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## BUSINESS

# U.S. Companies Turn to German Training Model to Fill Jobs Gap

Vocational approach popular in Germany helps smaller U.S. firms build skilled workforce



Apprentices at German engineering firm Wittenstein AG's factory in Bartlett, Ill. PHOTO: WITTENSTEIN HOLDING CORP.

By **ELIZABETH SCHULZE**

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American employers struggling to find enough qualified industrial workers are turning to Germany for a solution to plug the U.S. skills gap: vocational training.

Two million U.S. manufacturing jobs will remain vacant over the next decade due to a shortage of trained workers, according to an analysis by the Manufacturing Institute, a

nonprofit advocacy group affiliated with the National Association of Manufacturers, and professional-services firm Deloitte LLP.

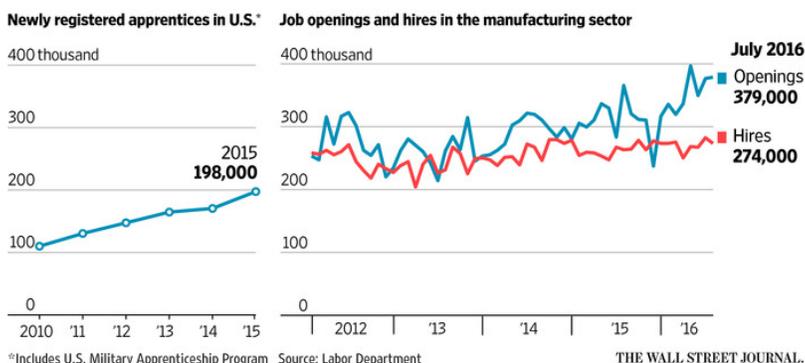
While the Obama administration has invested millions of dollars to promote skills-based training, it remains a tough sell in a country where four-year university degrees are seen as the more viable path to good-paying jobs. The Bureau of Labor Statistics said two-thirds of high school graduates who enrolled in college in 2015 opted for four-year degrees.

“You always hear apprenticeship is for losers, it’s a dead-end road,” said Mario Kratsch, skills initiative director at the Illinois Consortium for Advanced Technical Training, or ICATT, a Chicago-based apprenticeship group that cooperates with the German-American Chamber of Commerce and is trying to replicate the German model in the U.S.

In Germany, roughly half of high-school graduates opt for high-octane apprenticeships rather than college degrees. One draw: almost certain employment.

### Filling the Skills Gap

Apprenticeships are increasingly popular in the U.S., but employers still struggle to find enough qualified industrial workers.



German apprentices spend between three and four days a week training at a company and between one and two days at a public vocational school. The company pays wages and tuition. After three years, apprentices take exams to receive nationally recognized certificates in their occupation. Many continue working full time at the

company.

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The Labor Department said 87% of apprentices in the U.S. are employed after completing their training programs. Workers who complete apprenticeships earn \$50,000 annually on average, or

higher than the median U.S. annual wage of \$44,720. A 2012 study from Mathematica Policy Research found workers who complete apprenticeships make as much as \$300,000 more than non-apprenticeship participants over the course of their careers.

ICATT is looking to draw from the experience of German multinationals including BMW AG, Siemens AG and Volkswagen AG, which have already exported the vocational-training model to their U.S. operations.

Siemens launched an apprenticeship program at its Charlotte factory in 2011. The company partnered with a local community college to offer vocational courses in combination with on-the-job training on the shop floor. Apprentices learn skills required in advanced manufacturing and graduate with an associate degree combining disciplines of science, technology, engineering and math.

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Siemens said it recruited applicants from local high schools. The company spends around \$180,000 per

student to pay for tuition, books and wages during the four-year program. Ten of the 11 apprentices who completed the program still work at the company. Siemens expanded it to Fort Payne, Ala., Sacramento and Atlanta.

With ICATT's help, the German model is gaining traction among small and medium U.S. businesses, like metals manufacturer Scot Forge. The Illinois-based company worked with ICATT to institute an apprenticeship program that uses rigorous German certification standards to address its shortage of skilled workers.

Apprentices rotate between the shop floor at Scot Forge's metals forging facilities and classrooms at local colleges. The company pays their tuition and wages. Apprentices who successfully finish the three-year program graduate with an associate degree, debt-free, and a guaranteed job at the company for two years.

Zach Ford, who runs Scot Forge's apprenticeship program, said he wishes he had established the system sooner.

"If all manufacturers don't open their eyes and see what's going to happen here, it will hurt our industry," Mr. Ford said. "If you don't have the people to do the work, it doesn't matter how much work there is."

Mr. Ford said he hopes the German-style approach will help reduce employee turnover, a priority as retirements rise.

“Somebody is supporting them and taking a chance on them,” he said of apprentices. “Naturally it would provide a little bit of loyalty.”

Scot Forge is one of 12 companies to join ICATT since it launched last year. The number of applicants for apprenticeships rose from 19 to 53 over one year, and enrollment doubled to a still-modest 14 students.

The German-American Chamber of Commerce has similar partnerships with apprenticeship groups in Michigan, Kentucky and Georgia.

Peter Riehle, CEO of the U.S. subsidiary of German engineering firm Wittenstein AG, which is part of ICATT, said the German model allows smaller U.S. companies to build a skilled workforce even if they lack resources to develop training programs.

The U.S. departments of commerce, labor, and education and their three German counterparts last year signed a joint declaration aiming to introduce more companies to the German approach.

Commerce Secretary Penny Pritzker said the transplant effort “may be one of the most valuable German imports to our country over the long term.”

Despite the promise of the German approach, transplanting it to the U.S. won't be easy because it is linked to Germany's two-track educational system. Students at around age 17 choose whether to pursue a college degree or vocational degree and apprenticeship. Educational institutions are separate, and few students switch tracks.

Germany also enforces strict national standards across more than 300 occupations. The U.S. lacks uniform industry certification standards for apprenticeships. An employee who completes an apprenticeship at one company might not meet the qualifications for another company in the same field.

“The infrastructure in Germany is something that you need a long-term strategy to reach,” said Robert Lerman, a fellow at the Urban Institute, a think tank in Washington, D.C. “We are very far from that.”