1035-91-525

R Vincent Merlin* (vincent.merlin@unicaen.fr), Faculté de Sciences Economiques, Université de Caen, 14000 Caen, France, and Ronan Congar (ronan.congar@univ-rouen.fr), Faculté de Sciences Economiques, Université de Rouen, 3 avenue Pasteur, 76186 Rouen, France. A Characterization of the Maxmin Rule in the Context of Voting. Preliminary report.

In a voting context, when the preferences of the voters are described by linear orderings over a finite set of m alternatives, $m \ge 3$, the Maxmin rule orders the alternatives according to their minimal ranks in the voters' preferences. It is equivalent to the Fallback bargaining process described by Brams and Kilgour. We here propose a characterization of the Maxmin rule as a Social Welfare Function (SWF) based upon five conditions: 1) Neutrality. All the alternatives are treated in a symmetric way. 2) Duplication. Whenever a new voter join the population, his preference has no impact on the social ranking if his preference was already present in the initial profile. 3) Unanimity. Whenever all the voters have the same preference regarding the alternatives A and B, the SWF selects this unanimous ordering. 4) Top Invariance. The social ranking "A preferred to B" is unaffected by modifications of the individual preferences above A. 5) Saari's Weak Consistency. Whenever two subpopulations select the same ranking for the pair (A,B) with the same SWF, the SWF applied directly to the whole population also selects the same ranking. (Received September 10, 2007)