

Are We in a “Wrong” Patent Regime? The Patent-awarding Rules and Economic Growth

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Abstract

The motivation of this paper stems from the enactment of the 2011 America-Invents Act, the most significant change to the U.S. patent system since 1952. With this landmark piece of legislation, the United States ended its century-old system of awarding a patent to the person who claims to have discovered the invention first and joined the rest of the world that awards a patent to the person who files a patent application first. Behind the reason why the U.S. became the last country to adopt a first-to-file rule was the presence of the strong opposition to reform, who adduced the fact that the U.S. had led the world in invention for more than a century, and attributed that fact to the first-to-invent feature of the patent law that was in effect since 1836. The primary objective of the present paper, therefore, is to evaluate the opposition’s argument that a first-to-invent rule spurs economic growth relative to a first-to-file rule. The argument, if valid, would mean that the world economy is in a “wrong” patent policy regime. To this end, we consider an economy with a continuum of industries, in each of which two firms compete in R&D to create a new product. To highlight the difference between the two patent-awarding rules, we assume that each new product is brought to the market after completion of two stages of innovation: intermediate and final. Analysis proceeds in two steps. First, we develop a basic model, which is of partial equilibrium nature, taking profit as given. We show that growth is faster with the first-to-file rule than with the first-to-invent rule. It is equivalent to the result reported in Scotchmer and Green (1990). Second, the basic model is extended to general equilibrium. Two types of equilibrium exist. In the first type the partial equilibrium result holds, but it is reversed in the second type. We argue that the latter type of equilibrium is more plausible than the former, i.e. growth is higher under the first-to-invent rule.

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