

Agglomeration or Selection?

The Case of the Japanese Silk-Reeling Industry in 1909–1916*

Yutaka Arimoto[†] Kentaro Nakajima[‡] Tetsuji Okazaki[§]

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Abstract

Plants in clusters are often more productive than those located in non-clusters. This has been explained by agglomeration effects that improve productivity of all plants in a region. However, recent theoretical development of trade and spatial economic theories with heterogeneous firms has shed light on another channel of productivity improvement in clusters, “plant-selection effects”. This paper uses plant-level data on the Japanese silk reeling industry in 1909–1916 and distinguishes between these two effects. We identify the plant-selection effect by using the fact that the two effects have different implications on the distribution of plant-level productivity of the two effects. We confirmed that plants in clusters were indeed more productive. At the same time, we found that the widths of distribution of plant productivity in clusters were narrower and more severely truncated than those in non-clusters. Our results imply that the plant-selection effect was at least one of the sources of the higher plant-level productivity in clusters.

Keywords: Agglomeration; Plant-selection; Heterogeneous firms; Economic geography
JEL classification: L10; O18; R12

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[†]Department of Agricultural and Resource Economics, University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-8657, Japan. Tel: +81-3-5841-5328. E-mail: arimotoy@mail.ecc.u-tokyo.ac.jp

[‡]Faculty of Economics, Tohoku University, 27-1 Kawauchi Aoba-ku, Sendai, 980-8576 Japan. Tel/Fax: +81-22-795-4798. E-mail: knakajima@econ.tohoku.ac.jp

[§]Faculty of Economics, University of Tokyo