

The effects of patent litigation on university licensing efforts

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Abstract

One effect of increased patenting by universities over the past 20 years has been a rise in lawsuits to enforce university patent rights. In this paper we ask what effect patent litigation has on university efforts to license technology. Using secondary data on licensing and interviews with technology licensing office (TLO) directors for research universities, we find both qualitative and quantitative evidence that patent litigation has an adverse effect on university licensing activity. Our interviews suggest that this adverse effect occurs because litigation disrupts overall TLO activity, and reduces the time and resources available for marketing technologies and establishing licenses.

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1. Introduction

One of the changes that have accompanied the growth of patenting and licensing at American universities since the passage of the Bayh-Dole Act almost 25 years ago is the increased use of lawsuits by universities to enforce their intellectual property rights. For example, the University of California sued biotechnology firm Genentech, alleging intellectual property theft by a

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former post-doctoral researcher and violation of the university's human growth hormone patent, and negotiated a \$200 million settlement. Similarly, the University of Minnesota settled its dispute over patents covering Glaxo Wellcome's AIDS drug Ziagen with a multi-year \$300 million licensing deal, while the University of Rochester recently lost a billion-dollar lawsuit, and all subsequent appeals, to enforce its cox-2 inhibitor patent against pharmaceutical companies Pfizer and Merck.

Aggregate statistics illustrate the increasing use of patent litigation by universities. University patent litigation is growing more rapidly than overall U.S. patent litigation, more than tripling in the period 1985–2000, as compared with a “mere” doubling for the latter (Merz and Pace, 1994; Somaya, 2004).² However, despite increased patent litigation by universities, there has been no research that examines the role of this activity in the university technology licensing process.

An examination of this topic is valuable for two main reasons. First, this investigation would allow us to understand an important part of universities' strategic behavior, and its impact on the national innovation system. Universities are significant contributors to private sector innovation (Adams, 1990; Jaffe, 1986). As a result, their decisions about the creation and dissemination of technology influence innovative activity in the economy (Nelson, 1993). Therefore, understanding university patent litigation is important to our knowledge about university licensing and technology commercialization, and their role in the national innovation system.

Second, our study allows us to evaluate whether the incentives provided by the Bayh-Dole Act have unintended consequences, given the different goals of universities and policy makers. The primary purpose of the Bayh-Dole Act, which gave universities the property rights to federally funded inventions, was to encourage private sector commercialization of academic inventions, not to provide universities with an additional mechanism to generate revenues. However, many university administrators report that revenue generation is a major goal of their technology transfer operations (Thursby et al., 2001). University patent litigation is an important manifestation of the divergent goals of policy makers and university administrators because universities can generate revenue through litigation at the expense of reduced private sector commercialization of academic inventions. Therefore, quantifying the effect of patent litigation on technology transfer activities is important for public policy. Federal policy toward university intellectual property needs to consider whether university patent litigation reduces technology licensing activity and, thus, technology transfer to the private sector.

Our study employs two sources of empirical data. First, we conduct interviews with the directors of technology licensing offices at 13 Carnegie I research universities to understand what effect patent litigation has on technology licensing office operations. Second, we analyze quantitative data from an annual survey of university TLOs, which we combine with a dataset of university patent litigation. Using panel data techniques, we examine the impact of university patent litigation on licensing activity for 116 leading U.S. research universities from 1991 through 2000.

Our interviews and statistical analyses show consistent patterns. Patent litigation imposes important costs on university licensing activity and significantly reduces the number of new licenses executed. Our interviews suggest that this is because litigation disrupts TLO activ-

² It is important to note that university patenting also grew faster than overall patenting during this period.

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