A U.S. MANUFACTURING STRATEGY

FOR THE NEXT THREE DECADES

BY STEPHEN GOLD
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American manufacturing needs a national strategy. It once had one—more than 200 years ago. The architect was Alexander Hamilton, among the most foresighted of the Founding Fathers. The world of 2012 is dramatically different from that of 1791, and yet Hamilton’s words are eerily reflective of the current evolution of public opinion: “The expediency of encouraging manufactures in the United States,” he told Congress in his Report on Manufactures, “which was not long since deemed very questionable, appears at this time to be pretty generally admitted.”

That statement is as true in the early 21st century as it was in the late 18th century. A sector that was ignored by policymakers or even mistakenly given up for dead a decade ago is now viewed as key to our country’s economic survival. After all, among other things, manufacturers generate more economic activity across society, invest more in research and development (R&D) and innovation, and export more than any other sector.

Because of this welcome change in public perception of the factory sector, over the past few years a growing number of influential factions have called for a national manufacturing strategy. While such a focus on manufacturing is long overdue, industrial strategies are not completely novel in the United States. In January 2004, the Bush administration released its version, a list of 31 thoughtful recommendations culled from a series of manufacturing town hall meetings held across the country. Had even a handful of those recommendations been adopted, the story of American manufacturing—including the search for greener pastures overseas, the 20% contraction during the Great Recession, and the inability of manufacturers today to find enough skilled workers for their shop floors—might have taken on a different tone. Unfortunately, for the most part, the recommendations were ignored by lawmakers.

Without a national strategy, manufacturing employment in the United States has steadily declined, as has manufacturing as a percentage of U.S. GDP. Not surprisingly considering this downward drift, in 2010 (according to the United Nations), the United States gave way to China as the world’s top manufacturing economy in terms of output.

Given its singular focus on creating a global export platform, China’s rise as a manufacturing powerhouse was likely inevitable; America’s manufacturing decline was not. Rather, as Rob Atkinson and Stephen Ezell of the Information Technology and Innovation Foundation (ITIF) have advanced, unlike the dwindling footprint of agriculture that came from higher productivity, American manufacturing’s decline has resulted purely and simply from a loss of international competitiveness.

Other nations have manufacturing strategies. We should have one as well. Note that, in this context, an industrial strategy is not the same as an industrial policy.
Industrial policy involves politicians “picking winners”—that is, favoring specific industries and technologies over others through incentives and the reallocation of resources. It is true that the federal government is well situated to assist directly and indirectly in the research and development of nascent technologies—for example, the spillover effects from the Apollo space program are well known. The combination of politics and bureaucracy makes most industrial policies wasteful of taxpayer dollars at best, and breeds corruption at worst. Markets are far more efficient and effective at picking winners because, as James Surowiecki observed in his popular book *The Wisdom of Crowds*, they involve the aggregation and dissemination of information by groups, resulting in decisions that are typically better than those made by any lone politicians or regulators.

Thus, instead of politicians creating narrowly based incentives for specific companies and industries, a national manufacturing strategy should involve broadly based policies that support a more alluring climate for production and innovation across the board. If the world’s best manufacturers are scrambling to build factories, invest in R&D and capital equipment, and create new jobs in this country, such a strategy will raise living standards far higher and broader than a narrow industrial policy.

There’s no need to reinvent the wheel—a number of manufacturing strategies have been proposed in recent years. While there isn’t space here to review the hundreds of policy proposals now being promoted, here are some broad concepts to propel American manufacturing well into the future.
Tax and Regulatory Reform

A national strategy must first be grounded on the principle that, in the words of the National Association of Manufacturers (NAM), “The United States will be the best place in the world to manufacture and attract foreign direct investment.” To that end, the nation needs a tax and regulatory climate that encourages R&D and production here while still serving the purposes of government. The United States has the highest statutory corporate tax rates among developed countries, at 39.2% (federal and state combined). Moreover, according to a joint study by the Manufacturers Alliance for Productivity and Innovation (MAPI) and NAM, America’s pollution abatement costs are higher than those of any of its major trading partners. The NAM’s Manufacturing Renaissance: Four Goals for Economic Growth (October 2011) challenges politicians to create a better tax climate and perform more effective cost-benefit analysis on federal regulations. On the tax side, this includes reducing corporate rates to at least 25%, ensuring lower individual income tax rates for the 70% of manufacturers who operate as pass-through entities, and increasing the R&D tax credit to 20% and making it permanent.

On the regulatory side, this includes requiring federal agencies to select the lowest-cost alternative among regulatory options, strengthening the Regulatory Flexibility Act to ease the burden on small businesses, and strengthening Executive Order 12866 to include cost-benefit analysis on the 90% of rules that will have less than a $100 million impact on the economy.

Better Education and Continuous Training

America’s advanced manufacturing processes of today require a high level of science, technology, engineering, and mathematics (STEM) skills. Yet according to a skills gap survey by The Manufacturing Institute and Deloitte, two-thirds of manufacturers say they can’t find enough workers with sufficient skills. This translates into roughly 600,000 open manufacturing jobs at any one point in time. Without a steady supply of qualified employees here, manufacturers will go abroad to make their products.

Creating a more educated, better prepared funnel of students must be part of a national manufacturing strategy. In Why Does Manufacturing Matter? Which Manufacturing Matters? (February 2012), the Brookings Institution points to Germany’s approach to education as a model. That approach includes a so-called “dual educational system” that channels students who aren’t interested in a post-secondary diploma into a vocational school and an apprenticeship with a company.

Our country made a serious mistake decades ago when it virtually abandoned the vocational education track in our high schools. A national manufacturing strategy should include a coordinated approach in which secondary schools work with industry to help re-introduce this opportunity. Community colleges will play an increasingly important role as well, and organizations such as the NAM’s Manufacturing Institute are helping by developing a standardized Manufacturing Skills Certification System for use in two-year post-secondary schools.
American students once led the world in these areas; now their aptitude scores rank in the bottom half of the developed world. If the United States is going to maintain its leadership in innovation, it also must help re-engage its youth in STEM. The nation needs a coordinated focus by elementary and secondary teachers, government leaders, and the private sector to develop a long-term plan for improving our nation’s math and science instruction.

Open Markets and Enforcement of Global Trade Laws

U.S. manufacturers presently account for more than half of all exports from this country. In plain economic terms, without the more than $1.1 trillion in receipts for exported manufactures, this country would be forced to increase its borrowing or foreign investments to offset the well over $2 trillion in imports. A more activist trade policy must be part of any manufacturing strategy moving forward. As ITIF points out in its September 2012 National Traded Sector Competitiveness Strategy, such a policy should include both expanded trade promotion and trade enforcement components.

While the aforementioned policy changes would encourage “reshoring” and thus help our balance of trade by decreasing imports, ITIF notes several ways the federal government can boost exports. First and foremost is forging new trade agreements. As this country is currently negotiating one new agreement, the EU is in negotiation with the Association of Southeast Asian Nations (ASEAN), the Gulf Cooperation Council (GCC), and five separate countries—including India and its market of 1.3 billion consumers. Congress should also expand our Manufacturing Extension Partnership (MEP) export assistance program, which helps small and mid-size manufacturers sell goods abroad.

Trade promotion isn’t enough. As events of the last decade demonstrate, a growing number of countries are adopting China’s mercantilist approach to trade. Without enforcement of the rules that have governed global trade for the past half-century, the market-friendly system that ensured mutual advantages to all will break down completely. Any national manufacturing strategy will have to include a stronger response to currency manipulation, intellectual property theft, and comparable “win at all costs” tactics as practiced in emerging markets.

Federal Support for Basic and Applied Research

To achieve the kinds of breakthrough advancements needed to maintain our industrial competitiveness, federal funding for manufacturing-specific basic and applied research are essential to any national strategy. Manufacturers invest more in R&D than any other sector, particularly in areas related to their specific customers and markets—but in tough economic times, companies become more risk-averse with their business decisions. As physicist Geoffrey West observed in a recent interview with Edge.org, “It’s not surprising to learn that when manufacturing companies are on a down turn, they decrease research and development, and in fact in some cases, do actually get rid of it, thinking this is ‘oh, we can get that back in two years we’ll be back on track.’” Moreover, as Harvard Business School professors Gary Pisano and Willy Shih explain in their HBR report, “Does America Really Need Manufacturing?” (March 2012), the private sector has less incentive to invest in basic or applied research because, “the payoffs are too far in the future and too diffuse.”
That’s why since World War II the federal government has played a substantial role in basic and applied research—funding that has helped stimulate manufacturing innovation in the U.S. For example, as Pisano and Shih note, it was government-funded research in metallurgy that enabled American jet engine manufacturers to develop advanced materials and ceramics capable of withstanding extreme heat and pressure. The Defense Department played an important role in the development of the Global Positioning System and, of course, it was the applied research of the Advanced Research Projects Agency that ultimately led to the creation of the Internet.

Federal funding for basic and applied research has declined over the past decade, and the President’s Council of Advisors on Science and Technology has called for ramping the level of funding back up—particularly in such manufacturing-related areas as robotics, nanotechnology, and biomanufacturing. If policymakers want U.S. manufacturing to compete in the coming decades with their global counterparts, a long-term commitment to funding basic and applied research is a must.

Infrastructure and Energy Strategy

No national strategy would be complete without ensuring the long-term fitness of America’s infrastructure—not just its roads, rails, ports, and bridges, but its electricity and telecommunications grids as well. In a strategy unveiled in April, titled Value Added: America’s Manufacturing Future (April 2012), the New America Foundation notes that reducing infrastructure congestion and bottlenecks and creating “smart” transportation and communications systems are important factors in reducing the costs to U.S. manufacturers. Rather than the current piecemeal approach, Congress needs to adopt a long-term strategy to target and pay for the refurbishing of our transportation infrastructure. An integrated approach involving federal and state incentives and private-sector investment would ensure the creation of a 21st-century electricity and communications system.

The New America Foundation also promotes policies that ensure lower energy costs as a critical factor in maintaining a competitive manufacturing base in the United States. No sector is more dependent on plentiful, inexpensive energy supplies—manufacturers consume about one-third of the energy in this country. With the varied resources now available across North America—including new gas and oil reserves that modern technology can safely secure and transport—U.S. policymakers’ conscious evasion of a long-term national energy plan is nothing short of a dereliction of duty.

Never before have so many organizations and policy experts harmonized so clearly on the need for a long-term manufacturing strategy. It’s time to set aside political differences and work together to ensure American manufacturing remains competitive for decades to come.

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