Research grants competitions: step-by-step group contests with group-specific public-good prizes*

Katsuya Kobayashi †

Hosei University

April 3, 2017

Abstract

This study analyzes a structure of competitions for research grants. Research groups often competes with other groups for the grants. Each group has to expend much effort to publish papers one by one to win a grant. If their paper is accepted by a top journal, the group can have a big chance to get a grant. On the other hand, if it is not accepted by any journal, even if they had already expended much effort, the group-members can obtain nothing. We focus on this characteristic of groups' effort for publishing papers, and introduce a step function as a group impact function, namely the achievement of effort. Then, we analyze the group contests with group-specific public-good prizes, and characterize Nash equilibria. We show that there is an equilibrium at least, at which any members in each group do not free-ride the others, but expend positive effort, and that effort levels at Nash equilibria are less than the optimal effort level for each group.

Keywords: Step-by-step technology, Group contests, Group-specific public goods

***JEL* Classification Number: C72, D70, H41, I23**.

*I am grateful to Ryusuke Shinohara for his valuable comments and useful conversations.

†E-mail katsuyak@hosei.ac.jp, Faculty of Economics, Hosei University, 4342 Aihara-machi, Machida-shi, Tokyo 194-0298, Japan.