Manufacturing Skills Gap Less Pervasive Than Thought

BOSTON CONSULTING GROUP

The skills gap in U.S. manufacturing today is more limited than many people believe and is unlikely to prevent a projected resurgence in U.S. manufacturing by the end of this decade. But more severe shortages could develop, threatening to constrain that revival, unless aggressive steps are taken now, according to new research by The Boston Consulting Group (BCG) [1].

BCG estimates that the U.S. is short some 80,000 to 100,000 highly skilled manufacturing workers. That shortage represents less than 1 percent of the nation's 11.5 million manufacturing workers and less than 8 percent of its 1.4 million highly skilled manufacturing workers. What's more, only seven states — six of which are in the bottom quartile of U.S. state manufacturing output — show significant or severe skills gaps. The shortages are local, not nationwide, in nature and reflect imbalances driven by both location and job classes.

To identify where skills gaps exist in the U.S., BCG — using wage data and manufacturing-job vacancy rates — looked at localities where wage growth has exceeded inflation by at least 3 percentage points annually for five years. Wage growth is a widely accepted indicator of skills shortages in other sectors, such as energy; it reveals where employers have been forced to bid up pay to attract hard-to-find workers. By BCG's definition, only five of the nation's 50 largest manufacturing centers (Baton Rouge, Charlotte, Miami, San Antonio, and Wichita) appear to have significant or severe skills gaps. Occupations in shortest supply are welders, machinists, and industrial-machinery mechanics.

“Shortages of highly skilled manufacturing workers exist and must be addressed,

but the numbers aren't as bad as many believe," said Harold L. Sirkin [2], a BCG senior partner and coauthor of the research. "The problem is very localized. It's much less of an issue in larger communities, where supply and demand evens out more efficiently thanks to the bigger pool of workers."

Added Sirkin: "Investment in training and skills development needs to be stepped up, but there's little reason to believe that the U.S. cannot remain on track for a manufacturing renaissance by 2020."

The analysis, part of BCG's ongoing Made in America, Again [3] study of the changing global economics of manufacturing, supports the firm's estimate that rising U.S. exports [4] — combined with production brought back or "reshored" from China — could create 2.5 million to 5 million U.S. jobs in manufacturing and related services by the end of the decade. The study has also shown that the U.S. could capture up to $130 billion in exports from other nations by 2020, thanks largely to significant labor- and energy-cost advantages over Western Europe and Japan and to rising costs in China.

BCG's analysis also draws on results from a survey [5]conducted in February of more than 100 U.S.-based manufacturing executives at companies with annual sales of $1 billion or greater. The findings underscore the idea that worries of a skills gap crisis are overblown. Thirty-seven percent of respondents whose companies had shifted manufacturing to the U.S. from another country cited "better access to skilled workforce or talent" as a strong factor in their decision. Only 8 percent, one-fifth as many, cited this as a reason for moving production out of the U.S.

Potential for More Severe Shortages

Although the current skills gap may be smaller than many people believe, it could become more severe as aging workers in key trades retire and as ramped-up manufacturing — from reshoring (also referred to as "insourcing" and "onshoring") and increased exports — heightens labor demand. The average U.S. high-skilled manufacturing worker is 56 years old. Based on U.S. Bureau of Labor Statistics and BCG estimates, the shortage of highly skilled manufacturing workers could worsen to approximately 875,000 machinists, welders, industrial-machinery mechanics, and industry engineers by 2020.

To avert a crisis, BCG says, both awareness building and recruitment will have to be stepped up nationwide to ensure that enough new talent is entering the right trades. "The good news is, a wide array of programs already exist in which schools, companies, governments, and nonprofits are working together to address these needs," said Michael Zinser [6], a BCG partner who leads the firm's manufacturing [7]practice in the Americas. "In the years ahead, it will be critical to find ways to extend these programs to reach a broader population."

As examples of successful collaborations, Zinser and his coauthors cite several programs in their research, including the following:

Quick Start [8] provides customized workforce training and retraining free of charge, in partnership with technical colleges across Georgia, for companies such as NCR and Caterpillar. To qualify, companies have to create 15 similar jobs in a 12-month period.

The Austin Polytechnical Academy [9], founded in Chicago in 2007, teaches students all aspects of industry and has its own manufacturing training center. Its 65 industry partners include WaterSaver Faucet, Johnson Controls, S&C Electric, and Atlas Tool & Die.

Custom Machine [10], offered by the Center for Manufacturing Technology [11] in Woburn, Massachusetts, helps manufacturers assess new hires and train certified machine operators and computer-control programmers, among other things, and graduates up to a dozen students every six weeks.

More Aggressive Planning & Investment Needed

The analysis concludes by outlining a number of actions that manufacturers, government agencies, and educational institutions can take to build awareness of the long-term skills challenge and increase the attractiveness of manufacturing as a career. Companies are urged to anticipate future gaps by using demographic risk management and workforce-planning tools.

BCG also encourages manufacturers to do more to develop a future supply of skilled workers. As an example, the authors note that most high-skill jobs require only a high-school education in conjunction with on-the-job training. According to a second BCG survey of U.S.-based managers conducted in June, only 16 percent of respondents said they currently recruit in high schools. A little more than half (57 percent) said they partner with training programs at community colleges.

“Companies should be much more aggressive about cultivating the next generation of manufacturing talent,” said Justin Rose [12], a BCG principal and co-author of the research. “With more investment in recruiting and more in-house training, the availability of manufacturing talent could actually become a major competitive advantage for the U.S.”

What’s your take? Please or more information, please visit www.bcg.com [1]*.*

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