Not obviously manipulable allotment rules

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In the problem of allocating a single non-disposable commodity among agents whose preferences are single-peaked, we study a weakening of strategy-proofness called not obvious manipulability (NOM). If agents are cognitively limited, then NOM is sufficient to describe their strategic behavior. We characterize a large family of own-peak-only rules that satisfy efficiency, NOM, and a minimal fairness condition. We call these rules "simple". In economies with excess demand, simple rules fully satiate agents whose peak amount is less than or equal to equal division and assign, to each remaining agent, an amount between equal division and his peak. In economies with excess supply, simple rules are defined symmetrically. These rules can be thought of as a two-step procedure that involves solving a claims problem. We also show that the single-plateaued domain is maximal for the characterizing properties of simple rules. Therefore, even though replacing strategy-proofness with NOM greatly expands the family of admissible rules, the maximal domain of preferences involved remains basically unaltered.

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Referencias

[1] ARRIBILLAGA, R. P. AND A. G. BONIFACIO (2024): "Obvious manipulations of tops-only voting rules," Games and Economic Behavior, 143, 12–24.

[2] BARBERÀ, S., M. O. JACKSON, AND A. NEME (1997): "Strategy-proof allotment rules," Games and Economic Behavior, 18, 1–21.

[3] CHING, S. AND S. SERIZAWA (1998): "A maximal domain for the existence of strategyproof rules," Journal of Economic Theory, 78, 157–166.

[4] MASSÓ, J. AND A. NEME (2001): "Maximal domain of preferences in the division problem," Games and Economic Behavior, 37, 367–387.

[5] ORTEGA, J. AND E. SEGAL-HALEVI (2022): "Obvious manipulations in cake-cutting," Social Choice and Welfare, 1–20.

[6] SPRUMONT, Y. (1991): "The division problem with single-peaked preferences: a characterization of the uniform allocation rule," Econometrica, 509–519.

[7] TROYAN, P. AND T. MORRILL (2020): "Obvious manipulations," Journal of Economic Theory, 185, 104970.