Spring 2015 SCOM Guest Lecturer Series

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Designing Dynamic Contests

Friday, March 13
CBA 4.304
10:00 – 11:30 AM

Abstract

Innovation contests have emerged as a viable alternative to the standard research and development process. They are particularly suited for settings that feature a high degree of uncertainty regarding the actual feasibility of the end goal. Participants race towards completing an innovation project and learn about the underlying environment from their own efforts as well as from their competitors' gradual progress. Learning about the status of competition can alleviate some of the uncertainty inherent in the contest, but it can also adversely affect effort provision from the laggards as they become discouraged about their likelihood of winning. Thus, the contest's information provision mechanism is critical for its success. This paper explores the problem of designing the award structure of a contest as well as its information disclosure policy in a dynamic framework, and provides a number of guidelines with the objective of maximizing the designer's expected payoff. In particular, we show that intermediate awards, apart from directly affecting the participants' incentives to exert costly effort, may also be used as a way for the designer to appropriately disseminate information about the status of competition. Interestingly, our proposed design matches many features observed in real-world innovation contests.

Bio

Kostas Bimpikis is an Assistant Professor in the Graduate School of Business at Stanford University, in Stanford, CA. Professor Bimpikis' research agenda lies in the interface of operations, economics and information technology. Much of his current research is focused on studying the economics of complex networks and identifying the implications for individuals and businesses. Moreover, he is interested in issues arising in the operations of Internet-based markets.