

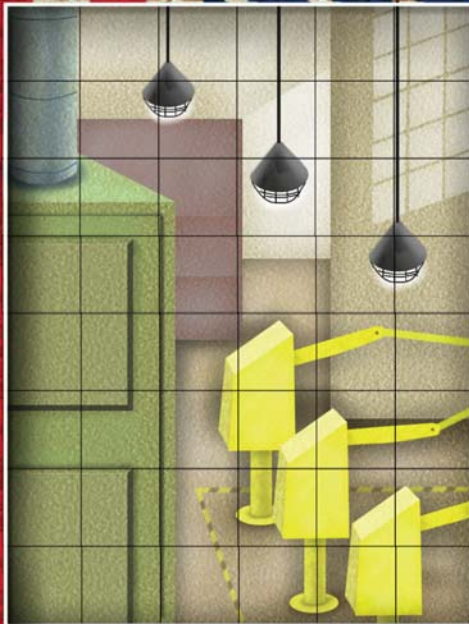
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THE BOSTON CONSULTING GROUP

MADE IN AMERICA, AGAIN

U.S. Manufacturing Nears the Tipping Point

Which Industries, Why, and How Much?



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Which Industries, Why, and How Much?

Harold L. Sirkin, Michael Zinser, Douglas Hohner, and Justin Rose

March 2012

AT A GLANCE

Seven groups of industries are nearing the point at which rising costs in China could prompt more companies to shift the manufacture of many goods consumed in the U.S. back to the U.S. Combined with an increase in U.S. exports, this shift could create 2 million to 3 million jobs and add around \$100 billion in annual output to the U.S. economy.

THINK HOLISTICALLY

Companies need to weigh not only their costs today but also the economic trends influencing total future costs. The labor content and logistics costs of a given product will have a determining influence on the optimal manufacturing location. Companies must also weigh projected productivity differences, the challenge of extended supply chains, and the high risk of cost volatility in China when considering their investments.

GET STARTED

Although the full impact of these cost shifts may not be felt for a few years, companies should start building flexibility into their supply chains now. When deciding where to add future capacity, they should seriously consider the U.S. as it becomes one of the cheapest locations for production in the developed world.

THE UNITED STATES has been losing factory jobs for so long that many observers have all but written off manufacturing as a meaningful part of America's economic future. The mass exodus of production following China's 2001 entry into the World Trade Organization (WTO) deepened this pessimism.

But the tide is starting to turn. In The Boston Consulting Group's first report in this series (*Made in America, Again: Why Manufacturing Will Return to the U.S.*, BCG Focus, August 2011), we explained how rising wages and other forces are steadily eroding China's once-overwhelming cost advantage as an export platform for North America. By around 2015, we concluded—when higher U.S. worker productivity, supply chain and logistical advantages, and other factors are taken fully into account—it may start to be more economical to manufacture many goods in the U.S. An American manufacturing renaissance could result.

But which industries will be most affected? By how much? And what will be the economic impact? To answer these questions, BCG analyzed the primary industry groups to identify those most likely to be influenced in the years ahead by changing global cost structures. We identified seven industry groups that account for \$200 billion in goods imported from China for which rising costs in China will likely prompt manufacturing of goods consumed in the U.S. to return to the U.S.

The economic impact would be significant. Production of 10 to 30 percent of the goods that the U.S. now imports from China in those seven groups could shift back to the U.S. before the end of the decade, adding \$20 billion to \$55 billion in output annually to the domestic economy. We estimate that the relocation of manufacturing from China, combined with increased exports due to improved U.S. competitiveness compared with Western Europe and other major developed markets, will directly and indirectly create 2 million to 3 million jobs in the U.S., reduce unemployment by 1.5 to 2 percentage points, and lower the nonoil-related merchandise deficit by 25 to 35 percent. In fact, given the many changes sweeping the global economy, we believe our estimates are conservative.

The implications of the new manufacturing math for companies are likely to be profound. Companies that continue to treat China as the default low-cost option for supplying U.S. markets on the basis of wage rates alone could soon find themselves at a competitive disadvantage. Although still in the early stages, production shifts resulting from changing cost structures are already visible in recent sourcing moves by companies across a range of manufacturing industries. Other companies are exploring the possibility of locating future production capacity in the U.S.

We identified seven industry groups for which rising costs in China will likely prompt manufacturing of goods consumed in the U.S. to return to the U.S.

Meanwhile, manufacturers from Western Europe, Japan, South Korea, and even China could begin to establish more production facilities in the U.S. to serve domestic and European markets, a trend that we will examine further in future reports.

Worker productivity has been growing faster in the U.S. than in Western Europe.

The Rush to China in Retrospect

U.S. companies had been moving production offshore well before China became a realistic option, sending labor-intensive garment, footwear, and electronics work to low-cost nations in East Asia and Latin America, and production of everything from cars to washing machines to Mexico after the North American Free Trade Agreement (NAFTA) was signed in 1994. But the rush accelerated after China joined the WTO in 2001. With hundreds of millions of workers, low factory wages, a rapidly developing domestic market, and generous government incentives to attract foreign investment, China offered an unbeatable cost proposition. Between 2000 and 2009, Chinese exports to the U.S. nearly tripled.

Nonetheless, the U.S. still manufactures \$3.4 trillion worth of goods annually, nearly three-quarters of what it consumes. What's more, the U.S. exports \$1.3 trillion worth of goods per year, mainly to Europe, Canada, and Mexico—further evidence of a robust manufacturing sector. In fact, U.S. competitiveness has been improving. Between 1997 and 2002, exports to Europe remained flat in nominal dollar terms. But they have increased 7 percent annually on average ever since, peaking at \$325 billion in 2008 before the onset of the global financial crisis. While the weak U.S. dollar certainly is a factor, it is also true that worker productivity has been growing faster in the U.S. than in Western Europe. U.S. productivity grew at 2 percent per year from 2005 to 2010, while Germany, France, the U.K., and Italy averaged only 0.04 percent productivity growth. In fact, U.S. manufacturing output has risen by more than two and a half times since the 1970s with 30 percent less labor.

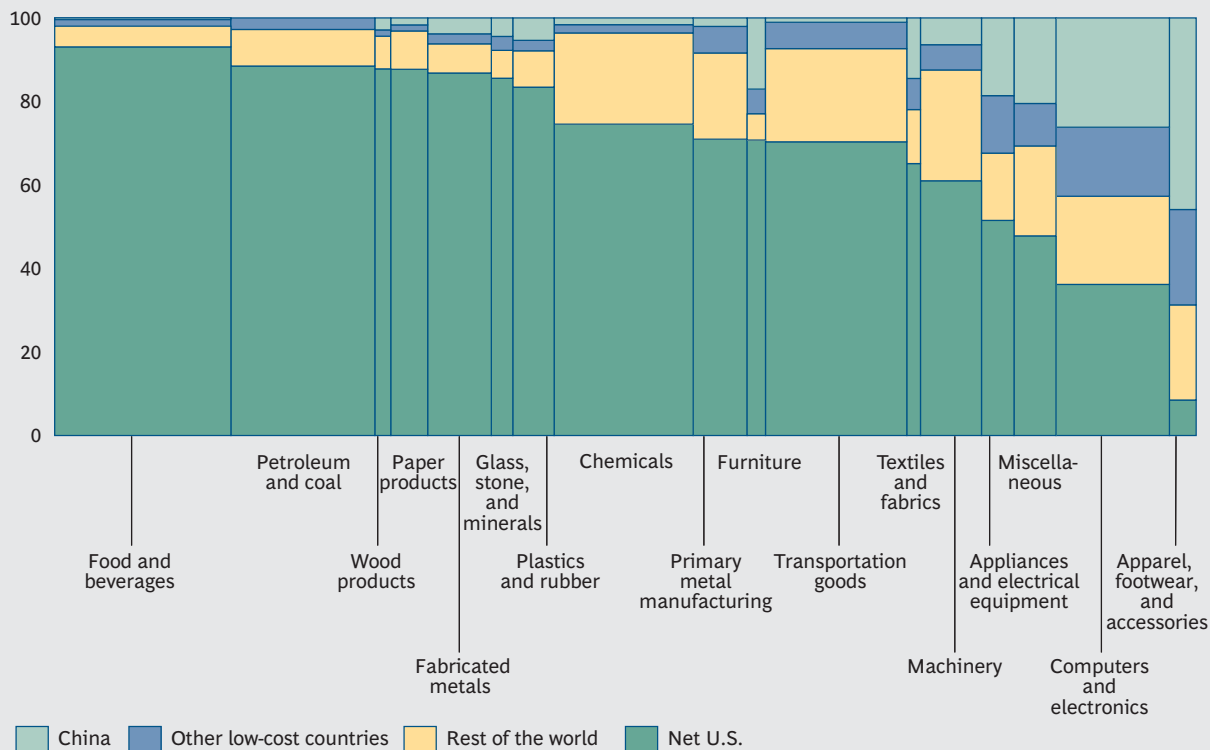
The rush to China should be seen in context. Yes, a lot of U.S. factories closed and a lot of jobs were lost. But a significant number of those jobs were casualties of automation or more efficient production methods—trends that are reducing direct-manufacturing employment everywhere in the world. A meaningful share of work went to China because labor accounted for a major share of costs. In categories such as apparel and shoes, had such production not gone to China, it would probably have gone to another low-wage country. But in other categories, such as paper products, where labor costs are less of a factor, most production never left U.S. shores.

Even in industries that experienced extensive outsourcing to China in the past decade, a surprisingly large amount of production has remained in the U.S. (See Exhibit 1.) For example, the U.S. manufactures 52 percent of appliances sold domestically, 61 percent of machinery, 70 percent of transportation goods, and 71 percent of furniture. Even in electronics, where the U.S. manufactures only 36 percent of the \$467 billion in goods it consumes each year, it makes more at home than it imports from any other country, including China.

Industries such as these are neither destined for low-cost nations nor anchored by necessity to the U.S. Instead, they are somewhere in between. For them, factory

EXHIBIT 1 | The U.S. Manufactures Nearly 75 Percent of What It Consumes

Manufactured goods consumed in the U.S. by source, 2010 (%)



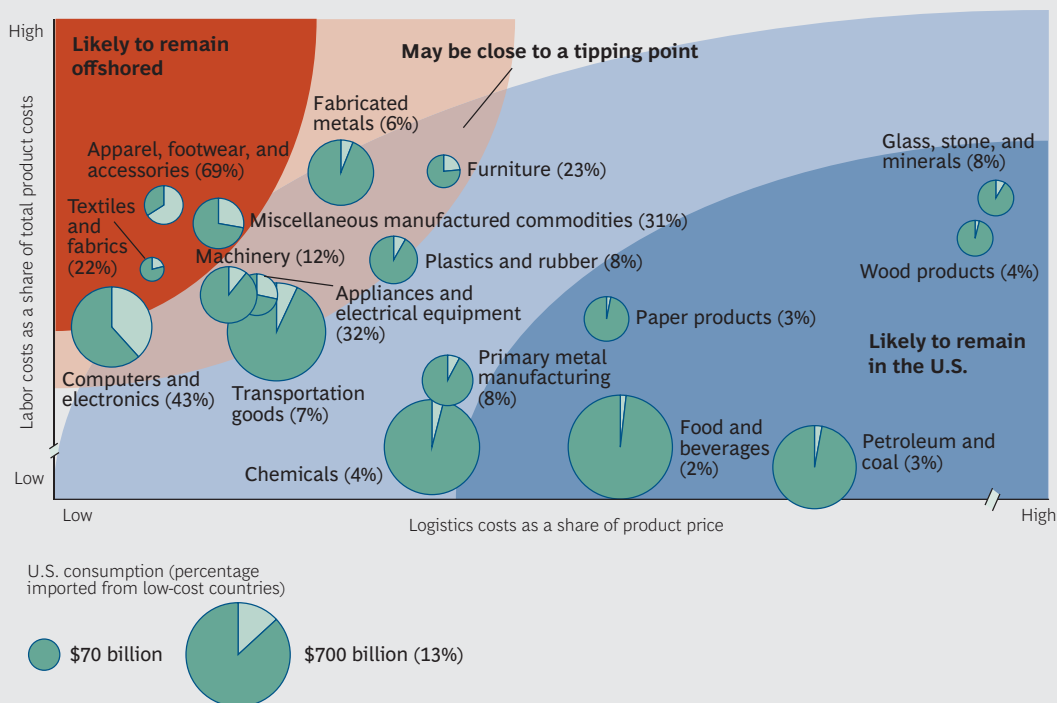
Sources: U.S. National Census Bureau; U.S. Bureau of Economic Analysis; BCG analysis.

wages generally account for only a modest portion of total production costs. Logistical issues, such as shipping costs, time to market, and the proximity of production lines to engineering and design teams, are relatively important. And while being located in a major industrial cluster can be an advantage, it is not necessarily crucial for many companies. As a result, major shifts in global cost structures could heavily influence where such industries decide to locate new manufacturing capacity. In fact, for some of them, China's cost advantage over the U.S. in the manufacture of products intended for sale in the U.S. is eroding so quickly that they are approaching a tipping point, where bringing production back to the U.S. starts to make economic sense. (See Exhibit 2.)

Recalculating the China Price

In our previous report, we described the magnitude of decline in China's once-enormous cost advantage as an export platform for the North American market. In 2000, factory wages in China averaged just 52 cents an hour, or a mere 3 percent of what average U.S. factory workers earned. Since then, Chinese wages and benefits have been rising by double digits each year, averaging increases of 19 percent from 2005 to 2010. The fully loaded costs of U.S. production workers, in contrast, rose by

EXHIBIT 2 | Seven U.S. Industry Clusters May Be Close to a Tipping Point

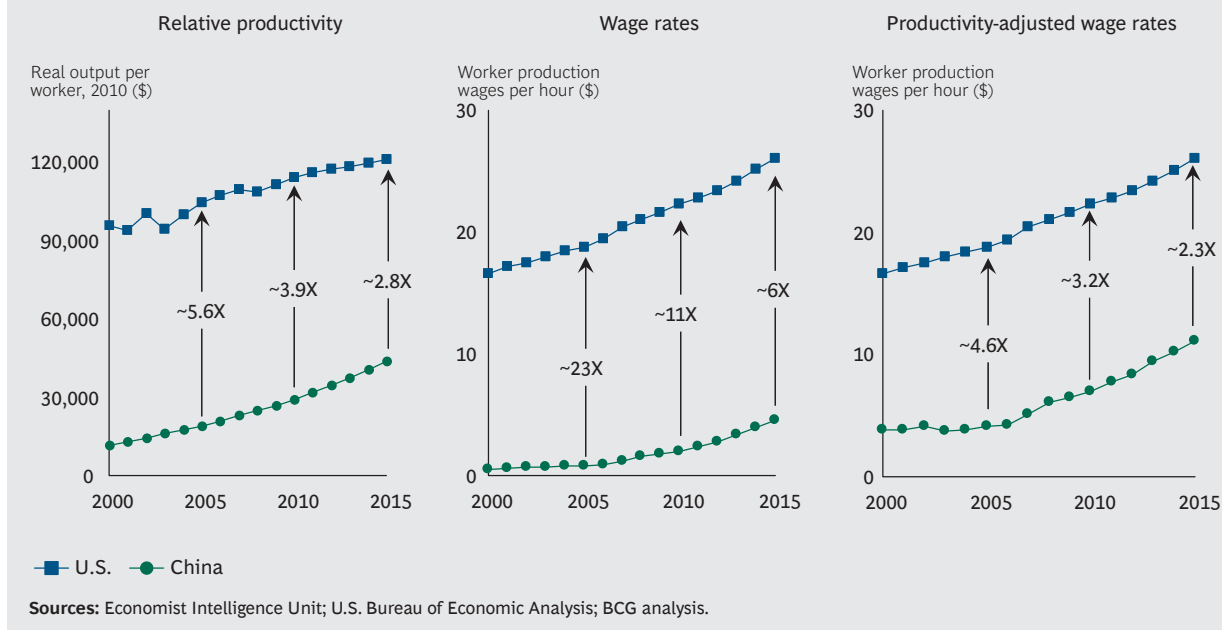


Sources: U.S. Department of Transportation; U.S. Census Bureau; U.S. Bureau of Economic Analysis; BCG analysis.

less than 4 percent annually between 2005 and 2010, and labor unions have become more flexible in negotiating future pay and benefits. In October 2011, for example, Ford Motor announced that it would add 12,000 hourly jobs in its U.S. manufacturing facilities and shift some sourcing in-house from suppliers in China, Mexico, and Japan as part of \$16 billion in planned investments. Under an agreement with the United Auto Workers, Ford will pay new hires \$15 to \$16 per hour, excluding benefits. Such entry-level jobs are being created at about twice the pace of many minimum-wage jobs in services.

As the Chinese labor market continues to tighten owing to economic growth and the nation's aging workforce, further wage increases of 18 percent per year are projected through 2015. By that time, the average fully loaded hourly wage in China would reach \$4.51. (See Exhibit 3.) In the Yangtze River Delta, the region of China's highest manufacturing output and the heart of such high-skill industries as automobiles and electronics, average wages are expected to reach \$6.31 per hour in 2015. That would make Chinese compensation packages equal to around 25 percent of what skilled workers earn in low-cost manufacturing states in the U.S. Take much higher U.S. worker productivity into account, and wages in the Yangtze River Delta will likely exceed 60 percent of labor costs in U.S. states with low manufacturing costs. Even though our model includes aggressive forecasts of productivity growth in China of around 8.4 percent per year through 2015, these increases will not compensate for wages likely to rise twice as fast.

EXHIBIT 3 | Labor Rates Are Growing Much Faster in China Than in the U.S.



By around 2015, the total labor-cost savings of manufacturing many goods in China will be only about 10 to 15 percent when actual labor content is factored in. When shipping and the many risks and hidden costs of operating extended global supply chains are considered, many companies will find that making products in China that are destined for the U.S. will bring only marginal costs savings—and that manufacturing these products in the U.S. may be more economical.

The Volatility Factor

Our estimates of the increased costs of sourcing in China are conservative. There is a significant risk that the actual cost increases will be higher. For example, while our model assumes that Chinese factory wages will rise by 18 percent annually on average through 2015, in some cases companies have experienced wage hikes of 40 to 100 percent in a single year. Similarly, our model assumes that transportation costs will rise by an average of 2.5 percent annually. But given the dramatic rise and fall of oil prices, actual shipping rates could rise much more sharply in any given year. Currency values, too, are notoriously difficult to predict. In the past, the risk of currency fluctuation was minimal in China because the central bank kept the yuan rigidly pegged to the U.S. dollar. But in 2005, under political pressure from the U.S., the government started to allow the yuan to fluctuate. The consensus among analysts is that the yuan will appreciate by 3.5 percent annually through 2015, but if China were to allow the currency to float free, it would probably rise even more dramatically.

Other low-cost nations, such as Vietnam and Indonesia, would not be able to absorb all the export manufacturing that might be displaced from China as a result

The tipping-point industries account for nearly \$2 trillion in annual U.S. consumption. In 2010, the U.S. imported nearly \$200 billion worth of these products from China.

of these factors, because they could not offer the infrastructure, skilled talent, supply networks, and worker productivity that make production in China so advantageous today. Factory automation in China is also unlikely to significantly change the cost equation. This may seem counterintuitive. But installing state-of-the-art automated production lines would undercut the chief competitive advantage of export manufacturing in China—low factory wages—because it would reduce the labor content of products. Any labor-cost advantage would then apply to a much smaller portion of total costs.

The Tipping-Point Industries

The impact of the changing math of manufacturing will be felt the most in seven industry sectors that our analysis predicted would reach a tipping point in around five years, when the rising costs of producing in China will make it more economical to shift the manufacture of goods consumed in the U.S. to the U.S. Together, these industries account for nearly \$2 trillion in annual U.S. consumption. In 2010, the U.S. imported nearly \$200 billion worth of products in these categories from China—almost two-thirds of total Chinese exports to the U.S. (See Exhibit 4.) These industries are the following:

- *Computers and Electronics.* The U.S. imports from China around 26 percent of the electronics it consumes, led by computers, wireless phones, and televisions. U.S. imports of these products from China in 2010 were worth \$122 billion.
- *Appliances and Electrical Equipment.* China supplies more than \$4.5 billion in lighting products and \$6 billion in small appliances such as fans, vacuum cleaners, and microwave ovens each year. China also exports big appliances like refrigerators, freezers, and dishwashers. U.S. imports of these products from China in 2010: \$25 billion.
- *Machinery.* Leading Chinese exports in this broad category include air conditioners, heaters, pumping equipment, office machinery, power tools, optical products, photocopiers, and farm equipment. U.S. imports from China in 2010: \$16 billion.
- *Furniture.* This industry, a traditional strength of southern U.S. states such as Virginia and North and South Carolina, witnessed a surge in imports from China from 2001 through 2006. U.S. imports from China in 2010: \$13 billion.
- *Fabricated Metals.* The array of metal products now made in China include plumbing fixtures, hardware, hand tools, cutlery, and pots and pans. U.S. imports from China in 2010: \$10 billion.
- *Plastics and Rubber.* Top Chinese exports to the U.S. include tires, floor coverings, and bottles. U.S. imports from China in 2010: \$9 billion.
- *Transportation Goods.* China has become a major source of car and truck components, motorbikes, bicycles, and aircraft parts. U.S. imports from China in 2010: \$6 billion.

EXHIBIT 4 | Tipping-Point Industries Account for Almost \$2 Trillion of U.S. Consumption and Nearly \$200 Billion in Imports from China

	Industry category	Value of goods consumed	Imports from China
	Transportation goods	~\$582 billion	~\$6 billion
	Computers and electronics	~\$467 billion	~\$122 billion
	Fabricated metals	~\$262 billion	~\$10 billion
	Machinery	~\$251 billion	~\$16 billion
	Plastics and rubber	~\$170 billion	~\$9 billion
	Appliances and electrical equipment	~\$134 billion	~\$25 billion
	Furniture	~\$75 billion	~\$13 billion

Sources: U.S. National Census Bureau; U.S. Bureau of Economic Analysis; BCG analysis.

Early Signs of a Shift

While a fundamental reconsideration of global sourcing in the U.S. is still in the early stages, companies in a wide range of industries have begun to move production. As noted in our first report in this series, manufacturers such as NCR and the Coleman Company have either shifted some manufacturing from China to the U.S. or added new production at home that otherwise might have gone abroad. Rising Chinese wages are a major factor. But others include the desire to slash long lead-times, locate production lines closer to design and engineering teams, improve quality control, and reduce shipping costs. More competitive U.S. labor costs are another driver. Some companies are beginning to introduce lower entry-level wage rates that compare favorably with productivity-adjusted rates in China. Besides helping to accelerate the broader economic trends, these rates offer employees the opportunity to move up to jobs with higher pay and greater responsibility over time.

We have identified many other companies—large and small—that have added or are planning to add U.S. manufacturing after rigorously assessing the total costs and risks of sourcing products consumed in the U.S. from halfway around the world.

- ET Water Systems, having made irrigation controls in Dalian, China, since 2002, recently relocated production and assembly to San Jose, California. Not only is it faster and cheaper to manufacture in San Jose, but the move has also improved quality and yield and accelerated innovation and product development.
- High-end cookware manufacturer All-Clad Metalcrafters is bringing lid production back to the U.S. from China to be closer to both customers and its main factory and to reduce capital costs.
- Electronics manufacturing services company AmFor Electronics cited delivery responsiveness and ease of design revisions as reasons for on-shoring wire-harness production and some final assembly from China and Mexico to Portland, Oregon. After implementing lean production practices, AmFor also found that landed costs were lower than when it was using overseas suppliers.
- Farouk Systems says it is moving some final assembly of hair irons and dryers from China and South Korea to a 1,000-worker factory in Houston, Texas, in part to cut inventory costs.

We project that manufacturing growth in the tipping-point industries, combined with increased exports, will create 2 million to 3 million jobs over the coming decade.

Altogether, the U.S. has added more than 300,000 manufacturing jobs since the beginning of 2010, showing growth for the first time since the late 1990s and offering an encouraging sign for the next several years.

Projecting the Impact

We project that manufacturing growth in the seven tipping-point industries, combined with increased U.S. exports to Western Europe and other developed markets, will add \$80 billion to \$120 billion in annual output to the U.S. economy and create 2 million to 3 million jobs over the coming decade, of which manufacturing jobs will represent about 25 percent. In reaching these estimates, we addressed several questions: How much production in each industrial group now based in China can be expected to return to North America, and specifically to the U.S.? What would that production be worth? How much growth can be expected in U.S. exports? And how many U.S. jobs would be created directly in the form of factory employment and indirectly through services?

We estimate that 10 to 30 percent of goods in the tipping-point industries that the U.S. now imports from China could be “reshored” this decade. To estimate the impact, we evaluated factors such as logistics costs and evolving supply and demand in the domestic Chinese market and in the U.S. We also considered the “movability” of production. Will some production remain where it is, for instance, because it needs to be located in an established industrial cluster or because it would be too expensive to build new capacity elsewhere? This analysis allowed us to build a bottom-up view of the reshoring potential of each tipping-point industry.

The U.S. Impact. We expect that around three-quarters of the manufacturing that is reshored from China will likely shift to the U.S. in the coming decade. This increased production will add between \$20 billion and \$55 billion annually to the U.S. economy. Again, the impact will vary from industry to industry. We expect that the vast majority of computer and electronics manufacturing that moves from China will go to the U.S., for example, while Mexico could get a significant share of reshored transportation goods owing to its strong manufacturing and supplier clusters.

It is perhaps surprising that we do not expect Mexico to receive more reshored manufacturing. After all, by 2015, Mexico will have a distinct cost advantage in many of the tipping-point sectors. Labor costs will be lower than in both China and the U.S., Mexican productivity growth is accelerating, the peso is depreciating against the dollar, and duties are not an issue, thanks to NAFTA. However, Mexico's ability to absorb such a dramatic increase in production is likely to be limited by the availability of skilled workers, infrastructure, and supplier networks, and by safety concerns related to the drug trade. Even more important, Mexico's current production in some of the tipping-point industries is quite limited. For instance, while Mexican workers assemble computers and other electronics equipment, this amounts to only around \$500 million in value-added production because most of the components and materials are imported. In addition, U.S. workers have more experience operating sophisticated, highly automated production lines—and tend to stay in their jobs much longer. This, too, will contribute to making the U.S. a more attractive option for investment in new production capacity.

Export Potential. We estimate that in around five years, U.S. exports could increase by at least \$65 billion annually. The reason is that the U.S. is gaining a significant production-cost advantage in many industries over much of Europe, largely because wages across Western Europe have been rising more sharply than in the U.S. when adjusted for productivity. Between 2000 and 2005, manufacturing output per worker rose by 3.3 percent per year in Western Europe—approximately twice as fast as in the U.S. But in the latter half of the decade, annual productivity growth accelerated to 2 percent in the U.S. while it slowed to just 0.04 percent in Western Europe. Coupled with a U.S. dollar that has depreciated by an average of 3.6 percent per year against the euro since 2000, this meant that the average U.S. worker was around 35 percent cheaper per hour on a productivity-adjusted basis than the average Western European worker in 2010. That same worker was 26 percent cheaper in 2005 and only 12 percent cheaper in 2000.

We expect that the wage differential with Western Europe will continue to grow. The projected shift in cost competitiveness is dramatic when examined over a 15-year period. By 2015, U.S. productivity-adjusted wages are expected to be equal to only 67 percent of German wages. French labor costs will have risen by more than 40 percent against U.S. wages over that period, and Italian labor costs will be nearly 80 percent higher. Therefore, some companies might even consider the U.S. as a low-cost export platform for Western Europe, especially in industries in which logistics issues are not paramount.

The production gains from reshoring and exports would make a noticeable dent—around 25 to 35 percent—in the nonoil-related merchandise trade balance of the

Around three-quarters of the manufacturing that is reshored from China will likely shift to the U.S. in the coming decade.

U.S. Had these gains occurred in 2010, the deficit would have dropped from \$345 billion to as little as \$225 billion.

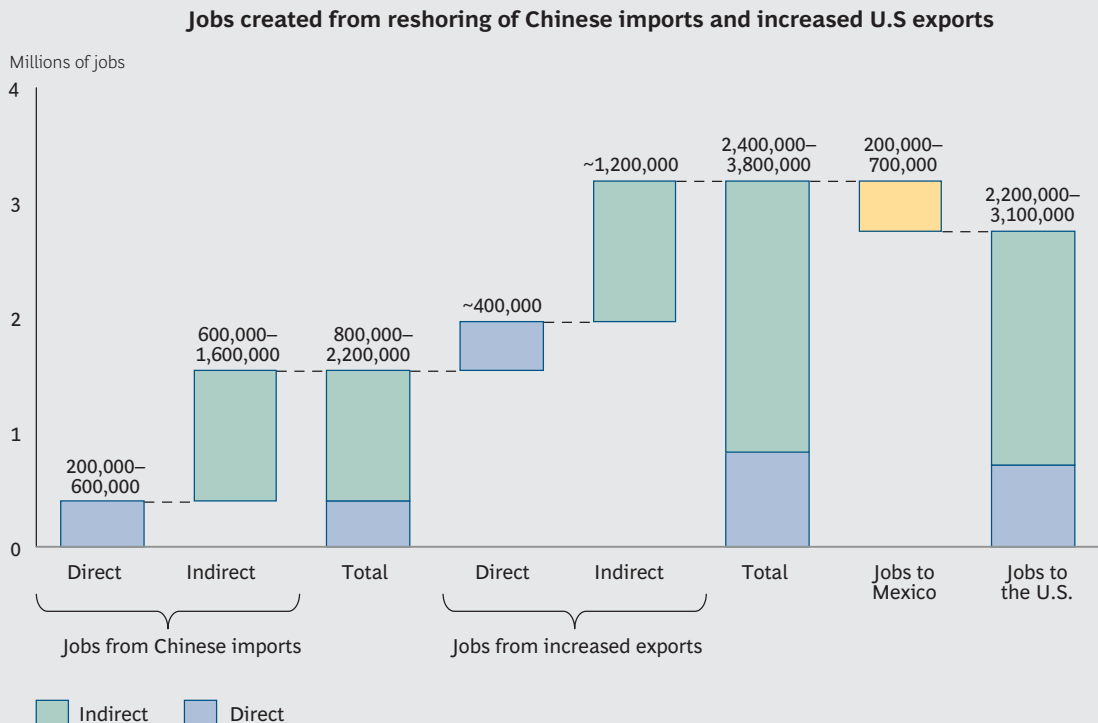
The Boost to Jobs. An American manufacturing renaissance would have a considerable impact on employment. By our estimates, the combination of manufacturing returning to the U.S. from China and higher exports will directly create between 600,000 and 1 million manufacturing jobs.

Each manufacturing job, in turn, will create jobs in sectors such as construction, retail, transportation, food services, and housing. A number of organizations, including the U.S. Bureau of Economic Analysis, the Economic Policy Institute, the New America Foundation, and the Public Policy Institute of New York State, have attempted to quantify this indirect impact and arrived at similar estimates, with multipliers ranging from around 2.5 to 3.5. Averaging these multipliers, we calculate that new factory jobs will create 1.8 million to 2.8 million additional jobs in the rest of the economy. (See Exhibit 5.) The addition of this many jobs would be enough to lower the U.S. unemployment rate by 1.5 to 2 percentage points.

Applying the New Manufacturing Math

To get a sense of how the changing cost dynamics could influence the location of

EXHIBIT 5 | Manufacturing Growth Could Create 2 Million to 3 Million U.S. Jobs in the Coming Decade



Sources: U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; U.S. Central Intelligence Agency, *The World Factbook*; BCG analysis.

future manufacturing, we performed a deep-dive analysis of a number of actual products within the seven tipping-point industry groups. In all cases, we found that Mexico has a cost advantage. Yet with a few exceptions, we expect that a significant amount of reshored production will go to the U.S. to take advantage of its greater experience base, larger skilled workforce, proximity to customers, and more secure operating environment.

One sector that is nearing a production-cost tipping point is car tires, a leading U.S. import from China within the plastics-and-rubber industry group. In the case of one car tire that we considered, China currently has a cost advantage over the U.S., despite the fact that its manufacturers have to pay the equivalent of \$11 in duties per tire. The duties were imposed by the U.S. government in 2009 in response to a trade action and are set to expire in 2012. By 2015, however, our model indicates that it will cost only 2.5 percent more to make that tire in the U.S., even in the absence of duties. All factors considered, including transportation costs, manufacture in the U.S. rather than in China could make more sense—assuming that the U.S. is the tire’s end market. Whatever cost savings might still be gained in China are unlikely to be worth the supply chain risks or to offset the logistical advantages of making tires close to where cars are assembled, which is mainly in the U.S. and Mexico for vehicles sold in North America.

A number of factors favor building more tire capacity onshore. North American demand is projected to grow from 437 million tires in 2010 to 576 million in 2017, an increase in sales of up to \$26 billion that would outstrip the ability of current U.S. production to service this region. Moreover, factories in China will still be required to supply the rapidly growing domestic market for cars and other vehicles. Tire demand in Asia is expected to grow by 5 percent annually through 2017, the fastest pace in the world, and by more than 50 percent by 2020.

If production costs were the only consideration, most tire production transferred from China would go to Mexico, where it would cost around 15 percent less. Yet we expect that 80 to 90 percent will go to the U.S., adding 27,000 to 46,000 direct factory jobs, because of better logistics, more skilled workers, and lower security risks. Reinforcing this trend, in October 2011, Continental announced that it would build a tire plant in South Carolina that would create 1,600 jobs. Bridgestone, Goodyear, and Toyo Tires are also expanding in the U.S.—further evidence that a tipping point is nearing.

The same is true for large kitchen appliances such as refrigerators, dishwashers, and stoves. Like car tires, these products are made in expensive plants, and they are also costly to ship. One appliance we studied now costs less than 2 percent more to make in the U.S. than in China when logistics and overhead are included. By 2015, wages and shipping will make it around 2 percent more expensive to make that appliance in China. And there is a very good chance that China’s costs will be higher than forecast.

Conservatively, we expect that around half the appliance manufacturing returning to North America will be done in the U.S., despite Mexico’s cost advantage. The appliance we studied, for example, would cost 9 percent less to make in Mexico, but

Conservatively, we expect that around half the appliance manufacturing returning to the U.S. will be done in the U.S.

the U.S. has more skilled workers who can operate sophisticated automated production lines. Some appliance manufacturers that have moved to Mexico have complained of quality problems due to shortages of skilled workers. Also, many U.S. state governments offer generous tax breaks, grants, and other financial incentives to companies that keep or expand production in the U.S. Electrolux recently secured \$137 million in financial support from state and local governments to help build a new plant in Memphis, Tennessee, that will make cooking appliances.

As the production cost gap with China continues to narrow, considerations that may have seemed marginal a decade ago—such as time to market, the availability of workers who can operate automated tools, and tax breaks—are likely to tilt the balance in America’s favor as a manufacturing location in a broad range of other industries.

The Implications for Manufacturers

The impact of rapid shifts in the cost structure between China and the U.S. is likely to be profound—both for the U.S. manufacturing sector and for companies that source their products globally. The message emerging from this analysis is that companies that have not done so already must start reassessing their global manufacturing footprint. This is especially true, and urgent, if they are in an industry nearing the tipping point, where the clear cost advantage of using China as an export base for the U.S. no longer applies. Those companies that continue to see China as the default option for manufacturing could find themselves at a competitive disadvantage.

Companies must approach this potential paradigm shift carefully and intelligently, however. Not long ago, too many companies rushed into China, spellbound by its cheap labor and fixed currency. Now they must avoid a wholesale withdrawal of production just because wages are rising and the yuan is appreciating against the dollar. What is required instead is a holistic, global, and long-term understanding of the total costs of making particular products for particular markets and the economic trends that will influence future costs.

That assessment should include worker productivity in different countries, labor as a share of total costs, the relative importance of logistics, and the myriad hidden costs and risks of operating extended global supply chains. Companies should also determine whether their Chinese production lines can be redeployed to supply China’s growing domestic market and other Asian nations. As companies ponder where to build new capacity or where to locate existing production, they must consider all factors and trends, for these investments will likely affect their competitiveness for the next two or three decades.

The winners are building flexibility into their supply chains now. For those companies planning to add new production capacity to meet demand in the U.S. market, it probably is time to take a fresh, hard look at the U.S.

About the Authors

Harold L. Sirkin is a senior partner and managing director in the Chicago office of The Boston Consulting Group and the author of *GLOBALITY: Competing with Everyone from Everywhere for Everything*. You may contact him by e-mail at hal.ops@bcg.com.

Michael Zinser is a partner and managing director in the firm's Chicago office and the leader of BCG's manufacturing practice in the Americas. You may contact him by e-mail at zinser.michael@bcg.com.

Douglas Hohner is a partner and managing director in BCG's Chicago office. You may contact him by e-mail at hohner.douglas@bcg.com.

Justin Rose is a principal in the firm's Chicago office. You may contact him by e-mail at rose.justin@bcg.com.

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