Network-Motivated Lending Decisions

Yoshiaki Ogura
Waseda University

Ryo Okui
VU University Amsterdam and Kyoto University

Yukiko Saito
Research Institute of Economy, Trade, and Industry

Abstract
We theoretically and empirically demonstrate that monopolistic or collusive banks will keep lending to a loss-making firm at an interest rate lower than the prime rate if the firm is located in an influential position in an inter-firm supply network. An influential firm generates a positive externality, and its exit damages the sales in the supply network. To internalize this externality, the banks may forbear on debt collection and/or bail out such influential firms when the cost to support the loss-making influential company can be recouped by imposing high interest on less influential companies. The analytical model shows that such forbearance can improve welfare. Our empirical study, performed using a unique dataset containing information about inter-firm transactions, provides evidence for such network-motivated lending decisions. In particular, this effect is more clearly observed at less credit-worthy firms whose main bank is a regional bank. Notably, we observe that such banks are often dominant lenders in the local loan market, and most of their clientele do not have direct access to the stock and bond market.
Keyword: supply network, influence coefficient, centrality, forbearance, bailout
JEL Classification: C55, D57, G21, G32, L13, L14

* This paper is a result of the research of the Study Group on Corporate Finance and Firm Dynamics at the Research Institute of Economy, Trade, and Industry (RIETI) in Tokyo, Japan. We are grateful for insightful comments by Kosuke Aoki, Takeo Hoshi, Masami Imai, Keiichiro Kobayashi, Yoshinori Kon, Hideaki Miyajima, Hiroo Sasaki, Yasunobu Tomoda, Greg Udell, Alberto Zazzaro, and other participants in the workshops at the Financial Service Agency Institute, Kobe University, Osaka University, RIETI, University of British Columbia, and Waseda University, and those in the sessions at the 5th Regional Finance Conference at Chuo University, Tokyo, Japan, and the Western Economic Association International 10th Biennial Pacific Rim Conference at Keio University, Tokyo, Japan. We gratefully acknowledge financial support, KAKENHI grants 23243050 and 26590051.