

It's not always about money—why academic scientists engage in commercial activities

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For scientists, engaging in commercial activities such as patenting and starting new ventures can be much more lucrative than relying on pure academic work. However, according to new research by Henry Sauermann of ESMT Berlin and colleagues Wesley M. Cohen (Duke University) and Paula Stephan (Georgia State University), money is not

the main reason why scientists choose to work on commercial activities. Other motives such as social impact and intellectual challenge appear to be more important. The study, titled "Not in the job description: The commercial activities of academic scientists and engineers," has been published in *Management Science*.

Using panel data of over 2,000 academics employed at US institutions, the authors investigated how scientists' [commercial activities](#)—measured by the number of patents they created—are related to their motives. Specifically, they examined the role of desires for peer recognition, money, intellectual challenge, and social impact. Surprisingly, the data show that there is virtually no association between an interest in money and academics' patent applications.

"Our findings suggest that an emphasis on the revenue that patents can potentially generate does little to incentivize commercial activities by scientists and engineers," says Sauermann, who is a professor of strategy at ESMT. "Instead, other motives play an important role, although these motives also differ across [scientific fields](#)."

In the [life sciences](#)—such as biology and environmental sciences—the desire for social impact is a particularly strong driver. Academics with a one standard deviation higher motive to contribute to society had an almost 60 percent higher patent count. Among engineers, the motives tied to patenting are intellectual challenge and peer recognition. A one standard deviation higher score on the two motives was associated with a 68 and 36 percent higher patent output, respectively.

By way of contrast, physical scientists—such as physicists, chemists, and mathematicians—who put a high value on peer recognition were found to be less likely to patent. "This indicates that commercial engagement in the physical sciences—but not other fields—may 'blemish' academic careers," says Sauermann.

More generally, Sauermann argues, "Policy makers and technology transfer offices need to recognize that academics' motives differ across fields, and structure their support mechanisms and policies accordingly. Most importantly, instead of hyping the amount of revenue earned from patents, they should stress other motives, such as [social impact](#) arising from commercial work."

More information: Wesley M. Cohen et al, Not in the Job Description: The Commercial Activities of Academic Scientists and Engineers, *Management Science* (2020). [DOI: 10.1287/mnsc.2019.3535](https://doi.org/10.1287/mnsc.2019.3535)

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