An efficiency result in repeated prisoner's dilemma under cost observation without any stochastic signal

Yoshifumi Hino*

This version: April 17, 2017

Abstract

We consider an infinitely repeated prisoner's dilemma game under cost observation. If a player observes his opponent, then he pays an observation cost and knows the action chosen by his opponent. If a player does not observe his opponent, he cannot obtain any information about the opponent's action. We assume that no signals are available not only after the choice of the action but also before the choice of action. We construct a variant of grim trigger strategy and prove an efficiency result without any signal when the common discount factor is sufficiently large and the observation cost is sufficiently small.

*Business Administration, Vietnam-Japan University, Luu Huu Phuoc Street, My Dinh 1 Ward, Nam Tu Liem District, Hanoi, 129160, Vietnam