Study finds workers misjudge wage markets

March 14 2024, by Peter Dizikes

Credit: Unsplash/CC0 Public Domain

Many employees believe their counterparts at other firms make less in salary than is actually the case—an assumption that costs them money, according to a study co-authored by MIT scholars.

"Workers wrongly anchor their beliefs about outside options on their current wage," says MIT economist Simon Jäger, co-author of a newly published paper detailing the study's results.

As a top-line figure, the study indicates that workers who would experience a 10% wage increase by switching firms only expect a 1% wage increase instead, leading them to earn less than they otherwise might.

That is one of multiple related findings in the study, which also shows that workers in lower-paying firms are highly susceptible to underestimating wages at other companies; and that giving workers correct information about the salary structure in their industry makes them more likely to declare that they intend to leave their current jobs.

The study also has implications for further economics research, since economists' job-search models generally assume workers have accurate salary information about their industries. The study was performed using data from Germany, although it quite likely applies to other countries as well.

"Misperceptions about outside options have substantial consequences on wages," says Nina Roussille, an economist at MIT and also a co-author of the paper. "The intuition is simple: If low-wage workers do not know that they could make more elsewhere, then these workers stay put in low-wage firms. In turn, these low-wage firms do not feel the competitive pressure from the external labor market to raise their wages."

The paper, "Worker Beliefs about Outside Options," is published in advance online form in *The Quarterly Journal of Economics*.

Updating beliefs

To conduct the study, the researchers incorporated a survey module into the Innovation Sample of the German Socio-Economic Panel, an annual survey of a representative sample of the German population. They used their survey questions to find out the nature of worker beliefs about outside employment opportunities. The scholars then linked these findings to actual job and salary data collected from the German government's Institute for Employment Research (IAB), with the prior consent of 558 survey respondents.

Linking those two data sources allowed the scholars to quantify the mismatch between what workers believe about industry-wide salaries, and what wages are in reality. One good piece of evidence on the compression of those beliefs is that about 56% of respondents believe they have a salary in between the 40th and 60th percentiles among comparable workers.

The scholars then added another element to the research project. They conducted an online experiment with 2,448 participants, giving these workers correct information about salaries at other companies, and then measuring the employees' intention to find other job opportunities, among other things.

By adding this layer to the study, the scholars found that a 10 percentage point increase in the belief about salaries at other firms leads to a 2.6 percentage point increase in a worker intending to leave their present firm.

"This updating of beliefs causes workers to adjust their job search and wage negotiation intentions," Roussille observes.

While the exact circumstances in every job market may vary somewhat, the researchers think the basic research findings from Germany could well apply in many other places.

"We are confident the results are representative of the German labor market," Jäger says. "Of course, the German labor market may differ from, say, the U.S. labor market. Our intuition, though, is that, if anything, misperceptions would be even more consequential in a country like the U.S. where wages are more unequal than in Europe."

Moreover, he adds, the recent dynamics of the U.S. job market during the COVID-19 pandemic, when many workers searched for new work and ended up in higher-paying jobs, is "consistent with the idea that workers had been stuck in low-paying jobs for a long time without realizing that there may have been better opportunities elsewhere."

Data informing theory

The findings of Jäger, Roth, Roussille, Schoefer stand in contrast to established economic theory in this area, which has often worked from the expectation that employees have an accurate perception of industry wages and make decisions on that basis.

Roussille says the feedback the scholars have received from economics colleagues has been favorable, since other economists perceive "an opportunity to better tailor our models to reality," as she puts it. "This follows a broader trend in economics in the past 20 to 30 years: The combination of better data collection and access with greater computing power has allowed the field to challenge longstanding but untested assumptions, learn from new empirical evidence, and build more realistic models."

The findings have also encouraged the scholars to explore the topic further, especially by examining what the state of industry-wide wage knowledge is among employers.

"One natural follow-up to this project would be to better understand the firm side," Jäger says. "Are firms aware of these misperceptions? Do they also hold inaccurate beliefs about the wages at their competitors?"

To this end, the researchers have already conducted a survey of managers on this topic, and intend to pursue further related work.

More information: Simon Jäger et al, Worker Beliefs About Outside Options, *The Quarterly Journal of Economics* (2024). DOI: 10.1093/qje/qjae001