



The Social Network Benefit: Losing an Employee Doesn't Have to Mean Losing Knowledge

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It's always been assumed that one company's loss is another's gain when an employee jumps ship. Just think of the knowledge, experience and connections that go out the door along with a person's boxes and office belongings.

But now a new study suggests that losing an employee, at least in a high-tech field, is not necessarily as bad as it seems. "Firms can wind up learning when employees leave their firm, which is contrary to the conventional wisdom -- that firms learn by hiring away employees," says Wharton management professor [Lori Rosenkopf](#). She and Wharton doctoral student Rafael A. Corredoira present their conclusions in a paper titled, "Learning from Those Who Left: The Reverse Transfer of Knowledge through Mobility Ties."

The two researchers came up with their silver-lining finding by studying the effects of "outbound mobility" on semiconductor firms in the United States and abroad. By analyzing patent citations, they were able to show that companies can benefit from a reverse flow of knowledge that results when an engineer or other technical expert moves on. Why? Because, according to Rosenkopf, there are social networks that transcend companies and allow the employees left behind to gain access to the knowledge being generated at their colleague's new place of business. She is not talking about corporate spying, but rather the flow of ideas and information among professionals who work in the same field. Their findings, she concludes, "call into question the conventional wisdom that losing employees means losing knowledge."

Other studies have looked at the opposite phenomenon -- "inbound mobility" -- documenting the transfer of knowledge that comes with hiring.

When people are viewed strictly as "human capital," the departure of an employee results in the former employer's loss of that person's intellect and talent, and the corresponding gain of those same valuable attributes for the company doing the hiring. "The belief has been that if you lose an employee, that's a bad thing for you," Rosenkopf says. Even common lingo -- that a company is losing a worker to another firm -- implies that there is nothing good that could possibly result.

But Rosenkopf says the picture is different when employees are viewed in terms of "social capital." Workers aren't just silos of knowledge and skill onto themselves, but rather are part of social networks of workers from various firms who talk about what's going on in their field. Those networks may involve formal arrangements, such as strategic alliances, but they may also be informal, involving professional conferences, email exchanges, common blog sites or even after-hour socializing.

"The social capital approach would predict that the firm losing an employee would gain access to the new employer's knowledge, while the human capital approach would not," the researchers suggest in their paper.

Six Degrees of Separation

The concept of social networks is not a new one, but it's getting more attention these days, both in the business world and in everyday life. ABC's much-anticipated new drama, "Six Degrees," is based on the popular notion that anyone, anywhere on the planet can be connected to another person by way of a chain of six people. It's an intriguing thought, though not a proven one.



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In business, networks have long factored into who is picked for a board of directors, Rosenkopf says. Board members aren't necessarily selected for what they know about a particular industry or organization, but rather because they are seen as influential and well connected. In other words, whom you know does matter. On a lower level, inner-office networks play a role in how information flows around a company. The corporate organization chart only tells so much. Who chats with whom around the office and who is the person that people go to for advice also matter.

The value of networks is also well recognized in medicine and science, with researchers routinely reporting their research results and clinical experiences at conferences and in journals. The open sharing of knowledge is considered part of the scientific process.

The technological world may be different. According to Rosenkopf's paper, some previous research has drawn a distinction between the transfer of knowledge that takes place in science and the knowledge flow in high-tech industries. Some researchers believe that there isn't much exchange of ideas and information among tech companies because they compete with one another and want to make money. Rosenkopf, however, has looked at the cellular industry and found that informal networks, such as engineers taking part in professional and trade associations, lead to the formation of strategic alliances.

For this paper, she focused on 154 semiconductor firms in 23 regions in the United States, including in Silicon Valley, and 11 foreign countries, including Japan and India. The semiconductor industry is interesting to study, Rosenkopf notes, because "it is an industry where intellectual property is really important." The widespread use of patents in the industry provided a good way to gauge the flow of knowledge between companies due to workers moving around.

She and her co-author examined patent records for 1980 through 1995 to see which firms and which specific employees were cited. They looked at approximately 42,000 patents. "Patent citations are records that allow us to track when a firm draws on other firms' knowledge stock -- as per our definition, a case of knowledge transfer," they write.

While they couldn't say specifically when a worker moved from one firm to another, they were able to gauge employee mobility by patent dates. They also looked at factors such as strategic alliances and worker mobility by geographic region.

Contrary to the view that companies lose something when a worker leaves, the study found that they stood to gain. Specifically, firms that lost an employee to another firm were 8% more likely to cite that firm than other equivalent firms, Rosenkopf says. The reverse flow of knowledge was particularly pronounced when the employee moved to another region. Then the old firm was 22% more likely to cite the new firm. The outbound mobility effect held even when the researchers controlled for other factors that could influence patent citations, such as hiring, alliances and technological similarities between firms. "The effect of outbound mobility is actually stronger when the mobility occurs across regions," the researchers conclude.

The findings suggests that within a region, especially places such as Silicon Valley where there are many semiconductor firms, there may already be mechanisms in place for the sharing of knowledge. That would mean the effect of a worker moving to another firm would not be as pronounced.

The research paper looks at various reasons why knowledge flows back when a worker leaves. For one, new communication channels may be established between the old firm and the new firm -- in other words, a worker keeps talking to his former colleagues and friends. The departure of a worker may also cause a company to take a closer look at what's going on elsewhere.

"When an employee leaves one firm for another, his/her colleagues remaining at the prior employer can become more aware of the new employer as a site where knowledge worth knowing is being produced," the authors write. "By having one of their own going to that firm, work in the receiving firm gains credibility and saliency. The firm receiving the employee thus becomes more highly monitored for innovation opportunities."

The researchers used patent citations to sort out the payoff from outbound mobility compared to inbound mobility, or hiring. "An interesting puzzle in our results is that the effect of outbound mobility seems to be

more robust, and although not significantly different, it is in general slightly larger than that of hiring," they reported.

The researchers looked at the effects of outbound mobility strictly in terms of patent citations, not financial effects, and it looked only at a high-tech business. In other businesses such as law or consulting, high-paying clients may go out the door with the worker. "While we suggest that the firm losing the employee increases the utilization of the body of knowledge of the firm receiving the employee, our study is not designed to address the economic implications of this activity," the authors write.

They also suggest that the findings shouldn't be seen as promoting the departure of workers. Still, "there are ways for the firm experiencing outbound mobility to obtain benefits from these events," the researchers said. Finally, Rosenkopf notes, firms need to keep things positive when a worker leaves. "Companies should be looking for making that parting as amicable as possible, to cultivate those ties as much as possible."

The going-away party -- at least at high-tech firms -- is about much more than sheet cake.

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