Collusion in Organizations and Management of Conflicts through Job Design and Authority Delegation

Yutaka Suzuki
Hosei University

Received 16 July 2007 ; Accepted 30 October 2007

Abstract

We analyze a principal-supervisor-two agent hierarchy with supervisory efforts, provide a characterization of the equilibrium of the game, and show which regime improves efficiency between the collusion-proof regime and the lateral collusion one, under the assumptions that the principal is less informed, and that the side-trade is costly. By coping with the trade-off between the value of information vs. either the cost of the collusion incentive constraint (in the collusion-proof regime) or the rent-seeking cost (in the equilibrium collusion one), for some parameters, the principal may want to adopt the collusion-proof contracts, and for other parameters, let collusion happen in equilibrium. As a characterization result, we derive the low-powered job for the agent and the high-powered job for the supervisor in each of the two regimes. Finally, we show how the allocation of real authority is endogenously determined, and interpret it from the viewpoint of the centralized vs. decentralized firms.

1Correspondence: Yutaka Suzuki, Faculty of Economics, Hosei University, 4342 Aihara, Machida, Tokyo 194-0298 Japan (E-mail) yutaka@hosei.ac.jp. An earlier version of this paper was presented at the Econometric Society North American Winter Meeting 2000 (Boston), Game Theory Society First World Congress 2000 (Bilbao), Mid-West Economic Theory Meeting 2002 (Notre Dame), and Workshops at The University of Tokyo, Hosei University and Osaka University (ISER). I would like to thank the seminar/session participants for their valuable comments and suggestions. Financial support for this research was provided through a Grant-in-Aid for Scientific Research by the Japan Society for the Promotion of Science (2005-2006) and the 2006 Grant from the Zengin Foundation for Studies on Economics and Finance in Japan.
1 Introduction

In hierarchical organizations where a supervisor(s) monitors agents for the benefit of the principal, manipulation of information may arise when agents and supervisor(s) collude to conceal the relevant information from the principal. This paper addresses this problem within the framework of triangular or multilateral agency relationships, where participants may contemplate side contracting. Collusion means that within a group of participants, a coalition forms a strategic alliance at the expense of the rest of the group.

The research has addressed the possibility of supervisor-agent coalition formation within a three-tier hierarchy, where the principal may wish to monitor an agent and so hires a supervisor to perform the task effectively. However, the supervisor may be often purely self-interested, and willing to accept a payment (bribe) from the agent in return for misreporting his observations. The manipulation of information through the collusion between the supervisor and the agent may bring about a large loss for the organization, since the ‘wrong’ task assignment may be realized. Hence, the principal may exercise the option to create collusion-proof contracts to deter the supervisor’s misbehavior. This is a familiar result in the collusion literatures following the model of Tirole (1986).

The focus of this paper is to show that under the principal-supervisor-two agents hierarchy with supervisory efforts, in some cases, the collusion-proof contracts may be the second best solution, but in the other cases, allowing the possibility of collusion and promoting cooperation among a subgroup of actors may be welfare enhancing. Further, a self-interested supervisor is unlikely to be of value to the principal due to the threat of manipulation of information through the collusion. What