



SCHOOL OF
**PUBLIC AND
ENVIRONMENTAL AFFAIRS**
Indiana University



What the Next President Should Do About U.S. Manufacturing: An Agenda for the First 100 Days

Supporting the Manufacturing Industry in the U.S.A.

Convened by the Indiana University School of Public and Environmental Affairs
Initiative on U.S. Manufacturing and Public Policy

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Presented by:
Alliance for American Manufacturing
Committee to Support U.S. Trade Laws
Information Technology and Innovation Foundation
King & Spalding
Manufacturers Alliance for Productivity and Innovation
Woodrow Wilson International Center for Scholars

**From the Dean of the Indiana University
School of Public and Environmental Affairs**



To encourage fresh thinking on the critical manufacturing policy issues facing the nation, the Indiana University School of Public and Environmental Affairs (SPEA) launched the Manufacturing Policy Initiative. This is the first and only university program in the country devoted to studying public policy issues related to U.S. manufacturing. In September 2016 we brought together experts from all sectors at a conference in Washington, D.C., with a goal of creating a policy roadmap for the next president. The conference produced what is before you: a series of position papers crafted by individuals and teams with deep experience in the issues.

We hope you find this document a helpful companion during the debates and policymaking ahead. We welcome your feedback and, most especially, we urge you to join us in our efforts to sustain and re-energize American manufacturing.

A handwritten signature in black ink that reads "John D. Graham".

John D. Graham, Ph.D.

*This event was intended to serve as a voter education event.
All candidates received invitations to participate in this event.
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What the Next President Should Do About U.S. Manufacturing: An Agenda for the First 100 Days

Conference Summary Report

Written by **Thomas J. Duesterberg, Ph.D.**

Former Executive Director, Manufacturing and Society in the 21st Century Program,
The Aspen Institute

A conference convened by Indiana University's School of Public and Environmental Affairs ("IU SPEA") and organized by its new Manufacturing Policy Initiative outlined an aggressive agenda for the incoming president to support the crucial manufacturing sector. Keynote speakers noted the importance of manufacturing to the national economy: It supports 12 percent of GDP directly and nearly one-third indirectly through its connections to production of natural resources, transportation, finance, and wholesale and retail trade; the sector offers above-average wages and benefits to its workers; it performs over 75 percent of research and development (R&D) and is a source of around one-half of all patents in the United States; it is a major source of productivity growth and innovation; and it provides meaningful jobs and careers for both college educated and less-than college educated skilled workers.

Despite its vibrant performance and centrality for the U.S. economy and its workforce, many challenges face this sector. Among these are growing international competition, slowing productivity growth and entrepreneurship; weakening capital investment; a shortage of skilled workers; and the erosion of the industrial base required for national defense.

These challenges have led to diminishing confidence in the future of the sector and, related to this, a weakening cultural preference for the types of education, investment and career choices needed to ensure its prosperous future.

The major recommendations for policy changes provided to the incoming administration by the six expert panels that convened for the conference are summarized below.

EDUCATION AND THE SKILLS GAP IN MANUFACTURING

Senior manufacturing executives consistently report that the most important barrier to building or expanding their firms is a lack of adequately trained workers for production jobs in the modern factory. The United States also does not produce the supply of engineers, physical scientists, and mathematicians needed for advanced technology production and research. ***The Conference Panel recommended:*** the urgency of having the president and senior cabinet officials lead an effort to reverse the negative image of manufacturing and manufacturing work in the United States and rebalance federal education programs to better support skilled training for this sector, instead of uniquely channeling students into college-bound tracks. Needed programs include, importantly, apprenticeships in schools, manufacturing firms, and union training centers; regional and local training programs such as those for the aerospace sector and skilled machinists for the auto sector; and related work-based training programs. The panel also encouraged business to work with all levels of government and invest in apprenticeships and other work-based training programs.

INTERNATIONAL TRADE

Manufacturing is the most trade-intensive sector of the U.S. economy, and accounts for the entirety of its growing trade deficit. The trade gap in manufacturing reached \$630 billion in 2015 (including a \$385 billion gap with China alone), and

\$92 billion in advanced technology products. Although the panel stressed the value to producers and consumers alike of free and fair trade, it cautioned that more robust efforts must be employed to combat unfair trade practices by global competitors. **The Conference Panel recommended:** a moratorium on new trade agreement negotiations while we convene a high-level, bipartisan presidential commission, including members of Congress, to undertake a comprehensive review of all aspects of trade policy, with particular attention to its impact on U. S. manufacturing; responding to currency manipulation by competitors by including anti-manipulation clauses in all trade agreements and applying the countervailing duty law to currency undervaluation; and making a sustained commitment on the part of the incoming president to the highest levels of enforcement of existing U.S. trade laws.

TAX POLICY AND MANUFACTURING

Due in no small part to aggressive tax-cutting by major industrial nations in recent years, the United States now has one of the highest corporate tax rates in the world, and the tax code serves as a major barrier to domestic investment in the manufacturing sector. It also serves as an incentive to maintain profits outside the country. **The Conference Panel recommended:** reduce the corporate tax at least to 25 percent, and to similar levels for non-corporate pass through entities; adopting a territorial tax system consistent with those of 28 of the 34 industrialized countries in the OECD; change the cost recovery (or depreciation) rules to approach full, first-year expensing of capital equipment, and enhance the Research and Experimentation (also known as R&D) tax credit to as high as 20 percent to help promote investments in new products. The latter recommendation was also a part of the Research and Innovation panel report.

STRENGTHENING THE DEFENSE INDUSTRIAL BASE

The intensification of global competition, increasingly in high-tech sectors, and the growth of outsourcing have led to an erosion of the national industrial base required by our world leadership and national security role. Decreases in budgetary outlays for new equipment, dispersals of supply chains, changes in military procurement strategies, and reductions in R&D expenditures by the federal government have contributed to this erosion. **The Conference Panel recommended:** consistently apply existing regulations and create needed new ones to give preference to domestic suppliers for defense procurements for equipment and materiel; change current incentives (both tax-related and revenue-based) that move domestic production offshore; maintain existing designation of China as a non-market economy to prevent dumping or otherwise capturing sensitive markets important to the defense industrial base in areas such as rare earth materials; and enhance planning and strategy for our defense industrial base.

REGULATORY REFORM

The United States is a highly regulated economy, which especially affects the manufacturing sector. Over 3,500 new regulations are added each year, cumulatively imposing a burden nearing \$1.9 trillion on the economy each year, including a cost nearing \$20,000 per manufacturing employee and nearly \$35,000 for those in small manufacturing firms. To counter this trend, which impedes economic efficiency and productivity growth, **the Conference Panel recommended:** adopting a “do more good than harm” philosophy that would include rigorous cost-benefit analysis, reviews of existing regulations, and adequate resources devoted to analysis and enforcement; streamlining the time-consuming permitting process for infrastructure and for construction and enlargement of existing factories; and presidentially led standards of accountability for all regulatory agencies.

MANUFACTURING TECHNOLOGY POLICY

The manufacturing sector is crucial to R&D and product and process innovation in the United States, yet its leadership position in world high-tech production is weakening as competitor nations ramp up their high-tech support programs. In 2009, only 42 percent of U.S. manufacturing was in medium- or high-tech sectors, compared to 58 percent in Germany, 48 percent in Japan and 52 percent in South Korea. U.S. exports of high-tech products have eroded as numerous competitors intensify efforts to build new high tech industries. In order to reverse this trend, **the Conference Panel recommended:** significantly expand funding for the National Network of Manufacturing Innovation (NMMI); pass and fully fund the National Manufacturing University Act to create a national network of at least 20 universities that brand themselves as manufacturing universities; increase funding for the Hollings Manufacturing Extension Partnership (MEP); and increase the scope of the R&D tax credit to at least 20 percent, and extend its coverage to all sectors.

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International Trade, China, and TPP

Terry Straub, Panel Moderator

Former Senior Vice President of Public Policy and Governmental Affairs, U.S. Steel

U.S. Manufacturing, China, and the Trans-Pacific Partnership (TPP)

Written by Stephen Vaughn

Partner, King & Spalding;
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BACKGROUND

To understand fully the challenges facing U.S. manufacturers, it is vital to appreciate the challenges resulting from globalization, including the impact of U.S. trade policy and the actions of other countries – particularly China – on domestic manufacturing. As shown below, there are strong reasons to believe that American manufacturers are not well served by current U.S. trade policy:

- For years, the United States has run massive trade deficits in the manufacturing sector. Data from the U.S. Department of Commerce (DOC) indicate that the U.S. manufacturing trade deficit rose from \$361.5 billion in 2002 to \$542.1 billion in 2007. After declining to \$318.5 billion in 2009 – a decline that reflected the effects of the global economic crisis – this deficit once more began to rise. Last year, it reached an all-time high of almost \$630 billion. These figures show that year after year, the value of manufactured goods imported by the United States far exceeds the value of manufactured goods exported by this country. In short, these figures measure the extent to which U.S. manufacturers are finding it difficult to compete with competitors in other countries – both in this market and in other markets.
- Much of the U.S. manufacturing trade deficit results from U.S. trade with China. DOC data indicate that from 2009 to 2015, the U.S. manufacturing trade deficit with China rose from \$240.1 billion to \$385.0 billion.
- It should also be noted that the challenges facing U.S. manufacturers are not limited to what some think of as “traditional” manufacturing. The difficulties discussed in this paper affect all aspects of U.S. manufacturing, including new and technologically advanced products. Last year, for example, the U.S. trade deficit with respect to Advanced Technology Products was almost \$92 billion.
- U.S. manufacturers often find themselves at an unfair disadvantage due to market-distorting policies in China. Last December, the Office of U.S. Trade Representative (USTR) reported that “Many of the problems that arise in the U.S.-China trade and investment relationship can be traced to the Chinese government’s interventionist policies and practices and the large role of state-owned enterprises and other national champions in China’s economy, which continue to generate significant trade distortions that inevitably give rise to trade frictions.”
- U.S. companies also find themselves at an unfair disadvantage in China due to non-tariff barriers, such as the uneven enforcement of key rules and regulations. Earlier this year, the American Chamber of Commerce in the People’s Republic of China reported “although American business in China has exemplary compliance programs in place, there are increasing concerns about transparency, predictability, and fairness of the regulatory environment, and especially in the absence of effective judicial remedies.”



ABOUT Terry Straub

Terrence “Terry” Straub served as a leading advocate for the interests of the American steel industry in general, and for U.S. Steel in particular, from which he retired in 2009 as Senior Vice President of Public Policy and Governmental Affairs. Through his leadership positions at U.S. Steel, as well as in many trade organizations and government advisory committees, he helped craft domestic and international policy affecting the steel industry.

Earlier in his career he served President Jimmy Carter as special assistant for congressional affairs, managing legislative strategies for creating the Department of Education and for reorganizing the federal government. Before his Washington career, Mr. Straub served in a number of Indiana state government positions and national political campaigns. He is currently a Fellow in the Advanced Leadership Initiative at Harvard University.

He holds a Bachelor’s degree in Business from Indiana University and a Master’s degree from the Johns Hopkins School of Advanced International Study.

- Since October 2000 – when Congressional approval of permanent normal trade relations made it clear that China would enter the World Trade Organization (WTO) – U.S. manufacturing employment has plummeted. In that month, there were over 17.2 million manufacturing jobs in the United States. Since then, almost 5 million manufacturing jobs have disappeared. Absolute job losses on this scale did not afflict the U.S. manufacturing sector prior to 2000.
- U.S. producers also seem to be at a disadvantage by comparison to their competitors in countries that have free trade agreements (FTAs) with the United States. Based on the figures above, last year the United States had a manufacturing trade surplus of \$13 billion with FTA countries. That surplus, however, results from using data for total exports including “re-exports” – products that enter this market and are re-exported without further manufacturing in the United States. If one compares domestic exports to imports for consumption – data that exclude re-exports, and thus focus more precisely on the performance of manufacturers in this country – then last year the United States had a manufacturing trade deficit of almost \$100 billion with its FTA partners.
- There is widespread political opposition to current U.S. trade policies. Trade Promotion Authority lapsed completely from 2007 to 2015, due in large part to Congressional opposition, and today it is unclear whether the Congress will approve the Trans-Pacific Partnership – a major trade deal between the United States and 11 other nations.
- These facts raise concerns not only about developments in this country, but about the ability of U.S. manufacturers to access markets elsewhere. There is a risk that political anger over current U.S. trade policy will undermine future efforts to open markets for U.S. exports. The recent vote in Britain to leave the European Union shows that voters unhappy with the effects of globalization can make it more difficult for countries to negotiate trade-opening arrangements. Such a risk should be taken seriously, because it is vital for U.S. manufacturers to have a fair opportunity to compete in global export markets. The potential sales at issue are enormous – last year, total U.S. exports of manufactured goods (including re-exports) exceeded \$1.3 trillion. Furthermore, to the extent U.S. manufacturers are denied full access to foreign markets, they are at a significant disadvantage vis-à-vis other manufacturers who do have such access.

- In short, U.S. policymakers have to find a balance that will promote U.S. access to foreign markets, while preventing unfair practices from

distorting the U.S. market. The United States should not stop trying to open markets abroad, particularly given that global markets are much larger than the U.S. market. At the same time, however, U.S. policymakers must ensure that American companies and workers have the opportunity to compete on a level playing field in this market.

RECOMMENDATIONS

As shown above, there are strong reasons to be concerned about whether, and to what extent, U.S. trade policy – and market-distorting practices abroad – have put U.S. manufacturers at an unfair disadvantage. At the same time, it is critical that the debate over these issues not be distracted by an outdated dispute between alleged “protectionists” and “free-traders.” Few if any Americans believe that the United States should withdraw from international markets, or prevent import competition

in this market. At the same time, to the extent free trade is meant to result in more efficient markets, both here and abroad, U.S. trade policy must remain vigilant against unfair practices that can distort such markets.

In short, there should be a broad consensus behind U.S. trade policies designed to make markets work more efficiently. None of the recommendations below is intended to “protect” U.S. companies or set up “barriers” to true market competition. Instead, these recommendations are designed to: (1) encourage U.S. trading partners (including China) to undertake market-based reforms; (2) ensure that success for manufacturers in the U.S. market is the result of hard work and innovation, not government subsidies or other market-distorting practices; and (3) assure U.S. manufacturers – and those workers and voters concerned about the manufacturing sector – that they are being treated fairly, and that any competition with imports takes place on a level playing field.

These recommendations also reflect our concerns about the significant risks of remaining on the current path. If current trends continue, more industries will be distorted by foreign government policies that are designed, not to promote economic efficiency, but to reward particular well-connected producers. U.S. manufacturers will increasingly have little choice but to go out of business or ally themselves with protected companies abroad.

Moreover, if voters here and elsewhere lose faith in the global trading system, and in its ability to generate fair market outcomes, they will be more likely to support truly protectionist policies that could significantly reverse the long-term trend toward open markets. We are seeing some evidence of this already. It is naïve to expect voters to continue supporting policies if they conclude that those policies are both unfair and harmful to their economic interests, and that they lead to the outsourcing of jobs and ongoing trade deficits.

Finally, we are not unmindful that U.S. exports of manufactured goods have also increased since the economic crisis of 2008, from \$917.9 billion in 2009 to \$1.316 trillion last year. Exports of manufactured goods are critical to many U.S. companies, and U.S. policy must further such exports.



ABOUT Stephen Vaughn

Stephen Vaughn is a Partner in the International Trade Practice Group of King & Spalding who works primarily on international trade litigation and policy matters. Mr. Vaughn has a specific focus on injury issues in the context of antidumping and countervailing duty litigation. He has lengthy experience in complex trade litigation before the U.S. International Trade Commission, the U.S. Court of International Trade, the U.S. Court of Appeals for the Federal Circuit, and North American Free Trade Agreement binational panels. He has also worked on a number of trade issues that were litigated before World Trade Organization (WTO) dispute settlement panels.

He has represented clients in some of the most significant trade litigation of recent years, including the following:

- Antidumping and countervailing duty cases on corrosion-resistant steel, cold-rolled steel, and hotrolled steel filed in 2015 (cases involving over \$5 billion worth of imports in a single year)
- Antidumping and countervailing duty cases on oil country tubular goods from China (2009 case that involved \$2.8 billion worth of imports in a single year)
- Global safeguard case on steel in 2001 that resulted in trade relief from President George W. Bush (last major case of this kind)

Mr. Vaughn has also been active in client representations regarding a number of trade policy matters, from enforcement of unfair trade laws to recent WTO negotiations to the role of trade issues in the context of climate change. As part of these efforts, he has played a major role in preparing documents for submission to numerous government bodies, including the Office of the United States Trade Representative, the U.S. Department of Commerce, and the U.S.-China Economic and Security Review Commission.

Mr. Vaughn is a member of the Bars of the District of Columbia and Kentucky and is admitted to the U.S. Court of International Trade and the U.S. Court of Appeals for the Federal Circuit.

With these principles in mind, we recommend the following:

- To encourage new thinking, and to avoid becoming distracted by the day-to-day issues necessarily resulting from active trade negotiations, the next administration should announce a pause on all ongoing trade talks for at least one year. It makes no sense to reach new trade agreements until the problems current trade policy creates for U.S. manufacturers have been identified and addressed. The next administration should undertake a complete, top-to-bottom review of all aspects of U.S. trade policy and its impact on U.S. manufacturing. Such a review would be designed both to determine the root causes of current problems and to ensure that future thinking on trade policy is not unnecessarily hamstrung by past practice.
- As part of this review, the president should appoint a high-level, bipartisan commission, consisting of experts on all sides of the debate over trade policy. The commission should include congressional members. The commission should be directed to undertake a complete, top-to-bottom review of all aspects of U.S. trade policy and its impact on U.S. manufacturing. Such a review would be designed both to determine the root causes of current problems and to ensure that future thinking on trade policy is not unnecessarily hamstrung by past practice.
- Currency values have a major impact on international trade – when the U.S. dollar is priced higher than market forces justify, that valuation places an unfair burden on U.S. manufacturers, who find it more difficult to export their products abroad, or compete against imports at home. In the past, both Presidents Nixon and Reagan took actions to address trade problems resulting from an overly strong dollar. In recent years, however, the United States has adopted a more passive approach. Going forward, U.S. currency policy should be sensitive to the effects of misaligned currency on U.S. trade in manufactured goods. Going forward, effective and enforceable currency provisions should be included in new trade agreements. We also advocate the application of the countervailing duty law to currency manipulation, a step the Obama administration has refused to take. In other instances, safeguard relief under Section 201 of the Trade Act of 1974 may be the best way to address import surges resulting from undervalued currencies abroad.
- The next administration should analyze the current roles of government agencies most responsible for trade and manufacturing policy, including the Department of State, the Department of the Treasury, the Department of Commerce, and the Office of U.S. Trade Representative. The next administration should consider administrative and/or legislative changes that may give policymakers more of a focus on manufacturing concerns, including the creation of a Secretary of Manufacturing position. Other sectors, such as agriculture, energy, and federal land management (through the Department of the Interior) have their own cabinet-level advocates. The fact that there is no cabinet level position monitoring and advocating for U.S. manufacturing has contributed to its problems.
- Furthermore, the next administration should commit to having highly-qualified, enforcement-minded persons in all key positions with responsibility for enforcing U.S. trade laws. Such positions would include, but not be limited to, the Secretary of Commerce, the Under Secretary of Commerce for International Trade, the U.S. Trade Representative, and members of the U.S. International Trade Commission. U.S. trade policy necessarily gives policymakers a broad range of discretion, which means that the effectiveness of U.S. trade laws will often be determined by the persons in these and other key positions.
- No new trade deals should be approved, either by the administration or by Congress, unless there is a broad consensus – both inside and outside the administration – that any such deal will result in net benefits for all major sectors of the U.S. economy, including the manufacturing sector. This principle would apply to the Trans-Pacific Partnership as well as any trade agreements currently in negotiation. Given the strong evidence that current trade policy is tilted against manufacturing, it makes no sense to approve new agreements that would make conditions even more difficult for U.S. manufacturers.
- The growth of state-owned enterprises in China and elsewhere – many of which benefit from subsidies – presents a serious challenge for policymakers. Under current law, there are concerns that foreign state-owned enterprises investing in the United States would have an unfair advantage vis-à-vis American companies. To deal with this issue, the next administration should consider policies to ensure that such companies cannot use investments in the United States to distort this market. One potential option would be to strengthen the Committee on Foreign

Investment in the United States (CFIUS) to ensure that any U.S. investment undertaken by a state-owned enterprise would be consistent with true market competition. CFIUS should also give special scrutiny to transactions in which Chinese state-owned or state-controlled enterprises seek to buy strategic assets and technologies developed in this country. Another option would be to consider potential new trade remedies to address any market distortions that may result from investments by foreign state-owned enterprises in the United States.

- Article XII of the General Agreement on Tariffs and Trade (GATT) provides that WTO members may, under certain circumstances, restrict imports “in order to safeguard its external financial position and its balance of payments.” The next administration should explore all potential options under this provision – or any other relevant provisions of the GATT or other WTO agreements – to identify measures that could be taken against China or other countries to bring about a more balanced trading system.
- U.S. policymakers should commit to policies designed to ensure that U.S. manufacturers do not face unfair competition in this market, including the following:
 - Strictly enforcing U.S. antidumping (AD) and countervailing duty (CVD) laws, including government initiation of trade cases when appropriate;
 - Providing more resources to enforce U.S. AD/CVD laws, including the creation of better early-warning systems to alert government officials to import surges;
 - Continuing to treat China as a “non-market economy” for purposes of U.S. dumping investigations unless and until China fully satisfies all requirements for market-economy status under U.S. law;
 - Pushing back against WTO decisions that undermine the effectiveness of U.S. trade laws, and resisting efforts by our trading partners to obtain concessions in litigation that they were unable to obtain through negotiations. The United States should create a position of WTO Solicitor, and fully staff this office, to make sure we have senior litigators fully committed to preserving the U.S. trade laws handling WTO litigation. For those cases that are wrongly decided, the United States should consider not complying with the WTO decision, a course that is clearly allowed under the WTO agreements;
 - Drawing upon all other trade tools available to the U.S. government, including safeguard measures, to encourage U.S. trading partners to comply with their commitments to stop engaging in subsidies and other unfair tactics;
 - Continuing strong and directed market opening initiatives in key manufacturing sectors.

Endorsed by:

Gilbert B. Kaplan

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U.S. Manufacturing and National Security

Scott N. Paul, Panel Moderator

President, Alliance for American Manufacturing

Policy Recommendations to Strengthen Our Defense Industrial Base

Written by Brigadier General John Adams, USA (Retired)

“... (T)he defense industry is second only to our people...
our defense industry is what makes us a great military power.”¹

INTRODUCTION

In times of crisis, our nation’s security rests on a military armed with the technology, weapons systems, and equipment needed to defend American lives and interests.

Over the decades since the end of the Cold War, our defense industrial base has become smaller and more brittle, a result of declining budgets, a prolonged recession, a shift in resources to current operations of the War on Terror and Extremism, changing procurement strategies (notably the shift from MIL-SPEC to COTS), dispersion of supply chains, and reductions in defense research and development that creates our future military superiority over potential rivals.

As a result, in a situation reminiscent of our lack of preparedness before World War II, our nation once again finds itself potentially ill-prepared for a future security environment characterized by rapid changes in technology and growing geopolitical competition from large nation states whose ideologies and policies and objectives are contrary to our own.

Our nation’s military and political leaders must act now to sustain and rebuild a strong defense industrial base – this is a fundamental element of our national security now and in the future. Deterrence is built on a foundation of demonstrated capabilities – in operations and in production. Offshoring and outsourcing are creating new vulnerabilities that undermine our capability to deter would-be foes.

It would be a grave mistake if the United States were to become dependent on potentially hostile foreign governments for its defense needs. Just as we demand strategic thinking about the problems confronting our armed forces on current and future battlefields, we demand strategic thinking about the problems confronting the defense industrial base.

We need a defense industrial base strategy that serves our most important security requirements. Not only must we produce superior weaponry for today’s warriors, we must preserve our technological edge which increasingly is key to our superiority to ensure that future generations can rely on America’s ability to fully meet its commitments as these arise.

THE BOTTOM LINE

The health of our defense industrial base is inextricably linked to our freedom and independence. The time to act is now – to head off destructive dependencies on foreign suppliers before they occur or get worse. It is in our national security interest to promptly and aggressively address the threats to our defense industrial base. To support the U.S. defense industrial base

¹ Ashton B. Carter. (2012). Quoted in Emilie Rutherford, “Carter: DOD to Protect Vital Industry Skillsets in Next Year’s Budget,” *Defense Daily* (May 31). Available at: <http://www.defensedaily.com/free/17916.html>

and our ability to respond to conflict and disasters, we must pursue all available means to maintain and expand a healthy defense industrial base.

KEY OBSERVATIONS

- Global technological convergence has taken place as more countries have caught up in areas where the U.S. previously enjoyed clear advantages, building from the ground up to achieve technologically advanced export sectors that are eclipsing the U.S.²
- U.S. companies have steadily moved large chunks of their manufacturing supply chains offshore, a trend that started in the 1980s as a way to take advantage of cheaper labor costs in newly industrializing countries. U.S. government policies continue to offer tax-and revenue-based incentives for domestic industry to offshore manufacturing jobs. Other countries' industrial policies, unfair trade practices and competition from State-Owned Entities (SOEs), notably in China and Russia, have created an unfair playing field for our defense industrial base manufacturers. In the 2000s, offshoring culminated in the relocation of high-tech manufacturing to emerging markets in order to take advantage of the special credits, grants, and subsidies these states offered as well as to gain proximity and greater access to other manufacturing facilities or large and growing consumer markets. Indeed, the U.S. now runs a more than \$120 billion annual trade deficit with China in Advanced Technology Products.
- U.S. policy responses to global economic challenges and associated growing pains have been awkward, insufficient, and often counter-productive. A largely unchallenged belief in neo-classical economics (rife with outdated assumptions) has resulted in muted responses to the gradual hollowing out of America's manufacturing base. Although there have been voices arguing for a more interventionist and involved approach to nurture and protect manufacturing, the government response has tended to be ambivalent, to say the least.

Of particular note is the current attack on our steel industry by imports of dumped and subsidized steel from China and others. Steel is an essential material for America's national security infrastructure. It is used in the construction of everything from ships, tanks, and armaments to bridges, our electrical grid, and energy infrastructure. Continued imports of subsidized foreign steel erode the U.S. steel industry's position as a fundamental building block of our nation's defense industrial base.

Geostrategic rivals, notably China, are practicing a 21st century form of mercantilist economic warfare in the steel sector, pushing U.S. steel manufacturers and their domestic supply chains, to the brink of irreparable damage. Left unchecked, plant closures, mass layoffs, and the loss of key technology and manufacturing know-how will continue. China's largely state-owned steel companies are using predatory trade practices in violation of our fair trade laws, and in doing so weaken our domestic steel industry. China's top steel producers, largely controlled by the communist regime in Beijing, are flooding international markets with subsidized steel.

The potential loss of domestic steelmaking capability signals a dangerous dependence on potentially hostile foreign governments to supply the defense and critical infrastructure products necessary to equip our military, respond to disasters, and modernize our increasingly fragile infrastructure.

The forces of globalization may be irreversible. However, it is not too late for businesses to stop the trend of putting short-term profit maximization ahead of long-term competitiveness. Lower production costs based on outsourcing and offshoring may lead to higher profits in the short-run, but they will continue to undermine our national security interests by diminishing productive capacity, transferring technology and putting at risk access to materials and supplies. In the long-run, this trend yields few winners among U.S. stakeholders – including management, workers, and the public at large. Our nation's leaders should use all available legal and legislative tools to safeguard our domestic defense industrial base, ensuring that our industry will remain a strong and ready foundation for our national security and protection of critical infrastructure.

We must identify and promptly address the vulnerabilities to our defense industrial base before we lose our core manufacturing capabilities – including the skilled workforce that is its backbone – especially to our most dangerous long-term strategic competitors like China and Russia. We must head off increasing dependencies on foreign suppliers before they become

² Dan Breznitz. (2007). *Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and Ireland*. New Haven: Yale University Press.



ABOUT Scott N. Paul

Scott N. Paul is President of the Alliance for American Manufacturing (AAM), a partnership established in 2007 by some of America's leading manufacturers and the United Steelworkers union. Mr. Paul and AAM have worked to make American manufacturing and "Made in America" top-of-mind concerns for voters and our national leaders through effective advocacy and data-driven research.

Mr. Paul has hosted more than 80 "Keep It Made in America" events, including a presidential candidates' forum on manufacturing, and has testified before seven committees of the House and Senate. He frequently appears on television news shows, and regularly blogs at Huffington Post. Mr. Paul is also a co-author of the 2013 book *ReMaking America*.

Mr. Paul served as a staff member on Capitol Hill at various times from 1989 to 2001. He currently serves on the Board of Directors of the National Skills Coalition and the Board of Visitors of the Political Science Department at the Pennsylvania State University.

Mr. Paul earned a B.A. in Foreign Service and International Politics from Penn State and an M.A. with honors in Security Studies from Georgetown University's School of Foreign Service. Raised in the small town of Rensselaer, Indiana, he currently resides in Silver Spring, Maryland, with his spouse Ilisa Halpern Paul and twin boys.

irreversible. Rebuilding our defense industrial base in a crisis remains an unrealistic option that risks supplies of our most important defense equipment and strategic materials at a time we need them most.

RECOMMENDATIONS

Our current strategic vulnerabilities demand realistic, achievable, urgently applied policy solutions. Government and industry must play mutually supportive roles in crafting and implementing these policies. Some of the solutions require enforcement of current laws and regulations; certain solutions require detailed coordination between government entities and industry stakeholders. To ensure that the defense industrial base is, first, protected from further decline, and second, creates the longer term conditions for recovery and expansion of our domestic military industry, we recommend:

Near-term Actions:

- **Create new, and consistently apply existing, legislative and administrative measures that explicitly give preference to U.S. domestic suppliers in the defense industry.** When it pertains to defense products, "Made in America" is in our national security interest. The Jones Act, for example, ensures United States Navy or other sea services acquire warships or other vessels built in U.S. shipyards. A similar measure could usefully protect other platforms and systems key to sustaining our military advantages. Chief among legislative options are those that have long aimed to ensure that important defense capabilities remained secure and available for America's armed forces, including domestic source preferences such as those that apply to the steel and titanium industries under the Specialty Metals Clause. Competition to reduce costs and achieve efficiency is always welcome – but only as long as the playing field is level. Here, the roles of both the Executive Branch and Congress are important to aggressively enforce regulations:
 - *Trade Enforcement.* We need proactive enforcement of U.S. trade remedy laws before mass layoffs and plant closures occur within our defense industrial base. We must provide resources necessary for the Department of Commerce to expedite trade cases. We must also fully utilize the tools provided in both the *Leveling the Playing Field Act* and the *Trade Facilitation and Trade Enforcement Act* to ensure that trade enforcement is efficient, strong, and not circumvented after the fact.
 - *Buy American.* We must strengthen federal and state domestic sourcing preferences to ensure that U.S. tax dollars are used to procure high-quality American-made steel and manufactured goods.
 - *Safeguard Actions.* The White House should consider and implement as necessary more existing legal authorities to

stop the flow of devastating import surges that threaten our economy and U.S. national security.

- *Global Overcapacity of Strategic Materials.* We must secure binding commitments from foreign countries to reduce global overcapacity through bilateral and multilateral forums like the U.S.–China Strategic and Economic Dialogue (S&ED), Joint Commission on Commerce and Trade (JCCT) and World Trade Organization (WTO) meetings.
- We should work with Mexico, Canada, the EU, and other allies to press countries with large key materials' overcapacity (notably steel) to make needed reforms.
- If countries like China refuse to cooperate, we should impose broad-based import restraints to prevent further damage to our economy.
 - *SOEs.* Develop and implement enforceable rules to ensure that state-owned entities operate based on commercial considerations. Meaningful disciplines are necessary to deter and, if necessary, counter anticompetitive behavior.
- **Change the current incentives that lead industry to offshore defense industrial base manufacturing.** This includes decreasing or eliminating tax- and revenue-based incentives to move defense-relevant manufacturing offshore. At the same time, we should increase the advantages to industry in preserving American defense industrial base manufacturing in the United States. The decline of the domestic defense industrial base is inextricably linked to the overall decline in American manufacturing. Failure to address the offshoring of our defense industrial base puts our national security at risk, and contributes to the hollowing out of one of our most important strategic assets: our ability to produce reliable weapons and equipment for our armed forces.



ABOUT Brigadier General John Adams

General Adams is the lead author of the 2013 report *Remaking American Security*, which documented threats to our defense industrial base supply chains, published by the Alliance for American Manufacturing.

He is the founder and President of Guardian Six LLC, where he assists clients in successfully analyzing national security issues and addressing U.S. and allied national security requirements. He retired from the U.S. Army in September 2007, after more than thirty years of active duty service.

His final military assignment was as Deputy United States Military Representative to the North Atlantic Treaty Organization Military Committee in Brussels, Belgium, the highest military authority of NATO. He worked with military representatives of NATO and Partnership for Peace member nations to develop policy recommendations for the political authorities of the Alliance.

As a Foreign Area Officer, Military Intelligence Officer, and Army Aviator, his more than thirty years of service in command and staff assignments includes nearly eighteen years in Europe, Asia, the Middle East, and Africa, including assignments with U.S. Embassies in Belgium, Rwanda, and South Korea. On September 11, 2001, he was stationed at the Pentagon in the Office of the Secretary of Defense, and participated in disaster recovery operations at the crash site as well as coordinated international support for the U.S. diplomatic and military response. He is a veteran of Operation Desert Storm (1991), Operation Guardian Assistance in Rwanda (1996), and served extensively on official business throughout the Balkans (1998-2003). He served on temporary duty in both Iraq and Afghanistan in 2004.

He holds a B.A. in Economics from North Carolina State University; an M.A. in International Relations from Boston University; an M.A. in English from the University of Massachusetts; and a Master of Strategic Studies from the U.S. Army War College. He taught English at the U.S. Military Academy from 1988-90, and taught National Security at the University of Arizona South. He speaks French, Dutch, German, and Croatian.

- **Create incentives for industry and government to apply networked operations to modernize our defense supply chains.** Just as networked operations characterize our military operations worldwide, we must provide near-real-time communications between prime contractors and the supply chains they depend upon to ensure the health and responsiveness of our supply chains that support increasingly complex weapons systems. Networked supply chain operations can capture the prioritization systematically, as well as incorporate solutions to address the risks of substandard or counterfeit parts. Relying on *ad hoc* and manual solutions to these problems is not an effective option.
- **Implement effective controls on the defense supply chains to reduce the risks of counterfeit and defective parts, especially in advanced electronic systems.** In its February 2016 report to Congress, the Government Accountability Office (GAO) estimated that in fiscal year 2014, the Defense Department managed over 4.7 million parts that are used in communications and weapons systems worth more than \$96 billion. “The existence of counterfeit parts in the DOD supply chain can...delay missions, affect the integrity of systems, and ultimately endanger the lives of service members.” We know that counterfeit parts enter our defense supply chains, constituting a cybersecurity vulnerability. We also know that counterfeit electronic parts, notably semi-conductors, are actually malware that can be programmed by the manufacturer for malicious purposes. Moreover, GAO auditors suspect that cases of counterfeit parts are underreported. Although the GAO has documented these vulnerabilities, and recommended that DOD better stipulate “clarifying criteria” for those parts, it is past time to implement effective controls.
- **Identify potential supply chain chokepoints and plan to prevent disruptions.** The Pentagon’s defense industrial base strategy attempts to map defense supply chains, but fails to address the critical task of restoring American control over the supply chains for critical defense items, such as high-tech batteries or semi-conductors. DOD’s past efforts (e.g., the Sector-by-Sector, Tier-by-Tier [S2T2] program) offered great promise to DOD and industry managers alike, by mapping the supply chain at levels below that of the prime defense contractors. This allowed DOD and industry managers to focus on and document the important role that lower tier defense industrial base firms play in sustaining U.S. defense supply chains. However, these efforts met great resistance from industry, which all-too-often viewed attempts to gain visibility into the lower tier supply chains as an expensive and unnecessary intrusion. Moreover, although these mapping efforts are an important management tool, they cannot be expected to inform managers about how to prioritize efforts or address recurring problems such as non-conforming or counterfeit products. In addition to mapping the lower tiers of the supply chain, there is an urgent need to use the data to determine the scope of foreign control over critical supply chains, as well as the risk of disruption from natural disasters. Foreign control of defense supply chains poses vulnerabilities for American defense capabilities, especially in times of crisis, potentially enabling foreign suppliers to leverage supply in return for concessions. Moreover, supply chain disruptions are not confined to foreign exploitation and we need to understand the details and dynamics of the most critical supply chains to plan for potential disruptions in advance, not waiting for the next Fukushima disaster or coup in a supplier nation to necessitate urgent and perhaps very difficult countermeasures.
- **Maintain China’s non-market economy (NME) status.** As China is our strongest potential competitor and has taken state-directed measures to seize control of several critical defense markets (notably, steel, rare earths, and semi-conductors), we should maintain China’s NME status until its government makes permanent reforms that free its grip over the Chinese economy. Any loosening of this designation would severely undercut U.S. antidumping laws, adding to the steel import surge and resulting in additional job losses and plant closures in this important strategic industry.
- **Formalize planning for the defense industrial base in U.S. national strategy.** We should manage the defense industrial base with as much care as we manage manning, training, readiness, and operational performance of our armed services. We should include specific steps to strengthen the defense industrial base in the U.S. National Military Strategy, National Security Strategy and Quadrennial Defense Review Process. To be sure, past iterations of these key strategic documents have addressed – albeit too briefly – the defense industrial base. Moreover, the U.S. government and American industry already are undertaking measures – albeit insufficient – to mitigate risks. It is vital that we accord higher priority to these efforts, to focus on supporting and strengthening the most important and potentially vulnerable sectors.

Strategic and Long-term Measures:

- **Build consensus across government, industry, and the military to address the challenges to the defense industrial base.** As important as it is to analyze and understand particular risks to the industrial base or the desirability of alternative mitigation strategies, creating consensus about the nature of the challenges and choices of options to remedy them is just as important a factor. No effective collaboration between industry and government is feasible without it. The most important steps to address supply chain issues will require the concerted efforts of defense prime contractors and original equipment manufacturers (OEMs) working in tandem with government to solve problems. Defense-related firms depend upon increasingly global and complex supply chains. We, in turn, rely on their systems integration skills to manage problems. Government and industry managers need effective tools to detect and try to prevent risks to the supply chain, to determine the scope of the problems, and to address particular problems such as conformance and counterfeit issues aggressively. As pertains to defense steel requirements, the U.S. Navy already has in place periodic consultations with steel manufacturers to provide a snapshot of steel production forecasts, so that industry can better prepare for future production requirements. This process should be formalized at the DoD level.
- **Focus defense industrial base legislation on national security rather than on satisfying constituencies.** Congress must ensure that our approach to strengthening the defense industrial base includes making the hard choices that weigh against natural inclinations to favor constituencies over performance and the national interest. At the national level, the task is to ensure that we budget and plan for enduring national security capabilities and sustain an industrial base necessary to support them. Members of Congress must carefully tend to their responsibilities to preserve and craft legislation that supports a broadly representative defense industrial base strategy.
- **Implement defense industrial base planning at the whole-of-government level.** The health of the defense industrial base also must not be solely the business of the Department of Defense (DOD). As part of American national strategy, assuring the health of the defense industrial base requires the coordinated efforts of a number of Executive departments and agencies, including *inter alia* the Departments of State, Treasury, Commerce, and Homeland Security. We need to establish better habits of transparency and routine cooperation among government agencies and between government and industry if we are to be successful.
- **Implement collaborative programs among government, industry, and academic research institutions to sustain specialized skill sets – particularly those necessary for advanced technologies – for the defense industry.** Measures aimed at the health of the industrial base cannot be limited to the production of inputs or hardware. Although we can be encouraged by DOD's recent progress in this area, there is much more to do. As then-Under Secretary of Defense Carter said in May 2012, the Pentagon's focus on selected skill sets is "an example of something we didn't do in [FY] '13... [but] as we put together the [FY] '14 budget ...[we] definitely want to look at those holes [and] make those kind of investments."³ Collaboration between government, industry, and academia has had a leading role in the development of America's 21st century economy, as well as its world-class defense industrial base. However, as globalization pulls defense supply chains out of the United States, it also pulls with it the building blocks of research, development, and advanced manufacturing processes. Reversing this trend will be difficult, but impossible without the concerted efforts of government, industry, and academic research institutions.
- **Secure control of key natural resources upon which our 21st century military depends.** Another important issue that demands attention is the reliance on foreign suppliers for natural resources, including rare earth elements that are essential components of modern military technology. As the U.S. has increasingly withdrawn from the mining and extracting sector for many of these elements, government and industry must address the lack of domestic capacity through a combination of stockpiling, renewed extraction efforts, recycling, and identifying alternate materials.

³ Ashton B. Carter. (2012). Quoted in Emilie Rutherford, "Carter: DOD to Protect Vital Industry Skillsets in Next Year's Budget," *Defense Daily* (May 31). Available at: <http://www.defensedaily.com/free/17916.html>

- **Reinvest in American infrastructure and particularly increase long-term federal investment in high-technology advanced research and manufacturing capabilities.** In the aftermath of World War II and the advent of the Cold War, American Administrations and Congress put in place a national security system which established (and funded) advanced research and development as an enduring priority. Today's technology challenges call for a similar bipartisan approach. Congress must take the lead in developing incentives for U.S. firms in the form of long-term federal investment in high-technology industries. The distinguishing attribute of America's defense industry is technological innovation. The effects of globalization, especially as it accelerates offshoring and outsourcing of critical defense technologies, risks depriving American industry of the capacity to design and commercialize emerging defense technologies. This capacity to adapt and develop new technologies is the American defense industry's most precious commodity. Congressional funding to develop and implement advanced process technologies can help ensure that America's armed forces dominate the future battlefield.

In summary, we must head off dependencies on foreign defense suppliers before they occur. Many of our most important defense supply chains are now at risk of manipulation by strategic competitors, or disruption from foreign financial crises and natural disasters. Rebuilding our domestic defense industrial base in a crisis remains an unrealistic option that risks supply of our most important strategic materials at a time we need them most. The U.S. government and industry are aware of these problems, but inadequately addressed, just as with our steel industry, these problems constitute significant risks to our readiness for future conflict. We cannot afford to relinquish our defense capability because the problem is too hard to address. If we fail to act, we will find ourselves at the mercy of foreign suppliers for the weapons and equipment we need to keep this country safe. We must not simply observe the trends, and mitigate them on the margins; we need to chart a course to ensure that U.S. national security will always be our first priority, and that our defense industrial base will retain the necessary capacity in the decades to come.

“Ours is a business of anticipation, not reaction. There is nothing magical about it. To meet tomorrow's crisis or conflict requires continuous investment today to ensure we can deliver capability critical to our nation and economic security.”⁴

Endorsed by:
Scott Paul

⁴ Mike Petters (President and CEO of Huntington Ingalls Industries). (2012). “How Long Would It Take the Shipbuilding Industry to Grow Capacity and Throughput if the Nation Faced a Naval Crisis or Conflict?”, *Information Dissemination* (online blog, June 5). Available at: http://www.huntingtoningalls.com/about/docs/idblog_05june12.pdf

Tax Policy and Manufacturing

Hap Shashy, Panel Moderator

Partner, King & Spalding and Former Chief Counsel, IRS

Tax Reform for Manufacturers

Written by

Donald Bruce¹, Ph.D.; Tami Gurley-Calvez², Ph.D.; and Matthew Murray³, Ph.D.

This research draws heavily on our previous study, A Missed Opportunity: The Economic Cost of Delaying Pro-Growth Tax Reform, prepared for the National Association of Manufacturers. The views expressed in this report are not necessarily shared by the National Association of Manufacturers or any of its employees or members. The authors thank Marcus Bansah for helpful research assistance.

OVERVIEW

Corporate tax reform has been actively percolating in the U.S. in recent years. Despite an emerging consensus regarding the well-known problems facing our tax system as well as possible solutions, forward progress has been elusive. The gridlock on tax reform is costly to all American businesses, but it is especially costly to manufacturers. Too many of our tax policies are temporary and ever-changing. The end result is a climate of uncertainty in which businesses are unable to confidently make long-term investment and hiring plans, and in which tax rules dictate or heavily influence business decisions.

The problems with the current system of business taxation are well-known. It is no secret that the maximum federal tax rate on corporate income in the U.S. is very high, at 35 percent, while corporate tax rates in most other developed countries have fallen significantly in recent years. The tax system is also a complex amalgam of deductions, credits, and other features, many of which are temporary in nature and make planning very difficult. A classic example is the U.S. capital cost recovery system, which provides important benefits in the form of accelerated depreciation allowances but is costly to administer and can result in the non-uniform treatment of business investments. An ideal tax system would create the fewest distortions to business decisions about capital and labor, except to promote the types of activities that generate positive spillovers. Yet another problem is that the U.S. is one of a very small number of countries that still uses a worldwide tax system, in which businesses are taxed on all of their income regardless of where it is earned. Since foreign source income is not taxed until it is repatriated to the U.S., a large amount of foreign-source income is effectively sitting in foreign accounts with little chance of ever being repatriated back to the U.S. Most of our major trading partners have adopted territorial systems in which taxes are levied only on the income that is earned within a country's borders and foreign source income is either completely or largely exempted.

Advances in technology, transportation, and tax accounting have made business capital much more mobile, to the point that the decision to pay U.S. corporate income taxes has become almost voluntary. Indeed, economic activity can be relocated for tax purposes via accounting or legal actions even if production activities do not actually move physically. It is perfectly legal (and in the profit-maximizing interests of shareholders) to minimize total tax payments by moving activity to lower-tax jurisdictions. This carries important costs for manufacturers who, partly in response to the changing global business tax environment, employ fewer and fewer American workers. A decision to move production off-shore is a decision to reduce or end the employment of Americans. Most developed countries have recognized the unparalleled mobility of business capital and the shrinking revenue importance of corporate income taxes, and have begun to think of their business tax systems as more of an economic development tool than a revenue source. Our business tax system drives a wedge between

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ABOUT Hap Shashy

Hap Shashy is a partner and the practice group leader of King & Spalding's Tax Practice Group. From 1990 to 1993, Mr. Shashy served as Chief Counsel for the Internal Revenue Service. As IRS Chief Counsel, Mr. Shashy was responsible for IRS litigation before the U.S. Tax Court. Mr. Shashy presided over the promulgation of numerous tax rules and partnerships, transfer pricing, foreign tax credits, original issue discount, and financial instruments and derivatives.

Over the course of his career in private practice, Mr. Shashy has advised clients in a number of industries on a wide variety of tax planning and tax controversy matters. Mr. Shashy's tax practice includes representation of domestic and foreign business, tax-exempt, and individual clients on a wide range of complex tax planning, regulatory, and controversy matters. His experience spans a variety of industries including energy, natural resources, healthcare, finance, technology, telecommunications, media, real estate, industrial and transportation. Mr. Shashy has been repeatedly selected for inclusion in: *Chambers U.S.A. America's Leading Lawyers for Business*, *The Best Lawyers in America*, *The Washington Post's Best Lawyers in Washington, D.C.*, *Legal 500*.

During his career, Mr. Shashy has served as an adjunct professor of tax at New York University School of Law and at Southern Methodist University School of Law. He has authored numerous articles for academic and professional publications and has lectured before a number of associations and institutes.

Mr. Shashy earned his B.S. degree in political science from the University of Florida in 1970 and his J.D. in 1973 from the University of Florida College of Law. He received his LL.M in taxation from New York University School of Law in 1975, was first in his class, and managing editor of the *Tax Law Review*.

the owners of mobile capital, who can more easily escape U.S. tax burdens, and the owners of immobile capital, which remains within our borders either due to economic constraints or sheer patriotism. Owners of both types of business capital deserve a more pro-business tax system that is based on efficiency, fairness, and simplicity.

SOLUTIONS

We encourage the full and careful consideration of the following set of business tax reforms, based on the National Association of Manufacturers' tax reform platform and resembling the sweeping reforms recently enacted in the United Kingdom:

1. Reduce the maximum tax rates on business income for both corporate and non-corporate pass-through entities. The NAM platform calls for a maximum tax rate of 25 percent. This would increase efficiency by reducing distortions to business activity that are created by the current high rates, and enhance the competitiveness of U.S. firms in the increasingly multinational business environment.
2. A robust capital cost recovery system, perhaps going as far as full expensing, would lower the cost of capital and improve cash flow, thus enabling businesses to pursue a larger number of profitable projects, and increase both investment and employment. It would also enhance fairness across sectors and types of capital, both domestically and internationally.
3. An enhanced research and development tax credit, perhaps as high as a 20% alternative simplified credit, would further encourage investments that support productivity gains and higher earnings for workers. A strong commitment to public support for business R&D activities would also promote international competitiveness and fairness. The R&D credit was introduced in 1981, and until

it was permanently extended in late 2015, it had been allowed to expire and be renewed on 16 occasions, sometimes on a retroactive basis.

4. Move to a territorial system for taxing multinational businesses. In 2000, only 13 of the 34 OECD countries had territorial systems. That number has more than doubled as of 2014, with an additional 15 countries adopting

territorial structures. Only six of the 34 OECD countries (and none of the other G7 countries) have a worldwide system as of 2015: Chile, Ireland, Israel, Korea, Mexico, and the U.S.

Taken together, these proposals would greatly enhance the competitive position of U.S. firms – especially manufacturing firms – while also dramatically simplifying the tax code and providing much-needed stability to the system. They would also bring a substantial economic impact. In our recent analysis for the National Association of Manufacturers, we estimated that this plan would add almost one percentage point (about 0.9) to GDP growth on an annual basis, amounting to over \$12 trillion over ten years. Additionally, the plan would add nearly 1.5 percentage points to investment growth on an annual basis (just over \$3.3 trillion over ten years), and between 492,000 and 522,000 jobs per year (over 6.5 million jobs over ten years).

Notable barriers to progress include concerns about the overall revenue impact as well as the distribution of that revenue across income groups. The prevailing tax policy climate in the U.S. is such that anything resembling a tax increase is effectively dead on arrival. The practical outgrowth of this is the notion that any tax reform proposal must be revenue-neutral if it is to have any chance of passage. This constraint on the policy discussion is unfortunate. Concerns over short-term and longer-term revenue adequacy are indeed quite important, but we must not lose sight of the other prominent goals of tax reform such as efficiency, fairness, and simplicity. To be sure, the revenue impact of a pro-business tax reform package would not necessarily be negative in the long term. A pro-business tax reform package could potentially increase total tax revenues in the long term if we consider impacts on other tax revenue streams in a full-budget analysis. On that note, it is important to consider business tax reform within the context of a broader tax reform effort. Even if we desire revenue neutrality for the broader reform package, it is not necessary to impose revenue neutrality on every individual component.

A similar barrier to business tax reform involves the incorrect public perception of business taxes as a tax on the relatively wealthy owners of capital. Any effort to reduce business taxes – and especially corporate income taxes – is viewed as an injustice that further tips the income distribution in favor of the wealthy. Estimated distributional impacts have become prominent components of any tax reform debate in recent years, and have meant the death knell for more than one



ABOUT Donald Bruce

Donald Bruce is the Douglas and Brenda Horne Professor of Business in the Boyd Center for Business and Economic Research (CBER) and the Department of Economics at the University of Tennessee, Knoxville. He also serves as the University of Tennessee's Faculty Athletics Representative to the NCAA and SEC.

As a Boyd Center economist, Dr. Bruce regularly provides objective, non-partisan policy research and evaluation under contracts with an array of government agencies at the federal and state levels. His recent work has included an ongoing evaluation of Tennessee's welfare program, Families First, for the Tennessee Department of Human Services, an analysis of teacher supply and demand in Tennessee for the Governor's Office of Education Policy, and a forecast of expenditures on Tennessee Education Lottery Scholarships for the Tennessee Higher Education Commission.

In addition to his Boyd Center research, Dr. Bruce studies the economic and behavioral effects of tax policies on such things as small business activity and owner-occupied housing. His work has been presented and published in a variety of academic journals, edited volumes, and professional meetings. He has testified before Congress on the topic of internet taxation, and he presented his work on taxes and small business activity before the President's Advisory Panel on Federal Tax Reform in 2005.

Dr. Bruce has conducted research on a consulting basis for an array of governmental and business organizations, including the U.S. Small Business Administration, the National Association of Manufacturers, the Internal Revenue Service, the Retail Industry Leaders Association, the Education Tax Policy Institute, and the Streamlined Sales Tax Governing Board.

He joined the UT faculty in 1999 after receiving his M.A. and Ph.D. in economics from Syracuse University and his B.A. with honors in economics from Drew University.

reasonable proposal. It is important to emphasize that business taxes are ultimately borne by people at all points on the income distribution. They are born by workers through lower wages or employment opportunities, by consumers through higher prices on final goods and services, and by the owners of capital in the form of lower returns to investment. And the owners of capital are not necessarily high-wealth or even high-income individuals; they include the large number of individuals with corporate stocks in their retirement accounts. In essence, we all pay business income taxes in one way or another.

Despite a large volume of theoretical and empirical literature on the incidence of the corporate tax, consensus has proven elusive. Recent studies have indicated that workers bear more than half, and perhaps as much as 70 percent, of the corporate tax burden. If workers bear any of the burden, pro-business tax reform that potentially reduces revenue can and should be viewed as pro-worker tax reform because it could increase employment and wages. Alternatively, even if the owners of capital bear most of the burden of the corporate income tax, it is important to recognize that many workers are owners of capital to the extent that they hold corporate stock directly or as part of their retirement savings. As such, workers could enjoy a separate longer-term benefit from a reduction in the tax rate due to the resulting increases in the values of their retirement accounts.

These impacts will have important effects on the distribution of the overall tax burden that should not be ignored in the policy discussion. As with the revenue neutrality issues discussed above, we should also avoid placing excessive importance on the distributional consequences of individual elements of a broader tax reform package. The potential distribution of the costs and benefits of business tax reform should be examined in light of the total distribution of costs and benefits of the broader tax reform package.

Endorsed by:

Tom Duesterberg

David Lewis

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Patrick Wilson

Innovation, Entrepreneurship, and Energy

Rob Atkinson, Panel Moderator

Manufacturing Technology Policy Recommendations

Written by Rob Atkinson

President, Information Technology and Innovation Foundation (ITIF)

A core goal of a U.S. manufacturing competitiveness strategy should be to support the development and adoption of new technologies that radically improve production processes or that can be transformed into innovative new products. There is no way manufacturing firms in the United States will be able to compete with low-wage economies specializing in high volume, commodity-based production unless those U.S.-based firms can sustainably achieve high levels of productivity growth and consistently produce high-tech, high-value added products and services. The U.S. needs to be producing things other countries cannot (or producing the same things more efficiently) and the only way to achieve that is through high levels of innovation in product and process technology.

Unfortunately, the U.S. manufacturing economy is increasingly less high-tech than its major competitors. For example, in 2009, 42 percent of U.S. manufacturing occurred in medium-high-tech or high-tech industries – industries in which R&D intensity (R&D as a percentage of sales) is greater than 3 percent – whereas 58 percent of German, 52 percent of Korean, and 48 percent of Japanese manufacturing occurred in such industries. And not only do Germany, Korea, and Japan each have more R&D-intensive manufacturing sectors than the U.S., they each export a greater share of technology-intensive products. Thus, one objective of the strategy should be to promote the technological upgrading of U.S. manufacturing, not only through cutting-edge new products like electric cars or rechargeable batteries, but by infusing new technology into “legacy” industries such as textiles, materials, paper, steel, ceramics, or numerous others. The U.S. should also promote “smart manufacturing” – the fusion of information technology and manufacturing.

Another key objective of the strategy should be to support public-private partnerships designed to help strengthen the connection between scientific research and technology commercialization in order to assist firms in “bridging the gap” between transforming technologies developed in universities and federal laboratories into commercialized products and efficient production processes. In other words, it is not enough to simply invent new technologies in America; the U.S. must also invest in the ability to manufacture those technologies in America, as well.

To achieve these aims, the U.S. will have to become much more of an engineering-based economy that embraces a real engineering culture. At least since World War II, the United States has led the world in science-based innovation, as research from U.S. corporate, academic, and government laboratories contributed to a series of transformative innovations, in everything from transistors and mobile phones, to lasers, graphical user interfaces, search engines, the Internet, and genetic sequencing. That approach worked well when few nations had the capacity to leverage U.S. scientific discoveries for their competitive advantage. But now U.S. federal R&D dollars for basic science generate knowledge that is essentially a non-rival, non-appropriable public good that can be quickly picked up and leveraged by foreign competitors. That’s why many nations invest much less in basic research and more in applied research. Instead, these countries often rely on the basic research discoveries coming out of U.S. universities and national laboratories, which allows them to concentrate their efforts on turning U.S. scientific discoveries into their own innovative technologies and products that they sell to other nations, including the U.S. In other words, investments in science create essential new knowledge that is freely traded around the world, but it is the application of that knowledge (e.g., through engineering) that creates wealth through new products and processes. The U.S. must also be able to make things here. And that requires engineering-based innovation, an appropriable activity through which U.S. establishments can add and capture value. But the U.S. faces an engineering gap compared to its manufacturing competitors in countries like Germany, Japan, and Korea.

RECOMMENDATIONS

Significantly Expand Funding for the National Network of Manufacturing Innovation—(NNMI)

Under the Obama administration, nine centers have been launched to bring together industry and academia to cooperate on precompetitive generic research related to manufacturing. To codify this effort, Congress passed the Revitalize American Manufacturing and Innovation Act of 2014. But funding for these initiatives, especially compared to our competitor nations, is low. Therefore, the next administration should propose funding continued expansion of the NNMI network with an investment of at least \$425 million dollars.

Pass and Fully Fund the National Manufacturing Universities Act

This initiative would establish a national network of at least 20 universities that brand themselves as leading manufacturing universities. These universities would revamp their engineering programs and focus much more on manufacturing engineering and in particular work that is more relevant to industry. This would include more joint industry-university research projects, more student training that incorporates manufacturing experiences through co-ops or other programs, and a Ph.D. education program focused on turning out more engineering grads who work in industry.

Increase Funding for the Hollings Manufacturing Extension Partnership (MEP)

The National Institute of Standards and Technology's Manufacturing Extension Partnership plays a vital role in enhancing the productivity, competitiveness, and innovation potential of U.S. SME manufacturers. However, compared to our competitor nations, we invest very little in helping SME manufacturers with technology. For example, Japan invests approximately 40 times more as a share of GDP and Germany 20 times more. Moreover, the MEP budget has not grown over the last two decades as a share of GDP. As such, we recommend that Congress double the MEP funding to at least \$260 million per year.



ABOUT Robert D. Atkinson

Dr. Robert D. Atkinson is one of the country's foremost thinkers on innovation economics. With an extensive background in technology policy, he has conducted ground-breaking research projects on technology and innovation, is a valued adviser to state and national policymakers, and a popular speaker on innovation policy nationally and internationally.

Before founding Information Technology and Innovation Foundation (ITIF), Atkinson was vice president of the Progressive Policy Institute and director of PPI's Technology & New Economy Project. He received his master's in urban and regional planning from the University of Oregon and was named a distinguished alumnus in 2014. He received his Ph.D. in city and regional planning from the University of North Carolina at Chapel Hill in 1989.

Increase R&D Tax Credit Generosity

Manufacturing performs over 75 percent of U.S. R&D. The R&D tax credit is an effective tool in spurring more private sector R&D investment. But while the U.S. created the R&D tax credit in 1981, and had the world's most generous R&D tax credit as late as 1992, by 2012 the U.S. has slipped to offering the 27th most generous R&D tax credit out of 41 nations offering the credit. As such, Congress should increase the generosity of the Alternative Simplified Credit (ASC) from 14 percent to at least 20 percent. At the same time, Congress should modify the existing collaborative R&D tax credit that provides a flat 20 percent credit for collaborative R&D (with universities, federal labs or industry consortia) for energy research and allow it to be applied for all fields.

Endorsed by:

Jerry Jasinowski

Education and U.S. Manufacturing

Tom Duesterberg, Panel Moderator

How to Address the Skills Gap in the Manufacturing Economy

Written by Tom Duesterberg

Former Executive Director, Manufacturing and Society in the 21st Century Program,
The Aspen Institute

Senior manufacturing executives consistently report that the most important barrier to building or expanding their firms is a lack of adequately trained workers for production jobs in the modern factory.¹ In addition to basic mathematics and verbal skills, candidates often are deficient in such “employability” factors as communications, teamwork, time management, problem-solving and reliability. Hard skills such as specialized training in machining, operating computer-controlled machines, metalworking, and even welding, are not even taught in most schools.² A skills gap for engineers and researchers is less evident, but nonetheless real as American universities produce inadequate numbers of degrees in the fields relevant to manufacturing, including the physical sciences.³ Retirements alone among the aging workforce in this sector account for about 25 percent of the total workforce that must be filled in the next decade, and Deloitte estimates over 2 million jobs could go unfilled due to a dearth of trained workers.

German and Japanese companies producing in the United States regularly lament the lack of skilled workers, and frequently locate their plants in areas that work with them to establish the training programs they require. Economic research and survey data indicate that efforts to meeting changing customer demand, and raise productivity and production levels are hampered by insufficiently skilled and adaptable workforces. The number of new plants foregone (or sited elsewhere) because a skilled workforce is simply not available is unknown.

Some economists argue that the skills gap can be met simply by raising wages. This begs the question of a timely emergence of candidates with well-grounded mathematics and verbal skills as well as employability tools. Our K-12 schools are less than proficient in teaching basic skills from the start, and, with the decline of vocational education, even worse at helping develop employability characteristics. American culture, to a large extent, devalues the types of work and skills needed in factories in favor of guiding all young people toward a four-year college education. Educational institutions, in turn, do not have confidence in the future of American manufacturing, have few lasting ties to industry, and often few specialized skills-training courses or teachers. At the engineering and research level, women, who already constitute the large majority of higher education graduates, are not incentivized or otherwise attracted to these professions.⁴ Employers often must turn to foreign degree holders to meet their needs for highly trained researchers and engineers. Additionally, a national survey done for the National Association of Manufacturers (NAM) revealed that only 37 percent of parents would encourage their

¹ See Deloitte and The Manufacturing Institute. (2015). “The Skills Gap in Manufacturing: 2015 and Beyond” (Washington: NAM). Available at: http://www.themanufacturinginstitute.org/~/_/media/827DBC76533942679A15EF7067A704CD.ashx

² See Robert Lerman. (2015). “How Can we Develop Enough Skills for a Robust Manufacturing Economy?” Paper presented to the Workshop on U. S. Manufacturing and Public Policy: Road Map for the Future” (Indianapolis, IN; October).

³ See Laura Putre. (2016). “Building a Better Advanced Manufacturing Workforce,” *Industry Week*, May 17, 2016. Available at: http://www.industryweek.com/education-training/building-better-advanced-manufacturing-workforce?code=UM_June16TrafficNL0529&utm_rid=CPG03000004499320&utm_campaign=12350&utm_medium=email&elq2=ebe26855b3ad4645b2352ea21aa741ca

⁴ See Thomas J. Duesterberg (2014). “Manufacturing Skills and The Untapped Resource,” *Huffington Post*, (May 11). Available at: http://www.huffingtonpost.com/thomas-j-duesterberg/manufacturing-skills-shortages-stem_b_4935255.html



ABOUT Thomas J. Duesterberg

Tom Duesterberg recently retired from his position as executive director of the Manufacturing and Society in the 21st Century program at the Aspen Institute. He was formerly (1999-2011) president and CEO of the Manufacturers Alliance (MAPI), an economic research and executive education organization based in Arlington, Virginia, with more than 500 manufacturing firms as members.

Previous positions include: Director of the Washington Office of The Hudson Institute, Assistant Secretary for International Economic Policy at the U.S. Department of Commerce, chief of staff to two members of Congress, and associate instructor at Stanford University. His commentary and analysis on manufacturing, economic performance, globalization, and related policy issues can be found in major news outlets. He is co-editor and co-author of *U.S. Manufacturing: The Engine of Growth in a Global Economy* (2003) and three other books, as well as nearly 100 articles in journals and major newspapers.

He holds a B.A. degree from Princeton and M.A. and Ph.D. degrees from Indiana University.

children to enter manufacturing, and hence acquire the necessary skills in their educational paths.⁵ The cultural bias (buttressed somewhat by ambiguous economic data) is exacerbated by notions of “secular stagnation” and by lack of confidence in American manufacturing by elites in government, business and education.

In recent years, fortunately, a number of successful new initiatives to reshape the skills training, Science, Technology Education and Mathematics (STEM) open some paths to addressing the problem. Apprenticeship programs, with the close involvement of manufacturing firms, unions and trade associations are now flourishing in the Carolinas, Wisconsin, Georgia, Florida, Tennessee and Michigan. German, Swiss and Austrian firms with factories in the United States are leaders of these initiatives, adapting their expertise in apprenticeships to American shores. Long-established apprentice pipelines for the naval and nuclear industries in Newport News, VA; for aerospace in the Pacific Northwest; and for metalworkers, utility linesmen, and construction workers are still effective. But overall, despite the promise of these programs, the number of apprentice programs fell by 40 percent between 2003 and 2013.⁶ The most effective of these new programs combine the support of companies, local high schools and community colleges, and local and state governments. Of the total number of nearly 448,000 apprentices in the United States, only 13,532 (3 percent) are in manufacturing-related programs. And nearly 96,000 apprentices are educated in active military duty.⁷ The success of the United Kingdom in more than tripling its apprenticeship programs in less than a decade shows that concerted public-private efforts can make major strides in skills training.⁸

Although much effort to promote and revalue STEM education has been expended in recent decades, most results indicate modest to scant progress. Attracting women to manufacturing-related fields, despite the efforts of the National Science Foundation and the Association for Women in Science, also have met with limited success. Programs like First Robotics and other science competitions have a profound impact on attracting young people to manufacturing fields, but the scope of participation remains small. Efforts by manufacturing firms to address the skills gap have been hampered by shrinking profitability in the face of growing global competition and fears that investments in human capital would be “poached” by competing firms. Company efforts to automate and lower labor costs are often not accompanied by training workers to maintain equipment and troubleshoot production problems.⁹ State and local programs to promote job-related skills, along with federal support for new apprenticeships and manufacturing research centers, are a start

toward a more systematic approach to the skills gap issue, but these efforts pale in comparison to the push for “college for all” and specialized programs for health care and even agriculture.

The following policy proposals and guidelines are designed to meet some of these shortcomings.

⁵ See NAM

⁶ See Deloitte, op. cit., p. 14.

⁷ U.S. Department of Labor, “ApprenticeshipUSA.” Available at: https://www.doleta.gov/OA/data_statistics.cfm

⁸ See Lerman, op. cit., pp. 20-21.

⁹ See Michael Collins. (2015). “Why American Has a Shortage of Skilled Workers,” *Industry Week* (April 16). Available at: http://www.industryweek.com/skilled-workers?code=UM_June16TrafficNL0529&utm_rid=CPG03000004499320&utm_campaign=12350&utm_medium=email&elq2=ebe26855b3ad4645b2352ea21aa741ca

POLICY PROPOSALS

Changing the Cultural Perception of Manufacturing

- Starting with the president, national leaders should visit modern factories and research centers to highlight exciting new technologies, production processes and products.
- Consider a major push for new space exploration program (Mars?) on the Apollo Project model, as a way to inspire students into STEM and manufacturing fields and spur new technology.
- Senior manufacturing executives, especially, but not exclusively women, should mentor young women on careers in manufacturing and visit schools to tout opportunities and show new technology.
- State and local leaders should actively promote apprenticeships to companies and students starting in high school, based on models of North and South Carolina and the United Kingdom.
- Government and business leaders should highlight the value of skills training in the U. S. military and promote career opportunities for those leaving the military for civilian life.

Adapting Skills Training by Education Institutions

- Support the revival of career education and training at high schools; inform teachers and guidance counselors on economic benefits of specialized skills training.
- Community colleges should work closely with local manufacturing firms to build partnerships for skills training for the local community: programs in the Carolinas, Kentucky, the Pacific Northwest and Tennessee provide good models.
- Work with industry associations and companies to build standardized training and certification programs at the local, regional or even national level to the extent possible, as means to build credibility for certifications and portability for those who receive them.
- Work with military to give credit where possible to training obtained by active duty military when transitioning to civilian economy.

Government Programs

- Support rigorous research on economic value of skills training both to individual career and to company success, and on the best methods for delivering such training; disseminate results widely to guidance counselors, parents and civic leaders.
- State and local officials should, where opportunities exist, promote partnerships with industry and development authorities appropriate to needs of local and regional economies.
- States should consider tax credits to employers for building apprenticeship programs, as done successfully in South Carolina (and the United Kingdom). Federal authorities might consider tax credits as an alternative to the plethora of job training programs as well.
- The incoming administration, with presidential backing, should undertake a comprehensive review of the nearly 50 separate federally funded jobs training programs. A high-level review commission should consider converting most programs into block grants to states, and/or grants to public and private education institutions (including schools, unions and industry-specific training entities) offering apprenticeship or other skilled training programs.
- Consider changing accounting standards for expenditures on training from current expensing to capital investment treatment as a means of incentivizing such expenses.

Manufacturing Companies

- Work with trade associations and educational institutions to develop standardized and portable skills requirements for certifications where possible.
- Work with local educational institutions to develop cooperative programs to improve STEM based education and offer specialized training, including apprenticeships, appropriate to local industry.
- Conduct research on value to company (response times, productivity and production levels) of skills trails training; disseminate to schools, opinion makers and government officials.
- Expand tuition reimbursement programs for skilled and professional workers.
- Deploy executives to local K-12 schools to educate students and teachers about new technology and new career opportunities in manufacturing.
- Invest in apprenticeship programs, starting in high schools in some circumstances, to meet pipeline for skilled workers.

Endorsed by:

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U.S. Manufacturing and Regulatory Reform

Paul Noe, Panel Moderator

Smarter Regulation for the American Manufacturing Economy

Paul R. Noe*

Vice President for Public Policy, American Forest & Paper Association

INTRODUCTION

The American version of democratic capitalism has been one of the greatest engines for prosperity and liberty in history, and has the potential to deliver a promising future for the USA and the world. The U.S. manufacturing sector has been a fundamental driver of this success, with the highest economic multiplier of any economic sector, and contributing to the U.S. economy 12 percent of GDP, or \$2.17 trillion. Manufacturing also supports about one in six private sector jobs (18.5 million), and the average compensation per full-time equivalent worker is \$79,553 annually—24 percent more than the average American worker.

But the United States also faces growing challenges in an increasingly competitive global economy. Large swaths of the American economy are distorted by mandates and incentives, and the vast majority of “laws” governing the U.S. are not enacted by elected representatives in Congress, but are promulgated by agencies as regulations. Moreover, as a result of our cumbersome permitting process, America’s infrastructure is crumbling; half of accidents are due to road conditions, the antiquated power grid wastes the equivalent of 200 coal-fired power plants, gridlock on roads and railroads wastes \$300 billion annually, and ancient water pipes leak 2 trillion gallons. And manufacturers that want to expand are stymied.

The cost, complexity and volume of regulations is greater than ever – with about 3,500 new rules annually imposing an invisible tax of about half of the \$3.8 trillion spent visibly through the budget – and this regulatory burden disproportionately affects manufacturers. Manufacturers spent on average \$19,564 per employee to comply with regulations in 2012 – nearly double the amount for all U.S. businesses – and small manufacturers spent about \$34,671 per employee annually – about triple that of the average U.S. business. The vast majority of U.S. manufacturing firms are small businesses; 75 percent have less than 20 employees.

Regrettably, well-intended government regulation often distorts the marketplace or picks winners and losers among companies or technologies. When regulators behave this way, they invariably cause unintended harms. Poorly designed regulations may cause more harm than good; stifle innovation, growth, and job creation; waste limited resources; undermine sustainable development; and erode the public’s confidence in our government. On the other hand, when sensible, evidence-based regulations respond to compelling public need, such as material failures of private markets, they can provide vital benefits, such as the protection of the environment, public health and safety, civil rights, consumers and investors.

Leaders in Washington must embrace regulatory reform not simply on a rule-by-rule basis, but as systemic change. Regulations must be carefully designed to provide net benefits to the public based on the best available scientific and technical information through a transparent and accountable rulemaking process, with due consideration of the cumulative regulatory burden.

* The author would like to thank many thoughtful reviewers for their comments and suggestions, including Donald Elliott, Susan Dudley, Karen Kerrigan, and Thomas Duesterberg.

POLICY PROPOSALS

The next president and Congress have an historic opportunity to dramatically improve the regulatory process to serve the public interest and increase the competitiveness of the American manufacturing economy. Though by no means exhaustive, the following policy proposals are intended to directly help reach that goal:

Do More Good than Harm

Regulatory agencies, including independent regulatory commissions, should objectively ensure that the benefits of their regulations justify the costs and that statutory objectives are achieved in the most cost-effective manner, such as through market-based mechanisms, performance standards, and information tools. The president should direct this effort through an Executive order overseen by the Office of Information and Regulatory Affairs (OIRA) in the White House Office of Management and Budget (OMB). The president also should direct the agencies to revise their statutory interpretations to fully promote benefit-cost balancing, unless prohibited by law. Regulatory priorities and budgets should be planned across the agencies based on the seriousness of the problems to be addressed and the ability to solve them in a cost-effective manner. Finally, since its creation 35 years ago, OIRA has lost over half its staff (from 97 to about 47), while the staff of regulatory agencies has about doubled (146,000 to over 278,000); OIRA's resources should be commensurately increased.

Sound Science

Regulators should base their regulatory decisions, priorities, and influential information disseminations on the best available



ABOUT Paul R. Noe

Paul Noe is the vice president for public policy at the American Forest & Paper Association (AF & PA). He has extensive experience in leading the formulation and execution of regulatory advocacy strategies. At AF & PA, Mr. Noe works on a wide variety of issues, including environmental regulation, regulatory reform, renewable energy, biomass carbon neutrality, chemicals and product stewardship, workplace health and safety, and sustainability. Prior to joining AF&PA, Mr. Noe worked as the vice president of regulatory affairs at the Grocery Manufacturers Association and in private practice.

Mr. Noe also has broad experience in public service, including as counselor to the administrator in the Office of Information and Regulatory Affairs, Office of Management and Budget (2001-2006), where he helped to lead the development of regulatory policy and White House review of regulations in the Administration of George W. Bush. He previously served as senior counsel to the U.S. Senate Committee on Governmental Affairs under chairmen Fred Thompson, Ted Stevens, and Bill Roth (1995-2001), where his work focused on reforming the regulatory process.

He currently serves as the co-chair of the legislation committee in the American Bar Association's Section of Administrative Law and Regulatory Practice, and recently coauthored a paper, "Beyond Process Excellence: Enhancing Societal Well-Being," which will be published this year in a book by Brookings Institution Press entitled, *Achieving Regulatory Excellence*.

Mr. Noe is a graduate of The Georgetown University Law Center, where he was a John M. Olin fellow in law and economics, and Williams College, where he was a member of Phi Beta Kappa.

scientific and technical information, including an objective and unbiased evaluation of costs, benefits, and risks including a careful and thorough analysis of the weight of the evidence. Influential scientific information and assessments should be peer-reviewed by independent experts before being disseminated.

Transparency

Agencies should disclose early to the public the data, models and other key information used in high-impact rulemakings and provide an adequate opportunity for meaningful public input. Moreover, court settlements between regulators and

interest groups to require rulemakings should be published and disclosed to the public, and reviewed by OIRA, before they are final.

Streamline the Permitting Process

The cumbersome federal permitting process for building infrastructure and siting or operating facilities or projects must be modernized to be timely, certain, and efficient so that our nation's crumbling infrastructure can be rebuilt, beneficial projects can proceed, and millions of jobs can be created. This requires clear lines of authority to make decisions and enforce deadlines, efficient environmental review, a one-stop-shop for permits, removing incentives to use litigation to delay projects, such as through bonding requirements, and streamlining and expediting litigation. This also requires the reform of policies and rules under general statutes such as the National Environmental Policy Act, as well as specific statutes such as the Clean Air Act.

Sensitivity to Small Business

Regulators should be more sensitive to the impacts of regulations on small business. For many years, agencies have exploited loopholes to avoid the requirements of the Regulatory Flexibility Act, such as excluding the “indirect effects” of regulations, and those loopholes should be closed.

Retrospective Review of Rules

There should be a retrospective review to streamline and simplify existing rules and to remove outdated and duplicative rules. The retrospective review process should be the beginning of a bottom-up analysis of how agencies can best accomplish their statutory goals. This should include a careful analysis of regulatory requirements and their necessity, as well as an estimation of their value to achieve needed outcomes.

During the first six months of the new administration, priority should be given to reconsidering regulations that have a significant impact on the U.S. manufacturing sector, starting with those listed in the attachment to this paper. Moreover, no new significant rule should be issued without a plan for review. In some cases, small scale pilot projects should be considered so more can be learned before a nationwide regulation is issued.

Finally, to institutionalize retrospective review for the long term, a Congressional-presidential commission should be established to recommend the elimination or modernization of packages of outmoded rules or programs through fast-track procedures, similar to the military base-closing commission, or sunset reviews could be instituted to eliminate or reform rules that no longer can be justified.

Accountability

The president should direct all regulatory agencies, including the independent agencies, to promptly implement the preceding policy proposals. As all regulation starts with the delegation of lawmaking authority from Congress, Congress should elevate these proposals into binding law. Because there is no independent regulatory evaluator in the federal government, regulatory reviews too often conclude with self-praise. Therefore, Congress also should establish an independent congressional agency modeled on MedPAC, the independent medicare advisory commission, or build new capacity in an existing body, such as the Congressional Budget Office, that could assess the costs and benefits of proposed or final regulations—as well as legislative proposals—to better inform Congressional oversight and legislative activity.

APPENDIX

Priority Manufacturing Regulations for Early Review

- **EPA Clean Power Plan:** By increasing the costs of electricity and natural gas and creating reliability challenges, this rule could put American manufacturers at risk in a globally competitive economy. The rule would vastly expand the Environmental Protection Agency's traditional authority far beyond specific source categories by reaching

into the entire electricity supply and demand chain. It also could serve as a model for future direct regulation of manufacturing industries – and thus manufacturers could be impacted twice by greenhouse gas regulations.

- **DOL Overtime Rule:** Announced on May 18, 2016, the Department of Labor rule raises the exemption from overtime pay from an annual salary of \$23,660 to \$47,476, and it requires employers to reclassify certain salaried employees as hourly to make them eligible for overtime pay.
- **EPA Waiver for California's Zero Emission Vehicle Regulation:** Under the Clean Air Act, all states are prohibited from enacting emission standards except for California, which may—if provided a waiver by EPA -- adopt stricter emissions standards than the federal government. In 2012 EPA granted a waiver for California to adopt a ZEV (Zero Emission Vehicle) requirement, which amounts to a requirement that about 15 percent of all new vehicles sold in 2025 be powered by electricity or hydrogen fuel cells. Neither EPA nor California subjected the ZEV requirement to a national benefit-cost analysis.
- **NLRB Joint-Employer Standard:** In 2015, the National Labor Relations Board issued a decision in the Browning-Ferris Industries case, which redefines the 30-year-old joint-employer standard, calling into question what type of relationship one employer has with another. Now, manufacturers who contract out for any product or service with another company could find themselves in a joint-employer relationship, triggering responsibility for collective bargaining agreements and other parts of the National Labor Relations Act.
- **EPA New Source Review Program:** The NSR program should be modified to allow manufacturers to make routine investments in maintenance and repairs, without triggering complex, time-consuming and costly permitting changes.
- **National Highway Traffic Safety Administration (NHTSA)/EPA Fuel Economy Rule:** The scheduled midterm review of federal fuel economy standards for vehicles should be adjusted to reflect lower gasoline prices and higher compliance costs, including coordination of federal regulations with California's greenhouse gas and zero-emission vehicle regulations.
- **Occupational Safety and Health Administration (OSHA), Crystalline Silica Standard:** The rule lowered the permissible exposure level for respirable crystalline silica by half to 50 micrograms per cubic meter of air, and mandates costly methods for controlling exposure, such as new engineering controls, respiratory protection, medical surveillance, hazard communication, and record keeping. The rule has been estimated to affect 534,000 businesses and cost \$5.5 billion annually.
- **EPA, Ozone National Ambient Air Quality Standards (NAAQS) Rule:** In 2015, EPA lowered its ozone standard from 75 to 70 parts per billion, despite a weak health science case. Because more than 60 percent of the controls and technologies are not known, the rule could result in plant closures and premature retirement of manufacturing equipment. By some estimates, the rule could reduce GDP by \$140 billion, eliminate 1.4 million jobs and cost over \$1 trillion, making it the most costly U.S. regulation in history.
- **EPA Boiler MACT Rules:** After about 20 years of work by EPA on certain Clean Air Act regulations setting limits for the emission of hazardous air pollutants from industrial and institutional boilers, parts of the rules were struck down in court for the second time in July 2016. Among other things, the court's actions could affect over 1,000 boilers at facilities that have just come into compliance under the January 2016 deadline. Three attempts at rulemaking have been unsuccessful in developing achievable and sustainable rules under the rigid technology-based standards in the Act.

U.S. Manufacturing and Public Policy Leaders Address Priorities

What the Next President Should Do About U.S. Manufacturing: An Agenda for the First 100 Days

September 14, 2016

FOR IMMEDIATE RELEASE

Washington, D.C. – Top industry executives, political leaders, small business and trade union leaders, researchers and policymakers are offering a blueprint for maintaining the competitiveness of the nation's manufacturing sector. A nonpartisan gathering, which took place at The National Press Club, was convened to produce immediate, concrete policy steps for the next U.S. president. The conclusions will be delivered in position papers to the Democratic and Republican presidential campaign teams this fall.

Conference participants concentrated on international trade, China, and the TPP; manufacturing's role in national security; the impact that education, regulatory reform, and tax policy have on manufacturing; and innovation, entrepreneurship and energy.

Among the provocative ideas under discussion: putting all U.S. trade talks on hold for one year to examine their impact on U.S. manufacturing.

"This is a unique opportunity to make progress in revitalizing U.S. manufacturing. Both presidential campaigns are talking about manufacturing and we are coming up with a menu of the best solutions," said Gil Kaplan, co-founder of the Initiative on U.S. Manufacturing and Public Policy and a partner at the law firm of King & Spalding.

The U.S. Manufacturing and Public Policy Initiative is an interdisciplinary program launched by Indiana University's School of Public and Environmental Affairs (SPEA) in 2015, and the impetus for this conference.

"Our goal at this conference and through the Initiative is to pinpoint best practices and solutions that will strengthen manufacturing," said John D. Graham, SPEA's dean. "The conference participants make up an impressive roster of leaders and their ideas and analysis can help turn all the talk about manufacturing into action."

The group offered and debated specific proposals for the next U.S. administration. Among the ideas discussed were:

International Trade – **Pause Trade Talks for One Year** during which a bipartisan high-level commission would review all aspects of U.S. trade policy and their impact on U.S. manufacturing.

National Security – **Remove Incentives for Off-shoring** that have led to offshore defense manufacturing. Promote "Made in America" purchases by the Department of Defense.

Education – **Boost Vocational Education** spending so that federal funding puts equal emphasis on vocational education and training, including work-based learning.

Regulatory Reform – **Strengthen the Interagency Regulatory Review Process** to ensure that regulations do more good than harm, and streamline the permitting process.

Tax Policy – **Cut Business Taxes** to align the federal tax rate on corporate and non-corporate taxpayers with an internationally competitive level.

Innovation and Energy – **Increase Funding for Innovation** to enhance research related to manufacturing and put the U.S. in line with competitor nations.

Mike Petters, President and CEO of Huntington Ingalls Industries (HII), the nation's largest military shipbuilding company with 35,000 employees, offered his long-term vision as the conference keynote speaker.

Distinguished presenters and panelists at the conference included:

- Brigadier General John Adams, U.S. Army, Retired
- Norman Augustine, former CEO, Lockheed Martin
- Elana Broitman, former Assistant Secretary of Defense for Manufacturing
- U.S. Senator Chris Coons (D-DE), Surrogate for Hillary Clinton
- Dan DiMicco, former CEO Nucor Corporation, Senior Trump advisor
- Leo Gerard, President, United Steel Workers
- Ralph Gomory, former SVP for Science and Technology, IBM
- Jason Miller, Deputy Assistant to the President, Deputy Director of the National Economic Council, and White House Coordinator for Manufacturing
- U.S. Senator Jeff Sessions (R-AL), Senior Trump advisor
- Gene Sperling, Outside Economic Advisor to Hillary Clinton and former Director of the National Economic Council
- Sue Smith, Vice President for Technology and Applied Sciences Division, Ivy Tech Community College

This conference was convened by The Indiana University School of Public and Environmental Affairs Initiative on U.S. Manufacturing and Public Policy.

Sponsors for the event: Alliance for American Manufacturing, Committee to Support U.S. Trade Laws, Information Technology and Innovation Foundation, King & Spalding, Manufacturers Alliance for Productivity and Innovation, Woodrow Wilson Center for Scholars.

For more on the Conference and its participants, please visit <https://spea.indiana.edu/mpp/2016-conference.html>

For more information please contact: Stephanie Lowet, slowet@mcginnandcompany.com, 301-537-5556

This event was intended to serve as a voter education event.

All candidates received invitations to participate in this event. The opinions expressed by any speaker, including candidates or their representatives do not represent the views of Indiana University. Indiana University does not endorse or provide resources to support or oppose particular candidates for political office or political parties.

Founded in 1972, the School of Public and Environmental Affairs (SPEA) is a world leader in public and environmental affairs and is consistently ranked in the top tier of graduate schools of public affairs. With more than 90 full-time and more than 100 part-time faculty members, SPEA provides international scope, influential research, and focused opportunities for students to pair a comprehensive foundation of knowledge with hands-on experience in the field.

