

LETTER TO THE GOVERNMENTS OF THE EU MEMBER STATES

In the last few years there has been an intense discussion on the voting procedure in the Council of Ministers of the European Union. With 25 member states (and two more in the near future) it is not a simple task to make reliable judgements on the implications of the various voting systems that have been suggested.

We the undersigned wish to draw the attention of EU Governments to the fact that scientific methods can be used and need to be used to analyse, understand and design complex voting systems. In particular:

- 1) From a scientific point of view there are obvious drawbacks to the systems of voting in the European Council discussed so far. The experts on voting theory agree that the Treaty of Nice gives too much power to a number of countries while others obtain less power than appropriate. On the other hand, **the draft European Constitution assigns too much power to the biggest and the smallest states in a systematic way**, while the middle size countries do not get their due share of influence (see the tables attached). Moreover, the Nice system will be extremely ineffective due to its high quotas.
- 2) The 'compromises' proposed recently to change the quota in the draft Constitution either to 65% of the population and 55% of the states or to 55% of the population and 55% of the states make the situation for several countries even worse than in the draft Constitution. As can be shown by mathematical analysis, it is not the quotas that are mainly at fault, but rather the system of proposed weights.
- 3) The basic democratic principle that **the vote of any citizen of a Member State ought to be worth as much as for any other Member State** is strongly violated both in the voting system of the Treaty of Nice and in the rules given in the draft Constitution. It can be proved rigorously that this principle is fulfilled if the influence of each country in the Council is proportional to the **square root** of its population. This is known as 'Penrose's Square Root Law'. Such a system may be complemented by a simple majority of states.
- 4) A voting system that obeys the Square Root Law, i.e., which gives equal power to all citizens, is easily implemented. It is representative, objective, transparent, and effective. Such a system was proposed by Swedish diplomats already in 2000, and recently endorsed in a number of scientific articles (see the list attached).

We urge our politicians to take into consideration the contribution of the scientific community to this issue. We are highly concerned that any system implemented without due regard to the scientific analysis of voting power may become a major drawback to a democratic development in the European Union.

Signed by

Scientists for a democratic Europe (see list of supporters)

Scientists for a democratic Europe

TABLES

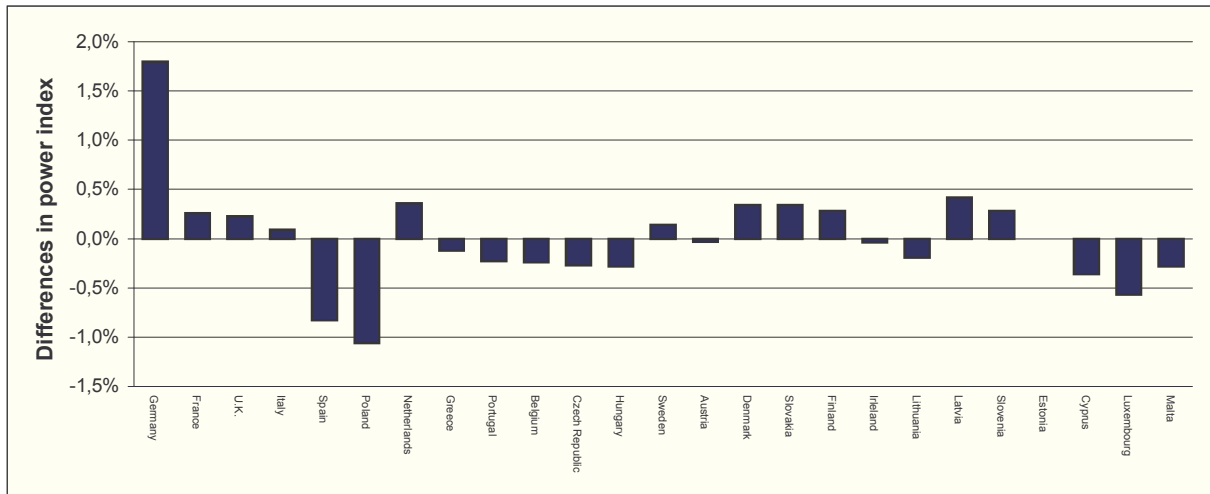


Diagram 1. Differences in voting power in the EU Council between the square root law and the procedure of the Treaty of Nice

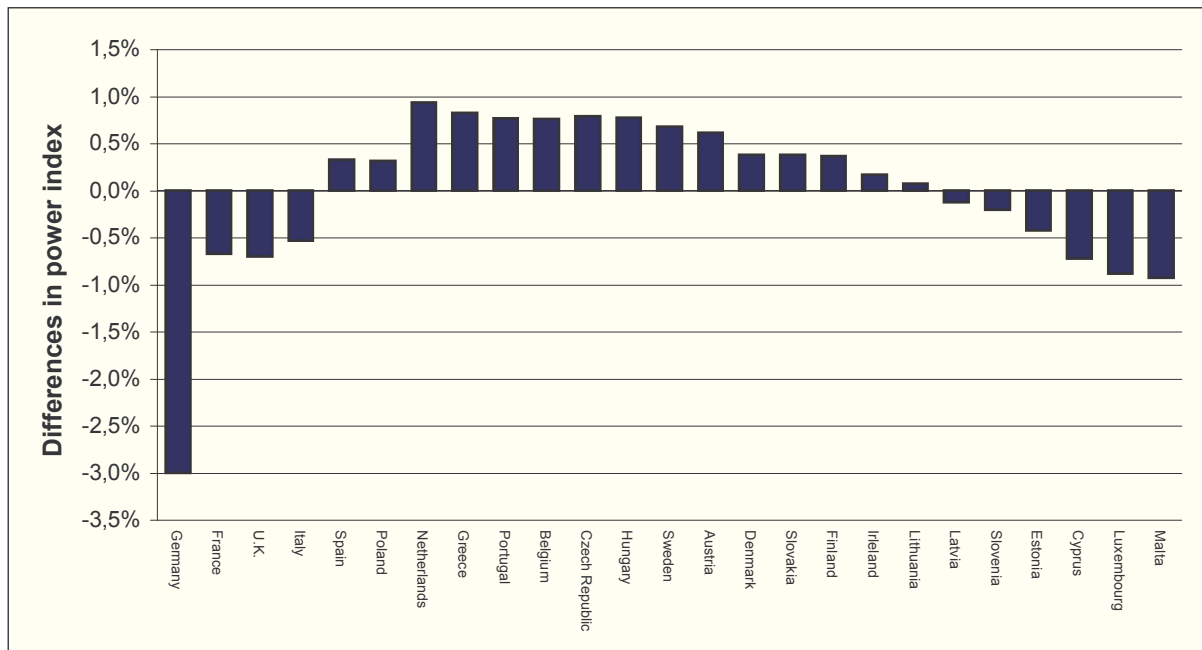


Diagram 2. Differences in voting power in the EU Council between the square root law and the proposal of the Draft Constitution

Scientists for a democratic Europe

LIST OF A FEW ARTICLES

- R. Baldwin, M. Widgren: Winners and losers under various dual majority rules for the EU's Council of Ministers, Preprint 2004
- D. Felsenthal; M. Machover: "Social Choice and Welfare", 8 (2001)
- D. Felsenthal, M. Machover: Analysis of QM Rules in the Draft Constitution for Europe Proposed by the European Convention, 2003, Preprint 2003
- M. Hosli, M. Machover: to appear in: Journal of Common Market Studies, 42, 3 (September 2004)
- W. Kirsch: "Die Zeit", 12 (2001)
- W. Kirsch, M. Machover, W. Słomczyński, K. Życzkowski: Voting in the EU Council – A Scientific Approach, Preprint 2004
- L. Mabile: Essai sur une juste pondération des voix au Conseil de l'Union européenne, Preprint 2004
- B. Plechanovová: Draft Constitution and the Decision-Making Rule for the Council of Ministers of the EU – Looking for Alternative Solution, Preprint 2004
- F. Pukelsheim: "Neue Zürcher Zeitung", April 27, 2004
- W. Słomczyński, K. Życzkowski: Rules Governing Voting in the EU Council, Preprint 2004

LIST OF INITIAL SUPPORTERS OF THIS LETTER

Jesús Mario Bilbao, University of Seville, Spain

Frédéric Bobay, economist and civil servant, Paris, France

Werner Kirsch, Ruhr-University of Bochum, Germany

Moshé Machover, London School of Economics, United Kingdom

Ian McLean, Oxford University, United Kingdom

Bela Plechanovová, Charles University, Prague, Czech Republic

Friedrich Pukelsheim, University of Augsburg, Germany

Wojciech Słomczyński, Jagiellonian University, Kraków, Poland

Karol Życzkowski, Jagiellonian University, Kraków and Polish Academy of Sciences, Poland

Scientists for a democratic Europe

**Supporters of the “open letter
to the Governments of the EU-member states”**

Prof. Dr. Jesús Mario Bilbao, University of Seville, Spain
mbilbao@us.es

Dr. Frédéric Bobay, economist and civil servant, Paris, France
fbobay@wanadoo.fr

Dr. Stefan Böcker, WestLB AG, Düsseldorf, Germany
dr-boecker@web.de

Prof. Dr. Anne Boutet de Monvel, Université de Paris 7, France
aboutet@math.jussieu.fr

Prof. Dr. David A. Brannan, The Open University, United Kingdom
d.a.brannan@open.ac.uk

Dr. Francesc Carreras, Polytechnic University of Catalonia, Barcelona, Spain
francesc.carreras@upc.es

Prof. Dr. Jean Michel Combes, Université du Sud Toulon-Var, France
combes@univ-tln.fr

Prof. Dr. Harrie C. M. de Swart, Tilburg University, Netherlands
h.c.m.deswart@uvt.nl

Prof. Dr. Peter Eichelsbacher, Ruhr-University of Bochum, Germany
peter.eichelsbacher@ruhr-uni-bochum.de

Dr. rer. nat. Martin Fehndrich, Wahlrecht.de, Duisburg, Germany
fehndrich@gmx.de

Dr. Josep Freixas, Polytechnic University of Catalonia, Barcelona, Spain
josep.freixas@upc.es

Dr. Uwe Grimm, The Open University, United Kingdom
U.G.Grimm@open.ac.uk

Prof. Dr. Fritz Haake, University of Duisburg-Essen, Germany
fritz@lux23.theo-phys.uni-essen.de

Prof. Dr. Madeleine O. Hosli, Leiden University, Netherlands
HOSLI@fsw.leidenuniv.nl

Prof. Dr. Alan Huckleberry, Ruhr-University of Bochum, Germany
ahuck@cplx.ruhr-uni-bochum.de

Scientists for a democratic Europe

Prof. Dr. Thomas Jahnke, University of Potsdam, Germany
jahnke@math.uni-potsdam.de

Prof. Dr. Ladislav Kabat, Comenius University, Bratislava, Slovakia
ladislav.kabat@fses.uniba.sk

Prof. Dr. Werner Kirsch, Ruhr-University of Bochum, Germany
wener.kirsch@rub.de

Prof. Frédéric Klopp, Université Paris-Nord, France
klopp@math.univ-paris13.fr

Priv.-Doz. Dr. Vadim Kostrykin, Fraunhofer Institute for Laser Technology, Aachen, Germany
vadim.kostrykin@ilt.fraunhofer.de

Prof. Dr. Dominique Lepelley, Université de Caen Basse-Normandie, France
dominique.lepelley@econ.unicaen.fr

Prof. Dr. Moshé Machover, London School of Economics, United Kingdom
moshe.machover@kcl.ac.uk

Dr. Antoni Magaña, University of Seville, Spain
magana@ruth.upc.es

Dipl.-Math. Stefan Maus, University of Maastricht, Netherlands
s.maus@ke.unimaas.nl

Dipl.-Wi.-Ing. Oliver Mayer, University of Karlsruhe, Germany
mayer@wior.uni-karlsruhe.de

Prof. Iain McLean, Oxford University, United Kingdom
Iain.Mclean@nuffield.oxford.ac.uk

Priv.-Doz. Dr. Peter Müller, Göttingen University, Germany
Peter.Mueller@Physik.Uni-Goettingen.de

Dr. Stefan Napel, University of Hamburg, Germany
napel@econ.uni-hamburg.de

Priv.-Doz. Dr. Norbert Peyerimhoff, Ruhr-University Bochum, Germany
peyerim@math.ruhr-uni-bochum.de

Dr. Bela Plechanovová, Charles University, Prague, Czech Republic
plechanovova@mbox.fsv.cuni.cz

Prof. Dr. Friedrich Pukelsheim, University of Augsburg, Germany
Pukelsheim@Math.Uni-Augsburg.de

Scientists for a democratic Europe

Prof. Victoriano Ramírez Gonzáles, Granada University, Spain
vramirez@ugr.es

Prof. Dr. Rudolf A. Roemer, University of Warwick, United Kingdom
r.roemer@warwick.ac.uk

Dr. Agnieszka Rusinowska, Warsaw School of Economics, Poland
a.rusinowska@uvt.nl

Prof. Dr. Pieter H.M. Ruys, Tilburg University, Netherlands
p.h.m.ruys@uvt.nl

Prof. Maurice Salles, Université de Caen Basse-Normandie, France
salles@econ.unicaen.fr

Prof. M. Remzi Sanver, Bilgi University, Istanbul, Turkey
sanver@bilgi.edu.tr

Dr. Bernd Sing, University of Bielefeld, Germany
sing@mathematik.uni-bielefeld.de

Dr. Wojciech Słomczyński, Jagiellonian University, Kraków, Poland
Wojciech.Slomczynski@im.uj.edu.pl

Dr. Tadeusz Sozański, Jagiellonian University, Poland
usozans@cyf-kr.edu.pl

Prof. Dr. Bernard Steunenbergh, Leiden University, Netherlands
steunenbergh@fsw.leidenuniv.nl

Prof. Dr. Peter Stollmann, Technical University Chemnitz, Germany
peter.stollmann@mathematik.tu-chemnitz.de

Prof. Dr. José Ignacio Torreblanca, National University of Distant Education, Spain
jtorre@poli.uned.es

Dr. Ivan Veselic, California Institute of Technology, USA
veselic@its.caltech.edu

Dr. Simone Warzel, Princeton University, USA
swarzel@Princeton.edu

Prof. Tomasz Zastawniak, University of Hull, United Kingdom
t.i.zastawniak@hull.ac.uk

Dr. hab. Karol Życzkowski, Jagiellonian University, Kraków, Poland
karol@tatr.if.uj.edu.pl