



Labor Market Information Today

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Some People Are Still Making a Future in Manufacturing



There's good news for anyone who likes to make things: your hands are definitely in demand.

Research into the status of manufacturing in North America indicates that unless younger skilled workers step forward, there are troubled times ahead for companies that make, well, almost everything.

That's what manufacturing is -- the making of stuff. A manufacturer uses a plant, factory or mill to turn a pile of metal into a car, a piece of plastic into a planter or a tree into a desk.

The big story in this sector now is the production workforce, in particular skilled workers. There simply aren't enough of them.

"The production worker of today is much different than the production worker of yesterday," says Phyllis Eisen. She is vice-president of the Manufacturing Institute in Washington, D.C.

"The new worker is much more skilled in communications and problem solving than the old worker. Now it's not just about smart machines. It's about smart people."

Eisen is leading a number of studies into what will happen to manufacturing over the next 20 years.

The trend is, well, old news. For years, industry experts have watched the skilled workforce get older and older. It's at the point now that when these aging employees retire, there won't be enough skilled workers to replace them.

Joe Terrett is the editor of Plant, a national industry newspaper. He says the involvement of skilled workers in manufacturing has increased dramatically over the past decade. Companies now don't just provide goods. They also provide services.

Today, manufacturers don't just produce products. They design them, too. That means that engineers, developers, designers and skilled trade workers are all part of the manufacturing process now.

How serious could the labor shortage be? Results of a major survey conducted by the National Association of Manufacturers (NAM) warn that America will need 12 million skilled workers by 2020.

"This is a numbers game with serious consequences unless we fill our workforce pipeline now," the report says. It adds that companies are already looking for entry-level workers, equipment operators, machinists, technicians and engineers.

"Productivity depends on a highly skilled workforce and a highly skilled workforce is exactly what manufacturers say they simply don't have," writes Jerry Jasinowski, president of NAM, in his analysis of the study.

"The U.S. manufacturing workforce is the best in the world, but this latest survey highlights the need to get back to the basics of a good education that gives workers the full range of skills necessary to maintain high productivity and economic growth."

Shattering the Image

"We've got to reverse the lousy image given to manufacturing if America is to remain an industrial giant," says Eisen. She points to the lack of awareness among teachers and parents as a big reason why young people aren't entering the skilled workforce.

"When it comes to career awareness, the school system has failed," she says. "Students don't know what they need to take in school to become a machinist or a pharmaceutical engineer or a welder."

Without enough skilled workers, manufacturing businesses can't meet consumer demand. That means North America will have to look to other continents for products.

Manufacturing Breakdown

Employment in the manufacturing sector can be separated into two main worker families: production and administration.

Administration includes employees in personnel, secretarial, sales and finance areas.

Production employees, on the other hand, are the people who actually build new products. They are the skilled workers companies need to keep the profits flowing.

Processors, assemblers, inspectors, handlers, packers, repair specialists, watchmen and foremen can all be part of production in a single company.

In the United States, the number of production employees reached 12,400,080 in 2000. They had an average annual income of \$26,450, according to the U.S. Department of Labor.

In 2001, total manufacturing employment in the United States stood at 17.7 million.

Terrett says in the future, manufacturers will have to be innovative in order to compete.

"There will be challenges from countries in Asia, like India and China, that are quickly developing and have an unlimited supply of workers," he says.

Careers in the Industry

A machinist is just one of many careers that will grind to a halt without replacements.

Machinists set up and operate a variety of machine tools to produce precision parts and instruments. They must have knowledge of mechanics, shop mathematics, metal properties, layout and machining procedures to get the job done.

The experts all agree that developing solid math, science and communication skills will open many doors in the manufacturing sector. Any trades you learn along the way are icing on the cake

According to the Occupational Employment Statistics (OES), annual earnings of machinists in America ranged from \$18,740 to \$45,430 in 2000.

To give you an idea of how some manufacturing jobs work together, let's look at electronic assemblers, fabricators, inspectors and testers.

Electronic fabricators are key in the development of electronic components. They essentially create small electronic parts and monitor their production.

Electronics assemblers put circuit boards together -- attaching the small but important electronic parts (such as resistors, capacitors and diodes) using tiny tools.

Electronic inspectors check to make sure the electronic parts have been attached properly and meet standards.

And finally, electronic testers check to make sure the new product actually works.

According to the OES, metal fabricators earned between \$18,330 and \$40,680 in 2000. Machine assemblers earned between \$16,800 and \$44,680. And inspectors and testers earned between \$15,250 and \$46,200.

Applicants for electrical or electronic assembler jobs should be technical school graduates or have equivalent military training. Other positions require only on-the-job training.

Some high school education and a community college diploma are musts for these jobs.

Handling the Trend

The experts all agree that developing solid math, science and communication skills will open many doors in the manufacturing sector. Any trades you learn along the way are icing on the cake.

"There's always been a belief that if you couldn't cut it academically then you could always find yourself a home in a trade," says Keith Lancaster. He works with an apprenticeship forum.

"The reality is that you need that same strong academic background to succeed as a skilled worker, too."

He adds that it's important to ensure youth are given adequate training and education.

"We see this as a crisis," says Eisen. "A lack of skilled youth in the pipeline will be a hindrance to productivity in America."

Certification is critical in Eisen's eyes. Having the right qualifications will help anyone who's looking to find the perfect job. "And it's not just about becoming an engineer or an entrepreneur -- manufacturing offers good pay and a good quality of life," she says.



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National Association of Manufacturers

Visit America's biggest manufacturing industry organization

<http://www.nam.org/>

Manufacturing is Cool

All you need to know about manufacturing

<http://www.manufacturingiscool.com/>

Association for Manufacturing Technology

An international look at manufacturing

<http://www.mfgtech.org/>

International Association of Machinists and Aerospace Workers

A closer look at machinists around the world

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