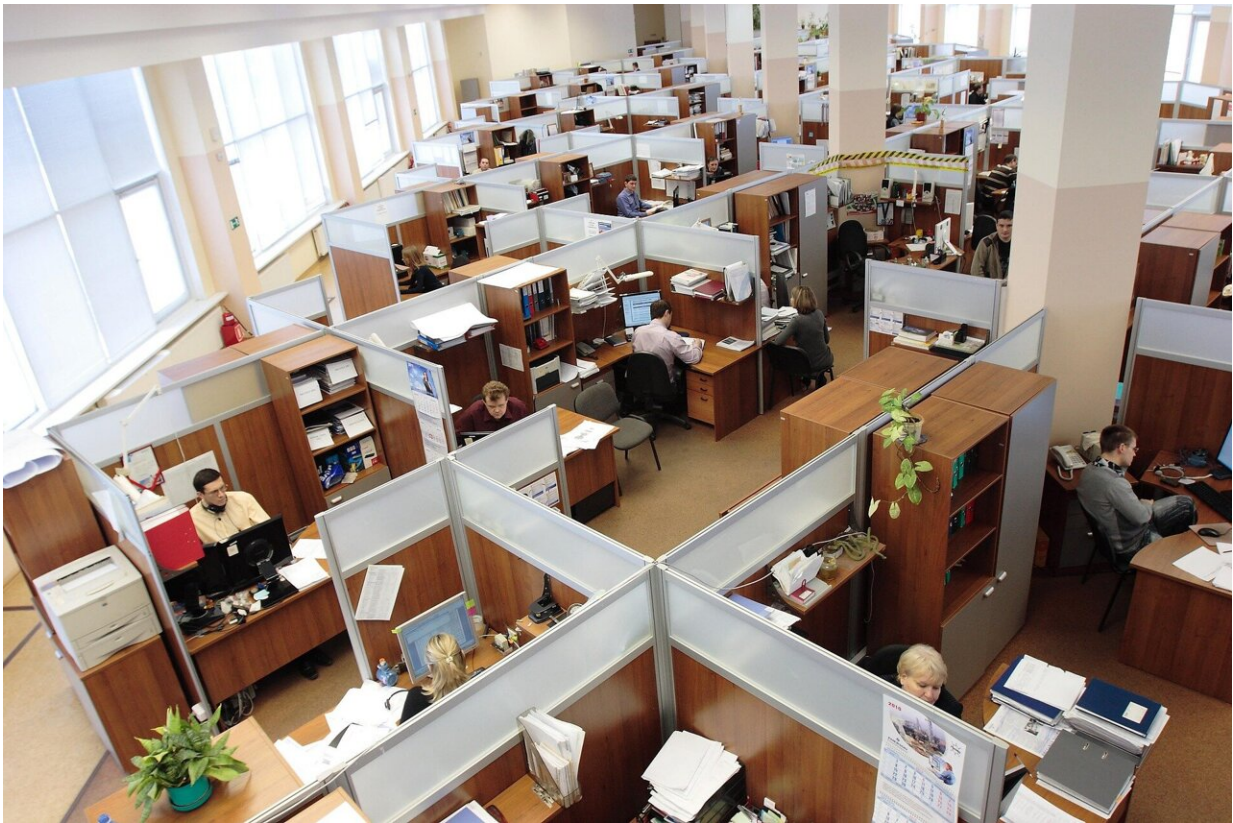


# Worker mobility can impact adoption of new technology

March 27 2024, by Sarah Magnus-Sharpe

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Increased worker mobility can negatively impact a business's ability to adopt new technology such as artificial intelligence (AI), researchers have found.

The research team suggests that when workers have greater mobility, businesses face higher risks of losing skilled employees who possess the expertise needed to implement new technologies, including machine learning.

Chris Forman, the Peter and Stephanie Nolan Professor in the Dyson School of Applied Economics and Management, in the Cornell SC Johnson College of Business, is co-author of "[How Does Worker Mobility Affect Business Adoption of a New Technology? The Case of Machine Learning](#)," which published on March 10 in *Strategic Management Journal*.

Co-authors are Ruyu Chen, Ph.D. '21, a postdoctoral researcher at Stanford University, and Natarajan Balasubramanian, professor at the Whitman School of Management at Syracuse University.

Machine learning is increasingly vital for businesses seeking to innovate and improve processes, but the adoption of these advanced technologies relies heavily on skilled workers who can implement and utilize them effectively.

For this research, the team used a natural experiment condition—changes in the enforceability of noncompete agreements at the state level—as a way to understand how worker mobility affects technology adoption. Noncompete agreements restrict employees from joining or starting competing businesses after leaving their current employer. By examining more than 153,000 organizations between 2010 and 2018, the researchers uncovered significant insights.

Their findings indicated that changes facilitating worker mobility were associated with a notable decline in the likelihood of businesses adopting machine learning. This decline varied based on factors such as establishment size, industry-wide adoption of predictive analytics, and

the presence of large competitors in the same industry and location.

"The stronger results in the presence of large competitors in the same industry location suggest that the risks of mobility to potential adopters will be stronger when workers have many outside options," Forman said.

In the early stages of technology adoption, employees often acquire these skills through on-the-job learning funded by the adopting business. Consequently, the risk of [skilled workers](#) leaving can diminish the incentives for businesses to invest in and adopt new technologies.

The study's framework and data analysis sheds light on the critical role of worker mobility in shaping technology adoption decisions and [business](#) innovation. It adds depth to previous research that has explored the connection between [human capital](#) and the adoption of AI and machine learning technologies.

While the study focused on [machine learning](#) adoption, it also points to avenues for future study. Said Forman: "Similar findings may arise in the early years of the diffusion of other technologies in which firms need to make new [technology](#)-specific investments that increase the human capital of workers."

**More information:** Ruyu Chen et al, How does worker mobility affect business adoption of a new technology? The case of machine learning, *Strategic Management Journal* (2024). [DOI: 10.1002/smj.3595](https://doi.org/10.1002/smj.3595)

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