EXECUTIVE SUMMARY

This study examines employers’ hiring experiences in 14 skilled production-related occupations in Manufacturing firms in Minnesota during 2018 through 2019. These occupations were chosen because of anecdotal evidence of shortages in these fields and growing numbers of vacancies. In-depth interviews with 146 Minnesota employers about over 1,000 job vacancies were conducted and analyzed for this study.

While employers reported general hiring difficulties for 62 percent of vacancies, just 10 percent of all vacancies were hard to fill solely because of lack of adequate supply (i.e. skills mismatches). Hiring difficulties were most frequently the result of a mix of supply- and demand-side problems. Hiring difficulties were most commonly found in:

- Occupations requiring long-term on-the-job training (OJT), especially machining and CNC programmers
- Industries that are low-tech, such as metal and food manufacturing
- Firms located in Central Minnesota
- Firms that do not provide structured OJT or apprenticeships
- Vacancies requiring a vocational certificate or Associate’s degree
- Vacancies in positions affected by turnover
- Vacancies that do not offer benefits such as paid time off, health care, and retirement

When employers were given the opportunity to identify the reasons for their hiring difficulties we found that skills gaps are one of several underlying causes. Employers identified the following causes of hiring difficulties as additional explanations for skills gaps: undesirable shifts, uncompetitive wages or compensation, inconvenient firm location, ineffective advertising, lack of work ethic in candidates, and general disinterest in production work (an “image problem”). The correct identification of these barriers is essential to making these jobs more attractive to job seekers, especially high school students.

When skills gaps were cited as a problem, employers pointed out that the most critical skills are more effectively acquired through OJT than through formal post-secondary credentials. The correct identification of these skills is critical to crafting effective policy and education responses to ensure that workforce skills align properly with employers’ needs.

By far the biggest skills gap identified by employers in job applicants is general mechanical aptitude, sometimes as basic as the ability to use hand tools such as a drill or a screwdriver. Respondents characterized this gap as generational. Math knowledge was also mentioned as lacking in candidates, from basic math to trigonometry and algebra. Strengthening math instruction and adding vocational courses at the high school level could help develop these skills and expose students to manufacturing careers.
Most employers understand that they have the ability to significantly reduce recruiting challenges. They understand that, in a tight labor market, each aspect of the job can become a competitive factor in the talent race, and firms that do not do enough to improve wage offers and workplace policies, or to highlight their advantages, might draw fewer applicants.

Most employers also understand that OJT is an essential component of any response aimed at alleviating hiring difficulties in skilled production jobs. Increased collaboration between employers and high schools/technical colleges is also essential. The most effective collaborations include offering students internships and work-based learning opportunities tailored to the unique needs of a region and industry. Whenever possible, the partnership should involve updating the curriculum with industry-approved competency standards in order to improve the alignment between school offerings and employer needs.

Firms that do not implement these actions often wish they could but cite resource constraints and fear of employee poaching from competitors as barriers. Disincentives to employer-provided training risks causing an overall decline in workforce skills across the manufacturing sector, especially as more experienced workers retire before their knowledge can be transferred to new generations.

Providing a combination of internal and external training to new hires and current employees is increasingly recognized as a best practice for bridging talent shortages. Initiatives by state agencies, such as the Minnesota Apprenticeship Initiative (Department of Employment and Economic Development and Department of Labor and Industry) and the Pipeline Program (Department of Labor and Industry) are drawing considerable interest from employers because they specifically address some of the toughest barriers and disincentives employers face.