Farsighted Stability of the Top Trading Cycle

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Abstract

Gale's top trading cycle was first introduced in Shapley and Scarf (1974) as an algorithm to obtain an allocation in the core of a market with indivisible goods defined by Shapley and Scarf (1974). In this paper, we examine the farsighted stable set of the strategic form game defined by Wako (1999). We show that when all preferences are strict, the set of strategy profiles which gives the unique top trading allocation is the unique farsighted stable set, regardless of whether coalitional deviations are allowed or not. We conclude with some remarks concerning the case when we drop the assumption that preferences are strict.

JEL Classification: C71, C72, D51

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Main References

- [1] Chwe, M. S.-Y. (1994). "Farsighted Coalitional Stability." Journal of Economic Theory 63:299-325.
- [2] Shapley, L. S. and H. Scarf (1974). "On Cores and Indivisibility." *Journal of Mathematical Economics* 1:23-38.
- [3] Wako, J. (1999). "Coalition-Proofness of the Competitive Allocations in an Indivisble Goods Market," Fields Institute Communications 23:277-283.

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