

**Making university and industry collaboration : sources of seeds, needs and their  
matching process in Japan (Preliminary)**

March 2014

Sadao Nagaoka \*, Institute of Innovation Research, Hitotsubashi University

Junichi Nishimura, Faculty of Economics, Gakushuin University

Shinichi Akaike Institute of Innovation Research, Hitotsubashi University

Mitsuaki Hosono, National Institute of Science and Technology Policy

**Abstract**

This paper examines the sources of university and industry collaborations as well as the mechanism of their making from a perspective of matching theory. We use a recent survey on the university and industry co-inventors in Japan, where co-inventions by university and industry researchers accounts for about a half of the university inventions. Major findings are the following: Three quarters of such collaborations have specific technology seeds and the needs for technical solution, so that matching is important. A university researcher frequently participates in the collaborative research as a user who needs technical solutions. The researchers with good seeds or needs tend to use the “efficiency” enhancing criteria (research capability of a partner and the good fit between the partner and the research) as matching criteria more, which generates positive assortative matching in such collaborations. The matching promoted by a university professor himself and at academic meeting facilitates matching based on such efficiency enhancing criteria, while a university based support unit emphasizes local proximity as matching criteria. Finally, the collaborative research projects, which were matched based on efficiency enhancing criteria, perform well, while those matched based on geographical proximity do not contribute to the performance.

Key words: university and industry collaboration; matching; seeds; needs,  
performance

JEL: O31,O32

---

\* Email [snagaoka@iir.hit-u.ac.jp](mailto:snagaoka@iir.hit-u.ac.jp), Hitotsubashi University, 2-1 Naka, Kunitachi, Tokyo 186-8603, Japan. This project is supported by the JSPS Grant-in-Aid for Scientific Research (S) (No. 20223002). We would like to thank for this.