

Opening Remarks

Bloomberg Businessweek

Smiles Aren't Factory-Made

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Manufacturing is at the lowest point on a curve that plots where companies profit most

During a phone call shortly after the November election, Apple Inc.'s chief executive officer, Tim Cook, got an earful from Donald Trump on the president-elect's pet economic subject: factories. He prodded Cook to manufacture his iPhones and other gear at home rather than outsource them to China. "One of the things that will be a real achievement for me is when I get Apple to build a big plant in the United States, or many big plants," Trump said he told Cook.

That sums up the economic vision of the Trump administration. The president and his advisers are convinced more factories can cure the trade deficits, lackluster growth, and (supposed)

joblessness plaguing the U.S. economy. Trump has vowed to lure back plants that departed for cheaper locales such as China or Mexico and sanction companies that dare to leave. The result, he claims, will be investments that revitalize down-on-their-luck communities and American economic vitality. "We will bring back our jobs," he pledged in his inauguration speech. "We will bring back our dreams."

The president, though, is plain wrong. Factories won't restore the American dream. That's because they don't contribute as much to the economy as they once did, despite all the fuss politicians make over them. Chasing them with pro-factory policies will not only fail to bring the benefits Trump has promised but could also hurt the very middle-class families they're designed to help.

A die-hard conviction remains among many Americans that the more an economy manufactures, the stronger it is. Some workers feel that making steel or cars is more respectable than stacking shelves at a Gap, and the Trump administration readily agrees. Calling steel "critical to both our economy and our military," the president signed an executive order in late April that in all likelihood will lead to curbs on imports to protect U.S. mills. Peter Navarro, one of Trump's key economic advisers, argues that bringing factories back from foreign countries will shore up the

nation's growth and security. "One of the goals of the Trump administration is to reclaim all of the supply-chain and manufacturing capability that would otherwise exist if the playing field were level," he recently said.

This strategy is based on flawed thinking. Manufacturing is certainly not as important to the U.S. economy as it once was, declining to less than 12 percent of gross domestic product in 2016 from 26 percent 50 years earlier. But the whole idea that "we don't make anything," as Trump himself has put it, is a fallacy. The U.S. remains a production powerhouse, accounting for almost 19 percent of global manufacturing, behind China's 25 percent but bigger than Germany's and Japan's shares combined. U.S. manufacturers are still extremely competitive in high-tech and hard-to-

duplicate products—think Boeing Co. aircraft. And even as some factory work has moved abroad, the U.S. economy remains remarkably strong. Home to many of the world's most important and innovative companies, from Facebook Inc. to Tesla Inc., the U.S. boasts an unemployment

rate of 4.3 percent, less than half the euro-area level.

What Trump fails to appreciate is that the true value in making something is no longer in making it. Companies figured out long ago that they can capture most of the value of a product by focusing on



R&D

Branding

Design



its design and research and development, its branding, and the services that support it after it's been sold. Stan Shih, the founder of Taiwan's Acer Inc., illuminated this phenomenon in the early 1990s with his "smile curve." The middle of the smile—the lowest point of value—is where

the fabrication takes place; the highest value is found at the corners—the R&D at the beginning and the customer service at the end.

That simply reflects supply and demand. The talent necessary to conceive, brand, and market a new product is much scarcer than the skills to

manufacture it. The integration of giant emerging economies such as China and India into global supply chains increased the number of available hands to screw or sew things together, dropping the cost of making a product even further. There's "a lot of supply for the actual manufacturing, but not a lot of supply for creating the next Google or Apple," says Ann Harrison, management professor at the Wharton School and co-editor of the book *The Factory-Free Economy*.

That disparity shows clearly in the apple of Trump's eye: the iPhone. In a 2010 study, the Asian Development Bank Institute pulled apart an iPhone and figured that the process of assembling it in China accounted for 3.6 percent of its production cost. The remaining 96.4 percent was paid to the parts suppliers, and Apple, as the creator, claimed the big profits. Net income at Apple, which does almost no manufacturing, was an impressive 21 percent of revenue in its last fiscal year, and its shares trade at 18 times earnings. Meanwhile, Taiwan's Hon Hai Precision Industry Co., one of the companies to which Apple outsources its manufacturing, recorded net profit of 3.5 percent of sales; investors value its shares at 12 times earnings. Apple also creates lots of jobs without big factories: It directly employs 80,000 people in the U.S. and plans

Marketing

to add thousands more.

Distribution

Of course, more factories mean more jobs, and more jobs are always good. Studies show that workers who lose their job when a plant closes take a long-term hit to their standard of living. Unfortunately, the 21st century factory won't create the jobs that yesterday's did. With advancing technology in robotics and automation, a modern plant can churn out a lot more stuff with fewer

workers. That's why U.S. manufacturing output continues to swell while employment in the sector has withered.

Trump's fixation on factories could lose, not gain, jobs for Americans. There are some measures he can take to woo factories home. A corporate tax cut, for instance, might make the U.S. more attractive to some manufacturers. But to entice supply chains back en masse from China and Mexico, where it's cheaper and more efficient to make certain things, he'd have to intervene in market forces to overturn those cost advantages—for example, by imposing taxes and tariffs on imports lofty enough to render manufacturing outside the U.S. much more expensive, as he's already threatened to do.

But whenever government tries to outmuscle the market, the result is almost always extra costs that have to be borne by the greater economy. A border tax being contemplated in a Republican tax plan could hurt shareholders, by decreasing corporate profitability and share valuations, and consumers, by hiking prices at their local Walmart or Target. That suppresses consumption, which is bad for growth and jobs. A major effort by the administration to force factories home could destroy lots of other jobs. Raising the price of imports would likely decimate the already struggling retail industry, which supports 1 of 4 American jobs, with slower sales and slimmer profits—almost certainly causing store closings and layoffs.

By obsessing over factory jobs that no longer exist, Trump may cost Americans the jobs of the future. The logic of the "smile curve" suggests he should focus on developing and supporting the parts of the manufacturing process that hold the real value—in other words, fostering more Apples. That would entail upgrading the skills of the U.S. workforce by devoting more resources to education and reducing the financial burden of a college degree, while encouraging foreign talent to start their next big ventures in Silicon Valley, not Shanghai. Rather than restricting trade, Trump should press for an even freer global exchange of goods and services so U.S. corporations can best organize their operations to maximize profits. Unfortunately, he and his team aren't headed in that direction.

Describing his talk with Cook, Trump called an Apple factory in America a "real achievement for me"—not Apple, the American worker, or the economy. By rallying political support, his obsession with factories may be good for him, but it isn't necessarily great for the rest of us. ⑨

Manufacturing

