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(Presented below is one of eight parts of this full-text article.)

ENTREPRENEURSHIP

What's the Best Commercialization Strategy for Startups?

The external environment dictates to a great degree whether competition or cooperation is the preferred road.

Through 25 years of radical breakthroughs in biotechnology, the top ranks of the pharmaceutical industry have remained virtually unchanged. Meanwhile, in the disk drive industry, each new generation of technology has caused the market leaders to stumble and new companies to take their places.

When does innovation lead to radical changes in market leadership, and when does it reinforce the status quo? Most research to date has focused on the characteristics of specific innovations, such as their "radicalness" or fit with current customers' needs. But a new study suggests that this is only part of the story. In order to understand how innovation by startups affects industry dynamics, the authors argue, we also need to analyze the institutional and economic environment that entrepreneurs face.

The October 2001 study is "When Does Start-Up Innovation Spur the Gale of Creative Destruction?" by Joshua S. Gans, professor of management at Melbourne Business School; David H. Hsu, a doctoral candidate at MIT's Sloan School of Management; and Scott Stern, associate professor of management and strategy at Northwestern University's Kellogg School of Management.

Startups, the authors observe, have two options when it comes to commercializing innovations. They can compete with incumbents through the product market, or they can cooperate with established businesses by selling their technologies through the market for ideas. In the second case, a startup can, for example, license its technology to a larger company, form a strategic alliance or agree to be acquired outright. If entrepreneurs typically choose one of these cooperative strategies, the balance of market power is likely to be preserved. But if they decide to compete with industry leaders, Joseph Schumpeter's "gale of creative destruction" may well be unleashed.

So what drives a startup's choice of commercialization strategy? The researchers surveyed 118 startups that had successfully commercialized a new technology. They found that possessing at least one patent — an indicator of relatively secure intellectual property rights — increased the probability of cooperation. Similarly, businesses with venture capital backing were more likely to cooperate because VCs help entrepreneurs identify and negotiate with the right product. Finally, startups were significantly more likely to choose a cooperative strategy when managers believed that complementary assets, such as channel relationships or a well-known brand, were both critical to a product's success and expensive to reproduce.

According to Stern, when the ideas market operates smoothly, a cooperative strategy offers higher returns. But when market imperfections, such as contracting costs, make working with incumbents difficult or risky, it makes more sense for startups to compete.

More broadly, Stern observes, the returns to innovation "depend critically on matching the commercialization strategy [for a technology] with the economic environment." In related work titled "The Product Market and the Market for 'Ideas': Commercialization Strategies for Technology Entrepreneurs" (2002), Gans and Stern have developed a simple framework that can help entrepreneurs with that critical task.

- *The attacker's advantage* is greatest when intellectual property rights are weak and incumbents do not control essential complementary assets. This is what many attackers in the disk drive industry have done.

- By contrast, when intellectual property protection is strong and complementary assets are critical for success, startups can earn the highest returns by becoming *ideas factories* and auctioning their innovations to established corporations. The pharmaceutical industry is one sector in which that pattern has prevailed.
- When intellectual property protection is weak but complementary assets play an important role, cooperation can pay off for startups, but only with incumbents who have invested in a reputation for fair dealing.
- Finally, entrepreneurs find themselves in the strongest position when intellectual property rights are strong and complementary assets relatively unimportant. Then the greatest returns may flow from a strategy of standard setting following the example set by Palm.

In order to maximize the returns to innovation, says Stern, entrepreneurs should take one step back and choose their projects with the microeconomic environment in mind. In other words, if you expect to compete through the product market, look for disruptive technologies that incumbents are likely to ignore. And if you expect to set up as an idea factory, make sure that you're selling something market leaders want to buy.

— Mary Kwak

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