Patent Protection, Optimal Licensing, and Innovation with Endogenous Entry*

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Abstract

How does patent policy affect innovation when patent licensing is crucial for firms? To address this question, the present paper incorporates voluntary patent licensing between an innovator and followers, which has been discussed in the literature of industrial organization, into a dynamic general equilibrium model. Unlike in existing studies, both the licensing fee and the number of licensees are endogenously determined by the innovator's maximization and the free-entry condition. Using this model, we show that strong patent protection does not always enhance innovation, economic growth, and welfare. Furthermore, the extended analysis provides a policy implication that the effect of patent policy depends on how difficult further innovation is without patent licensing of the current leading technology.

Keywords: innovation, patent protection, optimal patent licensing, endogenous market structure.

JEL-Classification: L24, O31, O34.

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