The profitability paradox of open innovation

Is open innovation profitable? IESE's Bruno Cassiman and Giovanni Valentini explore why the buying and selling of knowledge has yet to bear financial fruit.

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Scientists, inventors and R&D departments work painstakingly to produce patent-worthy innovations. However, according to a survey tracking more than 9,000 European patents, a third of them end in a wasteland, never used. Some of this stockpiling of intellectual property may be protective — yet it also indicates inefficiency in the innovation process.

IESE's **Bruno Cassiman** and **Giovanni Valentini** decided to test the open innovation literature, which, according to them, implies mutually beneficial effects to engaging in both inflows and outflows of knowledge. In "Open Innovation: Are Inbound and Outbound Knowledge Flows Really Complementary?" — published in the *Strategic Management Journal* — they find that buying and selling ideas openly is not necessarily a win-win situation. Cassiman and Valentini conclude with a call for more research on this highly misunderstood topic.

No need to reinvent the wheel?

Some firms are trying to shed their old "not-invented-here" biases against outside ideas in order to embrace open innovation. And the authors assert that those who do open up experience an increase in the production and sale of new products. Profitability is another story, however — at least for now. Open innovation may be good for the top-line, but it seems to affect the bottom line negatively. Put simply, opening up makes R&D more expensive.

This is at odds with some expectations of open innovation, broadly defined as firms using

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external as well as internal ideas to drive innovation. A body of current literature seems to imply that buying and selling knowledge should be mutually beneficial to firms, and that doing both should increase R&D productivity and decrease costs. The authors test this as a hypothesis in a study of 681 "innovation active" firms in the Belgian manufacturing industry.

On the face of it, they found evidence that runs counter to the hypothesis. "Buying and selling innovative ideas increases a firm's innovativeness, but this process seems to increase costs disproportionately," the authors conclude. Increasing costs is bad news for companies in search of innovation efficiency.

The theory of open innovation

When Cassiman and Valentini first formulated their research question, they contended that firms engaging in the buying and selling of knowledge should experience gains in R&D productivity. This increase should, in turn, reduce the costs — cognitive, transactional and organizational — associated with creating a permeable environment throughout the R&D department.

If nothing else, the sale of unutilized ideas and technologies seems sure to generate an increase in revenues. Buying existing ideas, meanwhile, should reduce the time and effort researchers required to develop new knowledge, and selling unused ideas should be good for morale, a sign that their hard work had not been in vain.

So what went wrong in the profitability equation? In the Belgian study, signs pointed to the added costs that arose from the complexity of firms' technology alliance portfolios — complexity that required more management resources to oversee.

An open future?

The negative results would seem to threaten the trend towards open innovation, but the authors urge caution and further study.

Two important considerations that support the overall benefits of open innovation are:

- A potential future decrease in costs. Sales and profitability may be just around the corner, as R&D departments become accustomed to the new way of doing things and learn cost-cutting measures.
- As the study's results indicate, complementarity of knowledge inflows and outflows may not exist at the firm level. But this mutually reinforcing effect may well exist "at

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an industry level, whereby specialization and the division of innovative labor might increase productivity." Put another way, if we don't research it, we'll never know.

With great ideas that were previously shelved finally seeing the light of day, it seems a shame to relegate open innovation without further study. The question now is when might profitability catch up?

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