Understanding the Link between Patent Value and Citations:
Creative Destruction or Defensive Disruption
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Abstract

The patent system is the leading legal mechanism for protecting new inventions and as such, patents are used in a host of research to proxy for innovative activity. Understanding how new products and processes are created and how to value them is critical to fields as diverse as industrial organization, corporate finance, and intellectual property law. In this paper we provide the first evidence that much of the work in these literatures is based on an erroneous assumption: that the value of innovation is proportional to citation-weighted patent counts. Using a proprietary dataset with patent-specific revenues, we find that there is an inverted-U relationship between patent value and citations. We attempt to explain this relationship using a simple model of firms, allowing for both productive and defensive patents. Simulations from the model match the empirical regularity that some very high-value patents receive substantially fewer citations than less valuable patents. Further, we find evidence of greater use of defensive patenting along the dimensions where it is predicted. These findings have important implications for our basic understanding of growth, innovation, and intellectual property policy.

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