The Market for Software Innovation Through the Lens of Patent Licenses and Sales

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ABSTRACT

Software innovation is transforming the US economy. Yet, the paid market for software innovation is poorly understood, in part because of a lack of public information about the licensing and transfer of innovation between firms. This paper skirts these obstacles by drawing upon several proprietary datasets, exploring the market for software innovation through the lens of patent licenses and sales. I find that despite the intense academic and policy focus on software patent litigation, software patents are much more likely to be transferred than litigated (1.4-2.4% odds of being sold per year vs. 1-2% odds of being litigated per lifetime), and argue that more attention should be paid to the market for innovation. Further, although the Supreme Court and new procedures have made it harder to enforce software patents, the market for software innovation remains remarkably robust, I find, with the number of software patents sold growing over 50% from 2012 to 2015. I attribute this development to the robustness of the demand for patents providing freedom to operate, the strength of software business models, and bargain shopping as the price of individual patents has gone down. This analysis distinguishes between transfers to support the transfer of technology as opposed to mere transfers of liability (generally through naked patent licenses). I find that the majority of significant software patent agreements registered with the SEC (N=245) support true technology transfer, contrary to other studies. However, trade secret and code were more important than patent for transferring software innovation between firms. In addition, large numbers of patents, it appears, are being sold to avoid litigation or provide freedom to operate, not to access technology for development. The traditional narrative of patents enabling young companies to get access to the commercialization capabilities of larger more established firms doesn't pervade in the data – patents are two to three times more likely to go from an older company to a younger company, and from a higher revenue to lower revenue public company, based on available data. When transactions are not accompanied by the

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transfer of technology, this finding lends some support to the perception of software patents as a tax on innovation that young companies must pay to older firms.