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Five myths about manufacturing jobs

By Ro Khanna

Ro Khanna, a deputy assistant secretary of commerce from 2009 to 2011, is the author of "Entrepreneurial Nation: Why Manufacturing Is Still Key to America's Future." And Ro Khanna, In his State of the Union address Tuesday, President Obama said that creating manufacturing jobs is the nation's "first priority." To some, this may sound like a throwback to a long-lost era; after all, such jobs are being eliminated, outsourced or automated, right? Not really. The United States remains a world leader in manufacturing, and that sector remains essential to our economic and technological future. Here are the five biggest misconceptions about U.S. manufacturing — and why the sector still matters.

1. A manufacturing job is no longer a ticket to the middle class.

There is no doubt that America's manufacturing base has declined, peaking at 19.6 million jobs in 1979 and now at just over 11 million jobs. Despite this economic transition, however, U.S. manufacturing jobs are still worth having. On average, full-time manufacturing work pays 20 percent more than full-time service-sector jobs. In my recent travels across the country, I met electronic technicians with only a high school diploma who had risen through the ranks of manufacturing companies to earn more than $100,000 a year. High school grads in retail or service-sector jobs rarely reach six figures.

Of course, manufacturing alone cannot solve our unemployment problem. For the foreseeable future, the lion's share of America's job growth will be in the service sector. By 2014, employment in services is expected to reach 129 million jobs, with education and health care growing most quickly. Still, there are lucrative careers available in manufacturing. And Obama's State of the Union proposal to create manufacturing hubs across the country — "to turn regions left behind by globalization into global centers of high-tech jobs" — will generate opportunities for young Americans with an aptitude for making things.

2. We can outsource manufacturing as long as product design stays here.

Andy Grove, the former chief executive of Intel, has famously argued that the best innovation takes place when design teams are integrated with production teams. Product designers can get feedback about the practical constraints involved in manufacturing and can fine-tune their designs accordingly.

Apple has said that it is investing $100 million in new U.S. plants — a move hailed as bringing manufacturing back to our shores. However, Apple has always done most of its prototype manufacturing in the United States. The company may mass-produce iPhones in China, but it has maintained U.S. factories as laboratories to perfect its products before launch. Now, rising wages in China and transportation costs have encouraged Apple to manufacture some of its Mac lines here.

It is naive to think we can keep design in America without retaining some manufacturing capacity. Harvard Business School professors Willy Shih and Gary Pisano have shown that the offshoring of semiconductor manufacturing that shifted silicon processing to Asia, for example, gave companies there an advantage in designing solar panels and energy-efficient lighting.

3. U.S. manufacturing can't compete with China.

Over the past decade, the growth of Chinese manufacturing has exceeded America's, so for the first time, China has taken the lead in global manufacturing. Yet, for all the hype about the BRIC economies — Brazil, Russia, India and China — the United States remains neck-and-neck with China in manufacturing output, and we still far outstrip such traditional powerhouses as Japan and Germany. China and the United States each produce about one-fifth of the world's manufacturing, yet we do so with only about 10 percent of our economy devoted to that sector, compared with nearly 40 percent of the Chinese economy.

What keeps us in the race is our productivity advantage. U.S. manufacturing workers are almost six times as productive as Chinese workers and 11 / 2 times as productive as those in Japan and Germany.

The best American manufacturers customize products to meet customer needs, reduce the time required to make them and constantly improve their design. Vitamix in Cleveland, for instance, makes specialized blenders that are more expensive than those produced in Asia — but Starbucks buys them because they are quiet and leave few lingering ice chips in Frappuccinos.

4. Manufacturing jobs are repetitive and low-skilled.

If you think of manufacturing as a tedious job with no intellectual stimulation, you haven't visited a U.S. factory floor lately. Whether making steel bars or suits for firefighters, many of today's manufacturing jobs require the ability to operate complex machines, math skills and an understanding of how to maximize efficiency.

No doubt, every job has repetitive aspects. As a lawyer, I can assure you that a lot of document drafting is repetitive, involving cutting and pasting from templates. But the best lawyers bring a unique perspective to the process and anticipate clients' problems. Similarly, the best manufacturing workers are not just doing repetitive tasks; they are thinking about how to improve a product's design or production.

5. Government is terrible at supporting manufacturing.

America has long had a bipartisan consensus favoring government support for private manufacturers. In 1791, Alexander Hamilton argued that the nation should provide incentives and assistance to manufacturers to compete in the world economy. Even Thomas Jefferson came around to the view that government has a stake in building domestic manufacturing.

These principles influenced Herbert Hoover, who before he was president was regarded as a great commerce secretary and provided financial support for the aviation industry. Later, President Ronald Reagan supported Sematech to help our semiconductor industry.

Of course, America's free-enterprise system is what enables our manufacturers to be the most innovative. No one is suggesting that the government pick winners or losers. Some bets on new companies, such as Solyndra, are bound to fail.

But such failures should not deter the government from investing in DARPA, a strategic agency at the Defense Department, or ARPA-E, a strategic agency at the Energy Department, which can propel innovation, new technologies and new industries. We also must help keep manufacturers at home through tax incentives, attract immigrants and better prepare a skilled workforce. And we must continue the collaboration between government and business that helped make America an economic superpower.

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