Optimality of Linearity in a Continuous–Time Multi–Agent Hidden–Action Model with Collusion

Mehmet Barlo\textsuperscript{*} \hspace{1cm} Ayça Özdoğan
Sabancı University \hspace{1cm} University of Minnesota
March, 2006

Abstract

This study analyzes a single-task continuous-time multi-agent hidden-action model where all the parties involved have exponential utility functions and agents jointly control the drift and variance of the return process governed by a Brownian motion, and are able to exploit all instantaneous collusion opportunities. In this setting, extending on the previous work by Sung (1995), we prove that the optimal contract is linear in final output. Therefore, a similar argument to the one supplied by Holmstrom and Milgrom (1987), establishes that the principal is acting is as if he is solving a one-shot model with collusion in which he is restricted to offer linear contracts.

\textit{Journal of Economic Literature} Classification Numbers: C61; C73; D82

\textit{Keywords}: Principal-agent problems, moral hazard, incentives, linear contracts, collusion, Brownian motion.

References


\textsuperscript{*}Email barlo@sabanciuniv.edu for comments and questions.