

# Strategy-proof Social Choice with Fixed Indifference Classes

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## **Abstract**

We assume that for every agent  $i$ , there exists a *fixed* equivalence relation  $I_i$  such that agent  $i$  is always indifferent between alternatives  $x$  and  $y$  iff  $xI_iy$ . That is, we consider the situation where the social choice rule designer knows the agents' indifference classes, but he is not sure how the indifference classes are ranked. We investigate the existence of a strategy-proof and nondictatorial social choice function, and prove that strategy-proofness necessarily implies dictatorship. Since our framework includes the domain consisting of the linear preferences, our result is a generalization of the Gibbard-Satterthwaite theorem.

**JEL classification number:** D7.

**Key Words:** Gibbard-Satterthwaite theorem, social choice function, strategy-proofness.