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SAY BYE-BYE TO THE LIKES *of River Rouge, and hello to smaller, smarter factories surrounded by industrial ecosystems that nourish innovation. But the next wave of manufacturing may require government's helping hand.*

Act II for American Manufacturing?

By BRUCE STOKES

LYNDORA, Pa.—Is American manufacturing dead? Those who think so point to manufacturing's plummeting share of the national economy as a predictor of its eventual demise. But they likely have never been to Butler County. Here, north of Pittsburgh, in the heart of western Pennsylvania, basic manufacturing still drives the local economy. It has survived around here—indeed, thrived—suggesting that America, too, has an industrial future.

Butler County's economy has long depended on making steel and fashioning it into precision tools, industries that most Americans think have largely fled overseas. To survive, companies here have successfully adapted, using flexible manufacturing techniques that marry computers with a skilled workforce to craft products for international markets. And in the wake of the worst economic downturn since the Great Depression, the unemployment rate in Butler County stood at just 6.8 percent in September, far lower than the national average.

The Obama administration's hopes for a second act for U.S. manufacturing center on high-tech, future-oriented products such as solar panels and biotechnology. There is reason to think these goods will play a big role. Their track record has been impressive, and their cutting-edge nature inspires public imagination. The wind-energy industry, for instance, is roughly a $20 billion business and is growing by leaps and bounds. Still, these technologies' contributions to the overall economy are statistically insignificant. Jobs in renewable energy, broadly defined (including wind, solar, and hydroelectricity), accounted for just 0.1 percent of total employment in the United States in 2007, according to Moody's Analytics. The makers of steel, aluminum, and other primary metals employed three times as many people.

"When it comes to new industries, it takes a while for them to grow," said Sophia Koropeckyj, a managing director at Moody's Analytics. So, for the foreseeable future, they'll be dwarfed in economic significance by existing manufacturing. Despite the near-disappearance of the American textile, apparel, and shoe industries, and the recent troubles of the auto industry, the United States remains—if tenuously so—the world's leading manufacturer, led by industries that rely more on technological precision and brainpower than on low-skilled labor—aircraft, sophisticated machinery, medical devices, and the like. But manufacturing's staying power is also thanks to old dogs, such as high-end steelmakers, that have learned new tricks.

An unlikely testing ground for the second act in American manufacturing is in western Pennsylvania, where the first act had its heyday. To the untrained eye, the two eras look much the same. Showers of sparks and unspeakable heat still mark the pouring of steel. But Andrew Carnegie would not recognize this steelmaking. To compete in an increasingly competitive world market, even traditional manufacturers must operate on the technological frontier. In its Lyndora plant, AK Steel operates the world's fastest and most productive coating and final annealing process, which chemically aligns grains on the surface of electrical steel so that—when it is used in a transformer that generates electricity—the electrons pass over it more quickly.

This is the future of American manufacturing, according to Sherle Schwenninger, who directs the economic growth program at the New America Foundation in Washington. "We need a broad-based manufacturing economy to provide jobs in the

United States," he said. And it can be done, he believes, because America's competitive advantage in the world market lies in "sophisticated and higher-value-added, fundamental manufacturing—things such as earth-moving equipment and safer mining and drilling technologies—that can meet the needs of emerging economies."

"This is manufacturing's moment," said John Engler, president of the National Association of Manufacturers, "precisely the right time for manufacturing to have a comeback." A broad-based manufacturing economy, however, may well depend on the right policy environment: lower taxes, smart regulation, a weaker dollar, better training for workers, and the preservation of local industrial clusters of large and small firms that feed off one another. That, in turn, requires the public's recognition that manufacturing has a meaningful role to play in America's future and a government-guided plan to make it happen. "Without a plan," warned Leo Gerard, president of United Steelworkers International, "American manufacturing will continue to atrophy."

SECRET TO SURVIVAL

The departures from the first act in American manufacturing may be more than technological. The geography will change, as will its configuration. Huge facilities with tens of thousands of workers are out. Factories won't look like the gigantic River Rouge auto-making complex that Henry Ford built in Dearborn, Mich., in the 1920s. Compact plants surrounded by clusters of small firms that service them will likely populate tomorrow's manufacturing landscape. Many of the factories will be in the South, where lower wages may help establish a new industrial heartland.

Manufacturing can also survive in the Rust Belt. AK Steel, for example, isn't merely surviving; it's flourishing. With more than 1,300 employees, it is Butler County's largest industrial employer. The company specializes in producing electrical steel (used in power transmission and distribution) and exports half of that. AK Steel is in the midst of a $135 million capital-expansion program, replacing three 1960s-era furnaces with a single, technologically advanced furnace. This will increase the plant's production capacity by 40 percent while improving productivity and quality. It will also give AK Steel the flexibility to make various steels, depending on customer demand.

A few miles away, in downtown Butler, Wise Machine is helping AK Steel become more productive. Workers at Wise are adapting one of AK Steel's continuous casters to resolve routine maintenance problems in hours, rather than days. Wise's two-dozen workers are traditional machinists who may soon be outfitted with iPads to boost their productivity.

In the nearby town of Cabot, Pa., more than 500 machinists at Penn United Technologies turn out a variety of precision parts, some for instruments used by orthopedic surgeons, others for the armature that reads computer hard drives. Thanks to automation, one person—instead of four—now operates four machines that load, monitor, and spot-check the quality of each machine tool to produce more widgets, with no defects, for customers worldwide.

The secret to Butler County's manufacturing success is not only a willingness to adapt but also the presence of an industrial ecosystem of sorts: a local network of companies and resources that help one another survive. At its core is AK Steel, which stayed in business while countless other steel mills in the Rust Belt succumbed to foreign competition. As a result, smaller businesses—such as Wise—that build parts and perform repairs for AK Steel have also survived. These companies are hothouses of innovation, spawning entrepreneurs who spin off to form their own firms. This, in turn, has preserved a skilled, local workforce.

Industrial ecosystems are important both in preserving traditional manufacturing and in developing cutting-edge, renewable-energy technologies, such as solar and wind. "Renewables have the benefit of being the new kid on the block," said Bruce Sohn, president of First Solar in Tempe, Ariz., the world's largest manufacturer of thin-film solar modules. "But finding the ability to compete and manufacture in the United States will be an ongoing challenge even for us, unless we make significant changes in our public policy."

NO. 1, BUT …

Measured as an engine for employment or as a chunk of the economy, American manufacturing has been retreating for two generations. The economy has shifted steadily from generating wealth by making things to counting on finance, insurance, real estate, and other white-collar activities to fuel growth. In 1947, manufacturing accounted for more than 25 percent of the nation's gross domestic product, while finance, insurance, and real estate produced less than 11 percent. *(See graphs on p. 14.)* By 2009, manufacturing had shrunk to 11 percent of the economy, while those other activities' share had doubled to 21 percent.

Moreover, the profile of American manufacturing has been transformed. Labor-intensive, low-value-added production has all but disappeared. The textile, leather, and apparel industries, which in 1977 accounted for nearly 7 percent of all manufacturing activity, shrank to less than 2 percent by 2008.

Increasingly, U.S. manufacturers have focused on producing capital-intensive goods: computers, electronic products, chemicals, and, soon, energy technologies. "The nuclear business has come alive again," said Eric Garrard, president of Wise Machine, whose shop is making coils for a nuclear reactor. "[It] may be the saving grace for a lot of the manufacturing firms."

But the new American manufacturing sector employs far fewer workers. Only 11 million people now make things in the United States, the lowest number since World War II.

Before the recent recession, however, the value of U.S. manufacturing output had reached an all-time high. The United States still hosts the world's mightiest manufacturing economy, producing 21 percent of all goods made globally. Japan is a distant second, at 13 percent. China, at 12 percent, ranks third.

The reason that the United States has remained the world's manufacturing leader while in relative decline is, in a word, productivity. U.S. manufacturers are the most efficient in the world. AK Steel, for instance, produces more steel today than in the 1970s, with a third of the workforce. This productivity has also helped fuel the rest of the economy. For every dollar that manufacturers spend directly, they foster another $1.40 in economic activity—a multiplier larger than for any other sector.

Manufacturing remains critical to American economic success. Exports of goods account for three-fifths of all U.S. sales abroad, paying the bill for imports of consumer products and oil. Without them, the U.S. trade deficit—at record levels before the recession—would be even worse.

Despite the recent boom in exports of goods, the nation's share of the world's manufacturing trade has been shrinking.

China is predicted to overtake the United States next year as the world's leading producer of manufactured items measured by value. And the future looks bleak. From 1989 to 2001, the United States recorded a trade surplus in advanced-technology products, including biotech. Those are the same capital-intensive goods that economists have long argued would naturally be Americans' domain, as the production of labor-intensive wares, such as apparel, moved overseas. Since 2002, however, the U.S. has run a deficit in advanced-technology trade.

Other hindrances may lie ahead. Workers can produce only as much as their plant and equipment permit, and until recently, U.S. industrial production capacity had grown robustly—through good times and bad. In the past decade, however, companies have shown a reluctance to invest in new capacity, which has grown at a third of its 1990s pace. When the economy eventually rebounds, this may limit U.S. manufacturers in satisfying domestic and foreign demand.

Manufacturers are also an important source of innovation, accounting for more than two-thirds of all research and development conducted in the United States. Since 1999, however, American manufacturers have increased their research-and-development investments outside the United States three times as fast as at home.

Manufacturing wages also bolster the economy. Manufacturing workers get higher pay and more generous benefits—20 percent higher in 2007—than Americans in nonmanufacturing jobs, although wages have recently been growing slowly, if at all.

"If you give up on manufacturing," New America's Schwenninger cautioned, "you give up lots of future productivity gains—and gains in the standard of living."

HOW TO INNOVATE

The conventional wisdom is that the United States can thrive simply as a place for research and development—that the country no longer needs to actually make things. But this assumes that new products spring full-blown from the minds of laboratory scientists. The reality is that in most industries, the manufacturing process itself is a critical factor in developing radically new products.

In Butler County, the presence of multiple manufacturers has been self-reinforcing. "People don't understand how much manufacturers feed off each other," said Diane Sheets, the business-development manager of the Butler County Community Development Corp. That symbiotic relationship is vital, she said, in prompting innovation and an entrepreneurial spirit.

For one thing, creating and sustaining a network of competitive manufacturing entails day-to-day interaction between suppliers and customers, which allows each to learn from the other. "The knowledge underlying emerging technologies requires person-to-person contact among manufacturing industries and between manufacturing and services," said Gregory Tassey, a senior economist at the National Institute of Standards and Technology. That interaction is harder when a company's supply chain stretches around the world.

New manufacturers also rarely emerge in a vacuum. They typically morph from existing businesses, when coworkers who think they can build a better gadget than their current employer go out on their own. In the 1970s, the founders of Penn United did just that, spinning off from Oberg Industries, another precision-tool firm down the road. This was history repeating itself: Oberg Industries, too, got its start when its founder left a larger local company in the late 1940s. If U.S. manufacturers move abroad, foreign entrepreneurs create these start-ups.

Consider what happened when the U.S.-based manufacturing of semiconductors and flat-panel displays for computers and televisions moved to China more than a decade ago, as Harvard Business School professors Gary Pisano and Willy Shih have recounted. At first, American economists saw no cause for concern, arguing that these weren't part of the core manufacturing capability that the United States needed. The experience that the Chinese gained in making computer chips and screens, however, taught them how to process ultrapure, crystalline silicon into wafers and to apply thin films of the silicon onto large glass sheets. By so doing, they created a solar panel industry that has become a major international player.

"The United States cannot continue to rely on outdated economic-growth strategies that fail to understand the complexity of industrial technology and the synergies among supply chains," economist Tassey said.

MEANS OF REVIVAL

During the past couple of years, a national preoccupation with Wall Street's meltdown and the ensuing recession has crowded out any serious debate about how to revive American manufacturing. So has the customary aversion to government-directed industrial policy, often demeaned as "picking winners and losers."

These attitudes, however, may be changing. Despite the distrust of government that Americans displayed in the November congressional elections, four of five Americans support a national manufacturing strategy, according to a poll that the Alliance for American Manufacturing conducted last spring. Proponents of a government-led strategy say that it needs to be comprehensive, with tax cuts, helpful regulations, and interrelated efforts to preserve and rebuild core industries, the small companies that cluster around them, and their skilled managers and workers.

So far, the specter of such a strategy hasn't raised the tea party's hackles or provoked a political furor over government's proper role. Indeed, political antagonists have found points of agreement. Recommendations issued in November by a bipartisan budget commission suggest growing sentiment that the corporate tax rate—among the highest in the world—ought to be reduced to encourage companies to base their operations in the United States.

Similarly, Democrats as well as Republicans support a tax credit for research and development, which lapsed a year ago for the 14th time in the past three decades. The United States accounts for about a third of the world's R&D spending, far more than the second-place Europeans. Still, relative to the size of its economy, America's spending on research and development ranks eighth among major industrial economies.

But R&D isn't enough. "An R&D policy should not be confused with a manufacturing policy," First Solar's Sohn warned. "The worst thing would be for us to tap into the ingenuity of our engineers and come up with products and manufacturing processes, and then go and put [them] overseas because that is the only place that it makes sense to make things."

Manufacturers gravitate to societies that show they want them, said Sohn, whose company operates factories in Germany, Malaysia, and Perrysburg, Ohio. "We were attracted to Malaysia," he noted,

"because of their focus on manufacturing. It starts with a tone in the country. Politicians and businessmen there have acknowledged the utility and value of having manufacturing as a base, and they have established a set of policies that were attractive," including lowering taxes and providing access to low-cost capital.

Subsidies can dry up, of course, and tax benefits can be withdrawn. Manufacturers also look for stable—preferably growing—domestic demand. That's one reason First Solar built a factory in Germany and is expanding it. German utilities are required to buy electricity produced by consumers' roof-top solar panels at a price set high enough to enable them to pay for its installation. Giving every consumer a chance to earn money as an electricity producer has sent German demand for solar panels skyrocketing.

A vibrant American market for manufactured goods will be harder to achieve, given the likelihood of continual slow growth. The 2009 economic-stimulus package sought to encourage the market by requiring that projects it funded include substantial U.S.-made content. Many economists and foreign governments decried the provision as inefficient and jingoistic. Yet it enabled United Streetcar in Clackamas, Ore., to begin the first production of streetcars in America in more than half a century. "The buy-America provision took the risk factor out, so we could make the start-up investment," said Chandra Brown, United Streetcar's president.

Foreigners, too, can be lured into making in the United States more of what they sell to Americans and to the rest of the world. Because of the recent decline in the dollar and the slow growth in American wages, it's become cheaper in many cases to manufacture in the United States than in Germany or Japan. As a result, Volkswagen is building a plant in Tennessee, and BMW's factory in South Carolina has become the largest exporter of U.S.-built cars. The federal government might also attract and keep manufacturers by matching the investment subsidies and tax breaks that China and Singapore offer.

Lowering the value of the dollar would preserve and expand the U.S. manufacturing base by making homemade goods a better buy for Americans and foreigners. The dollar is estimated to be overvalued against the Chinese renminbi by at least 20 percent. Reducing that to zero, according to the Peterson Institute for International Economics in Washington, would create about a half-million well-paying American jobs, mainly in manufacturing.

THE SKILL, THE DESIRE

But something more is needed to assure a vibrant future for American manufacturing: a skilled workforce. That's a scarce

How to Succeed in Exports ...

By Derek Thompson

THERE WAS NO WAY that Mark Rice could have known that the next e-mail he opened would change his business and his life. It was 2003, and somehow the world's largest shipbuilder (based in South Korea) had discovered Rice's small ship-manufacturing firm (based in South Baltimore) over the Internet. Hyundai Heavy Industries wanted his 30-person company—Maritime Applied Physics Corp., or MAPC for short—to build a specialized rudder that would instantly double his business.

Rice was honored. He was also, by his own admission, "wandering around in the dark trying to find trees." He didn't understand international business customs when he arrived in Korea on a typhoon-delayed flight. When he prepared the bid, Rice didn't understand licensing rules and inadvertently violated U.S. export law. Then, with the deal nearly complete, his bank said that the project was too risky and demanded that the company immediately repay its credit line.

Even with the best rudder in the world, MAPC still faced daunting hurdles that nearly killed the multimillion-dollar deal. Once you understand where Rice went wrong—at the bidding level, the finance level, and the export-control level—you also begin to understand some of the barriers that U.S. exporters face. The nation's trade challenge is not merely an issue of high domestic wages and voracious American consumers—although those matter, too. It is a question of commercial culture. The United States exports less than Germany while it manufactures more. The U.S. government offers less financial support for exports than Canada's does, despite greater exports of goods. And Washington applies byzantine rules to monitor specialized products, even though the nation's competitive edge lies precisely in those specialized wares that only Americans have designed and built.

AN UNDERDOG OVERCOMES

The obstacle course for exports looks daunting for small, inexperienced companies such as MAPC, but it isn't prohibitive. Rice ultimately found a bank, secured financing, won the bid, and doubled his business.

The Korean deal changed MAPC. It also changed Mark Rice. He became passionate about overseas trade and the promise it held for other small firms around Baltimore. With the help of Bill Burwell at the Commerce Department's Export Assistance Center, he designed a seminar to teach tech-savvy companies to follow in his footsteps—without mimicking his mistakes.

"Mark had the intellectual foresight to see a teaching opportunity," said Burwell, director of the center's Baltimore office. "Based on his experience, he helped us craft the first offering of ExporTech," a three-day seminar for executives on how to write an export business plan. In Maryland, it was an instant hit. Today, ExporTech has been replicated in at least 19 states and has assisted more than 300 clients. Even the federal government took notice, authorizing $11 million for the program in small-business legislation enacted in September.

"We made every mistake you could make in Korea, and we didn't want other companies to do the same," Rice explained in his office by a wind-whipped Baltimore pier that once bustled with shipbuilders. "I guess we succeeded because we were naive."

"But we were successful," interjected Jim Chafe, MAPC vice president.

commodity these days, even in Butler County. "Every kid who grows up here wants to go to college and work on Wall Street," said Wise Machine's Garrard, "not follow their fathers into AK Steel."

Butler High School has a highly regarded vocational education program that teaches the latest in manufacturing techniques. Almost all of its graduates find jobs. But there are only 43 participants—more students choose training to become beauticians than machinists. "If we want to replicate the highly skilled German workforce," said Scott Paul, executive director of the Alliance for American Manufacturing, "we need a seamless four-year program that starts in high school and goes through community college or technical schools that prepare students for manufacturing jobs."

That proposal costs money. Butler County Community College conducts extensive training programs for local manufacturers, but demand is down, partly because of cuts in the state funding that picked up much of the cost. Nationally, only 0.17 percent of America's GDP is invested in worker training. Germany spends nearly five times as much.

If skills are an obstacle, more money can help. But if it's desire that's lacking, all bets are off. In the past few decades, as manufacturing's share of the American economy and workforce has slipped precipitously, the perception has grown that U.S. manufacturing has no future. No doubt this has contributed, in turn, to the Butler County youths' tepid desire to pursue a manufacturing career.

Yet in Butler County, where the surviving manufacturers are showing some spunk, these fears seem premature. "There will always be a manufacturing sector in the United States—there has to be one," said Frank Vargo, NAM's vice president for international economic affairs. "The question is what kind of manufacturing. And that is a matter for policymakers to shape."

In any event, there is reason to hope. "The future is still in our hands," said Kent Hughes, director of the program on America and the global economy at the Woodrow Wilson International Center for Scholars in Washington, "if we don't sit on them." ■

R&D alone won't assure a future for **American manufacturing.**

The author, a senior fellow at the German Marshall Fund, is a contributing editor to National Journal.

... By Really, Really Trying

"That's the difference between naiveté and gumption."

HEAVY INDUSTRY, HEAVY RULES

A company that won't need help from ExporTech is Bucyrus International, a mining-equipment manufacturer in South Milwaukee, Wis. A century after producing three out of every four of the steam shovels used to build the Panama Canal, the *Fortune* 700 company has become one of the world's largest designers and builders of 30-foot, 500,000-pound steel contraptions that dig into the earth.

It's boom times for international mining, now that the world's fastest-growing countries—Brazil, China, India, Indonesia—are simultaneously experiencing urban industrial revolutions. "You have billions of people demanding not only new buildings and cars, but new water heaters, cell phones, and air-conditioner units," Bucyrus CEO Tim Sullivan said. "To make these things, you need iron ore, manganese, coking coal, copper." Bucyrus makes the machines that unearth those commodities.

Once a purely domestic juggernaut, Bucyrus is doing a flourishing business overseas. Like MAPC, it faced challenges that showcase the ways U.S. export rules can work for and against American companies. Last summer, Bucyrus reached out to the Export-Import Bank, a federal agency that helps to finance overseas sales for U.S. companies. Ex-Im Bank objected to Bucyrus's $600 million deal to sell equipment to a power plant in India on the grounds that it violated the agency's strict environmental standards. The decision caused a to-do at Bucyrus, until all-night negotiations and pressure from Congress persuaded the bank to accede.

However, with mining bids pending in India and South Africa, Bucyrus is still at the mercy of the agency's environmental standards and its slow processing of loan applications.

"I have no problem with establishing environmental benchmarks in lending policies, but those policies should not disenfranchise U.S. manufacturers," Sullivan said. "I don't know the internal mechanics of [Ex-Im Bank's] underwriting process, but it takes them two to three times longer to process loan applications in comparison to their foreign competition." The wait, he said, can take up to six months.

BANKING ON EXPORTS

That's not just bitterness talking. A wide range of experts, from business executives to think-tank analysts, say the same thing: Ex-Im needs to do more, faster. Frank Vargo, a vice president at the National Association of Manufacturers, noted that the agency guaranteed $21 billion of U.S. exports in 2009, a fraction of its Canadian counterpart's $80 billion in a smaller economy. "The Japanese," he said, "did well over $100 billion."

Ex-Im Bank's role is crucial in lending money to importers overseas and in helping firms on both ends of the deal secure cheaper loans. Charles Tansey, senior vice president at Ex-Im Bank, acknowledged that the agency's limited staff hurts its ability to process applications quickly. Caution is also necessary, he said, to protect American taxpayers from heavy losses. Still, more government-backed financing would mean more U.S.-made goods sold overseas.

"We need the financing process to be quicker," Bucyrus's Sullivan said. "It's this simple. We need to be faster too if we want to be more competitive."

The author is an associate editor at The Atlantic.

By Ronald Brownstein

It's probably no surprise that Seattle and its surrounding cities have developed an innovative and comprehensive program to encourage local businesses to increase their exports. After all, Seattle is coastal and cosmopolitan, Asia-facing and technology-embracing, home to world-girdling brands such as Microsoft, Boeing, and Starbucks. The tradition of trading abroad is as deep as the city's spectacular port.

It's a bit more unexpected to find northeast Ohio pursuing opportunities in Europe, Asia, and the developing world. In popular imagination, Cleveland and nearby cities such as Youngstown are victims of globalization stranded in a blasted Bruce Springsteenesque landscape of deserted steel mills and rusted cars. In all of these communities, the scars of America's manufacturing decline are etched in lost jobs and abandoned factories—hulking relics of the nation's industrial might that are now, as Springsteen recorded in his piercing ode to Youngstown, "just scrap and rubble."

Yet from that stony ground, renewal is sprouting. Companies that produce cutting-edge medical devices, thin-film polymers for display monitors, sophisticated heat-trapping components critical to cell phones, and dozens of other advanced products are expanding production across northeastern Ohio, hiring workers—and selling to markets around the world. "There is this pervasive sense that globalization hasn't been good to us," said Brad Whitehead, president of the Fund for Our Economic Future, a Cleveland-based nonprofit that underwrites economic development work. "But perception has not caught up to the fact that the industrial Midwest can be, and increasingly is, competitive in global markets."

Overall, the United States still imports more than it exports, and the list of products that were formerly made in America remains daunting. Opinion polls show that the public is increasingly souring on free trade. But the familiar narrative of decline and retreat before a tide of low-cost imports doesn't capture the full ledger of America's place in the global economy. Exports now equal about 11 percent of total U.S. economic output, about double the level of 1970. And more cities are benefiting from that rising tide of foreign sales than most Americans recognize—often, even in those cities themselves. Access to international markets is already central to the prosperity of many places where protectionism is often a winning political argument.

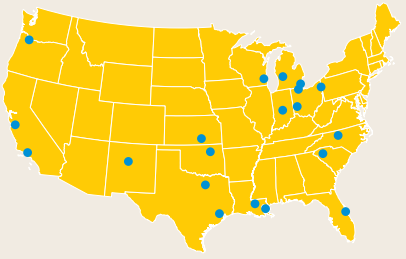
The Brookings Institution, in an illuminating study last summer, found that exports already account for at least 10 percent of the total economic output in 58 of the 100 largest U.S. metropolitan areas. Across those 100 communities, the study found, exports provide for more than 8 percent of total employment—7.7 million jobs. Fully 40 metropolitan areas have increased their exports by at least 10 percent annually since 2003, after adjusting for inflation. President Obama has set the ambitious goal of doubling American exports over the next five years. But "we already are more export-oriented than we think we are," said Bruce Katz, director of Brookings' Metropolitan Policy Program, which conducted the study.

Perhaps the study's most striking conclusion was the breadth of export activity. The 20 cities that most rely on export-related jobs include, not surprisingly, San Jose, Calif., Seattle, and Portland, Ore.—Asia-oriented hubs of high-technology innovation filled with young professionals, bike paths, and coffee bars that offer options of Euclidean complexity. But the list also includes places where the morning coffee run is more likely to McDonald's or Dunkin' Donuts: Hartford, Conn.; Rochester, N.Y.; Milwaukee; Greensboro, N.C.; and Toledo and Youngstown in Ohio. Only San Jose (at 22.7 percent) generated a larger share of its employment from exports than did Wichita, Kan. (22.3 percent), where a vibrant global-sales network has developed around civil-aviation powers such as Cessna and Hawker Beechcraft.

The Other Global Cities

The metropolitan areas where exports' share of total economic output is greatest are mostly inland, and their exports are growing.

Top metro areas by export intensity



Metro area	Export intensity*	Growth, 2003-08
Wichita, Kan.	28%	+112%
Portland, Ore.	21	+101
San Jose, Calif.	20	+27
Baton Rouge, La.	19	+83
New Orleans, La.	18	+101
Youngstown, Ohio	18	+40
Greensboro, N.C.	17	+35
Toledo, Ohio	16	+29
Indianapolis, Ind.	15	+30
Grand Rapids, Mich.	15	+12
Oxnard, Calif.	15	+39
Detroit, Mich.	15	0
Houston, Texas	15	+100
Greenville, S.C.	14	-11
Tulsa, Okla.	14	+78
Dayton, Ohio	14	+18
Milwaukee, Wis.	14	+36
Palm Bay, Fla.	14	+63
Dallas, Texas	13	+65
Albuquerque, N.M.	13	+27

U.S. avg. +46%

*Exports as share of total metro economic output, 2008.
Source: Brookings Institution

Yet in many, if not most, American cities, the importance of exports to the local economy is a mystery, Katz said. "When the president gets up and says, 'Let's double exports,' many local government, civic, and economic officials don't see themselves in that narrative." Most cities, Katz said, still define economic development as building stadiums or attracting "10,000 people to live downtown." Few have constructed a strategy to create jobs by systematically encouraging their businesses to sell into the global market. Formulating such a plan, he lamented, "is an unnatural act in most American metros."

Bill Stafford agrees. For two decades, he has headed the Trade Development Alliance of Greater Seattle, a pathbreaking effort to expand the region's opportunities in the international economy. Over that period, he said, the alliance's efforts "have been copied more overseas almost than in the United States."

The Seattle trade alliance shows what cities and regions can do when they recognize that they are competing in a global race. Launched in 1991, it organizes an annual "study mission" to learn from the economic strategies of major cities around the world (recent targets have included Abu Dhabi, in the United Arab Emirates; Helsinki, Finland; and Melbourne, Australia) as well as an annual trade mission that pursues market opportunities in such countries as China, India, Taiwan, and Vietnam. It assembles delegations that combine representatives of smaller companies and executives from Microsoft, Boeing, and other titans. "We use the big guys to open doors," Stafford said unapologetically.

At home, the alliance has organized workshops that provide technical assistance on every aspect of exporting, built a database that allows foreign economic officials to find local suppliers, and systematically marketed Washington state colleges and universities to foreign students—partly in the hope of attracting future entrepreneurs who will start local businesses. "It's an integrated approach," Stafford said. "The game is played so differently around the world. This country and, for that matter, our state and our region have been able to ignore [that]. We've been smug."

Smugness isn't a problem in northeast Ohio. Since the 1970s, the region has been battered by plant closings and population decline. Youngstown has lost about a quarter of its residents just since 1990. The region's challenges today remain formidable: In Youngstown's Mahoning County, unemployment approaches 11 percent.

But the city and the region no longer feel that they are in free fall. Local governments and nonprofit organizations have developed an array of programs to nurture new manufacturing firms, and amid all the challenges of the Great Recession, those efforts are producing green shoots. "We have a growing segment of advanced-technology companies," said Jay Williams, Youngstown's dynamic young black mayor. "These are all fairly small, not the steel mills of the old days with thousands of employees, but they are skilled and are seeing growth even in this economy." Central to that growth strategy, Williams said, is "expanding into exports and other markets."

Nationally, Brookings reports, only about one in every 100 U.S. businesses exports to foreign markets. As part of the strategy to promote export growth, northeast Ohio has systematically worked to broaden that circle. "The really interesting piece of this is how the exporting economy is becoming increasingly critical to the midsized manufacturers and even many of the startups," said Cleveland's Whitehead. "Companies are going into foreign markets earlier and as a more fundamental part of their strategy than they might have a decade ago."

One program helping Ohio companies take that leap is the Manufacturing Advocacy and Growth Network. For five years, it has operated a global-services program that provides practical guidance to businesses on how to enter foreign markets; just since July, about 500 companies have attended its programs. Dan Berry, MAGNET's president, said that the group is further expanding its assistance for small and midsized enterprises because all manufacturers will need "some level of competency working with international markets looking ahead."

Far too few urban officials are moving as systematically to help local businesses crack foreign markets and overcome obstacles that range from language barriers to intellectual-property theft. Brookings's Katz argued that the United States is unlikely to double its exports unless cities and counties set goals of their own—and establish concrete plans to meet them. "This really is a challenge to the current generation of city and metro officials to up their game," he said.

Stafford, in Seattle, similarly argues that the United States needs the equivalent of a "political campaign" to focus local officials and business executives on both the opportunity and imperative of selling more to nations whose economies are growing faster than ours. "It's going to take a major effort to get this country to look at exports and international competitiveness as a major thing we're going to need to do," Stafford said. "We're probably going to keep grinding along at 1 to 2 percent growth if we don't start exporting."

The author is the editorial director of National Journal. NJ researcher Scott Bland contributed to this report.

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