SIM 2013

# Base sequence of degressively proportional divisions 

Piotr Dniestrzański ${ }^{\text {a }}$, Janusz Łyko ${ }^{\text {a }^{*}}$<br>${ }^{a}$ Wrocław University of Economics, Komandorska Street 118/120, 53-345 Wrocław, Poland


#### Abstract

The distribution of seats in the European Parliament in accordance with the provisions of the Lisbon Treaty is of a degressively proportional nature. 751 seats are distributed among the 27 Member States with the use of a principle which is in some way a response to the need of constructing a division that ensures adequate representation of the smallest members of the community. There are many feasible solutions however - unfortunately, no unambiguous manner of such allocation has yet been put forward. Therefore, the current seat distribution has been chosen through political negotiations. It turns out that a number of seats are not subject to such negotiations. When performing the distribution and preserving boundary conditions, a certain number of seats gets allocated to individual countries independently of negotiations, but only through the application of the principle of degressive proportionality. This paper explores the problem of determining the scale of actual political negotiations. It presents the minimum and maximum number of mandates which can be granted to specific Member States. This paper determines certain situations in which the boundary conditions, supporting the principle of degressive proportionality are contradictory.


© 2014 The Authors. Published by Elsevier Ltd. Open access under CC BY-NC-ND license.
Selection and peer-review under responsibility of SIM 2013 / 12th International Symposium in Management.
Keywords: European Parliament; degressive proportionality; base sequence; boundary conditions

## 1. Introduction

Currently, the European Union has 27 members. The European Parliament - representation of the citizens of the Union comprises representatives of the Member States. Inability to apply to the equal or proportional allocation of seats (Cegiełka et al., 2010), (Dniestrzański, 2011a) has led to the intermediate solution called in the Lisbon Treaty (2007) degressively proportional distribution.

The document reads: The European Parliament shall be composed of representatives of the Union's citizens. They shall not exceed seven hundred and fifty in number, plus the President. Representation of citizens shall be degressively proportional, with a minimum threshold of six members per Member State. No Member State shall be allocated more than ninety-six seats. Clarification of the provisions of the Lisbon Treaty can be found in

[^0]European Parliament's resolution of 11 October 2007 and the annex to the draft of the resolution (Lamassoure \& Severin, 2007).

Number of seats that a country has depends solely on its population. Thus, distribution of seats is an assigning one sequence of positive numbers to another sequence of positive numbers. This allows to formulate the following definition (Łyko, Rot, \& Rudek, 2012):

Definition 1. A finite sequence of positive numbers $S=\left(s_{1}, s_{2}, \ldots, s_{\mathrm{n}}\right)$ is degressively proportional with regards to another $P=\left(p_{1}, p_{2}, \ldots, p_{n}\right), 0<p_{1} \leq p_{2} \leq \ldots \leq p_{n}$ if and only if

$$
\begin{equation*}
s_{1} \leq s_{2} \leq \ldots \leq s_{n} \tag{C1}
\end{equation*}
$$

and

$$
\begin{equation*}
\frac{p_{1}}{s_{2}} \leq \frac{p_{2}}{s_{2}} \leq \ldots \leq \frac{p_{n}}{s_{n}} . \tag{C2}
\end{equation*}
$$

In the subsequent part of the paper $P$ will mean a sequence of population and $S$ sequence of the number of EU mandates.

Geometric interpretation of the definition 1 is as follows. Sections with the start point at $(0,0)$ and ends at $\left(p_{i}, s_{i}\right)$ the points must have progressively smaller inclination to the $x$-axis .


Fig. 1 Degressive proportionality.
Source: own work.

It is known that assuming the positivity of sequences $P$ and $S$, the sufficient condition for the degressive proportionality is concavity of the polygon with vertices $\left(p_{i}, s_{i}\right)$ (Dniestrzański, 2011a). It is not, however, as shown in Fig. 1, a necessary condition. Definition 1 cannot be replaced by the requirement of polygon concavity with vertices $\left(p_{i}, s_{i}\right)$ as the same number of seats for the two countries with different populations would force the same number of seats for all subsequent less or equally populated states.

Quoted in the report (Lamassoure \& Severin, 2007), one finds a statement that the minimum and maximum numbers set by the Treaty must be fully utilised to ensure that the allocation of seats in the European Parliament reflects as closely as possible the range of populations of the Member States. This means that the boundary conditions laid down in the Treaty in the form of inequality in practice are to be used as equalities, which in turn

# https://daneshyari.com/en/article/1114588 

Download Persian Version:
https://daneshyari.com/article/1114588

## Daneshyari.com


[^0]:    * Janusz Łyko. Tel.: +48 713680336 ; fax: +48 713680787.

    E-mail address: janusz.lyko@ue.wroc.pl.

