CLUSTERING IN N-PLAYER PREEMPTION GAMES

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Abstract
We study a complete information preemption game in continuous time. A finite number of firms decide when to make an irreversible, observable investment. Upon investment, a firm receives flow profits which decrease in the number of firms that have invested. The cost of investment declines over time exogenously. We characterize the subgame-perfect equilibrium outcome, which is unique up to a permutation of players. When the preemption race among late investors is sufficiently intense, the preemption incentive for earlier investors disappears, and two or more investments occur at the same time. We identify a sufficient condition in terms of model parameters: clustering of investments occurs if the flow profits from consecutive investments are sufficiently close. This shows how clustering can occur in the absence of coordination failures, informational spillovers or positive payoff externalities. (JEL: C73, L13, O3)

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