

The Deal

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Revisiting manufacturing

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Elkhart, Ind., population 52,000, garnered a dubious distinction last year: It topped America's unemployment charts. By May 2009, a whopping 20.3% of its workforce had lost their jobs. Residents figured a further 30% to 40% were underemployed. "It was dark. It was very bleak," says Steve Rorie, who has lived and worked in Elkhart for "all but seven of my 55 young years."

For more than a century, this proud city made things. However, in the years leading up to the 2008 recession, most of the musical instruments industry that once defined Elkhart's manufacturing prowess consolidated, then decamped for Asia. As oil prices soared and the economy fell apart, much of Elkhart's more recent-vintage recreational vehicle and prefabricated housing manufacturing also disappeared. As Mitchell Roob, the state's secretary of commerce, says bleakly, "Everything Elkhart made to sell got hit."

According to Bureau of Economic Analysis data, in 2008, metropolitan Elkhart ranked second to dead last in regional GDP change, declining more than 9%. That performance is likely to be repeated when 2009 figures are published later this year. "In many respects, it's a devastating picture, one building after another that's vacant," says Steven Wasser, who bought Elkhart's E.K. Blessing Co., a well-known musical instruments company started in 1906, in October for an undisclosed amount.

Given that grim scene, repeated so often in the media, it would be very easy to portray Elkhart as a symbol of America's sorry manufacturing state -- easy, if not accurate. The landscape is so much more complex than simply nudging that old Rust Belt metaphor for one spin. Just zoom out a single notch on your **Google** map of Indiana, and the industrial landscape looks dramatically different, even while you remain centered on Indiana flatlands. Travel to Warsaw, 40 miles south, on routes 19, 6 and 30, past Wakarusa, Nappanee and Leesburg. This town of just 13,000 on Winona Lake remains quite possibly the largest center of orthopedic medical devices in the world. "Thirty-five percent of the total world's supply comes out of this little place called Warsaw, Ind.," says Roob.

The U.S., in fact, has successfully maintained its hold on medical-device manufacturing, providing economic growth, technological innovation and lots of well-paid jobs in Warsaw (see story, page 44). Then there are Indiana's steelmakers. Of course, steel is often cited as the embodiment of America's industrial decline. So, what to make of Fort Wayne-based **Steel Dynamics Inc.**?

Three partners started Steel Dynamics from scratch in Indiana 16 years ago, raised \$400 million within a year and opened their first mill in 1996 in Butler, 73 miles southeast of Elkhart. Through a combination of greenfield projects, acquisitions and purchases out of bankruptcy, the company now boasts five separate steel mills, all domestic. Each has a different product line, plus steel-processing plants, producing a total of 7 million tons a year. In 2007, Steel Dynamics acquired the scrap iron giant OmniSource Corp. for \$1.1 billion, a move designed to ensure access to supply. The company now employs a total of 5,900 workers.

While 2009 proved difficult, Steel Dynamics wasn't overly dependent on a failing auto industry and regained profitability in the first two quarters of 2010. Frank Giarratani, who heads the Center for Industry Studies at the University of Pittsburgh, calls Steel Dynamics a real success story. Is American steel endangered? "Hell, no," responds Richard Teets Jr., a co-founder and head of operations, with a hearty laugh. "Don't put my tombstone out yet."

So manufacturing in America isn't dead, but does it have much of a pulse? The knee-jerk tendency in everything from politicians' stump speeches to Chamber of Commerce luncheons is to come down hard one way or the other: feast or famine.

As Timothy Sturgeon, senior research affiliate at Massachusetts Institute of Technology's Industrial Performance Center, says: "The debate is almost childish. On one side, it's the end of the world; on the other, everything is peachy." Instead, Sturgeon says, the role and status of American manufacturing equates to a very complicated formula. "I don't think we understand how all these things [related to manufacturing] play out."

This can cut both ways. Sturgeon cites one study that questions the accepted wisdom of productivity gains in U.S. domestic industry and suggests that at least part of this could be the result of offshore-made components being transferred back into the U.S. Other issues include everything from the oft-debated role Washington plays in research and development to the notion of China as a trade predator. The prognosis varies from sector to sector, sometimes from product to product within an industry. And it changes over time.

There's one constant that nearly everyone agrees on: Manufacturing remains vital to America's economic engine. For all sorts of important reasons, from wages to trade to social cohesion, from community well-being to education, manufacturing has outsized importance. "By any measure, it's a strong driver of our economic prosperity," says Timothy Sheehy, president of the Metropolitan Milwaukee Association of Commerce. "Manufacturing is the goose that lays the golden jobs. We have to make sure it's healthy."

The health or weakness of manufacturing affects a large swath of investment capital and its stewards as well. "We're the tail being wagged by this dog of an economy," says John Emory Jr., a Milwaukee-based investment banker, as he discusses midmarket-related manufacturing M&A, which, he says, dropped 90% from its peak pre-2008 crisis. It's now recovering, although not uniformly, with the lower end of the middle market lagging the \$100-million-plus deals. "We're intermediaries. If we don't have healthy companies, we don't have deals."

Through July, American manufacturing grew for 12 straight months, according to a report issued by the Institute for Supply Management. Manufacturing-related employment has increased for eight straight months. However, the rate of manufacturing growth eased in July, and two-thirds of the respondents to the study say they're keeping their employment levels steady. "Many manufacturing companies have been hitting the ball out of the park for the last three, four months. But they're worried it's not sustainable," says Emory, who serves as president and CEO of **Emory & Co. LLC**, which he co-founded with his father, former **Robert W. Baird & Co.** banker John Emory Sr. Instead, he says, companies are taking their profits and reducing debt. "They're not buying new equipment or hiring the marginal worker."

That tendency, which has been apparent nationally, is beginning to change, argues Tom Goin, who heads the new machine tools distribution company **Heartland Machines and Engineering**, based in Franklin, Ind. Inquiries "have quadrupled in the last 90 days," he says. Most manufacturers, he adds, have depleted their inventory and now need to quickly ramp up production again to fill orders.

Uncertainty also helps explain why manufacturing-related M&A hasn't come roaring back, especially in the middle market. "The M&A climate is typically driven by confidence," says Frank McGrew, a managing director with investment bank **Morgan Keegan & Co.** who leads the firm's industrial group. Until recently, "there's been a high degree of uncertainty and fear."

While far more potential buyers are sniffing around, says Emory, potential sellers remain "worried they'll slip in the middle of the deal process."

McGrew, however, says he's seeing more optimism, "much more dialogue, much more capital in the form of debt to make acquisitions." He's received interest in manufacturing from both strategic and financial players, the exception being Europeans, who have been preoccupied with their own problems. "Two years ago, a great majority of companies sold were distressed," McGrew says. "Today, it's much more about healthy companies."

Paul Rogalski, a managing director who heads the industrial investment banking group at Robert W. Baird, cites his bank's composite index of 250 public industrials. "Some of these companies clearly outperformed during the downturn, and a number of these businesses are PE-owned. They're looking at sales and exits."

Manufacturing now accounts for about 12% of the U.S. economy. A half-century back, almost 30% of GDP was manufacturing-related. (Manufacturing still accounts for more than 30% of China's GDP.)

Post-World War II, manufacturing also accounted for about 30% of America's workforce. That percentage remained remarkably stable until about 1970, when it began its long tumble. In early 2008, the figure dropped below 10% for the first time in America's post-agricultural history.

In absolute numbers, postwar manufacturing employment peaked in 1979, with 19.43 million workers, according to U.S. government data. In June 2010, that figure stood at 11.67 million. Meanwhile, the U.S. population has grown from 225 million in 1979 to more than 307 million today.

That decline has hit some states particularly hard. Wisconsin employed some 600,000 manufacturing-related workers as late as 1999, according to Sheehy. That number is down to 435,000. "Clearly, we've taken a beating," he says.

In many manufacturing endeavors, however, employment is one issue, production quite another.

Giarratani cites the steel industry. "We still produce a heck of a lot of steel, not that much less than historically," he says. That's especially true for specialty steel, he notes. "There hasn't been downsizing. Specialty is still very much U.S.-based," he says, adding that the Pittsburgh area continues to support 13 steel mills, nine of which make specialty steel.

As Pittsburgh, Cleveland and other Rust Belt cities attest, that is cold comfort for the once-massive steel-related labor force. "In Pittsburgh, we lost tens of thousands of jobs," Giarratani says. "We lost 50,000 jobs in two to three years," decimating the city. The steel industry as a whole has one-third the number of workers it had 20 years ago, Giarratani says.

Adds Chris Briem, a regional economist at the University of Pittsburgh's Center for Social and Urban Research: "We're always getting better at making things. They're just not great employment generators."

Elkhart itself is a jumble of contradictions. Unemployment remains high. According to the latest Elkhart County statistics, the jobless rate hovers at almost 14%. However, some industry is creeping back, largely because of the same highly trained workforce that got flattened by outsourcing and recession in the first place. In September 2009, Phillips Industries shut down its RV windows and doors plant, tossing more than 400 employees out of work. (The company eventually went bust.) Enticed by tax incentives, a small Norwegian electric carmaker called **Think Holdings AS**, backed by **RockPort Capital Partners** and an Indianapolis-based, publicly traded advanced battery maker called **Ener1 Inc.**, is moving into the plant, which has been designated for final assembly. According to a company spokesman, Think is scheduled to begin assembly of what it hopes will be 1,500 cars next year, and it expects to employ 440 workers by 2012.

Sweden's **Dometic Holding AB** made an even more counterintuitive play. This year, it moved its RV-related refrigeration manufacturing to Elkhart from Sweden. "We want to be close to our customers, and most of them are in Elkhart," says

Rutger Wachtmeister, the company's executive vice president of marketing.

As Mohan Tatikonda, a professor of operations management at University of Indiana's Kelley School of Business, says, "With all the bad has come some good."

Wasser, who owns high-end flutemaker **Verne Q. Powell Flutes Inc.**, headquartered outside Boston, is part of that movement back. He vows that his newly acquired Elkhart company, E.K. Blessing, will reverse years of outsourcing. "Our strategy is to make all our instruments in Elkhart and nowhere else."

"We have our pick of fine, well-qualified brass [instrument] makers," says Rorie, who now serves as Blessing's general manager after working more than 20 years at a competing manufacturer. "We not only want to base it in Elkhart, but grow it in Elkhart."

After Wasser acquired Blessing, his new unit also picked up the abandoned Damon Motor Coach building in Elkhart. Blessing is scheduled to move into the facility this month. It's retooling and rehiring, and while Wasser doesn't sugarcoat the difficulties, he speaks passionately of the benefits -- social and economic -- of U.S. manufacturing. He ticks off the advantages of locating in Elkhart: a highly skilled, highly specialized workforce, much more exacting quality control, a deep understanding of the product by those who make it. "It's nice to feel connected to your community," he says. "I hope one of the byproducts of the recession is that Americans start to pay more attention to and value what is made in the USA."

This isn't to say that the U.S. will -- or even could -- undergo an industrial renaissance that will reverse trends and produce millions and millions of new jobs; we're not going back to the '50s. Some manufacturing sectors -- most textiles, consumer electronics, plastics -- are probably lost forever, short of some technological transformation. This trend toward deindustrialization is nothing new. "We're in the latter stage of a shift of low-skill and unskilled jobs to lower labor-cost countries. That process really started in the late 1970s," says Stephen Guy, a managing director for the industrial investment banking group at Baird. For low-skill manufacturing, "whatever hasn't gone will be gone."

Or, as Bruce Springsteen sang nearly three decades ago, "These jobs are going boys and they ain't coming back to your hometown."

The debate now, Guy continues, "is more focused on skilled labor," providing the education and training that ensure

adequate manpower for increasingly sophisticated manufacturing processes and tasks.

That kind of labor migration has obvious advantages to both manufacturers and their workers. Productivity and efficiency are today's watchwords, with output per worker at all-time highs, despite the debates over productivity. For more fortunate workers, that's translated into higher wages. "Our employees are the highest paid in the industry," says Steel Dynamics' Teets. One year, his average employee's wages "were knocking on \$100,000."

For less fortunate workers, however, it often means lower-paying work or the unemployment line.

Because of the heightened use of technology in industry, the total number of manufacturing-related jobs will likely continue to fall, even among some of the more robust sectors. A manufacturing process that once required hundreds of laborers may now need only a handful.

Offshore competition shouldn't be minimized, either. China is in industrial ascent and has quickly become an enormous production machine whose trade is helped along by an artificially weakened renminbi and some pretty blatant protectionism. China is also moving up the value chain. China's authoritarian government is in the midst of an ambitious industrial policy that pours billions of dollars into applied R&D in up-and-coming sectors such as cleantech and renewable energy. That will further imperil American manufacturing.

All this helps explain why so many fear America is mired in a jobless economic recovery. "We're witnessing a great decoupling of company profits from jobs," wrote Robert Reich, the former secretary of labor, in a blog post last month. "Higher corporate profits no longer lead to higher employment."

That decoupling may eventually prove to be fallout from a serious slump, not a permanent condition. Besides, not everyone is enthralled with Chinese contract manufacturers. Like Powell's Blessing acquisition, a few dissatisfied manufacturers are actually moving back or reinvesting in U.S. assets. "Outsourcing is a very hit-and-miss proposition if quality is an issue and you're a relatively small player," says Wasser.

Adds Morgan Keegan's McGrew: "It's easier to ensure quality if you make it domestically."

For almost every example of manufacturing that has fled the U.S., there's a counterexample of one that's holding on. That's true even in long-buried American industries such as garments and electronics. "You have to see where the value flows from. If you only do what others can do, then it will flow to where the lowest costs are," says Kevin Meyer, who heads the consultancy **Factory Strategies Group LLC**. But if American manufacturers can add value in some way, he continues, whether that be technology, innovation or proprietary design, it's possible to overcome labor cost disadvantages. "I believe it can be done with some effort in any industry," Meyer says.

Take that most pedestrian of products, socks. China cranks out millions of generic black nylon or white cotton varieties, the kind indistinguishable from one to the next, available in dollar stores and department stores. When it comes to super-premium woolen, outdoor models, however, it's a different story. **Wigwam Mills Inc.**, a company making them in Sheboygan, Wis., is squared off against **Nester Hosiery Inc.**, whose factory is in Mount Airy, one of those North Carolina towns that defined American textiles for decades.

Or consider that most-talked-about sector, automobiles. **General Motors Corp.** and **Chrysler LLC** went bankrupt, and Washington poured tens of billions of dollars into bailouts that may have given the pair another chance while greatly reducing their onshore presence. Dozens of American automotive parts makers have fallen, including some major Indiana-based companies.

Some of those that survived have moved offshore as well. Ann Arbor, Mich.-based **Affinia Group Holdings Inc.**, for

example, has just filed to go public. A maker of brakes, filtration and chassis parts for the vehicle repair aftermarket, Affinia has closed down 46 plants in the U.S. in the past four years, transferring production to China, India, Ukraine and Mexico.

That doesn't mean vehicle manufacturing has forsaken the U.S. completely. Indiana boasts four auto-assembly plants. They carry the names **Toyota**, **Subaru** and **Honda**. Those plants are supported by hundreds of suppliers in Indiana, 275 of which are Japanese-owned. These transplants "saved automotive employment in the U.S., just not the American companies," says MIT's Sturgeon.

Commoditization is the word most often attached to manufacturing that has fled overseas and stands pretty much no chance of returning. Put another way, if the product is solely -- or primarily -- determined by manufacturing costs, the U.S. stands little chance of retaining it.

By contrast, says Frank Chaiken, a Cincinnati-based partner at **Thompson Hine LLP** who chairs his firm's corporate transactions and securities practice, "the more you take labor costs out of the equation," the more likely American manufacturing can compete.

But he and others don't limit the discussion to labor costs alone. Surprisingly for many, Indiana has, per capita, a larger percentage of its population devoted to manufacturing than any other state. The University of Indiana's Tatikonda lists three factors necessary to retain industry in the state, although he could be talking about most anywhere in the U.S.:

- A shift in production to high-margin goods, where "you're not trying to squish out every cent" in labor costs. Examples include airplane engines, pharmaceuticals and medical de-vices. "These are naturals for industries to stay here," Tatikonda says.
- Production customization and specialization, subject to constant improvement and refinement, with a greater reliance on technology and sophisticated manufacturing processes. These are "high-variety, low-volume products," made in small batches, he says. "It's easier and better if it's done here rather than offshore," he says.
- Locational advantage, what others often term "a proximity to the customer." When manufacturers must respond quickly to customer needs, it's a lot harder to pull off when factories are halfway around the world, when production is contracted to third parties and when goods have to be transported by ship. "The chain of control," says Tatikonda, is simply easier to manage when factories are in close proximity of management.

That includes the supply chain. In this age of just-in-time manufacturing, "[a]ll things being equal, manufacturers have to have a supply base close by," says Sheehy. "A global supply chain is a hassle."

Manufacturers depend on key vendors daily, if not several times a day, adds McGrew. A break in that chain "may cause the factory to shut down."

Sheehy cites **Bucyrus International Inc.**, a Milwaukee-based manufacturer of mining equipment, which has seen demand explode for its products from emerging markets. Bucyrus has 250 suppliers in the Milwaukee area, employing 15,000 workers. "That's a great example of the food chain that Bucyrus creates," Sheehy says.

A variant of this is product size. If the item is heavy or bulky -- steel is an example -- "freight is a very important part of the final delivered costs," says McGrew. Add to that the two months steel takes to ship from Asia, during which time customer demands may shift. "Every day in our business, orders are getting changed," says Teets.

Result: Any manufactured cost savings could be completely offset by shipping.

Government policy and regulatory issues can be another advantage. Defense is the most obvious, where the law dictates that manufacturing must be sourced onshore. Others, including medical devices, may be slightly less direct but still require regulatory approval, in this case from the Food and Drug Administration. "It's easier to monitor, control and permit," says McGrew.

American companies "have to focus on what is it that we have that gives us an advantage, what kinds of manufacturing to cultivate," says Chaiken. He sees the German model, "moving continuously up the technology curve and the quality curve," as one the U.S. should emulate. He adds that manufacturing-related M&A will reflect this. "You'll see acquisitions of technologies or acquisitions of companies that will move [the acquirer] in that direction," adding that middle-market companies "have greater incentives to figure out manufacturing here ... because they're not as easily able to take it overseas" as larger companies.

For many manufacturers, however, the attraction to offshore production centers is expected to increase over time, many believe, as those markets and their consumer demands grow. "Being in the country, in many situations, is frankly a prerequisite," says Baird's Guy. He cites Brazil and Russia as two countries in which local products must be made domestically.

So it's no longer a case of locating a factory offshore only to stay cost competitive. "Defensive moves that have been made in the last five or 10 years have come more or less to an end," Guy says. "Companies are thinking more offensively."

Many American manufacturing advocates fault Washington for not reacting more forcefully to this asymmetry. Critics of U.S. trade policy, such as Robert Scott at Washington think tank Economic Policy Institute, marvel at the continued vibrancy of American manufacturing but warn of a bleak future. China is usually fingered as the biggest threat. "As long as we allow China to compete unfairly, every industry is potentially threatened," Scott says.

While Scott slams China's overinflated currency and its discriminatory tariffs, he adds that Chinese governments, from Beijing to the provincial and city levels, put huge amounts of capital into the equation as well, in effect engaging in predatory investment. "China will invest whatever it takes to capture a growing size of every market," he charges.

Scott cites the solar industry. China has "spent much more than we have commercializing photovoltaics," he says. "They have invested in the solar industry and are buying the products simply to create demand. They have done the same thing in wind."

Solar photovoltaic cell technology is nothing new. It's been around the U.S. for decades. However, now that alternative energy is flexing its muscles and stands as a real growth industry in the U.S., which manufacturers are benefiting?

According to Ted Sullivan, who heads the solar technology practice for New York-based **Lux Research Inc.**, "most device manufacturing for [photovoltaics] has moved overseas for much the same reasons" as other outsourced manufacturing, primarily lower labor costs but also tax incentives and government loans. Asia produces 69% of total photovoltaic module manufacturing, according to Lux Research Solar Supply Tracker, more than half of which is made in China.

But this doesn't tell the whole story. Sullivan goes on to say that the American solar industry "has a few, very technologically competent companies" that compete quite well. They utilize new processes, new technology.

What's more, a few non-U.S.-owned companies have begun to locate manufacturing facilities in America to take advantage of the North American market and to save shipping costs.

That includes the German **Schott AG**, which opened a solar plant in Albuquerque, N.M., last year, producing both photovoltaic arrays and more advanced solar thermal systems. "We believe local manufacturing is essential to serve our customers," says Gerald Fine, the CEO of Schott Solar Inc. and the head of the North American operations of Schott's numerous other ventures.

"A highly trained workforce combined with automated manufacturing processes can create financially viable manufacturing in North America," he says.

Schott boasts 14 manufacturing plants in North America, employing 3,000 workers, including the 350 at the solar plant. "We're growing American jobs and growing a manufacturing base in the U.S.," he says, making a point to add: "I find it a little ironic that it's a German-owned company that's doing it."

Just back from a stint in Elkhart, Powell Flute's Wasser acknowledges his newly acquired company won't have an easy time of it. Blessing can't compete against mass-produced Chinese flutes on price alone. "If we were to focus only on student instruments, we couldn't make a go of it," he admits. In China, he adds, it's "all about producing as much as possible. Quality is secondary."

To become profitable, Blessing, which makes trumpets and trombones, must expand into other instrument lines, like French horns, Wasser says. Blessing must move upmarket as well, with higher margins, more craftsman-oriented, technologically advanced professional instruments.

"With judicious use of technology and pockets of skilled labor, we can become competitive," Wasser insists. There's another element, he adds: "How about pride and being able to make things in the U.S.?"