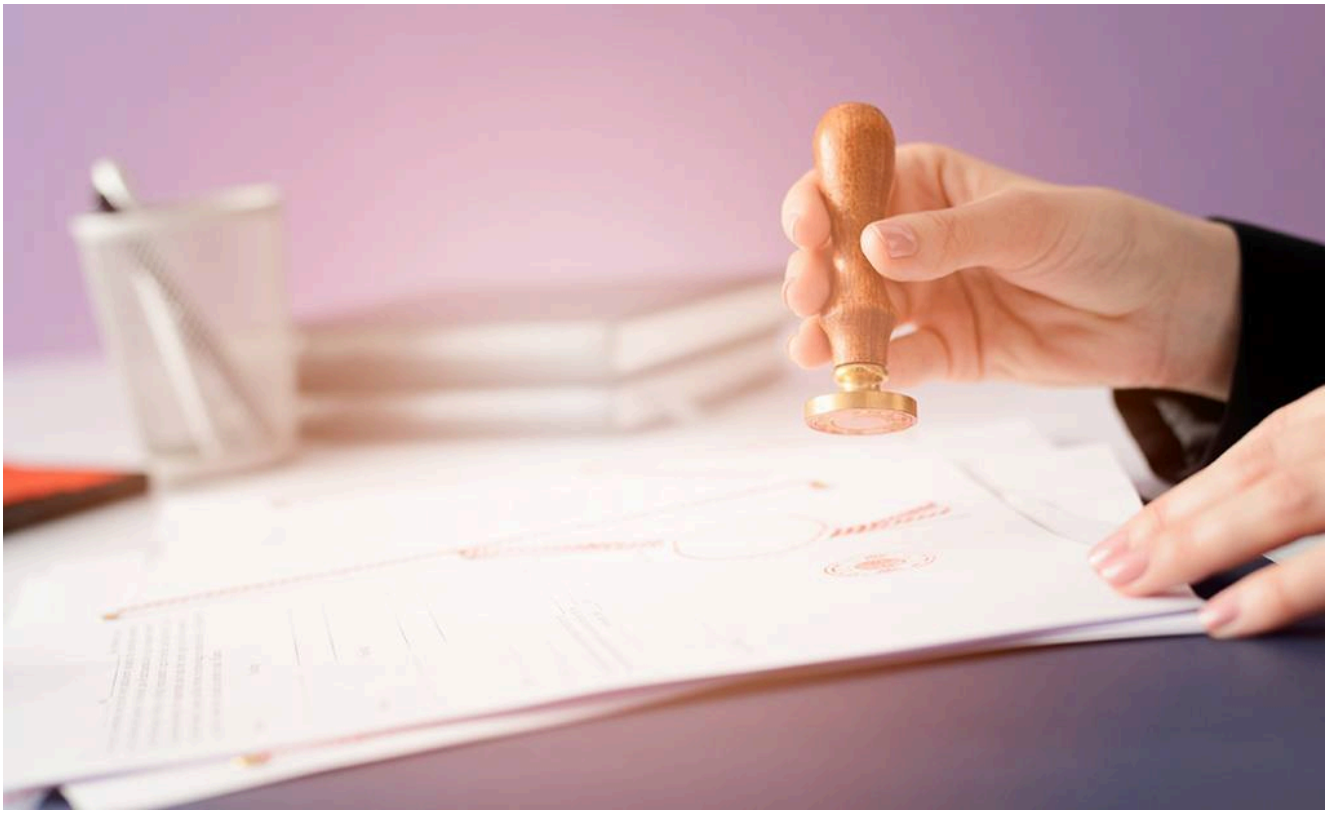
Job stickiness? The unexpected benefit of patents

A surprising finding about patented innovations has implications for managing patent-heavy firms. Research by IESE's David Wehrheim and co-authors may lead the way for larger investments in inventors' learning and development for the long term.



October 25, 2019

When young inventors are awarded patents, what might you expect to happen to their job

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prospects and mobility?

Since patent protection — and its shiny sealed certificate — should signal to the world that inventors have created something novel and innovative, their employers might worry that, with this outside recognition, inventors are ripe to be poached by rivals. But new research finds that early career patents actually make inventors less likely to leave their current firm.

More specifically, co-authors David Wehrheim, Eduardo Melero and Neus Palomeras find that receiving a patent decreases the probability that an early-career inventor will change employers by 23%, on average.

This surprising finding comes from analyzing the career trajectories of 67,775 inventors after they file their first patent application with the U.S. Patent and Trademark Office (USPTO). To better isolate the effect of the patent award itself, the co-authors look to the USPTO examiners' "leniency." Since patent applications filed with the USPTO are as good as randomly assigned to examiners, and certain examiners are more likely to rubber stamp applications, the co-authors are able to home in on the causal effect of patents on job mobility.

These results have some strategy implications for patent-heavy firms. First, with less job-hopping by promising inventors, firms can invest in training and development with the long term in mind. That is because patent holders may be more efficient and less risky investments for HR. Second, management may feel more confident when filing for patents, knowing that they are more likely to hold on to the tacit knowledge that an inventor brings.

Why might patents have this effect on mobility? The analysis suggests that patents turn innovation-related skills into patent-holder-specific human capital. That is to say, once an innovation is patented, its creators' tacit know-how is only valuable if they stay with their employers who are typically the owners of the patent. Supporting this idea, the paper documents that the decrease in job mobility is more pronounced when inventors have fewer co-inventors, when they work outside the core R&D focus of the firm, and when they produce innovations in the realm of basic research. Complementary results further reveal that when inventors change firms, their former employers make less use of the patented innovations.

Outside the managerial implications, these findings also suggest that patents "may hamper the diffusion of tacit know-how that comes with interfirm mobility," as the co-authors summarize. The centuries-long debate over the pros and cons of patents continues.

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Methodology, very briefly

The paper, published in *Management Science*, tracks 67,775 inventors who filed their first patent application with the U.S. Patent and Trademark Office (USPTO) between 2001 and 2012. Among other variables, the analysis is notable for using examiner leniency as a source of variation in patent protection that is outside inventors' or firms' control.

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