Recovery From High Unemployment Rates Is Slow But Real

We all know that the economy has been rough for the past few years, but sometimes we aren't fully aware of just how rough it has been in historical terms. This past recession is the worst of any since World War II. We can’t precisely compare this recession with the Great Depression of the 1930s, since we didn't begin collecting good economic data until after that time, but we do know that it is the only economic crisis of similar magnitude in the past century.

The graph below, from the economics blog Calculated Risk, shows job losses and recoveries in the past eleven recessions stretching all the way back to 1948. The recession that began in 2007, indicated by the red line, shows a greater percentage of job losses than any of the other ten recessions on the chart and three times more than the recessions in 2001 and 1990.
Despite these horrific job losses however, the economy began to turn around in 2009, and we have been making slow but steady progress since then. If we keep adding new jobs at this pace, we’ll get back to where we were in 2007 in about two more years.

The Washington Post’s Wonk Blog has a new chart of changing employment levels in major industries showing how they are experiencing different rates of recovery. Mining and logging (the black line) show the biggest jump. Education and Health (in pink) never missed a beat throughout the recession, climbing steadily every year. Construction employment (bright blue) took the biggest hit falling rapidly through 2010, but has since begun to grow again, as have most other industries.

![Employment by industry](chart)

**Employment by industry**

*Source: Current Employment Statistics, Bureau of Labor Statistics*

Virginia

The pace of unemployment in Virginia (shown in a chart on the next page) mirrored national unemployment throughout the recession but was always significantly lower. In 2003, we had a low unemployment rate of about 4 percent compared to the nation’s 6 percent. It fell even further to an almost unprecedented 3 percent in 2007. Once the recession kicked in, Virginia’s unemployment rate rose rapidly but even at its highest in 2010, it was significantly less than the nation’s. We were at 7.3 percent when the national unemployment rate hit 10 percent.

A final chart shows total employment in Virginia compared to the size of our labor force (defined as those who are employed *plus* those who are unemployed and looking for work). From 2002 through 2007, the number of employed Virginians tracked fairly closely with the number in the labor force. In
2008 the number of employed dropped steeply. The number in the labor force fell too — even though our total population kept growing — as people stopped looking for work. In 2010 the number of people employed began to rise, and the number in the labor force did too as people started looking for work again. Both numbers are rising now, but the gap between the employed population and those in the labor force remains about twice what it was back in 2006.

Overall these charts show that the economy has not yet recovered from the most devastating crisis in at least 80 years, but we are making progress. With luck, this year’s graduates should have a better chance of finding work than those who graduated last year or the year before. Let’s just hope that sequestration issues are settled before graduation time, and that neither this or other as-yet-unforeseen troubles kick us back into another recession before we have had time to recover fully from the last one.
America’s Manufacturing Revival

Manufacturing has had a lot of bad press in the last few decades. So many jobs were lost in America's Northeast that it was renamed the "Rust Belt," and a manufacturing career in the U.S. began to seem really implausible. But manufacturing is reviving across the nation, and a career in this industry might be a better choice for many of today's students than it was for their parents. High tech manufacturing is a much cleaner, high-skilled business than it was a few decades ago, and it has become so cost effective that manufacturing employment is beginning to rise again after decades of decline.

Reshoring

In a recent report, the Economist magazine outlines current trends in offshoring and outsourcing and discusses whether the rate of offshoring may slow or if some jobs may even be “reshored” to the U.S. in the future.

Offshoring has received the blame for much of America's economic problems. An NBC and Wall Street Journal survey found that 86% of those polled believed that this was the leading cause of recent economic problems. In truth, offshoring was not the only reason for falling employment in manufacturing; new technology, such as robots, resulted in at least as many job losses as sending jobs overseas did. But offshoring did kill many jobs and the threat of sending jobs overseas helped keep manufacturing wages down.

Continuing improvement in supply and communication networks seems to indicate that even more manufacturing and service jobs will be sent overseas in the future. But other trends may slow the rate of offshoring and in some cases cause manufacturing jobs to be relocated to the United States.

Labor Costs

Low foreign labor costs have been the key attraction to offshoring jobs in labor intensive industries. American wages have barely risen in the past few decades, but rising labor costs in developing countries, particularly China, have significantly diminished their supply of cheap labor. Due in part to their one-child policy, China’s workforce is even beginning to shrink. Pay and benefits for the average Chinese factory worker rose by 10% a year between 2000 and 2005 and sped up to 19% a year between 2005 and 2010. Minimum wages are set to rise at 13% annually until at least 2015. By then, manufacturing costs in China will be approximately the same as in the U.S.
Rising costs have caused many companies to rethink offshoring work to China, and some are considering shifting work back to the U.S. A survey of American manufacturing companies by Boston Consulting Group in 2012 found that among the largest firms, 48% were considering moving production back to the U.S.

Although there are a number of other countries where labor costs remain much lower than the U.S., few have the advanced supply chains and infrastructure combined with low labor costs that made China so attractive for outsourcing.

**Automation**

The other key factor that is making the U.S. competitive in manufacturing is automation. As factories incorporate more labor saving technology, particularly robots, labor costs don't have as large an impact on total production costs. A robot costs about the same to operate in a factory in the U.S. as in China.

Advanced manufacturing techniques also alter the economics of production, making it a far less labor-intensive process. For example, toys sell relatively cheaply but are quite labor intensive to produce. As a result, toys were one of the first items to be outsourced, first to Mexico and then China. But as companies, such as Disney, begin manufacturing their toys using 3D printers, they will be able to produce them just as cheaply in the U.S. 3D printers are in their infancy at the moment and only useful for very simple products, but this technology is likely to become increasingly sophisticated over time.

While the “death of outsourcing” may appear to be good news for communities hit hard by job losses, optimism may be premature. As a rule, manufacturing work will often only come back when it has been automated, so the number of jobs returning will be smaller than the number lost in the first place.
Furthermore, if reshoring boosts demand for labor, it will only be for those with high levels of skill who can work in automated factories and in the advanced supply networks that bring materials to the factories and ship goods out.

**Improving Skills May Revive American Manufacturing**

Improving local education and training is one of the most effective ways for communities to attract high tech manufacturers looking to return production to the United States. Danville is a good example of a community that has done this. The city experienced major job losses over the past two decades because its factories couldn’t compete with cheaper labor overseas and during the recession Danville’s unemployment rate nearly reached 16 percent. To build up the needed skills in the local workforce, Danville Community College started construction on its Center for Advanced Technology and Training. The Center teaches its students how to work in automated factories, including how to program and maintain factory robots.

During the same period, Ikea, the world’s largest furniture retailer, opened its first factory in North America just off Route 29 in Danville to take advantage of the skilled local workforce and the advanced supply networks that serve the area. The factory is highly automated and uses computerized wood working machines including the Weke Profiline BST5000 to prepare material surfaces and bore holes in the panels and a Bargstedt robotic stacker to automatically load the panels.

Though the Ikea factory is automated and has fewer workers than the factories it replaced, it offers premium wages for the region. It has also attracted a number of suppliers who have built similarly automated factories nearby and created more well-paying manufacturing jobs in the community. Even furniture manufacturers not connected to Ikea have opened plants in Danville to make use of the region’s resources.

Danville’s investment in its workforce and the creation of advanced manufacturing jobs in the community has helped Danville experience a significant recovery since the recession. Danville’s unemployment rate has declined more than twice as fast as the national average, dropping by 40 percent during the past four years. In 2012, the Milken Institute ranked Danville as one of the fastest improving economies among small cities nationwide.

Danville’s story mirrors a national trend of a revival in manufacturing communities across the U.S., where their workforces have upgraded their skills and attracted advanced manufacturing jobs. But as the Economist warns in its report, the
"...shift of jobs back to developed countries is an encouraging sign that the flow of jobs need not be one-way. But only if governments and people in prosperous places invest heavily in building up skills will the workforces there properly benefit."

By joining with community colleges and local governments, CTE can help to raise workforce skills to the level modern industry requires. Courses available to Virginia CTE students provide the basic preparation that modern manufacturing needs, courses like Manufacturing Systems, Materials and Processes Technology, Robotic Workcell Technology, and Technology of Robotic Design, to mention just a few of today’s CTE options. To make these courses fully effective in boosting local industry and connecting students with jobs, however, they need to be implemented in close collaboration with local industry, and they need to have clear pathways leading students from high school into college or employer apprenticeship programs. By building these partnerships and pathways, Virginia’s Career and Technical Education programs can play an important role in the revival of American manufacturing.

Manufacturing Is Looking For Workers With Technical Training And Certification

Deloitte Consulting, together with the Manufacturing Institute, has produced a series of reports exploring recent changes in manufacturing technology, the skills that are now needed, and the jobs being affected most. The 2011 report, titled Boiling Point, focuses particularly on how the changing nature of manufacturing has affected the demand for skills.

During the last five years, manufacturers significantly changed their production systems. Eighty-three percent of manufacturers surveyed for the study had redesigned and streamlined their production process during this period, and 51 percent had also increased automation in their factories. These production changes were likely made in order to reduce labor costs by replacing workers with automated and more efficient equipment. However, changes of this kind usually require manufacturers to raise the skill level of the workers they do employ, and it is notable that 43 percent of manufacturers also reported an increase in skilled positions. These skilled positions normally pay better than unskilled ones, so those workers who are still retained in manufacturing may be benefiting from this change.

Surveying manufacturers’ current needs for workers, the study found that the largest shortages were in skilled production and technical occupations. Forty-five percent of manufacturers reported having a serious shortage of skilled production workers, such as machinists, operators and technicians. Non-technical positions like HR, IT, finance, sales and marketing or customer service seem to be much easier to fill, however; few employers reported shortages in these areas.

While it has been widely reported that high school students are not proficient in math, science, and communication skills, these skills were not a big concern for manufacturing employers. Instead, they
listed problem solving and technical training as the largest deficiencies among their employees. Working in production at a highly automated factory requires technical training and problem solving skills as soon as an employee starts work. The traditional, less technical, factory positions allow for on-the-job training, but there is significantly less room for on-the-job training in today’s technical positions; automation has replaced most positions that could have been used for initial training.
Finding employees with the technical skills they need to immediately begin working in an automated factory has been a challenge for most manufacturers. Additionally, Boiling Point reports two trends that have made filling skilled production positions even more difficult. First, training is expensive and difficult. Some manufacturers have been reluctant to train employees before they begin work because of the high cost, while others have invested in training programs that fall short of their goals. Second, training is made even more difficult by the fact that so few people want to come into this industry. In a survey of 18-24 year olds, researchers found that manufacturing ranked very last among industries in which they would choose to start their careers.

![What are the most serious skill deficiencies in your current employees?](image)

The ideal solution to this problem is to build stronger partnerships between employers and our schools and colleges, so that students are introduced early on to the career potentials in manufacturing, and high school and postsecondary programs receive the help they need to prepare students with the skills that employers want.

In their report, Deloitte and the Manufacturing Institute highlight the cooperation between San Antonio manufacturers and local community colleges and high schools. Manufacturers there partnered with the colleges and high schools to develop a dual credit program with classroom instruction and hands-on learning. High school students can graduate with up to 35 credits, a National Career Readiness Certificate, and the Production Technician Certification from the Manufacturing Skills Standards Council. Local manufacturers provided significant input into designing the program and recruited graduates from the program as well.

Unfortunately, we have seen few examples of this kind of extensive cooperation here in Virginia. The potential for cooperation exists, however. The Virginia Manufacturer's Association is concerned about
where Virginia employers will find the workers they need to grow, and a number of initiatives are in place to increase cooperation between educators and employers. As a result, Virginia CTE programs may now have more opportunities for manufacturing partnerships than they did in the past.

It is important to begin making these connections. Manufacturing is the 7th largest industry in the state, and industry wages are among the state's highest. We know that students have been discouraged from entering manufacturing because employment in the industry has fallen for years and jobs have been insecure; however, this seems to be less true today. Investment in technology at home and a changing economy overseas seem to have stabilized the industry. Employment in manufacturing is no longer declining and the future for high skilled manufacturing workers is likely to be more secure than it has been in the past. Now is a great time for career and technical educators to begin building partnerships with local manufacturers.

Data from employment and wages for 3rd quarter, 2012. Source: Virginia Workforce Connection