

## **Structure, Conduct, and Performance of Principal-Agent Models: An Overview**

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### **Abstract**

This prelude introduces the first symposium of this journal devoted to the structure, conduct, and performance of principal-agent models in a broad view. Five papers, exemplifying recent developments and targeting readers of interdisciplinary interest, are summarized.

*Key words:* agency; principal-agent; asymmetric information; contract

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The principal-agent problem, resting on a basis in economics, describes strategic interactions between two parties to a contract, called a principal and an agent. The central theme is to ask how to get the agent (e.g., an employee; a borrower) to act in the best interest of the principal (e.g., an employer; a lender) when the (informed) agent has an informational advantage over the (uninformed) principal and often has conflicting interests with the latter. Earlier work centered on dilemmas of resolving problems due to incomplete information in insurance industries [e.g., Spence and Zeckhauser (1971)]; in screening contracts in the context of optimal taxation as in Mirrlees (1971); quickly spread in various contracts, with theoretical rigor and ample management-oriented applications reinforced, led by Jensen and Meckling (1976), and Harris and Raviv (1978) among many others. But why do we need one more symposium in this area, particularly for an interdisciplinary journal struggling for serving our community for the third year? Mimicking kind words by K. Lovell in his forward for launching this journal, we strive for convincing readers that *this journal* crosses boundaries, welcoming contributions from all fields in quantitative-oriented business. So here it is.

In a semi-synthetic style Jain, Jeitschko, and Mirman (2003) study a model that combines entry deterrence with a repeated principal-agent problem concerning adverse selection between an outside principal (offering agency contract) and the incumbent (as the agent) threatened by entry. They find an agency makes entry more

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profitable; inviting entry can alleviate agency costs. Turning to the field of corporate finance, Fairchild (2003) develops a simple principal-agent model of financial contracting in which investors (principals) provide finance while the manager as the agent exerts effort in creating firm value, hence moral hazard problem prevails.

Diversity continues. Shoham, Yaari, and Brock (2003) ask how the headquarter of a multinational firm (as the principal) designs an incentive mechanism to encourage (intra-firm) knowledge transfer across two subsidiaries. Possibly more tailored to the need of business economists and entrepreneurs, Reid and Smith (2003) provide empirical evidence (in U.K.) on how investors (as principals) and investees (as agents) view and evaluate two risk classes in high-technology venture capital investments. We close this special issue with an *exposita note* of unusual length yet “dry” as expected, Renou (2003), which characterizes the optimal menus of (multi-dimensional) screening contracts that shareholders of a cash-constrained firm offer in the linear case. By “multidimensional” we mean that the capacity to distribute future dividends depends on her production costs and technology (or productivity), privately known to the manager (as the agent). Controversial reviews and rebuttal notwithstanding, we have it included to stimulate further discussion.

Any cavity you might find could be a design. Inexperienced as we are, thanks and apology go to conscientious referees as unsung heroes, disappointed contributors whose gems deserve to see the light of the day in regular issues or much better outlets, and especially our readers.

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