

Virtual Valuation in Dynamic Contest Design*

Minoru Kitahara[†] Ryo Ogawa[‡]

First Draft: April 21, 2011

Abstract

We formulate a dynamic version of contest ([?]), and argue the implications of incentive compatibility in the model. We then solve the optimal (principal's revenue-maximizing) dynamic contest and derive the counterpart of *virtual valuation*, which originates in [?]'s work to investigate the optimal auction problems. We also argue the difficulty of implementing the optimal dynamic contest indicated by the dynamic virtual valuation in the paper.

*The authors are grateful to Makoto Hanazono, Shingo Ishiguro and Michihiro Kandori for helpful comments.

[†]JSPS Research Fellow, Graduate School of Social Sciences, Tokyo Metropolitan University, 1-1 Minami-Osawa, Hachioji-shi, Tokyo 192-0397, Japan, and Visiting Research Fellow, Population Research Institute, Nihon University, 12-5 Goban-cho, Chiyoda-ku, Tokyo 102-8251, Japan (mkitahar@tmu.ac.jp)

[‡]Corresponding author. ISER, Osaka University, 6-1 Mihogaoka, Ibaraki, Osaka 567-0047, Japan (r-ogawa@iser.osaka-u.ac.jp).