

A patentability requirement and industries targeted by R&D

Keiichi Kishi[†]

Graduate School of Economics, Osaka University

Abstract

This paper develops a Schumpeterian growth model to analyze the effect of a patentability requirement on innovation. We introduce an inventive step requirement, which is one of the patentability requirements, that is, a minimum innovation size required for patents. We show that each R&D firm targets only the industries that the incumbent's technology is sufficiently obsolete in order to satisfy an inventive step requirement. This is because a technological gap between innovator and incumbent is larger in the industries that use older technology. Under the circumstance, strengthening an inventive step requirement reduces the industries targeted by R&D, on the other hand, increases R&D investments to the targeted industries. Consequently, we find the non-monotonic effect of inventive step requirement on aggregate flow of innovations. (JEL: O31, O34, O41)

Keywords: Technological progress, Innovation, Intellectual property rights

[†] Graduate School of Economics, Osaka University, 1-7 Machikaneyama, Toyonaka, Osaka 560-0043, Japan

E-mail address: ba000069@gmail.com