

# Buyers, Suppliers, and R&D Spillovers

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This version: 10 January 2015

## 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 relationships. 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.

## Acknowledgements

This paper is the result of a joint research project of the National Institute of Science and Technology Policy (NISTEP) and the Research Institute for Economy, Trade and Industry (RIETI) under the “Science for Science, Technology and Innovation Policy” program. René Belderbos gratefully acknowledges financial support from NISTEP, and the Centre for Economic Institutions and the joint Usage and Research Center (Fiscal 2014 Project Research Program) at the Institute of Economic Research, Hitotsubashi University.