

The Diminishing Signaling Value of Patents between Early Rounds of Venture Capital Financing

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A long stream of research has documented the positive effects that patents bring about to emerging firms in high technology industries. The general consensus is that patents contribute to firm growth because they confer monopolistic market rights, offer protection from competitors, increase the negotiating position of patent holders and other benefits. What has received relatively less attention in the literature is whether patents act as a signal that attracts investors such as venture capital firms. The handful of studies that have addressed that question has not analyzed whether the signaling function of patents decreases after the initial attraction of venture capital, as information asymmetries between investors and target firms reduce. In this study we hypothesize that patent activity has a signaling value that diminishes once information asymmetries between investors and funded firms lessen. To study our proposition we draw upon a longitudinal dataset of more than 580 U.S. – based biotechnology firms to empirically demonstrate that biotechnology firms with that have submitted patent applications substantially increase the level of funding they receive for their first round of financing. In line with a reduction of information asymmetries once the initial investment has materialized, patent applications and granted patents have no effect on the growth of venture capital funds raised during the second round of financing. We conclude the study with a discussion of avenues for new research, implications for policy makers that consider the usefulness of the current patent system and with insights that can be employed by managers of firms in knowledge intensive areas such as biotechnology.

