Offshoring, Relationship-Specificity, and Domestic Production Networks*

Taiji Furusawa
Hitotsubashi University

Keiko Ito
Senshu University

Tomohiko Inui
RIETI

Heiwai Tang
Johns Hopkins University

September 30, 2015
(Preliminary. Comments are welcome.)

Abstract

An economy is an interlinked web of production units. Decisions by a buyer will affect the performance of its old and new input suppliers, and vice versa. This paper examines both theoretically and empirically how downstream firms' offshoring decisions lead to the reorganization of the domestic production network. We build a buyer-seller model that features supplier heterogeneity in efficiency and distance, as well as intermediate inputs that vary in the degree of specificity to the relationship with the buyer. The model predicts that the more productive buyers will source inputs from a larger range of geographic regions, especially for generic inputs. Inputs that are more relationship-specific are less likely to be sourced from distant regions or foreign countries. Starting from these equilibrium sourcing patterns, a decline in offshoring costs leads to dropping of the less productive suppliers that are closer to the buyers, which are to be replaced by the more distant and productive suppliers due to the indirect productivity effect of offshoring. Less relationship-specific suppliers are more likely to be dropped, despite their higher productivity. Using unique and exhaustive data on the buyer-seller network in Japan, we find evidence supporting the main predictions of the model.

Key Words: Production Networks; Offshoring; Relationship Specificity
JEL classification: F10, F14, L14

*This study is conducted as a part of the Project "Global Markets and Japan's Industrial Growth" undertaken at Research Institute of Economy, Trade and Industry (RIETI). We would like to thank the Ministry of Economy, Trade and Industry for providing the micro data of the Basic Survey of Japanese Business Structure and Activities, and RIETI for allowing us to access TSR data used in this study. Thanks also go to Andy Bernard, Andreas Moxnes, Jonathan Vogel and participants at APTS in Canberra, ETSG in Paris, HKU, and RIETI, and World Congress of Econometric Society in Montreal for helpful comments.