



Written by **The Economist** Intelligence Unit

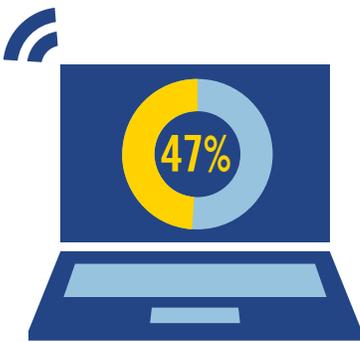
Although much of the ongoing discussion on the dramatic loss of manufacturing jobs has focused on the role of global trade and globalization, automation has had a far greater impact. “There are lots of jobs that, because of automation and digitalization, just do not exist,” observes Christopher Shelton, president of Communications Workers of America (CWA). “And there’s no way to bring them back because you can’t bring back what’s not there.”

While recognizing the painful impact of such losses, David Autor, an economist at the Massachusetts Institute of Technology, observes that “it’s not the case that automation has reduced employment rates in net over the past century.” He describes the shift from agriculture to industry, as a “wrenching change,” but also notes it created the pressure and commitment to send new generations of Americans to high school to expand their capabilities and adjust.

Rise of automation in service industries

Beyond agriculture and manufacturing, automation is now increasingly affecting service industries. This has challenged workers to expand their skill sets to stay employed and get ahead. What was once hands-on and physical has gradually become more computerized, digitized and technologically driven, requiring that workers enhance their reading, math and computer skills and their ability to solve problems, think creatively and adapt to a more flexible employment landscape.

In healthcare, for example, workers are dealing with electronic records, tablets, sensors and other wireless devices to gather and assess patients; and even home healthcare aides are facing the implementation of robots to augment care. Truckers are anticipating the expansion of self-driving, autonomous vehicles, and retail workers are confronted with increasingly automated stores. Likewise, fast food employees are witnessing the arrival of systems for customers to order and pay without human interaction. In a University of Oxford study of 702 occupations, researchers estimated that 47% of jobs in the U.S.



OF JOBS IN THE U.S. ARE AT RISK OF AUTOMATION OVER THE NEXT TWO DECADES, PLACING GREATER EMPHASIS ON CREATIVE AND SOCIAL INTELLIGENCE TO SUSTAIN EMPLOYMENT.

are at risk of automation over the next two decades, placing greater emphasis on creative and social intelligence to sustain employment.¹

Workers may take advantage of educational advancement to land jobs in new industries that rely on more advanced computer skills and other technology-based knowledge—but many of these industries have largely operated outside of union involvement. This underscores the growing challenge unions face to respond to new technology and train workers for new positions.

Opportunities for unions

“Employers have a choice in how they employ technology. Those choices have consequences for union and non-union jobs,” says Paul Osterman, professor of human resources and management at MIT’s Sloan School of Management. Mr. Osterman notes that unions can influence how their members remain critical to the workplace.

“Technology does not imply any specific configuration.” In addition, he says, unions are providing apprentice and other on-the-job-training programs, although increasingly the training is outsourced to, or jointly organized with, community colleges. “Unions can be effective in helping employers maintain more employment. But they alone are not going to save the day.”

Indeed, CWA president Christopher Shelton worries too many workers struggle to make ends meet, leaving insufficient resources for higher education or the necessity of taking on crushing debt. He advocates expanding training programs that prepare workers for the jobs of the future.

“CWA has lots of training programs that we offer to our members in telecommunications,” Mr. Shelton says. “People take advantage of them to improve themselves to go to jobs focused on the future, not jobs that they currently do.”

The importance of joint labor-management programs

Beyond a shift in national policy that puts greater focus on job training and more affordable higher education, it may take more employer-employee

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partnerships that allow workers to gain a broad range of skills that are widely usable and portable, not just narrowly circumscribed to a single job. The AFL-CIO estimates that joint labor-management programs contribute about \$1.5B to the U.S. economy each year, offering training in aerospace, construction, healthcare, hospitality and manufacturing. Construction and steel workers, for example, are taking courses in renewable energy systems and energy efficient technologies to tap into the expanding green economy.

Whether pursuing these fields or new ones not yet imagined, one thing is clear: Flexibility and lifelong learning are critical to thriving in an increasingly automated and ever-changing economic landscape.

Sources

¹ Carl Benedikt Frey and Michael Osborne, "The Future of Employment," September 2013, University of Oxford, <http://www.oxfordmartin.ox.ac.uk/downloads/academic/future-of-employment.pdf>.

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02/2019