Experiments on Repeated Games with Infrequent Monitoring^{*}

Hajime Kobayashi[†] Tatsuhiro Shichijo[‡] Shigeki Kano[§] Katsunori Ohta[¶] Tatsuyoshi Saijo[∥] Takafumi Yamakawa^{**}

January 27, 2018

Abstract

When individuals face to imperfection in monitoring technology, accumulating information via infrequent monitoring improves efficiency under long term relationships. This paper investigates this effect through laboratory experiments by extending the design by Aoyagi and Frèchette (2009). We find that: (i) when the level of noise is small, the level of cooperation is significantly enhanced as the length of accumulation periods becomes long, (ii) when the level is high or zero, the level of cooperation decreases as the length of accumulation periods becomes long. For individual behaviors in the small noise treatment, we find that subjects utilize the accumulated signals in such a manner that they are more tolerant and more forgiving than in the standard repeated game treatment.

^{*}We are very grateful to Takehito Masuda for his helpful assistance. We are also grateful to Thomas Palfrey for his valuable comments. This research is supported by the Zengin Foundation for Studies on Economics and Finance, by the Murata Science Foundation, and by JSPS KAKENHI Grant Number JP24530207. All remaining errors are ours.

[†]Faculty of Economics, Kansai University, 3-3-35 Yamate-cho, Suita 564-8680, Japan; khajime@kansai-u.ac.jp.

[‡]School of Economics, Osaka Prefecture University, 1-1 Gakuen-cho, Naka-ku, Sakai 599-8531, Japan; shichijo@eco.osakafu-u.ac.jp.

[§]School of Economics, Osaka Prefecture University, 1-1 Gakuen-cho, Naka-ku, Sakai 599-8531, Japan; kano@eco.osakafu-u.ac.jp.

[¶]Faculty of Economics, Wakayama University, 930 Sakaedani, Wakayama 640-8510, Japan; ohta@eco.wakayama-u.ac.jp.

^{||}Institute of Economic Research, Hitotsubashi University, 2-1 Naka, Kunitachi 186-8603, Japan; saijo@ier.hit-u.ac.jp.

^{**}Institute of Social Economic Research, Osaka University, 6-1 Mihogaoka, Ibaraki 567-0047, Japan; yamakawa@iser.osaka-u.ac.jp.