Buyers, Suppliers, and R&D Spillovers

René Belderbos
University of Leuven, UNU-MERIT, Maastricht University, and NISTEP

Kyoji Fukao
Hitotsubashi University, NISTEP, and RIETI

Kenta Ikeuchi
NISTEP

Young Gak Kim
Senshu University and NISTEP

Hyeog Ug Kwon
Nihon University, NISTEP, and RIETI

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ABSTRACT
The role of buyers and supplier has received little attention in the literature on R&D spillovers and productivity, which has focused primarily on the moderating roles of technological and geographic proximity. In this paper, we examine R&D spillovers due to buyer and supplier relationships at the transaction level, utilizing a unique dataset identifying individual buyers and suppliers of Japanese manufacturing firms, matched with data from the census of manufacturers and R&D surveys. In an analysis of more than 20000 Japanese manufacturing plants, we find that R&D stocks of buyers and suppliers provide a substantial productivity performance premium over and above the effect of technologically and geographically proximate R&D stocks. These effects are magnified if the supplier and buyer have business group ties based on capital ownership relations. While the effects of technologically proximate R&D decay with distance, this is not the case for spillovers from buyers and suppliers. Our results identify transaction-based spillovers as key influences on productivity and social returns to R&D.

Keywords: productivity, location, R&D, spillovers

JEL codes: D24, O32.

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