A Theory of Player Turnover in Repeated Games

By Yuk-fai Fong and Jin Li,
Kellogg School of Management, Northwestern University

ABSTRACT

We propose a theory of player turnover in long-term relationships according to which replacement of players suspected of deviation with new players mitigates inefficiency arising from imperfect (public) monitoring even if doing so requires compensating the suspected deviators adequately for them to leave voluntarily. Our theory encompasses turnover allowing and disallowing payment to the departing player, voluntary and involuntary turnover. Through a general model and three applications we establish the following findings. First, player turnover creates Pareto improvement even if the new player is an identical replica of the existing player, so improvement in performance following player change may not be attributable to difference in player abilities. Second, bargaining power of the incumbent player limits the Pareto improvement of and causes delay in player turnover. Third, when payment to the departing player is not allowed, the outside option of a player has a nonmonotone impact on the payoff of the other player. Finally, in principal-agent relationships with limited liability, the profit maximizing relational contract never maximizes aggregate payoff if replacement of agent is not allowed, but allowing agent replacement restores the value maximization principle for a wide range of parameter values.