

Decision Making Games in the European Union: Evaluation of National and Institutional Influence

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Abstract

The paper analyses models of consultation, cooperation and co-decision procedures in decision-making of the European Union institutions: Commission, Council of Ministers and European Parliament. Using power indices methodology a distribution of influence among Commission, Council and the Parliament under different decision making procedures is being evaluated, together with voting power of member states and European political parties.

Keywords: Co-decision procedure, consultation procedure, cooperation procedure, power indices methodology

JEL Classification: D79, F15

1 Introduction

The decision making system of the European Union is based on interaction of the three institutions: Commission, Council of Ministers and European Parliament. The models of decision making in the EU institutions and interactions between them have been intensively studied over the past two decades, starting by pioneering work of Holler and Kellermann (1977), Johnston (1982), and Brams and Affuso (1985). Two game-theoretic orientations of the studies have been opened and developed, Nurmi (2000).

One of the streams of existing literature on EU decision making has employed game-theoretic power indices, such as Shapley-Shubik (1954), Banzhaf-Penrose (1946, 1965), Holler-Packel (1983) and others to get measures of power or relative influence of actors within the EU (member states and institutions). Distribution of power in the EU Council of Ministers and European Parliament has been analyzed earlier in Holler and Kellermann (1977), Johnston (1982), Brams and Affuso (1985), the present development associated with the 1995 enlargement of EU in Widgrén (1993, 1994, 1995), Berg and Lane (1997), Lane and Maeland (1996), Nurmi, Meskanen and Pajala (2001), Bindseil and Hantke (1997), Felsenthal and Machover (1998), Mercik (1999),

Turnovec (1996, 2001) and others. Holler and Widgrén (1999) provide strong arguments for power indices methodology in assessing EU decision-making. What exactly power indices are measuring is controversial, see e.g. arguments of Garrett and Tsebelis (1999) about ignoring preferences, and response of Holler and Widgrén (1999), but they are of general interest to political science because they may measure players ability to get what they want. Admittedly significant share of decisions under the EU decision making procedures are taken without recourse to a formal vote. But it may well be the case that the outcome of negotiation is conditioned by the possibility that a vote could be taken, and than a priori evaluation of voting power matters. Moreover, analyses of institutional design of decision making could benefit from power indices methodology (Holler and Owen 2001, Lane and Berg 1999).

The second approach uses spatial modelling apparatus together with extensive form games to take into account precisely those aspects that are overlooked by the power indices models. An important factor that affects an actor's ability to get his/her stand on an issue adopted by a collective decision making body is (in addition to his/her own vote share) the proximity of his/her stand to that of the other actors. The starting point in spatial modelling is the location of actors in one- or more-dimensional policy space. The space is spanned by policy variables. Each actor is assumed to have an ideal value on each dimension. Thus, each actor can be represented by a point in the policy space. The research tradition spawned by Downs has, over the past four decades, produced a host of results on the conditions under which stable outcomes exists. This approach seems particularly appropriate for the evaluation of EU decision making procedures, since the decision making within each of participating bodies (Commission, Council, Parliament) can be viewed as a policy choice which, in turn, restricts the choice possibilities of other bodies. The main difference with respect to the spatial modelling is the focus on the relative power of various institutions assuming that each one of them has its own ideal point in the policy space. Relevant results concerning spatial modelling approach to EU decision making procedures see e.g. in Riker (1992), Steunenberg (1997), Tsebelis (1994, 1996), Moser (1996), Crombez (1996).

In this paper power indices methodology is extended for measuring relative influence of national states, European political parties and European institutions in the Commission - Council - European Parliament decision making, reflecting some features of cooperative, consultation and co-decision procedures. Power indices are used to evaluate the shifts in influence of the different actors in various decision making arrangements. Models of interactions among the different bodies of the EU decision making were first studied by Widgrén (1996). He applied the compound game idea to evaluate the influence of the Commission in the Commission-Council game, including Commission as the 16th player in the Council decision making. We are using his idea in the model of consultation procedure. European multi-cameral procedures were studied also by König and Bräuningen (2001) by explicit analysis of winning coalitions in multi-cameral decision making, but without formulation of explicit voting game model. Formulation of European multi-cameral decision making procedures as compound weighted majority games see Turnovec (1998).

2 Voting Games and Power Indices

Let N be a finite set of players and v be a function defined over the set of all subsets of N such that $v(S) \geq 0$ for all $S \subseteq N$, $v(\emptyset) = 0$, $v(S_1 \cup S_2) \geq v(S_1) + v(S_2)$ for any two disjoint subsets S_1 and S_2 of N (so called characteristic function). The couple $[N, v]$ is called a cooperative game in a characteristic function form. If the characteristic function v can attain only two values 0 and 1, we refer to $[N, v]$ as a simple game.

Let N be a set of members of a committee (voting body), w_i be a weight of the member $i \in N$ (say, the number of votes), and q be a quota (say, majority quota in voting). We say that $S \subseteq N$ is a winning coalition if

$$\sum_{i \in S} w_i \geq q$$

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and a losing coalition if

$$\sum_{i \in S} w_i < q$$

The triple $[N, q, w]$ where w is the vector of weights is usually called a weighted voting game. Voting power analysis seeks answer to the following question: Given a weighted voting game, what is a probability that member i of the committee will be "successful" in voting. A power index as a measure of "successfulness" of each committee member is a function of quota and distribution of weights $\pi_i(q, w)$. Different power indices were proposed based on different concepts of successfulness.

Any weighted voting game $[N, q, w]$ can be represented by a simple game $[N, v]$ where $v(S) = 1$ if S is a winning coalition and $v(S) = 0$ otherwise. One of the proposals of a power index was presented by Shapley and Shubik (1954) as a special case of Shapley value of cooperative characteristic function game applied to simple game.

A player i in a simple game $[N, v]$ is called critical with respect to a coalition S , if $v(S) = 1$ and $v(S \setminus \{i\}) = 0$ (the coalition is winning with him and losing without him). Let us denote by $C(i)$ the set of all coalitions the member i is critical with respect to. The Shapley-Shubik power index is defined as

$$\pi_i(N, v) = \sum_{S \in C(i)} \frac{(s-1)!(n-s)!}{n!}$$

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where $s = \text{card}(S)$ and $n = \text{card}(N)$.

Let the numbers $1, 2, \dots, n$ be fixed names of committee members. Let

$$(i_1, i_2, \dots, i_n)$$

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be a permutation of those numbers, members of the committee, and let member k is in position r in this permutation, i.e. $k = i_r$. We shall say that member k of the committee is in a pivotal situation with respect to a permutation (i_1, i_2, \dots, i_n) , if

$$\sum_{j=1}^{r-1} w_{i_j} < q \quad \text{and} \quad \sum_{j=1}^r w_{i_j} \geq q$$

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Let us assume that an ordering of members in a given permutation expresses an intensity of their support (preferences) for a particular issue in the sense that, if a member i_s precedes in this permutation a member i_t , then i_s support for the particular proposal to be decided is stronger than support by the member i_t . One can assume that the group supporting the proposal will be formed in the order of the positions of members in the given permutation. If it is so, then the member k will be in situation when the group composed from preceding members in the given permutation still does not have enough of votes to pass the proposal, and a group of members place behind him in the permutation has not enough of votes to block the proposal. The group that will manage his support will win. Member in a pivotal situation has a decisive influence on the final outcome. Assuming many voting acts and all possible preference orderings equally probable, under the full veil of ignorance about other aspects of individual members preferences, it makes sense to evaluate an a priori voting power of each committee member as a probability of being in pivotal situation. This probability is measured by the Shapley-Shubik power index and we shall use it in our analysis.

3 Models of the EU decision making procedures

The players of decision making games in the EU are European institutions (Commission, Council and the European Parliament), Member States and European political parties.

The Commission can be seen as an organ which promotes integration. The major tasks of the EC are the initiation of actions (agenda setting power), the execution of its policies, the implementation of the budget and enforcement of the European laws. According to the Maastricht Treaty the Commission is appointed by the European Parliament and as a body can be dismissed by the European Parliament. From 1995 the Commission has 20 members - the commissioners, responsible for different agendas. There is one commissioner from each member state and the five big countries (Germany, United Kingdom, France, Italy and Spain) have two commissioners each. One of the commissioners is appointed as the President of the Commission. The Commission can appoint one or two vice-presidents. The term of the office is five years. For EC work some 19,000 European civil servants. The official seat of the EC is Brussels.

The Council of Ministers, in contrast to the Commission, is a body representing member states interests. It is the main decision maker since its positive view is always required to a decision. It has both executive and legislative powers. The Council consists of one representative minister of the government of each of the member states. The members of the Council, representing individual member states, have different voting weights (numbers of votes allotted to member countries). The Council has two main decision making rules: qualified majority and unanimity. When qualified majority is applied, the sum of national weights (votes) in favour of a proposal has to represent roughly 70 % of the total sum of votes, while the decision can be blocked by a so-called "blocking minority" (about 30 % of votes against).

Until 1987, the European Parliament had only an advisory role in EU-decision making, but during the last ten years its influence has increased due to the Maastricht Treaty

Reform. European Parliament has 626 members (after the last extension in 1995) representing citizens of 15 member countries. The European Parliament acts on the basis of simple majority, in some cases absolute majority is required.

The rules of decision making games are given by different categories of procedures historically developed during last fifty years. A detailed formal description of consultation, cooperation and co-decision procedure see e.g. in Laruelle (1998).

In our analysis we shall make the following simplifying assumptions:

a) We assume the Commission to be an organ which promotes integration and represents the Union interests, it is not linked with specific interests of particular member states. Voting in the Commission is not influenced by citizenship of Commissioners and by their ideological preferences. Commission is deciding as a collective body and results of its voting are not known.

b) The Council is viewed as a body representing member states interests, its members' voting expresses positions of national governments.

c) The European Parliament represents interests of citizens and acts on the basis of ideological principles expressed by European political parties. Voting in the Parliament is in no way correlated to the voting in the Council.

d) For modelling purposes we shall use simplified versions of the decision making procedures:

Consultation procedure (introduced in 1958): Commission submits proposal, the Council is approving proposal by qualified majority. By unanimity the Council can amend (change) the proposal even against the will of Commission.

Cooperation procedure (introduced in 1986): Commission submits the proposal, the Council is approving the proposal by qualified majority, unanimity of the Council can't change the Commission's proposal. Proposal approved by the Council is submitted to the European Parliament. European Parliament approves the proposal by simple majority. The Council can by unanimity over-vote the Parliament's veto.

Co-decision procedure (introduced in 1992): Commission submits the proposal, the Council is approving the proposal by qualified majority, unanimity of the Council can't change the Commission's proposal. Proposal approved by the Council is submitted to the European Parliament. European Parliament approves the proposal by simple majority. The Council cannot over-vote by unanimity the Parliament's veto.

We shall formulate the European Union decision making procedures as simple voting games.

Let N be the set of the EU member states, P be a set of European political parties represented in European Parliament, and by C_m we shall denote Commission as a unitary organ. Let w_i be the weight of the i -th country in the Council of Ministers voting, q be the qualified majority quota in the Council, s_j be the weight of the j -th European political party in the European Parliament, t be the majority quota in the parliamentary voting. Let W_C be a set of all winning coalitions in the Council of Ministers voting and W_P be the set of all winning coalitions in European Parliament voting.

Consultation procedure can be modelled as the simple game with the set of members C_m characteristic function

$$v_i(S) = \begin{cases} 1 & \text{if } (S = C_m \cup R, \text{ where } R \in W_C), \text{ or } S = N \\ 0 & \text{otherwise} \end{cases}$$

Cooperation procedure can be modelled as the simple game with the characteristic function

$$v_2(S) = \begin{cases} 1 & \text{if } (S = Cm \cup R \cup T, \text{ where } R \in W_C \text{ and } T \in W_P) \text{ or } S = Cm \cup N \\ 0 & \text{otherwise} \end{cases}$$

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Co-decision procedure can be modelled as the simple game with the characteristic function

$$v_3(S) = \begin{cases} 1 & \text{if } (S = Cm \cup R \cup T, \text{ where } R \in W_C \text{ and } T \in W_P) \\ 0 & \text{otherwise} \end{cases}$$

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To evaluate voting power (influence) of individual actors and institutions in different procedures we are using Shapley-Shubik power indices of simple games with characteristic functions v_1 , v_2 and v_3 .

4 Evaluation of Distribution of the National and Institutional Influence in the recent European Union of 15

Table 1 presents the recent distribution of seats in the Commission, votes in the Council of Ministers and seats in the European Parliament in the European Union of 15 member states.

The last election to the European Parliament took place in June 1999 for electoral term 1999 - 2004. Distribution of votes in European Parliament has not only national dimension, but also a political dimension. Political parties in member countries are taking part in the elections and they create international factions based on ideological basis, European political formations in EP: Party of European Socialist (PES) with 181 members of EP, European Peoples Party (EPP) with 232 members, Union for Europe (UE) with 30 members, European Liberal, Democrat and Reform Party (ELDR) with 52 members, European United Left - Nordic Green Left (EUL/NGL) with 42 members, Green Group in the European Parliament (GGEP) with 46 members, European Radical Alliance (ERA) with 13 members, Independent Europe of Nations (IEN) with 16 members. Then there are two groups without clear political affiliation: independents (IND) with 19 seats and non-affiliated (NA) with 8 seats (European parties factions in November 1999, see: www.europarl.eu.int).

In Table 3 we are resuming results of evaluation of the relative influence (by Shapley-Shubik power index, in percentage) in different types of decision making games in the EU of 15. Calculations were made for recently used weights and qualified majority voting in the Council (62 out of 87) and simple majority (314 out of 626) in the Parliament.

Table 1
Votes and seats in the EU institutions

country	seats in the Commission	votes in the Council	seats in the European Parliament
Belgium (B)	1	5	25
Denmark (DK)	1	3	16
Germany (D)	2	10	99
Greece (EL)	1	5	25
Spain (E)	2	8	64
France (F)	2	10	87
Ireland (IRL)	1	3	15
Italy (I)	2	10	87
Luxembourg (L)	1	2	6
Netherlands (NL)	1	5	31
Austria (A)	1	4	21
Portugal (P)	1	5	25
Finland (FIN)	1	3	16
Sweden (S)	1	4	22
United Kingdom (UK)	2	10	87
total	20	87	626

Results of evaluation indicate the growing influence of the European Parliament and European political parties in European Union governance process as a result of implementation of cooperation and co-decision procedure.

Table 2
Distribution of national and institutional influence in the EU of 15

	weights	Voting in the Council	Voting in the Parliament	Consultation proc.	Co-operation proc.	Co-decision proc.
Commission				24.81	30.8	30.55
Council		100		75.19	59.66	51.05
Parliament			100		9.54	18.40
		100	100	100	100	100
Council	87					
D,F,I,UK	10	11.66		8.51	6.73	6.14
E	8	9.55		7.04	5.58	4.56
B,EL,NL,P	5	5.52		4.18	3.31	2.80
A,S	4	4.54		3.52	2.79	2.41
FIN,IRL,DK	3	3.53		2.84	2.28	1.58
L	2	2.06		1.83	1.48	1.17
Parliament	626					
PES	181		19.45		1.86	4.00
EPP	232		39.56		3.77	7.43
UFE	30		6.35		0.61	1.05
ELDR	52		10.87		1.04	1.90
EUL/NGL	42		8.25		0.79	1.42
GGEP	46		9.33		0.89	1.61
IEN	16		2.66		0.25	0.43
IND	19		2.66		0.25	0.43
NA	8		0.87		0.13	0.13

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