

Patent Lather

Red Herring Magazine, August 1, 1999

During the two and a half years I have been writing this column, hundreds of readers have sent me letters, many of them critical. I never felt compelled to publish a substantial correction. Until now.

Julio H. Cole, an economics professor at the Universidad Francisco Marroquin in Guatemala, makes an important point about one of my recent columns (April 1999), in which I said that patents are, on the whole, productive. He notes that they aren't necessarily so: a patent benefits those who use the patented item if the invention covered would not have been made -- or made as soon -- without such a lure. But patents also hurt consumers by creating monopolies on goods that would have been developed even without the patents.

Though I did observe this trade-off in my column, I quickly moved past the downside of patents, which was noted as early as 1934 by the British economist Arnold Plant in "The Economic Theory Concerning Patents for Inventions." Plant also noted that patents divert inventive activity toward things that are patentable -- and away from things that aren't.

SUDDEN NONIMPACT

For almost a century, economists have been creating mathematical models of patents' economic effects and writing about them. And for years U.S. trade negotiators have made strengthening the international patent-protection system one of their biggest priorities. Yet no one has come up with compelling evidence, one way or the other, of the patent's impact on invention. In the absence of evidence, both pro- and antipatent camps have been making leaps of faith.

This is beginning to change. In April the National Bureau of Economic Research in Cambridge, Massachusetts, published a working paper on patents' effect on innovation. The authors, Mariko Sakakibara at UCLA's Anderson management school and Lee Branstetter at the University of California at Davis, studied the 1988 strengthening of Japan's patent system and concluded that it hasn't had much impact on invention there.

Before 1988, each Japanese patent could cover only one claim of a novel advance, often forcing inventors to file many patents for one technology. The American and European systems, by contrast, have for decades allowed multiple independent claims for the same patent. Japan's 1988 patent law follows the Western paradigm, offering two benefits to patent holders. First, companies can save money by filing fewer patents. The second benefit takes some explaining. Before 1988, a patent holder in Japan could not always obtain a second patent with a different but related claim on the same invention; the Japanese model follows a "one invention, one patent" rule. Nor could a competitor trying to get a patent based on the remaining claims do so: such a patent wouldn't meet the requirement that the invention be novel. If patents are an important spur to innovation, the 1988 Japanese reforms should have increased invention by making intellectual property easier to protect.

PATENT DEPENDING

Ms. Sakakibara and Mr. Branstetter say that one might argue, using advanced econometric techniques, that patent reform increased Japanese companies' R&D spending by about 9 percent in any given year after 1988. But they go on to reject this analysis. If they assume that the patent reform was enacted in 1985 instead of 1988, they find an even stronger boost -- about 17 percent -- in R&D spending. It's unlikely, they note, that Japanese research firms anticipated the reforms as early as 1985 and adjusted their R&D spending accordingly. Therefore, it appears that patent reform was not the reason for the increased spending.

The paper's authors also point out that if Japanese patent reforms had led to increased inventive activity, then Japanese firms should hold more U.S. patents as well -- spin-offs from their innovative efforts in response to those reforms. In fact, they do find that Japanese patent grants in the United States rose by 40 percent in a typical year after the 1988 reforms. Again, though, they show reason to doubt that this correlation implies causation. By redating the reforms to 1985, they find almost as strong a relation, with the reforms accounting for a 35 percent increase in U.S. patents granted to Japanese firms. That the percentages are almost equal suggests again that other factors affecting the Japanese economy, not patent reforms, have been responsible for the surge in innovation.

Although Ms. Sakakibara and Mr. Branstetter effectively undercut their paper's own initial result -- that increased patent protection spurs innovation -- it's striking that such provocative data existed in the first place. The authors have done us all a service by attempting to determine the true relationship between patents and invention.

My own view on the effects of patent protection remains more agnostic than theirs. In any event, until I see some slam-dunk evidence supporting a particular position, I'll be a lot more careful when advocating -- or opposing -- a patent system.