

Market Concentration and Sectoral Inflation under Imperfect Common Knowledge*

Ryo Kato[†] Tatsushi Okuda[‡]

April 17, 2017 (Preliminary)

Abstract

This paper first provides empirical evidence that sectoral inflation persistence, measured by autocorrelation of monthly changes in U.S. producer prices, is starkly dispersed and negatively correlated with market concentration in each sector. To replicate such empirical observation, we develop a dynamic stochastic model of firms' pricing strategy in which monopolistically competitive firms set their prices receiving private signals on cost shocks. In the model, an increase in the number of competing firms raises strategic complementarity among the firms in the same sector. Using the model, we analytically show that, under imperfect common knowledge, sectoral inflation persistence is monotonically decreasing in market concentration.

JEL Classification: E31, D40, D82, L16

Keywords: Imperfect common knowledge, Inflation persistence, Market concentrations.

*The authors thank Satoshi Nakada, Mototsugu Shintani, Yuki Teranishi, Takayuki Tsuruga, Takashi Ui, and Toshiaki Watanabe for their invaluable comments. Views expressed in this paper are those of the authors and do not necessarily reflect the official views of the Bank of Japan.

[†]Head of Economic Studies Group, Institute for Monetary and Economic Studies, Bank of Japan: ryou.katou@boj.or.jp

[‡]Economist, Institute for Monetary and Economic Studies, Bank of Japan: tatsushi.okuda@boj.or.jp