

Fresh Brain Power and Quality of Innovation in Cities: Evidence from the Japanese Patent Database*

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Abstract

This paper analyzes whether freshness of knowledge increases the quality of innovation by using the Japanese patent database. Agglomeration is generally believed to foster the creation of new knowledge through knowledge spillover, such as active face-to-face communication; however, expansion of common knowledge within research communities may discourage high-quality innovation. Taking this into consideration, we attempt to examine the turnover effects of knowledge workers across cities by looking at the interregional migration of university graduates. We find that the quality of innovation as measured by the number of patent citations tends to be higher in cities with bigger migration flows of university graduates. More importantly, we find that metabolizing agglomeration plays an important role for high-quality innovative activities.

JEL classifications: O31, O34, R12, R23

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