

Does Compulsory Licensing Discourage Invention?

Evidence from German Patents after the US Trading-with-the-Enemy Act

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ABSTRACT

Compulsory licensing – which allows patents to be licensed without the consent of patent owners – is a prominent mechanism to improve access to essential innovations, such as medicines to combat HIV. Critics have argued that compulsory licensing discourages innovation by weakening the intellectual property of foreign inventors. This paper exploits the 1918 US Trading-with-the-Enemy Act (TWEA) as an empirical setting to investigate the effects of compulsory licensing on patenting in Germany, the country whose patents were violated. Difference-in-differences regressions of new data on nearly 80,000 German patents compare changes in patenting by German inventors after 1918 for fields in which German-owned patents were violated with other fields. This analysis reveals a 38 percent increase in invention for fields with licensing. Regressions with renewed patents as a proxy for high-quality patents imply a 25 percent increase. Intent-to-treat regressions, which use German-owned US patents to measure exposure to licensing, imply a 30 percent increase. Firm-level analyses reveal that firms whose patents had been licensed under the TWEA began to patent more in research fields with licensing. Firm-level data also indicate an increase in the number of research-active firms in research fields with licensing. These results suggest that compulsory licensing may encourage, rather than discourage innovation by increasing competition.