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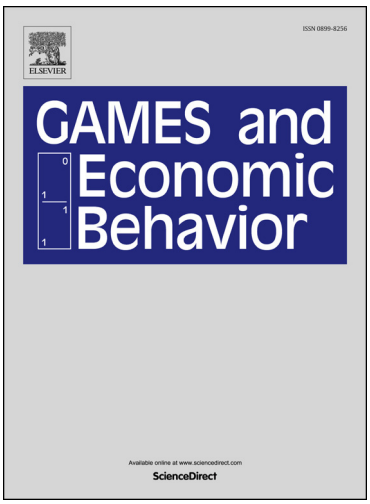

The Procedural Egalitarian Solution

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PII: S0899-8256(17)30172-0
DOI: https://doi.org/10.1016/j.geb.2017.10.001
Reference: YGAME 2754

To appear in: *Games and Economic Behavior*

Received date: 7 November 2016

Please cite this article in press as: Dietzenbacher, B., et al. The Procedural Egalitarian Solution. *Games Econ. Behav.* (2017), https://doi.org/10.1016/j.geb.2017.10.001

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The Procedural Egalitarian Solution

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October 9, 2017

Abstract

In this paper we introduce and analyze the procedural egalitarian solution for transferable utility games. This new concept is based on the result of a coalitional bargaining procedure in which egalitarian considerations play a central role. The procedural egalitarian solution is the first single-valued solution which coincides with the constrained egalitarian solution of Dutta and Ray (1989) on the class of convex games and which exists for *any* TU-game.

Keywords: egalitarianism, egalitarian procedure, procedural egalitarian solution, egalitarian stability, constrained equal awards rule
JEL classification: C71

1 Introduction

Egalitarianism is a paradigm of economic thought that favors the idea of equality. Economic equality, or equity, refers to the concept of fairness in economics and underlies many theories of distributive justice. Starting from the seminal work of Rawls (1971) in which equality plays a central role in two fundamental principles of justice, egalitarianism and equity have inspired scientists within several areas, e.g. social philosophy and welfare economics. Young (1995) provides a rich survey on equity concepts in both theoretical and practical contexts. We focus on the role of egalitarianism in distributive justice applied to coalitional arrangements which affect the distribution of joint revenues among cooperating participants.

Dutta and Ray (1989) introduced a concept of egalitarianism under participation constraints for transferable utility games. A transferable utility game describes an allocation problem for a set of cooperating players in which the economic possibilities of all subcoalitions are taken into account. The *constrained egalitarian solution* of Dutta and Ray (1989) uses a specific Lorenz criterion to select a payoff allocation. Their most important result states that the constrained egalitarian solution selects at most one feasible allocation, despite the partial ordering generated by the Lorenz criterion. However, existence of the constrained egalitarian solution is only shown to be guaranteed for the special class of convex games.

The constrained egalitarian solution is well-studied on the class of convex games. Dutta and Ray (1989) showed that the constrained egalitarian solution of a convex game cannot be blocked by any subcoalition, i.e. it is an element of the core. Dutta (1990) axiomatically characterized the constrained egalitarian solution on the class of convex games using consistency properties for reduced games of Davis and Maschler (1965) and Hart and Mas-Colell

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