

An Experimental Test of Patent Peer Review

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The U.S. patenting process suffers from a gap in scientific expertise, as patent examiners have limited time and experience in cutting-edge science. We design a novel (randomized) field experiment to test whether expert peer review can improve patent examination, including by bridging the non-patent literature deficit at the USPTO. We contacted 1476 scientists who were top patenters and affiliated with universities, and then we matched the 336 experts who agreed to participate with two recently published patent applications in their field of expertise, one of which was randomly chosen to be sent to the expert for review. Experts identified relevant prior art and were asked to explain the relevance to the pending claims, which we submitted to the USPTO as third-party preissuance submissions. Our results provide some evidence of the value of expert peer review: submissions caused examiners to increase search of and citations to non-patent literature, and the treatment group had a lower first-action allowance rate. But our field experiment also highlights many challenges in bringing scientific expertise to bear on patent law and policy.