Inequality in Voting Powers with Multiple Issues

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Abstract

In this study, we extend the inequality measure of power in voting situations for a single issue, proposed by Laruelle and Valenciano (Social Choice and Welfare 22: 413-431, 2004). In our model, there exist multiple issues to vote, and each voter has three voting options on each issue, 'yes', 'no', or 'abstention'. We add both a decomposability axiom and a separability axiom to the set of Laruelle and Valenciano's axioms to characterize their inequality measure of voting power. Our inequality measure is represented by a two-stage aggregation procedure, where in the first stage, the distribution of voting power on each issue is aggregated into an inequality index based on the Laruelle and Valenciano measure, and then the second stage aggregator sums up the inequality index of each issue

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