3	3	3	3	7	7	7	7	7	7	1	1.10	1	1.10	1	1.10	1	1.10	1	1.10	1	1.10	1	1.10
Estonia	1.34	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	1	0.27	1	0.27	1	0.27	1	0.27	1	0.27	1	0.27	1	0.27
Finland	5.28	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	1	1.07	1	1.07	1	1.07	1	1.07	1	1.07	1	1.07	1	1.07
France	63.39	4	10	10	10	10	10	10	10	10	29	29	29	29	29	29	1	12.80	1	12.80	1	12.80	1	12.80	1	12.80	1	12.80	1	12.80
Germany	82.31	4	10	10	10	10	10	10	10	10	29	29	29	29	29	29	1	16.62	1	16.62	1	16.62	1	16.62	1	16.62	1	16.62	1	16.62
Greece	11.17	-	-	5	5	5	5	5	5	5	12	12	12	12	12	12	1	2.26	1	2.26	1	2.26	1	2.26	1	2.26	1	2.26	1	2.26
Hungary	10.07	-	-	-	-	-	-	-	-	-	12	12	12	12	12	12	1	2.03	1	2.03	1	2.03	1	2.03	1	2.03	1	2.03	1	2.03
Ireland	4.31	-	3	3	3	3	3	3	3	3	7	7	7	7	7	7	1	0.87	1	0.87	1	0.87	1	0.87	1	0.87	1	0.87	1	0.87
Italy	59.13	4	10	10	10	10	10	10	10	10	29	29	29	29	29	29	1	11.94	1	11.94	1	11.94	1	11.94	1	11.94	1	11.94	1	11.94
Latvia	2.28	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	1	0.46	1	0.46	1	0.46	1	0.46	1	0.46	1	0.46	1	0.46
Lithuania	3.38	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	1	0.68	1	0.68	1	0.68	1	0.68	1	0.68	1	0.68	1	0.68
Luxembourg	0.48	1	2	2	2	2	2	2	2	2	4	4	4	4	4	4	1	0.10	1	0.10	1	0.10	1	0.10	1	0.10	1	0.10	1	0.10
Malta	0.41	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08	1	0.08

Pop.**	1958-1972		1973-1980		1981-1985		1986-1994		1995-2004		Treaty of Nice			Convention		Lisbon Treaty		
											Voting weights	No. of states	Pop.*	No. of states	Pop.*	No. of states	Pop.*	
Netherlands	16.36	2	5	5	5	5	5	5	5	13	1	3.30	1	3.30	1	3.30	1	3.30
Poland	38.13	-	-	-	-	-	-	-	-	27	1	7.70	1	7.70	1	7.70	1	7.70
Portugal	10.60	-	-	-	5	5	5	5	5	12	1	2.14	1	2.14	1	2.14	1	2.14
Romania	21.57	-	-	-	-	-	-	-	-	14	1	4.36	1	4.36	1	4.36	1	4.36
Slovakia	5.39	-	-	-	-	-	-	-	-	7	1	1.09	1	1.09	1	1.09	1	1.09
Slovenia	2.01	-	-	-	-	-	-	-	-	4	1	0.41	1	0.41	1	0.41	1	0.41
Spain	44.47	-	-	-	8	8	8	8	8	27	1	8.98	1	8.98	1	8.98	1	8.98
Sweden	9.11	-	-	-	-	-	-	-	-	10	1	1.84	1	1.84	1	1.84	1	1.84
United Kingdom	60.85	-	10	10	10	10	10	10	10	29	1	12.29	1	12.29	1	12.29	1	12.29
Total	495.12	17	58	63	76	76	76	76	87	345	27	100	27	100	27	100	27	100
Qualified Majority Threshold	-	12	41	45	54	54	54	54	62	255	14	306.98	14	297.08	15	321.83	15	321.83
		70.6%	70.7%	71.4%	71.1%	71.1%	71.1%	71.1%	71.3%	73.9%		62%		60%	55%	65%		65%

Source: Updated from Hosli (1993).

\* Population figures 2007 (from Eurostat), in percent.

\*\* Population figures 2007 (from Eurostat), in millions.

In a surprisingly regular pattern, moreover, the voting threshold for QMV, since the end of the 1950's, stayed constant at about 71 percent of the weighted vote total (Hosli 1993). By comparison, the Convention proposal constituted a radical departure from the traditional pattern by allocating one vote to each EU member state. An additional population criterion (62 percent) was first introduced by the Treaty of Nice and modified (to 60 percent) by the Convention proposal. The IGC that followed the Convention raised this threshold to 65 percent (in addition to a 55 percent clause as regards the required share of member states to support a proposal).

Applying the methodology described above, Table 2 gives an overview of the proportion of winning coalitions in the Council that can form when coalition-formation is considered to be non-restricted (ICC assumption), for each stage in the EU's history. In addition, it shows the consequences of the provisions contained in the Nice Treaty and the Convention and Lisbon Treaty clauses, respectively. To allow for comparison, Table 2 also provides the respective number of possible winning coalitions under the unanimity requirement.

Increased membership, as Table 2 illustrates, appears to have considerably reduced the Council's capacity to act under the unanimity requirement – as it applied regarding decisions taken either on the basis of the 'Luxembourg compromise' or decisions formally requiring unanimity (such as taxation). Under the unanimity rule, assuming ICC, one in 64 coalitions (1.56 percent) is winning in the framework of a six-member committee, whereas this proportion decreases to one in 32 768 (or 0.0031 percent) in an institution encompassing fifteen members, implying a significant change in the 'betting odds against passing',<sup>16</sup> again assuming ICC. With twenty-seven members, decision probability has decreased to one in  $2^{27}$ , implying that evidently, reaching unanimity has become much harder in the enlarged EU in practice.

These figures appear to be rather abstract and to underestimate the actual probabilities of legislative acts to be adopted. Preference constellations in which EU states do not decide to either agree or disagree with a general probability of one-half may certainly render predictions as regards decision probability more 'optimistic'. In this respect, the figures provide a 'worst case reference scenario'. However, intuitively, it is certainly plausible that it is easier to reach agreement among three players than among ten, for example, although situations can of course be imagined in which the reverse holds true (depending on the specific distribution of players' preferences). In this sense, the figures provided in Table 2 give simple 'averages', indicating the *a priori* chances of forming various winning coalitions when all member choose to either support or decline a proposal independently, based on the decision weights and thresholds, and ignoring any other information (such as specific preference constellations). In this sense, the figures indicate simple trend lines regarding the extent to which decision-making may become more tedious with enlargement.

How has decision probability changed in the framework of QMV over time? Since the QMV threshold, historically, remained at about 71 percent with each enlargement, one would expect that 'decision probability' – measured as the share of winning coalitions in all possible coalitions among members – would have remained largely constant

<sup>16</sup> This term is adopted from Hosli and Machover (2004).

**Table 2.** The capacity of the Council to act under QMV and unanimity (Coleman's measure of the power of a collectivity to act)

	1958- 1972	1973- 1980	1981- 1985	1986- 1994	Since 1995	Nice Triple Majority	Convention Double Majority	Lisbon Treaty Double Majority
No. of member states	6	9	10	12	15	27	27	27
No. of possible coalitions	2 <sup>6</sup>	2 <sup>9</sup>	2 <sup>10</sup>	2 <sup>12</sup>	2 <sup>15</sup>	2 <sup>27</sup>	2 <sup>27</sup>	2 <sup>27</sup>
<b>QMV</b>								
No. of winning coalitions	14	75	140	402	2 549	2 718 740	29 381 273	17 233 337
Decision probability*	21.88	14.65	13.67	9.81	7.78	2.23	21.89	12.84
<b>Unanimity</b>								
No. of winning coalitions	1	1	1	1	1	1	1	1
Decision probability*	1.563	0.195	0.098	0.024	0.003	0.00000000745	0.00000000745	0.00000000745

\* Decision probability is defined as the share of winning coalitions in all possible coalitions (in percent).

over time. However, this intuition is misleading, as Table 2 clearly illustrates. The overview shows that a decrease in the Council's capacity to act under QMV should be expected to have occurred between 1958 and the present, as the share of winning coalitions in the total that could be formed among member states was more than one in five (21.9 percent) in the first phase of the Community's existence, 14.7 percent after the 1973 enlargement and lower ever since: between 1981 and 1985, the share was 13.7 percent, with a subsequent drop to 9.8 percent (1986–1994). In the 1995 to 2004 constellation of EU membership, the ratio of winning coalitions to all coalitions that could be formed under QMV among the 15 member states, assuming ICC, was 7.8 percent.<sup>17</sup> The change, as compared to unanimity, is much less dramatic, but significant nonetheless. The provisions according to Lisbon Treaty lead to a capacity of the Council to act – here based on calculations for the twenty-seven EU states – comparable to the 1981 to 1985 situation within the European Community. Clearly, reaching unanimous agreement within the enlarged EU has become significantly more difficult, providing further incentives to apply QMV instead of unanimity provisions in EU decision-making.

Of course, decision-making can still be swift if enlargement is paralleled by a convergence of preferences, thus maintaining the same ability of the Council to act. This claim would be in agreement with Golub's empirical analyses (Golub 1999, 2002, 2007). Accordingly, when members' preferences are relatively close to each other, it may be possible that it is rather easier to agree, even when the group size expands.

Under the provisions of the Nice Treaty and with twenty-seven EU member states, the Council's decision probability under QMV decreased to just 2.2 percent. By comparison, under the provisions foreseen by the Convention (again assessed for 27 EU states), it would have remained remarkably flexible with 21.9 percent, reaching a decision probability almost equal to that attained in the 1958–1973 phase. Under the provisions of the Lisbon Treaty, with an EU consisting of twenty-seven member states, decision probability is again somewhat lower than in the 1981–1985 phase.

Effects on decision probability, however, are not the only consequences of the recent suggestions for voting weight adaptations. Clearly, in addition to this, distributional effects materialize. Recent political discussions have focused on the effects the provisions of the Nice Treaty and of the Lisbon Treaty would generate regarding the balance of influence among EU states in the Council of the EU. Since these respective calculations use similar tools to those applied above, Table 3 applies a prominent power index – the normalized Banzhaf index – in order to indicate the current distribution of *a priori* influence among EU states in the Council<sup>18</sup> and the effects generated by the Nice, Convention and Lisbon Treaty proposals on this distribution.<sup>19</sup>

<sup>17</sup> On these figures e.g. see Hosli (1998).

<sup>18</sup> The provisions of the Lisbon Treaty are likely to only become effective as of 2017. The calculations provided here do not account for additional blocking possibilities by a limited number of EU states (e.g. the four-member blocking minimum requirement incorporated into the provisions of the Constitutional Treaty), as their effects are very small in practice. Neither does it account for the possibility that the earlier Ioannina compromise, demanding prolonged negotiations when a given number of EU states oppose a proposal, might become effective again in the future.

<sup>19</sup> For helpful information on the characteristics of various power indices, e.g. see Pajala et al. (2002). For the introduction of a new measure of voting power, see Turnovec (2007).

**Table 3.** Relative power of EU states in the Council: EU-15 and EU-27  
(normalized Banzhaf index)

	EU-15 (1995–2004)*	Nice Treaty**	Convention**	Lisbon Treaty**
Germany	11.16	7.78	11.59	12.39
Italy	11.16	7.78	8.51	8.85
Spain	9.24	7.42	6.61	6.85
Poland	–	7.42	5.66	6.29
Romania	–	4.26	4.14	4.00
Netherlands	5.87	3.97	3.50	3.38
Greece	5.87	3.68	2.87	2.76
Belgium	5.87	3.68	2.81	2.69
Czech Republic	–	3.68	2.80	2.68
Portugal	5.87	3.68	2.77	2.65
Hungary	–	3.68	2.74	2.62
Sweden	4.79	3.09	2.63	2.50
Austria	4.79	3.09	2.53	2.41
Bulgaria	–	3.09	2.46	2.33
Slovakia	–	2.18	2.19	2.06
Denmark	3.59	2.18	2.18	2.05
Finland	3.59	2.18	2.17	2.04
Ireland	3.59	2.18	2.05	1.92
Lithuania	–	2.18	1.94	1.81
Latvia	–	1.25	1.81	1.67
Slovenia	–	1.25	1.78	1.64
Estonia	–	1.25	1.69	1.56
Cyprus	–	1.25	1.63	1.49
Luxembourg	2.26	1.25	1.59	1.45
Malta	–	0.94	1.58	1.44
Total	100	100	100	100

\* Calculations based on population size in 2003.

\*\* Calculations based on population size in 2007.

Clearly, compared to the rules of the Nice Treaty, the Convention proposal would have increased the power of larger states in EU decision-making.<sup>20</sup> Similarly, compared to Nice, the Lisbon Treaty provisions change the balance of *a priori* voting power in the Council by increasing the influence of the largest states, to the detriment of the middle-sized EU members. Even though the Convention proposal would have considerably increased collective decision probability within the Council, this ‘balancing’ of influence among EU states may have been a major rationale for why the EU summit in December 2003 on this proposal failed: the relative influence of states in the Council –

<sup>20</sup> In interpreting the results of Table 3, it has to be kept in mind that each enlargement usually generates a relative decrease in the power of states that are already EU members’. In this sense, an increase in the relative power of Germany, for example (from 11.16 percent to 11.59 percent according to the Banzhaf index), is fairly extensive.

including the ‘almost largest’ ones – on the basis of the distribution of voting weights, is indeed core to governments’ EU institutional interests.

Hence, the Convention succeeded in formulating provisions to enhance the capacity of the Council to act but with this, it lowered the ability of individual governments to block collective EU decisions, and offered a re-balancing of influence within the Council notably in favor of the larger EU states. By comparison, the provisions of the adapted Constitutional Treaty – incorporated into the more recent Lisbon Treaty – amplify this latter effect. Overall, compared to the current voting system in the Council (based on the Nice Treaty scheme), larger states tend to win with both the Convention proposal and the provisions as incorporated into the Lisbon Treaty. By comparison, collective decision-making capacity has been reduced with the Lisbon Treaty as compared to the Convention, but is still considerably above the level of the (present) Nice Treaty rules.

## 5. Conclusions

This paper shows that the choice of a decision rule for the Council of the EU constitutes a trade-off in terms of decreased sovereignty for individual governments versus an increased ‘capacity to act’. This trade-off is well known from the various debates about moving from the unanimity rule to QMV in some important policy fields, including foreign and security policy, and taxation.

The relevant decision rules will not only matter regarding ‘day-to-day’ decisions in the EU Council, however. Supporting general intuition, this paper provides background calculations which indicate that, with a significantly expanded membership, the EU indeed risks being unable to reach intergovernmental agreement. Accordingly, a challenging issue for the EU is to move towards provisions allowing for its own constitution, if ever adopted, to be amended: again, the trade-off between state sovereignty and the EU’s capacity to act is at the core of this dilemma.

In view of recent and likely future enlargement, the EU, without adaptations of its decision rules – within the Council as well as in view of possible future ‘constitutional change’ – risks paralysis of its own system. The European Convention has come up with an ingenious design that would, as this paper demonstrates, indeed have considerably enhanced the capacity of the EU Council to act. Given increased involvement of the EP in EU-decision making over time, this might have been a helpful instrument to avoid excessive *status quo* bias in EU decision-making. However, this change would also have strongly increased the relative influence of larger states in EU decision-making – an effect that will, however, also materialize under the provisions of the Lisbon Treaty. Accordingly, the Convention and Lisbon provisions protect the interests of the largest, and in fact also the smallest members in the EU, but lower the protection of the interests of medium-sized EU states. By contrast, the provisions according to the Treaty of Nice, which implemented a triple-majority rule in Council decision-making, led to a more moderate ‘re-balancing’, but clearly lowered the Council’s overall capacity to act. The Lisbon Treaty provisions, compared to the Convention proposal, generate a more moderate increase in the Council’s capacity to act.

Findings presented in this paper are not uniformly plausible intuitively. Background calculations are needed in order to discern the effects not only of different vote allocation schemes, but also of various other elements needed to form winning coalitions in the Council (such as, regarding the ‘institutional skeleton’, the number of EU states, the required population threshold and qualified majority of voting weights). The findings of this paper have profited from the fact that programs readily available on the internet, especially ‘Indices of Power’ (König and Bräuningner 2001) and ‘Powerslave’ (Pajala et. al. 2002), make calculations, even for twenty-seven or more EU member states, relatively simple exercises to undertake. The results presented in this paper partially corroborate findings presented elsewhere (e.g. Hosli 1998, Felsenthal and Machover 1998, Federer et al. 2003, Felsenthal and Machover 2003). In spite of a number of critiques that have been leveraged against techniques that analyze voting power and decision probability (e.g. Albert 2003), such tools may indeed still be useful (e.g. Baldwin et al. 2001, Felsenthal et al. 2003) in assessing some basic institutional challenges facing the EU in view of considerable enlargement.

Reflecting on the results presented in this paper, the EU has managed to adapt its day-to-day decision-making rules in view of the challenge of considerable enlargement. But with the latest Treaty revisions, it has empowered its largest members. It has also managed to enhance the decision capacity of the Council of the EU, at least under the respective QMV decision rules. But with these changes, it now gives less ‘voice’ to medium-sized EU states, in the EU-27 and beyond.

**Acknowledgment** Earlier versions of this paper have been presented at various academic conferences and a preliminary version was published in the form of a working paper by the Institute for Advanced Studies, Austria (Reihe Politikwissenschaft 97). For helpful comments, I would notably like to thank Pieter Bakker, Martin Gregor, Iain Paterson, Běla Plechanovová and an anonymous reviewer.

## References

Albert, M. (2003). The Voting Power Approach: Measurement Without Theory. *European Union Politics*, 4(3), 351–366.

Axelrod, R. (1970). *Conflict of Interest*. Chicago, Markham.

Baldwin, R., Berglöf, E., Giavazzi, F. and Widgrén, M. (2000). EU Reforms for Tomorrow’s Europe. London, Centre for Economic Policy Research. (Discussion Paper No. 2623)

Baldwin, R., Berglöf, E., Giavazzi, F. and Widgrén, M. (2001). *Nice Try: Should the Treaty of Nice be Ratified? Monitoring European Integration 11*. London, Centre for Economic Policy Research.

Baldwin, R. and Widgrén, M. (2004). Winners and Losers Under Various Dual Majority Rules for the EU Council of Ministers. London, Centre for Economic Policy Research. (Discussion Paper No. 4450)

Best, E. (2000). The Debate over the Weighting of Votes: The Mis-Presentation of Representation? In Best, E., Gray, M. and Stubb, A. (eds.), *Rethinking the European Union: IGC 2000 and Beyond*. Maastricht, European Institute of Public Administration, 105–130.

Bräuninger, T. and König, T. (2001). *Indices of Power (IOP)*. Konstanz, University of Konstanz. Available at <http://www.uni-konstanz.de/FuF/Verwiss/koenig/IOP.html>.

Buchanan, J. and Tullock, G. (1962). *The Calculus of Consent*. Ann Arbor, University of Michigan Press.

Coleman, J. S. (1971). Control of Collectivities and the Power of a Collectivity to Act. In Lieberman, B. (ed.), *Social Choice*. New York, Gordon and Breach, 269–300.

Dahl, R. A. (1956). *A Preface to Democratic Theory*. Chicago, The University of Chicago Press.

Dinan, D. (2003). Governance and Institutions: Anticipating the Impact of Enlargement. *Journal of Common Market Studies*, 41, 27–43.

Felderer, B., Paterson, I. and Silárszky, P. (2003). Draft Constitution: The Double Majority Implies a Massive Transfer of Power to Large Member States – Is this Intended? Vienna, Institute for Advanced Studies. (Policy Paper for EU Convention Forum)

Felsenthal, D. S. and Machover, M. (1998). *The Measurement of Voting Power: Theory and Practice*. Cheltenham, Edward Elgar.

Felsenthal, D. S. and Machover, M. (2001). The Treaty of Nice and Qualified Majority Voting. *Social Choice and Welfare*, 18, 431–464.

Felsenthal, D. S. and Machover, M. (2003). Analysis of QM Rules in the Draft Constitution for Europe Proposed by the European Convention. (mimeo)

Galloway, D. (2001). *The Treaty of Nice and Beyond: Realities and Illusions of Power in the EU*. Sheffield, Sheffield Academic Press.

Golub, J. (1999). In the Shadow of the Vote? Decision-Making in the European Community. *International Organization*, 53(4), 733–64.

Golub, J. (2002). Institutional Reform and Decision-Making in the European Union. In Hosli, M. O., Van Deemen, A. M. A. and Widgrén, M. (eds.), *Institutional Challenges in the European Union*. London/New York, Routledge, 134–154.

Golub, J. (2007). Survival Analysis and European Union Decision-Making. *European Union Politics*, 8(2), 155–79.

Hagemann, S. and De Clerck-Sachsse, J. (2007). Decision-Making in the Enlarged Council of Ministers: Evaluating the Facts. Brussels, Centre for European Policy Studies. (Policy Brief No. 119)

Hirschman, A. O. (1970). *Exit, Voice, and Loyalty. Responses to Decline in Firms, Organizations, and States*. Cambridge, Harvard University Press.

Hosli, M. O. (1993). Admission of European Free Trade Association States to the European Community: Effects on Voting Power in the European Community Council of Ministers. *International Organization*, 47(4), 629-643.

Hosli, M. O. (1998). *An Institution's Capacity to Act: What are the Effects of Majority Voting in the Council of the European Union and in the European Parliament?* Maastricht, European Institute of Public Administration.

Hosli, M. O. and Van Deemen, A. M. A. (2002). Effects of Enlargement on Efficiency and Coalition Formation in the Council of the European Union. In Hosli, M. O., Van Deemen, A. M. A. and Widgrén, M. (eds.), *Institutional Challenges in the European Union*. London/New York, Routledge, 65–88.

Hosli, M. O. and Machover, M. (2004). The Nice Treaty and Voting Rules in the Council: A Reply to Moberg (2002). *Journal of Common Market Studies*, 42(3), 497–521.

Johnston, R. J. (1995). The Conflict Over Qualified Majority Voting in the European Council of Ministers: An Analysis of the UK Negotiating Stance Using Power Indices. *British Journal of Political Science*, 25, 245–54.

Kilgour, D. M. and Levesque, T. J. (1984). The Canadian Constitutional Amending Formula: Bargaining in the Past and the Future. *Public Choice*, 44, 457–80.

Kirsch, W., Słomczyński, W. and Życzkowski, K. (2007). Getting the Votes Right. *European Voice*, 13(17).

König, T. and Bräuninger, T. (1998). The Inclusiveness of European Decision Rules. *Journal of Theoretical Politics*, 10(1), 125–42.

König, T. and Bräuninger, T. (2002). From an Ever-Growing to an Ever-Slowing Union? In Hosli, M. O., Van Deemen, A. M. A. and Widgrén, M. (eds.), *Institutional Challenges in the European Union*. London/New York, Routledge, 155–172.

Laruelle, A. and Widgrén, M. (1998). Is the Allocation of Power among EU States Fair? *Public Choice*, 94(3–4), 317–339.

Leech, D. (2002). Designing the Voting System for the EU Council of Ministers. *Public Choice*, 113(3–4), 437–464.

Moberg, A. (1998). The Voting System in the Council of the European Union: The Balance Between Large and Small Countries. *Scandinavian Political Studies*, 21(4), 437–65.

Moberg, A. (2002). The Nice Treaty and Voting Rules in the Council. *Journal of Common Market Studies*, 40(2), 259–282.

Pajala, A., Meskanen, T. and Kause, T. (2002). *POWERSLAVE Power Index Calculator: A Voting Body Analyser in the Voting Power and Power Index Website*. Turku, University of Turku. Available at <http://powerslave.val.utu.fi>.

Paterson, I. (1997). *Vote Weighting in the European Union: Confronting the Dilution of Representation?* Vienna, Institute for Advanced Studies. (East European Series No. 54)

- Paterson, I. and Silárszky, P. (1999). Redesigning the Institution of the Council of Ministers in Advance of EU Enlargement: Issues and Options. *Journal for Institutional Innovation, Development and Transition*, 3, 43–54.
- Peters, T. (1996). Voting Power after the Enlargement and Options for Decision Making in the European Union. *The Swiss Review of International Economic Relations*, 51, 223–43.
- Plechanovová, B. (2004). The Draft Constitution and the Decision-Making Rule for the Council of Ministers of the EU: Looking for an Alternative Solution. *European Integration online Papers*, 8(12).
- Rapoport, A. (1970). *N-Person Game Theory: Concepts and Applications*. Ann Arbor, University of Michigan Press.
- Schulz, H. and König, T. (2000). Institutional Reform and Decision-Making: Efficiency in the European Union. *American Journal of Political Science*, 44(4), 653–666.
- Słomczyński, W. and Życzkowski, K. (2007). Jagiellonian Compromise: An Alternative Voting System for the Council of the European Union. (mimeo)
- Steunenbergh, B., Schmidtchen, D. and Koboldt, C. (1999). Strategic Power in the European Union: Evaluating the Distribution of Power in Policy Games. *Journal of Theoretical Politics*, 11(3), 339–366.
- Taagepera, R. and Hosli, M. O. (2006). National Representation in International Organizations: The Seat Distribution Formula Implicit in the European Union Council and Parliament. *Political Studies*, 54(2), 370–398.
- Tsebelis, G. and Yatağan, X. (2002). Veto Players and Decision-making in the EU After Nice: Policy Stability and Bureaucratic/Judicial Discretion. *Journal of Common Market Studies*, 40(2), 283–307.
- Tullock, G. (1976). *The Vote Motive*. Lancing, Institute of Economic Affairs.
- Turnovec, F. (1997). The Double Majority Principle and Decision Making Games in Extending European Union. Vienna, Institute for Advanced Studies. (European Series No. 48)
- Turnovec, F. (2007). New Measure of Voting Power. *AUCO Czech Economic Review*, 1(1), 4–14.
- Van Deemen, A. M. A. (1997). *Coalition Formation and Social Choice*. Boston, Kluwer.