

An experimental study of implementing fair allocations

Yuji Fujinaka ^{*}, Toyotaka Sakai [†] and Shin Sakaue [‡]

April 16, 2009

Abstract

In the problem of assigning a single indivisible object among individuals with monetary transfers, we conduct a laboratory experiment of a fair allocation mechanism. We observe that the mechanism achieves efficiency with 81% and envy-freeness with 77%, where envy-freeness implies efficiency in this model. Individuals rarely play dominated strategies, and the mode of strategy profiles is a unique undominated Nash equilibrium, as is theoretically predicted.

Keywords: Mechanism design, Nash implementation, Undominated Nash implementation, Dominance solvability, Fair allocation, Indivisible good, Envy-freeness.

JEL codes: C78, D63, D71.

^{*}Faculty of Urban Liberal Arts, Tokyo Metropolitan University, Tokyo 192-0397, Japan. E-mail: fujinaka@tmu.ac.jp

[†]Department of Economics, Yokohama National University, Yokohama 240-8501, Japan. E-mail: toyotaka@ynu.ac.jp

[‡]Faculty of Economics, Keio University, Tokyo 108-8345, Japan. E-mail: sakaue@econ.keio.ac.jp