Analysis of QM Rule Adopted by the EU Inter-Governmental Conference Brussels, 18 June 2004

Dan S Felsenthal   Moshé Machover
University of Haifa   King's College, London

Voting Power and Procedures Project
Centre for the Philosophy of the Natural and Social Sciences
London School of Economics and Political Science

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Please address all correspondence to:

Moshé Machover
CPNSS, LSE
Lakatos Building, Portugal Street
LONDON WC2A 2AE
ENGLAND

Phone: +44 20 8969 5356 (home)
Fax: +44 20 7955 6869 (office)
E-mail: moshe.machover@kcl.ac.uk

ABSTRACT

We analyse and evaluate the qualified majority (QM) decision rule for the Council of Ministers of the EU adopted at the EU Inter-Governmental Conference, Brussels, 18 June 2004 [1]. We compare this rule with the QM rule prescribed in the Treaty of Nice, and the rule included in the original draft Constitution proposed by the European Convention in July 2003. We use a method similar to the one we used in [3] and [4].

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1   Introductory remarks

The agreement reached at the Brussels IGC, 17–18 June 2004, amends the QM rule in the draft Constitution as follows:

Article I-24

1. A qualified majority shall be defined as **at least 55%** of the members of the Council, **comprising at least fifteen of them** and representing Member States comprising at least **65%** of the population of the Union.

A blocking minority must include at least four Council members, failing which the qualified majority shall be deemed attained.

2. **By derogation from paragraph 1,** when the Council is not acting on a proposal from the Commission or from the Union Minister for Foreign Affairs, the qualified majority shall be defined as **72%** of the members of the Council, representing Member States comprising at least **65%** of the population of the Union.[1]

We shall not deal with the last paragraph (2), which applies in certain exceptional circumstances.

Also, we shall only deal with the effect of the new QM rule in the scenario of a 27-member EU. This is because the provisions of the Treaty of Nice will continue to apply until 31 October 2009,[2] by which time the EU will almost certainly have been enlarged to include (at least) Romania and Bulgaria.

Using the latest population figures available to us,[3] we find that the clause excluding blocking coalitions with less than four members rules out (under the 27-member scenario) just the following ten coalitions, whose populations comprise more than 35% of the total, and therefore would otherwise be able to block.

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[1]See [1, p. 7].

[2]See [1, p. 8].

[3]Taken from *Eurostat* [2].

1. Germany, France, UK;

2. Germany, France, Italy;

3. Germany, France, Spain;

4. Germany, France, Poland;

5. Germany, UK, Italy;

6. Germany, UK, Spain;

7. Germany, UK, Poland;

8. Germany, Italy, Spain;

9. Germany, Italy, Poland;

10. France, UK, Italy.

Accordingly, the complementary ten 24-member coalitions will be winning coalitions, although their populations comprise less than 65% of the total.

The structure of the tables in this paper is the same as in our [4], to which the reader is referred for explanations.

We denote by $\mathcal{D}_{27}$, $\mathcal{N}'_{27}$ and $\mathcal{C}_{27}$, respectively, the new QM rule, the rule prescribed by the Nice Treaty, and the rule included in the original draft Constitution (all under the 27-member scenario). Rule B is our benchmark rule, with voting powers very nearly proportional to population square roots, and quota set at 60% of the total weight.

2   Conclusions

From Table 5 we can see that $\mathcal{D}_{27}$ is quite inequitable by the yardstick of Penrose's Square-Root Rule. Its overall distortion, as measured by the distortion index D, is not quite so bad as that of the original version $\mathcal{C}_{27}$ proposed in the draft Constitution. However, its 'local' distortions – the individual deviations from equitability – are more extreme than those of $\mathcal{C}_{27}$. From the last column of Table 2 we can see that the two most egregious cases are: on the one hand Malta, which has 138.5% more than its fair share; and on the other hand Greece, which has 17.4% too little.

In [4] we saw that $\mathcal{C}_{27}$ was biased in favour of the four largest and six smallest member-states. Table 2 now shows that the same is true of $\mathcal{D}_{27}$, but

now the bias in favour of the six smallest member-states is more pronounced, whereas that in favour of the four biggest is less so.

Returning to Table 5, we observe that $\mathcal{D}_{27}$ is quite effective: it has a relatively high value of Coleman's index A (the a priori probability of approving an act rather than blocking it) and a correspondingly low resistance R. In betting terms, this means that the a priori odds against approval of an act are approximately 27 to 4 (whereas under $\mathcal{C}_{27}$ they would be approximately 25 to 7). The values of these parameters are not very different from what they were in the periods 1973–80 and 1980–85, when the EU had nine or ten members. In our view they are very reasonable.

With respect to A and R, as well as with respect to sensitivity S and mean majority deficit (MMD), $\mathcal{D}_{27}$ is intermediate between $\mathcal{N}'_{27}$ and $\mathcal{C}_{27}$.

Table 3 compares $\mathcal{D}_{27}$ with $\mathcal{N}'_{27}$. We see that $\mathcal{D}_{27}$ gives all member-states more absolute voting power (as measured by ψ), but the increase is very uneven, not to say erratic. In [4] we saw that $\mathcal{C}_{27}$ would improve the *relative* positions (measured by β) of the four largest and six smallest member-states compared to their positions under $\mathcal{N}'_{27}$. We now see that $\mathcal{D}_{27}$ does the same; but unlike $\mathcal{C}_{27}$ it also improves the relative positions of two other members: Denmark and Slovakia. As for blocking power, γ, Malta is the only gainer in comparison with $\mathcal{N}'_{27}$; all other member-states lose blocking power, but the extent of loss is again very uneven.

Table 4 compares $\mathcal{D}_{27}$ with $\mathcal{C}_{27}$. We see that $\mathcal{D}_{27}$ gives all member-states less absolute voting power and greater blocking power than $\mathcal{C}_{27}$ would have done. But in relative terms the six largest member-states – from Germany down to Poland – do slightly less well under $\mathcal{D}_{27}$, whereas all the others do slightly better.

3   Tables

Table 1: Population of 27 present and prospective EU members

Country	Population	Pop.%	Pop. sqrt.	Pop. sqrt.%
Germany	82,536,700	17.047	9,084.97	9.54
France	59,630,100	12.316	7,722.05	8.11
UK	59,328,900	12.254	7,702.53	8.09
Italy	57,321,000	11.839	7,571.06	7.95
Spain	41,550,600	8.582	6,445.98	6.77
Poland	38,218,500	7.894	6,182.11	6.49
Romania	21,772,800	4.497	4,666.13	4.90
Netherlands	16,192,600	3.344	4,024.00	4.23
Greece	11,018,400	2.276	3,319.40	3.49
Portugal	10,407,500	2.150	3,226.07	3.39
Belgium	10,355,800	2.139	3,218.04	3.38
Czech Rep	10,203,300	2.107	3,194.26	3.36
Hungary	10,142,400	2.095	3,184.71	3.35
Sweden	8,940,800	1.847	2,990.12	3.14
Austria	8,067,300	1.666	2,840.30	2.98
Bulgaria	7,845,800	1.621	2,801.04	2.94
Denmark	5,383,500	1.112	2,320.24	2.44
Slovakia	5,379,200	1.111	2,319.31	2.44
Finland	5,206,300	1.075	2,281.73	2.40
Ireland	3,963,600	0.819	1,990.88	2.09
Lithuania	3,462,600	0.715	1,860.81	1.95
Latvia	2,331,500	0.482	1,526.93	1.60
Slovenia	1,995,000	0.412	1,412.45	1.48
Estonia	1,356,000	0.280	1,164.47	1.22
Cyprus	715,100	0.148	845.64	0.89
Luxembourg	448,300	0.093	669.55	0.70
Malta	397,300	0.082	630.32	0.66
Total	484,170,900	100.003	95195.10	99.98

Note Source of population figures: [2]. The apparent discrepancies in the totals of the second and last columns are due to rounding errors.

Table 2: QM rule $\mathcal{D}_{27}$

Country	w	ψ	100β	γ	Quotient
Germany	1705	0.204161	11.8702	0.79273	1.244
France	1232	0.150306	8.7389	0.58362	1.077
UK	1225	0.149536	8.6942	0.58063	1.075
Italy	1184	0.145129	8.4380	0.56352	1.061
Spain	858	0.109655	6.3755	0.42578	0.942
Poland	789	0.101270	5.8880	0.39322	0.907
Romania	450	0.072553	4.2183	0.28171	0.861
Netherlands	334	0.060284	3.5050	0.23408	0.829
Greece	228	0.049531	2.8798	0.19232	0.826
Portugal	215	0.048213	2.8031	0.18720	0.827
Belgium	214	0.048109	2.7971	0.18680	0.827
Czech Rep	211	0.047807	2.7796	0.18563	0.828
Hungary	209	0.047603	2.7677	0.18484	0.827
Sweden	185	0.045175	2.6265	0.17541	0.836
Austria	167	0.043349	2.5203	0.16832	0.845
Bulgaria	162	0.042843	2.4910	0.16636	0.847
Denmark	111	0.037670	2.1902	0.14627	0.899
Slovakia	111	0.037670	2.1902	0.14627	0.899
Finland	108	0.037363	2.1723	0.14508	0.906
Ireland	82	0.034726	2.0190	0.13484	0.965
Lithuania	72	0.033704	1.9596	0.13087	1.002
Latvia	48	0.031254	1.8172	0.12136	1.133
Slovenia	41	0.030535	1.7753	0.11856	1.197
Estonia	28	0.029212	1.6984	0.11343	1.388
Cyprus	15	0.027878	1.6209	0.10825	1.825
Luxembourg	9	0.027259	1.5849	0.10585	2.253
Malta	8	0.027158	1.5790	0.10545	2.385
Total	10001	1.719953	100.0002		

Table 3: QM rule $\mathcal{D}_{27}$ compared to $\mathcal{N}'_{27}$

Country	$\psi[\mathcal{D}_{27}]/\psi[\mathcal{N}'_{27}]$	$\beta[\mathcal{D}_{27}]/\beta[\mathcal{N}'_{27}]$	$\gamma[\mathcal{D}_{27}]/\gamma[\mathcal{N}'_{27}]$
Germany	6.245729	1.5257	0.98249
France	4.598195	1.1233	0.72332
UK	4.574655	1.1175	0.71962
Italy	4.439859	1.0846	0.69841
Spain	3.518676	0.8596	0.55351
Poland	3.249634	0.7938	0.51118
Romania	4.055848	0.9908	0.63801
Netherlands	3.611800	0.8823	0.56815
Greece	3.200845	0.7819	0.50351
Portugal	3.115648	0.7611	0.49011
Belgium	3.108956	0.7595	0.48905
Czech Rep	3.089425	0.7547	0.48598
Hungary	3.076248	0.7515	0.48391
Sweden	3.478080	0.8496	0.54712
Austria	3.337459	0.8153	0.52500
Bulgaria	3.298542	0.8058	0.51888
Denmark	4.099205	1.0014	0.64483
Slovakia	4.099205	1.0014	0.64483
Finland	4.065775	0.9932	0.63957
Ireland	3.778841	0.9231	0.59443
Lithuania	3.667634	0.8960	0.57694
Latvia	5.952199	1.4540	0.93631
Slovenia	5.815234	1.4206	0.91477
Estonia	5.563331	1.3590	0.87514
Cyprus	5.309266	1.2970	0.83517
Luxembourg	5.191457	1.2682	0.81664
Malta	6.859621	1.6757	1.07905

Table 4: QM rule $\mathcal{D}_{27}$ compared to $\mathcal{C}_{27}$

Country	$\psi[\mathcal{D}_{27}]/\psi[\mathcal{C}_{27}]$	$\beta[\mathcal{D}_{27}]/\beta[\mathcal{C}_{27}]$	$\gamma[\mathcal{D}_{27}]/\gamma[\mathcal{C}_{27}]$
Germany	0.676013	0.9276	1.14929
France	0.698817	0.9589	1.18805
UK	0.700510	0.9613	1.19093
Italy	0.700751	0.9616	1.19134
Spain	0.709691	0.9739	1.20654
Poland	0.680431	0.9337	1.15680
Romania	0.754626	1.0355	1.28294
Netherlands	0.751772	1.0316	1.27808
Greece	0.759113	1.0417	1.29056
Portugal	0.759286	1.0419	1.29086
Belgium	0.757655	1.0397	1.28808
Czech Rep	0.760008	1.0429	1.29209
Hungary	0.756767	1.0385	1.28657
Sweden	0.764274	1.0488	1.29934
Austria	0.763640	1.0479	1.29826
Bulgaria	0.766646	1.0520	1.30337
Denmark	0.771315	1.0584	1.31131
Slovakia	0.771315	1.0584	1.31131
Finland	0.774320	1.0625	1.31642
Ireland	0.776491	1.0655	1.32011
Lithuania	0.779308	1.0694	1.32490
Latvia	0.787012	1.0800	1.33799
Slovenia	0.786396	1.0791	1.33695
Estonia	0.788179	1.0816	1.33998
Cyprus	0.790007	1.0841	1.34309
Luxembourg	0.799177	1.0967	1.35868
Malta	0.796190	1.0926	1.35360

Table 5: Synoptic comparison

Rule	D	max$|d|$	ran(d)	MMD	S	A	R
Pre-Nice	5.1903	124.1	144.2	5 519	0.861	0.078	0.844
$\mathcal{C}_{27}$	8.7090	118.2	139.0	3 761	0.965	0.219	0.562
$\mathcal{N}'_{27}$	4.8227	77.6	99.7	7 937	0.858	0.020	0.959
$\mathcal{D}_{27}$	7.5574	138.5	155.9	5 223	0.945	0.129	0.742
Rule B	0.2490	1.2	2.1	3 882	0.966	0.198	0.605

D, max $|d|$ and ran(d) are given in percentages.

References

[1] Conference of the Representatives of the Governments of the Member States, Brussels, 18 June 2004. EU document CIG 85/04

[2] EUROSTAT (the statistical office of the European Commission): `http://europa.eu.int/comm/eurostat/`.

[3] Felsenthal D S and Machover M 2001: 'The Treaty of Nice and qualified majority voting, *Social Choice and Welfare* **18**:431-464. Downloadable from
`http://www.lse.ac.uk/Depts/cpnss/projects/vp.html`

[4] —— 2004: 'Analysis of QM rules in the draft Constitution for Europe proposed by the European Convention, 2003'. Forthcoming in *Social Choice and Welfare* **23**:1–20. Downloadable from
`http://www.lse.ac.uk/Depts/cpnss/projects/vp.html`