

Report on the paper "*Focused Power: experiments, the Shapley-Shubik power index, and focal points*"

In this paper the authors design and run an experiment to test whether the Shapley Shubik power index is a good proxy of the distribution of power in voting games where voters differ for the number of votes they have and have to form coalition to share a common endowment.

I have four main comments.

1. The description of the axiomatic characterization of the SSPI in Section III is at least inaccurate. The authors describe the axioms as properties that "reasonable bargaining games, presumably ought to obey"(pag. 6 line 8), as if the axioms identified a class of games in which the SPPI is applicable. For instance, they describe the axiom of efficiency (see Dubey (1975) for a characterization based on the three axioms mentioned by the authors) as if it requires that "the game is efficient": this is clearly incorrect. The axiom of efficiency requires that the power index mapping is such that the sum of the power of the players must be equal to the worth of the grand coalition in the game. Axioms are a list of properties that a power index mapping should satisfy, not the games (or the preferences of the voters: see my third comment).

I recommend the authors to read a recent paper by E. Einy and O. Haimanko (2011); in the characterization result contained in this paper, the efficiency axiom is replaced by a much weaker axiom. A part from a wrong interpretation of the role of the axioms, the authors seem to believe that efficiency plays a central role in the SPPI characterization and repeatedly point out that the design of the experiment as also the selection of the subjects aim at inducing efficiency.

2. All the discussion about focal points and transaction costs at page 10 and following pages lacks of clarity. I am not able to follow the arguments made by the authors. They do not provide a clear definition of what they mean by "focal points" or by "transaction costs": according to the definition of transaction costs that I have in mind, there are no transaction costs in their bargaining game.

3. I do not agree on the authors' justification on how they select the participants of the experiment and especially the motivation on why they exclude some subjects based on their preferences. The sentence "Subject homogeneity is the empirical manifestation of symmetry" is meaningless. From a methodological point of view the authors seem to suggest that they choose their subjects in order to obtain the desired results. At pag.11 line 4 the authors write that they select subjects and write instructions that promoted behavior consistent with the assumptions, confounding once again, assumptions about the mathematical properties of the power index with assumptions about voters' behavior. The exclusion of some subjects based on their (supposed) preferences casts serious doubts on the validity of their experiment.

4. In the experiment, participants have the possibility to freely negotiate by means of a chat room. This is probably the most interesting feature of the experiment, which is totally disregarded by the authors who devote no effort in analyzing the content of the messages exchanged during the negotiation process. According to my opinion, it would be interesting to know how many times voters refer to "fairness" or make use of threats, etc.

Reference

Characterization of the Shapley–Shubik power index without the efficiency axiom ,Ezra Einy , Ori Haimanko, *Games and Economic Behavior* Vol. 73, Issue 2, November 2011, Pages 615–621