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Make AND Buy: Gaining Technology Leadership In Ventures

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"With patents taking on average four years to grant, we (Uber) hadn't had enough time to build up our own portfolio…And we knew we needed some way to protect our business."

− Uber's Head of Patent Transactions and Patent Policy Kurt Brasch

Entrepreneurs strategically patent their intellectual property (IP) rights to appropriate value from their inventions. This is particularly true when such IP rights can confer competitive advantage. As such, protecting core ideas and inventions is an important determinant of venture survival and performance. Although appropriating the value of inventions shapes a venture's growth potential, it generally involves multiple intermediate steps toward transforming a patented invention into an end product. Moreover, ventures could not come up with patentable inventions essential to their business in-house due to time, staff, and financial constraints. In such a case, they can simply buy patents instead.

In recent years, MIT Media Lab spinoff E-Ink and texting application developer Textsoft bought patents developed elsewhere. There are at least three benefits for ventures to engage in the purchase of patents. First, buying patents is at a small fraction of the cost and time that ventures would take to develop the patented inventions themselves. In this regard, ventures could leverage the results of the enormous upfront R&D investment of others. Second, buying patents could variously fill technical holes or resolve technological bottlenecks in entrepreneurial value appropriation. Third, buying patents could strengthen IP rights protection for their products and services. For instance, while continuously developing its own technology, Uber bought patents from the AT&T Bell Laboratories prior to its initial public offering. Those patents not only gave Uber a competitive advantage in a location-based matching of passengers with drivers but also provided IP rights protection against potential infringement claims from competitors.

When should ventures consider buying patents? My study answers this question by examining when patents change hands between firms in technology-intensive sectors. Specifically, the study considers the relative differences in technological distance from a patent to the patent portfolio of a seller and that from the patent to the patent portfolio of potential buyers (i.e., ventures). A venture whose patent portfolio is more technologically proximate to a patent is more likely to realize a better return on the patent than its current owner (i.e., the seller) whose patent portfolio resides further away from the patent. However, such a relationship will be weaker when a venture and the owner provide similar products and services and compete against each other in the same industry, or when the owner has superior technological capability.

I examined transactional decisions on over 2 million U.S. patents of technology-based ventures between 1987 and 2016. My preliminary findings indicate that the technological proximity of a patent to a venture's patent portfolio will generally increase the extra output of that patent, leading to the venture's economic return. This is, a venture is more likely to buy a patent owned by another firm when the patent is technologically closer to its patent portfolio vis-à-vis that of the current owner. In speaking with IP managers of the sample ventures, I have learned that ventures buy a patent that is likely to be of greater technical or strategic importance and that is highly valued at the asset level. However, such a relationship is likely to be weaker when the venture and the potential seller provide similar products and services and compete against each other in the identical industry, or when the seller is highly capable in a technological manner. As such, Alibaba, Facebook, and Snap have bought patents from IBM before going public, and LinkedIn (a subsidiary of Microsoft) and Twitter have built their patent portfolio with patents originally owned by IBM. Similarly, Uber, Lyft, and Facebook have bought patents from AT&T.

Thus far, we have merely thought that entrepreneurs have sought patents to protect their core ideas and inventions and to access venture capital. However, entrepreneurs can also buy idle patents in the markets for technology to unlock new technological and business opportunities while reducing the need to reinvent the wheel. My preliminary findings suggest that both ventures and established firms can benefit from trading in patents. On the one hand, ventures can leverage idle patents developed elsewhere for socially favorable use at a small fraction of the cost and time that they would take to develop themselves while reducing the need to reinvent the wheel. On the other hand, established firms can satisfy not only consumers by selling their inventions to another firm that can actually deploy them in its business, but also shareholders by generating a greater return on investment. Indeed, an acquired patent could be an essential missing puzzle for ventures, thus giving new life to the technology currently not in use.

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