

Abstract

In this study, a participation game in a public good mechanism to implement a public project is considered. In this game, agents decide simultaneously whether or not to participate in the mechanism, and only the participants undertake a public project and distribute the cost of the project. We characterize the sets of participants in the strict Nash equilibria, strong equilibria, and coalition-proof equilibria of the participation game. The three sets of equilibria are shown to coincide and exist. All the equilibrium allocations are Pareto-efficient at any one of three notions of equilibria. However, if the public good can be provided in multiple units or if there are multiple projects, then these sets may fail to coincide.

Key words: Participation game; Public project; Strong equilibrium; Coalition-proof equilibrium; Non-excludability of public goods

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