

Does Deep Economic Integration Facilitate International Research Collaborations?

JINJI Naoto*[†]

ZHANG Xingyuan[‡]

HARUNA Shoji[§]

Abstract

We examine whether regional trade agreements (RTAs) facilitate international research collaboration. Using a simple duopoly model with process research and development (R&D) investment and spillovers, we first analyze whether trade liberalization through a trade agreement with deep economic integration increases firms' incentive to engage in research collaboration. We then empirically investigate the effects of deep RTAs by using the data on patents with multiple inventors from different countries at the United States Patent and Trademark Office (USPTO) for 113 countries/regions for the period 1990–2011. We interpret co-inventions by inventors who are resident in different countries as evidence of international research collaboration. We use dummy variables and indexes to measure how deep economic integration by RTAs is. We find that deeper integration is actually associated with more active international co-inventions. We check the robustness of our findings by employing various specifications and by addressing endogeneity issue.

Keywords: regional trade agreement; deep integration; research collaboration; international co-invention.

JEL classification: F15; O33.

*Corresponding author. Faculty of Economics, Kyoto University, Yoshida-honmachi, Sakyo-ku, Kyoto 606-8501, Japan. Phone & fax: +81-75-753-3511. E-mail: jinji@econ.kyoto-u.ac.jp.

[†]Research Institute of Economy, Trade and Industry (RIETI).

[‡]Faculty of Economics, Okayama University, 3-1-1 Tsushima-Naka, Kita-Ku, Okayama 700-8530, Japan.

[§]Faculty of Economics, Fukuyama University, 985-1 Sanzo, Higashimura-machi, Fukuyama 729-0292, Japan.