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Skill Mismatch, Layoffs, and Bouncing Back

Claudia Macaluso. "Skill Remoteness and Post-Layoff Labor Market Outcomes." CESifo Working Paper No. 10845, December 2023.

Being laid off from one's job often leads to worse future employment outcomes. The underlying reasons for this are unclear, however. Recent research by Richmond Fed Economist Claudia Macaluso has found that mismatch between a laid-off worker's skills and the skills involved in other local jobs plays a significant role. She created a novel measurement of "local skill remoteness" and used it to compare the effects of layoffs from jobs with varying levels of this skill remoteness on a worker's wages, future employment, and migration.

Macaluso defined skill remoteness as "the degree of dissimilarity between the skill profiles of a worker's job and all other jobs in a local labor market." This calculation has two crucial components: the differences in the skill content of *jobs* (not of workers), and the differences in job availability across geographic locations. For example, an economist would likely have higher skill remoteness than an office manager, since more jobs involve social and administrative skills than advanced economics. Two economists in different locations would also have different levels of skill remoteness: An economist on Wall Street would have more skills in common with the other jobs in the area than an economist in rural Iowa.

To account for all of this, Macaluso created measurements of the "distance" between a particular occupation's skills and that of every other occupation, and then weighted the distances by the prevalence of that occupation in a certain city each year. This data-heavy task hinged on a survey called the Occupational Information Network, or O*NET, which asks workers and occupation experts to quantify the skills they use in their occupations, among other characteristics.

Armed with this empirical measurement of skill dissimilarity across geography and time, Macaluso set about investigating its effects.

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Skill remoteness is not inherently a bad thing; niche skills could be valuable and well-rewarded in the labor market. But they could also make it more difficult for skill-remote workers to find wages on par with their skills in their local areas. Macaluso found more evidence of the latter in her investigation of post-displacement behavior for those who lost their jobs through no fault of their own (plant closure or layoff). Using the National Longitudinal Survey of Youth 1979, she tracked workers over their careers and confirmed the literature's finding of a large and persistent earnings drop after displacement; on average, displaced workers earned only about 60 percent of pre-displacement earnings *four years* later. This is true even when accounting for other factors that could affect displacement and earnings, such as location, occupation, date, and local unemployment rate.

The main results of Macaluso's investigation lie in comparing skill-remote (above median skill remoteness) to skill-central (below median) displacements. She discovered that there was no association between pre-layoff earnings and skill remoteness, but there was a strong negative correlation post-layoff. Earnings in the month of layoff were almost $500 per month lower for skill-remote workers than skill-central, and this persisted at around $200 per month less even four years after the displacement. Over the course of these four years, this difference added up to over $10,000, a substantial loss. She also found that workers displaced from skill-remote jobs had a lower probability of working jobs with similar skill profiles in the future. Additionally, workers in locally skill-remote jobs were more likely to migrate to cities with a lower local skill remoteness (our displaced Iowa economists tended to move to places like New York City). Not only did they change cities, but workers who lost a skill-remote job were also 11 percent more likely to change occupation than those who lost a skill-central job, and they went through more substantial skill portfolio changes.

Macaluso found the business cycle was important to this, as well; earnings losses following displacement are more severe in recessions, and the fraction of destroyed jobs that are skill-remote is higher in recessions (60.3 percent) than in booms (46.6 percent). This suggests that labor policies that target individuals displaced from skill-remote jobs could ameliorate some post-layoff hardships, especially in recessions.

The magnitude of these earnings losses and the other disruptions associated with skill remoteness are significant. Macaluso stressed that skill remoteness is a quality of jobs, not workers: Skills can be taught, and workers can potentially improve their post-layoff prospects by investing in skills valued in their local area. Skill mismatch matters, Macaluso suggested, and can play a significant negative role in labor market outcomes, especially for displaced workers. **EF**