

An efficiency result under cost observation without public randomization device

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January 20, 2017

Abstract

We consider an infinitely repeated prisoner's dilemma with cost observation. Each player chooses whether or not he pays an observational cost at the same time as he chooses his action. If he pays the observation cost, he can observe the action just played by the opponent. Otherwise, he cannot obtain any information about the action chosen by the opponent. We introduce correlated signal at the beginning of each stage game. Since the correlated signals are realized before players' action choice, the realized signal does not contain any information about realized action profile. We prove an efficiency result without public randomization device on the condition that the discount factor is sufficiently close to one and the observation cost is sufficiently small.

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