



# 9 Steps to Revitalize America's Manufacturing Communities

MAY 9, 2019 — ANDREW STETTNER, THOMAS CROFT, MICHAEL SHIELDS, JOEL S. YUDKEN,  
STEVE HERZENBERG, JACK MILLS AND CHRISTY VEEDER, PH.D.

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For the past year, experts and stakeholders across the country have worked together to develop a new industrial policy that explicitly ties the goals of rebuilding America's manufacturing base to that of revitalizing economically vulnerable communities and distressed regions. This endeavor has been called the High Wage America Project, whose interlinked priorities include spurring innovation, reshoring and revitalizing sustainable industries, reinvesting in workers, and mobilizing responsible capital.<sup>1</sup> These objectives represent the best thinking of leading experts and practitioners from communities in the industrial heartland and will create the first-ever bottom-up, sustainable, and inclusive regional industrial policy.

This handbook gives policymakers quick access to the nine best actions for bringing this groundbreaking policy vision to fruition. They are:

- **1—Avert layoffs.** The Workforce Innovation and Opportunity Act (WIOA) requires states to commit part of their rapid response program for economic dislocation to efforts that prevent layoffs. However, the fine print of those requirements gave states wide latitude and implementation has lagged. This trend must be reversed. States should establish the capacity to provide proactive business turnaround

assistance in partnership with skilled organizations outside the workforce system. This should include assistance to businesses in economic distress and helping exiting owners convert to employee ownership. Example: *Pennsylvania Strategic Early Warning Network*.<sup>2</sup>

- **2—Buy America.** The federal government already requires made-in-America iron, steel, and other manufactured goods for all federally financed infrastructure and defense projects.<sup>3</sup> States can extend these protections to state-funded infrastructure projects, including permanent and temporary public buildings (like schools and hospitals), roads and bridges, mass transit, waterways, and airports that are not already covered by federal Buy America rules. States should prioritize requiring made-in-America iron and steel, which are the easiest components to label and identify. Example: *2017 New York<sup>4</sup> and Texas<sup>5</sup> Buy America policies*.
- **3—Reshore.** Reshoring has developed some national momentum, but as companies recognize the closing cost gap between offshoring and producing domestically. Still, no systematic state or

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federal initiatives yet assist firms with transitioning back to producing and hiring on American soil. States should fund and implement a reshoring technical assistance team that helps overcome the market failures (lack of information and uncertainty) that lead firms not to consider reshoring, and to demonstrate the cost-effectiveness of making the transition. *For more information, see the Reshoring Initiative.*<sup>6</sup>

- **4—Foster sector partnerships.** Sector partnerships aggregate employer demand, identify skill gaps, and make it possible for job seekers to fill them. States should stabilize and scale up public-private joint investment in industry-led and worker-centered manufacturing sector partnerships. States can appropriate general or employer-funded state training resources and combine them with federal funding for specific groups of workers, like the funds created by the Workforce Innovation and Opportunity Act, the Temporary Assistance for Needy Families program, the U.S. Department of Transportation, and the Supplemental Nutrition Assistance Program’s Employment and Training programs. Public funding is crucial for planning and starting up, and private sector match is crucial for sustaining and scaling. *Example: Pennsylvania Industrial Partnerships.*<sup>7</sup>

- **5—Nurture industrial apprenticeships.** States should bolster industrial apprenticeships through tax credits of \$1,000–\$2,000 per year per apprentice, as well as through state financial aid for related instruction at higher education institutions. This funding should come alongside support for strong multi-firm apprenticeship hub organizations that focus on reaching women and people of color. *Examples: the Wisconsin Regional Training Partnership*<sup>8</sup> *and the AFL-CIO Industrial Manufacturing Technician Apprenticeship.*<sup>9</sup>

- **6—Increase the number of minorities and women in manufacturing.** States should focus on leveraging the manufacturing recovery to create a more diverse workforce. Companies need to work with workforce providers and educational institutions with deep roots in communities of color, and with state programs that provide sufficient resources for marketing, wrap-around services, post-placement mentoring, skills training, and work-based learning. One promising tool is the U.S. Employment Plan, which allows localities to give vendors additional points for inclusive manufacturing hiring plans in bids to manufacture federally funded public transportation. *For more information, contact: Jobs to Move America.*<sup>10</sup>

- **7—Invest in innovation.** States should continue and increase investments in university-based cooperative research and development centers that break down barriers between scientific research, engineering applications, and product and process commercialization. To complement these efforts, states should offer small innovation vouchers (up to \$50,000) to small manufacturers who seek to work with local universities or research centers. *Example: Rhode Island Innovation Vouchers.*<sup>11</sup>

- **8—Invest responsibly.** State and city pension funds, and other institutions, should adopt the United Nations’ Principles of Responsible Investment (UN PRI) and enact investment policy measures to comply with the Department of Labor’s guidance on economically targeted investments (DOL 2015-1). The UN PRI are voluntary standards committed to analyzing potential investments by environmental, social, and governance principles. The DOL 2015-1 guidance allows pension funds to consider social needs as long as financial returns are not compromised. Economically targeted pension funds should invest in promoting in-state

manufacturing and community development and ensuring sustainable investment in cities and communities. *Example: The Office of the Illinois State Treasurer is a signatory to the UN PRI.*<sup>12</sup>

- **9—Create state manufacturing task forces.** Governors should convene multiple stakeholders, including business, labor, academia, and workforce providers, to develop a state manufacturing strategy, as well as identifying key manufacturing clusters and coordinated industrial and workforce policies that would support the strategy’s success. *Example: National Governors Association Center for Best Practices Policy Academy.*<sup>13</sup>

This report is edited by Andrew Stettner, Senior Fellow, with sections authored by members of the High Wage America Advisory Committee: Tom Croft, Stephen Herzenberg, Jack Mills, Michael Shields, Christy Veeder and Joel Yudken.

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## Authors

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**Thomas Croft** is the managing director of Heartland Capital Strategies (HCS), where he manages a national network of responsible investors who seek to rebuild cities, renew the industrial commons, and grow the clean economy; and executive director of the Steel Valley Authority (SVA), a regional development authority focused on retaining, restoring, and creating manufacturing jobs.

**Stephen Herzenberg** is the Executive Director of the Keystone Research Center (KRC) ([www.keystoneresearch.org](http://www.keystoneresearch.org)), a Pennsylvania-based, independent, non-partisan economic research and policy organization, which also houses the Pennsylvania Budget and Policy Center ([www.pennbpc.org](http://www.pennbpc.org)).

**Jack Mills** is the founder of Smart Future Strategy, a consulting firm focused on achieving economic security for people and advancing industries they work in.

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## Notes

- <sup>1</sup> For more information, see Joel S. Yudken, Thomas Croft, and Andrew Stettner, “Revitalizing America’s Manufacturing Communities,” The Century Foundation, October 16, 2017, <https://tcf.org/content/report/revitalizing-american-manufacturing-communities/>.
- <sup>2</sup> See the Pennsylvania Strategic Early Warning Network’s website, <https://www.steelvalley.org/sewn>
- <sup>3</sup> Kate Manuel, “The Buy America Act – Preference for Domestic Supplies: In Brief,” Congressional Research Services, April 26, 2016, <https://fas.org/sgp/crs/misc/R43140.pdf>.
- <sup>4</sup> See Bill A08427, New York State Assembly, signed December 15, 2017, [https://nyassembly.gov/leg/?default\\_fld=&leg\\_video=&bn=A08427&term=2017&Summary=Y&Actions=Y&Memo=Y&Text=Y](https://nyassembly.gov/leg/?default_fld=&leg_video=&bn=A08427&term=2017&Summary=Y&Actions=Y&Memo=Y&Text=Y).
- <sup>5</sup> See S.B. 1289, Texas State Legislature, available at <https://s3.amazonaws.com/fn-document-service/file-by-sha384/3eb32644bfa66a5d293ba5f8582d8e170f77656edab35d2826bdf3554ba5bb3f11cf5d295ec8b5dd1e33b057d7918297>.
- <sup>6</sup> See the Reshoring Initiative’s website at <http://www.reshorenor.org/>.
- <sup>7</sup> See “Pennsylvania’s Next Generation Industry Partnerships,” Pennsylvania Department of Labor and Industry, <http://www.dli.pa.gov/Businesses/Workforce-Development/Pages/Industry-Partnerships.asp>.
- <sup>8</sup> See the Wisconsin Regional Training Partnership website at <http://www.wrtp.org/>.
- <sup>9</sup> See the Industrial Manufacturing Technician Apprenticeship website at <https://www.imtapprenticeship.org/>.
- <sup>10</sup> See the Jobs to Move America website at <https://jobstomoveamerica.org/>.
- <sup>11</sup> See the Rhode Island Innovation Vouchers program website at <https://commerceri.com/innovation-incentives/>.
- <sup>12</sup> “PRI Signatories,” United Nations Principles for Responsible Investment, <https://www.unpri.org/signatories>.
- <sup>13</sup> “Making Our Future,” National Governors Association, January 28, 2013, <https://classic.nga.org/cms/home/nga-center-for-best-practices/center-divisions/center-issues/page-ehsw-issues/page-economic-development/col2-content/related-issues/related-publications/content-reference-4@/making-our-future.default.html>.

# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 1: Avert Layoffs*

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### *Rationale*

Job insecurity is not only an enormous stressor on working people: it also undermines our economy's ability to maintain, or regain, its competitive leadership on the world stage. By investing in tools that help workers to keep their jobs, we invest in our nation's stability as a whole. One key tool available to us for this purpose is called layoff aversion.

Many shutdowns and mass layoffs can be averted with sufficient early warning, especially when coupled with a well-organized and expedient business turnaround or buyout effort. States and local workforce development boards should establish layoff aversion programs in good times as well as in hard times because small business owners, managers, and workers need dependable business and jobs retention policies, initiatives, and capacities, not intermittent actions by government. A sustained aversion initiative should include early identification of firms at risk of layoffs; a quick response to assess at-risk firms' needs and options; the delivery of investment and financial restructuring; economic development and adjustment; and employment and training services that address risk factors. Early warning is crucial not only to prevent dislocations, but also to help workers who need critical transition services.

### *Key Actions*

The Workforce Innovation and Opportunity Act (WIOA) requires states and local workforce boards to commit part of their rapid response program for economic dislocation to efforts that prevent layoffs.<sup>1</sup> However, the fine print of those requirements gave states wide latitude, and implementation has lagged. This trend must be reversed. States should establish the capacity to provide proactive business turnaround assistance in partnership with skilled organizations outside the workforce system. This should include assistance to businesses in economic distress and helping retiring owners convert to employee or alternative ownership, and should ensure that women and minority shareholders' interests are fully accounted for.

### *Issues to Remember*

- States and communities need to establish core turnaround services (e.g. financial restructuring and production process interventions, shared-work systems, market diversification, and buy-outs), which are integral to an effective layoff aversion system.

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- There are several bedrock policies that bolster layoff aversion. States can give workers and communities more notice by improving on the federal Worker Adjustment and Retraining Notification Act. For example, New York requires ninety days' notice (as opposed to sixty federally) and applies to layoffs of twenty-five workers or more (versus 50 federally).<sup>2</sup> Similarly, thirty states have established shared work/short time compensation programs, which allow firms to make workers part-time rather than laying them off and to use partial unemployment insurance payments to make up the difference.<sup>3</sup> Furthermore, courts have upheld the rights of municipalities to use their power of eminent domain to buy time to examine alternatives to the liquidation of prospectively viable manufacturing firms.<sup>4</sup>
- There are new, exciting developments in the broader arsenal of layoff aversion tools: ramping up sector partnerships and incumbent worker strategies; engaging with broader value chains; providing ownership transition guidance; and business sustainability strategies. However, these aversion services alone generally will not prevent the closure of distressed enterprises, and must complement bedrock policies like those described above.

### *Recent Progress*

A number of states have recently established layoff aversion programs, and local workforce areas have experimented with models as well.

- In the last two years, the North Carolina Department of Commerce has established the Business Edge (BE) program, bringing together local Workforce Investment Boards (WIBs), state agencies, and other partners to identify at-risk firms and utilize a variety of resources, including Certified Turnaround Professionals (CTPs), to prevent layoffs and closures.<sup>5</sup>

- California consolidated the federal WIOA Rapid Response into a single guidance, providing a policy framework for local WIBs to design and implement sub-state business engagement and layoff aversion.<sup>6</sup>

### *Model Program*

In Pennsylvania, the Steel Valley Authority (SVA) has implemented the Strategic Early Warning Network (SEWN), a successful layoff aversion initiative with five offices that integrates into the commonwealth's overall dislocated worker services system.<sup>7</sup> Since 1993, SEWN has engaged 1,100 at-risk small and medium enterprises and averted or deferred the loss of 26,000 manufacturing jobs.<sup>8</sup> SEWN, through a regional retention team and other partners, monitors industries and provides services to retain and assist at-risk manufacturing businesses. Here are three key facets of the initiative:

- *Timely identification of at-risk businesses:* SEWN utilizes numerous intelligence gathering tools, including early warning research sources (WARN notices, Dun and Bradstreet reports on company problems, newspaper notices, etc.). It has nurtured a diverse and extensive public referral network, and an informal network of banks, CPAs, and attorneys acts as both a conduit for early warning intelligence and as a leverageable resource to coordinate responses to both mass layoffs and distressed firms.
- *Initial viability assessments:* Within forty-eight hours of a request, SEWN staff cooperates with the requesting firm's management and its workforce to provide an evaluation and a situational analysis of the company. It also makes referrals to other public or private agencies where indicated and appropriate.
- *Delivery of key services:* SEWN provides five core services: financial restructuring; operational restructuring and cost management; market

diversification; ownership transition (employee stock ownership plans, etc.); and high-performance workplace strategies.

For more information, contact Tom Croft, Steel Valley Authority, [t.w.croft@steelvalley.org](mailto:t.w.croft@steelvalley.org).

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## Notes

- <sup>1</sup> "Workforce Innovation and Opportunity Act," final rule, U.S. Department of Labor, Federal Register, volume 81, number 161, August 19, 2016, 56071, <https://www.federalregister.gov/d/2016-15975>.
- <sup>2</sup> New York State Department of Labor, "Worker Adjustment and Retraining Notification," accessed February 13, 2019, <https://labor.ny.gov/workforcenypartners/warn/warnportal.shtm>.
- <sup>3</sup> George Wentworth, Clare McKenna, and Lynn Minick, "Lessons Learned: Maximizing the Potential of Work-Sharing in the United States," National Employment Law Project, October, 2014, <https://nelp.org/wp-content/uploads/2015/03/Lessons-Learned-Maximizing-Potential-Work-Sharing-in-US.pdf>.
- <sup>4</sup> Steel Valley Authority, Appellant, v. Union Switch and Signal Division, American Standard, Inc., Westinghouse Air Brake Division, et al, Appellees, 809 F.2d 1006 (3d Cir. 1987), <https://law.justia.com/cases/federal/appellate-courts/F2/809/1006/385531/>.
- <sup>5</sup> "Workforce Solutions Division," North Carolina Department of Commerce, <https://www.nccommerce.com/about-us/divisions-programs/workforce-solutions-division>.
- <sup>6</sup> "Rapid Response and Layoff Aversion Activities," California Employment and Development Department, Workforce Services, July 22, 2016, [https://edd.ca.gov/Jobs\\_and\\_Training/pubs/wsd16-04.pdf](https://edd.ca.gov/Jobs_and_Training/pubs/wsd16-04.pdf). [note]
- <sup>7</sup> New York State utilizes its ninety-day WARN Act, its business services and rapid response teams, and its Shared Work Program (SWP) to help protect workers during temporary business downturns.[note] "Worker Adjustment and Retraining Notification," New York State Department of Labor, <https://www.labor.ny.gov/workforcenypartners/warn/warnportal.shtm>; and "The Shared Work Program," New York State Department of Labor, <https://www.labor.ny.gov/ui/employerinfo/shared-work-program.shtm>.
- <sup>8</sup> See SEWN's website at <https://www.steelvalley.org/sewn>.

# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 2: Buy America*

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### *Rationale*

Every day states spend hard-earned taxpayer dollars on infrastructure. Spending that money on Made-in-America products keeps our money in the economy, supporting good paying manufacturing jobs and companies that pay local taxes. Infrastructure spending is one of the most important parts of state spending when it comes to making an impact on U.S. manufacturing. Infrastructure, whether it is roads or bridges or mass transportation, depends on iron, steel, and many other manufactured goods and materials like cement, concrete, and glass. And federal and international law give states more leeway to require domestic content than for other types of purchased goods.<sup>1</sup> States should make sure they have strong Buy America rules for infrastructure and then explore preferences for other procured goods.

### *Key Actions*

The federal government already requires Made-in-America iron, steel, and other manufactured goods in federally financed infrastructure and defense projects.<sup>2</sup> States can extend these protections to state-funded infrastructure projects, including public buildings like schools, hospitals,

roads, bridges, mass transit, waterways, and airports that are not covered by federal Buy America rules. Here are some steps that states should take:

- States should prioritize requiring Made-in-America iron and steel, which are the easiest to label and determine if they are fully manufactured in the United States. Other manufactured goods should also be included in state protections lists, but these goods will require more oversight from state agencies to determine the production location of components.
- States should allow limited exemptions to Buy America provisions for goods that are not produced in the United States at sufficient and reasonably available quantities or if the purchase of domestic material will increase the overall project contract by more than 25 percent.

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## *Issues to Remember*

- States should not restrict infrastructure to producers from their own state, but rather use the broader-based Made-in-USA content rules. Short of content requirements, states can bolster local manufacturing through procurement by creating publicly supported markets for in-state goods and holding Made in [X state] marketing campaigns. Within overall rules regarding procurement by the lowest qualified bidder, states can institute preferences (not requirements) for locally produced goods. For example, one proposal suggests giving a preference to contractors who use locally produced food and whose services are no more than 10 percent more expensive than any other bidder.<sup>3</sup>
- States and localities should pay special attention to the purchase of rolling stock. As outlined by Jobs to Move America and The Century Foundation, the U.S. Department of Transportation's U.S. Employment Plan gives regional governments a format to follow in structuring bids in ways that boost U.S. manufacturing and provide training pathways for disadvantaged workers.<sup>4</sup>

## *Recent Progress*

- In December 2017, New York State extended Buy America provisions for structural iron and steel to a wide variety of entities, such as the Metropolitan Transportation Authority and the State University of New York's Dormitory Authority.<sup>5</sup>
- In September 2017, Texas extended Buy America rules for iron and steel for state-financed construction products and added Buy America protections for iron in all state-funded transportation projects, which already required American steel.<sup>6</sup>

## *Model Program*

The American Alliance for Manufacturing can provide model legislation of Buy America implementation. Their model requires construction, repairs, and maintenance of public buildings and public works to use iron, steel, and manufactured goods that are produced in the United States. The model provides limited exemptions, including when there are insufficient materials of a given category made in the United States and when it increases the cost of a project by more than 25 percent. It also provides a thirty-day notice and comment period for any such waiver request. Furthermore, it provides enforcement provisions that would debar any contractor from bidding on state construction projects if they are found to have intentionally violated Buy America rules with a false Made in USA label or other means of misrepresenting where materials are made.

For more information, contact Brian Lombardozi, American Alliance for Manufacturing, [brianl@aamfg.org](mailto:brianl@aamfg.org).

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economic research and policy organization, which also houses the Pennsylvania Budget and Policy Center ([www.pennbpc.org](http://www.pennbpc.org)).

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## Notes

<sup>1</sup> Steel Valley Authority, annual performance audits and calculations, cumulatively added to its 2014–16 Annual Report, as submitted to the Pennsylvania Department of Labor and Industry.

<sup>2</sup> Most states have signed on to the General Procurement Agreement of the World Trade Organization which gives companies in their states access to international markets for procured goods and services in exchange for access to U.S. markets. The GPA specifically exempts transportation and mass transit spending, however. “General Procurement Agreement,” World Trade Organization, accessed April 1, 2019.

<sup>3</sup> Kate Manuel, “The Buy America Act – Preference for Domestic Supplies: In Brief,” Congressional Research Services, April 26, 2016, <https://fas.org/sgp/crs/misc/R43140.pdf>.

<sup>4</sup> “ALICE Model Local Food Procurement,” ALICE Law, July, 2013, available at [https://s3.amazonaws.com/stateinnovation-uploads/uploads/asset/asset\\_file/ALICE\\_Model\\_Local\\_Food\\_Procurement\\_7\\_23\\_13.pdf](https://s3.amazonaws.com/stateinnovation-uploads/uploads/asset/asset_file/ALICE_Model_Local_Food_Procurement_7_23_13.pdf).

<sup>5</sup> Madeline Janis, Roxana Aslan, and Katherine Hoff, “Harnessing Government Spending to Revitalize Good Manufacturing Jobs,” Jobs to Move America and The Century Foundation, October, 2017, <https://tcf.org/content/report/harnessing-government-spending-revitalize-good-manufacturing-jobs/>.

<sup>6</sup> “Governor Cuomo Signs ‘Buy American’ Legislation for All Structural Iron and Steel on New York Roads and Bridges,” Office of the Governor, New York State, December 15, 2017, <https://www.governor.ny.gov/news/governor-cuomo-signs-buy-american-legislation-all-structural-iron-and-steel-new-york-roads-and-> and “New York Buy America Act,” New York State Legislature, Laws of New York, chapter 451, 2017, <http://public.leginfo.state.ny.us/navigate.cgi?NVDT0>.

# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 3: Reshore*

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### *Rationale*

Several economic factors have led U.S. companies in recent years to question decades-old assumptions about the greater profitability of offshore production. These factors include rising wages in China (notwithstanding inadequate data); labor's declining share in the cost of production; problems with quality control; issues of intellectual property protection in China; the availability of low-cost natural gas in parts of the United States; and a shift in U.S. trade policy into a stance less favorable to offshore production.<sup>1</sup> In 2012, the Boston Consulting Group predicted that reshoring will create between two million and three million jobs over the next decade, about a third of them direct manufacturing jobs.<sup>2</sup> States should rely on the hard numbers and seek to shift the conventional wisdom in favor of reshoring, and thereby trigger a tectonic shift in favor of U.S. sourcing.

### *Key Actions*

While reshoring has gathered national momentum, no systematic state or federal initiatives yet exist to assist firms. Thus, the key action for states is to implement a state-funded reshoring technical assistance team that helps

overcome the market failures (lack of information and uncertainty) that lead firms to count out reshoring when it would in fact deliver savings—and to demonstrate the cost effectiveness of the public capacity. Initial reshoring analysis services should be offered at no cost to combat the lack of information, misinformation, and uncertainty concerning the subject. These reshoring assistance teams would conduct firm- and market-specific financial analysis and then deliver technical assistance to help firms with potential for cost-saving reshoring to access economic and workforce services that will enable them to shift sourcing back to the United States.<sup>3</sup>

### *Issues to Remember*

- Since systematic state support to help firms reshore is new territory, state reshoring initiatives need not be expensive. What are most needed are low-cost (e.g., \$1 million for reshoring technical assistance), three-year, proof-of-concept initiatives in multiple states, along with peer learning across states and careful evaluation of results.
- Shifting production back onshore often has transition costs (e.g., for shipping capital equipment

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back home and other startup costs for new domestic production); beyond the cost of the technical assistance capacity, firms identified as having profitable reshoring opportunities should be given priority for state-funded economic development technical assistance.

### *Recent Progress*

The state of Pennsylvania conducted initial reshoring projects in 2015 and 2016, projects which identified the need for reshoring technical assistance and financial analysis (of the pros and cons of reshoring) to be highly customized to the markets and production of each company. That experience helped shape the proposal outlined below.

### *Components of a Model Program*

A three-year reshoring proof-of-concept could be either an executive-branch or legislative initiative. It could also be a cost-shared federal-state initiative aimed specifically at upending long-standing assumptions about the superiority of offshore production. The essential activities and services performed by such a proof-of-concept include the following:

- Form a reshoring team led by staff of experienced managers and turnaround specialists and with partners from manufacturing extension partnerships (MEPs), who have production expertise, and executive branch staff (e.g., the Governor’s Action Team in Pennsylvania) who have knowledge of and access to financing. The team would identify criteria for selecting Original Equipment Manufacturers (OEMs) and suppliers to assist with reshoring, such as companies:
  - in target industries in which the state has competitive strength;
  - that have significant offshore production;
  - that source some similar production in the state; that are open to reshoring production

and can demonstrate that if initial reshoring went well they could reshore additional jobs;

- for whom enough jobs would be reshored initially to enable the state to drive the cost per job reshored below \$10,000;<sup>4</sup> and
- with some or many similar in-state manufacturer, who then might explore reshoring if it works for the first company.

- Market (e.g., through the same channels and customer base used to identify companies that need layoff aversions services) the opportunity to participate in the reshoring proof-of-concept.
- Select financial analysis tools suitable for initial evaluation of the potential to profitably reshore production at the selected companies.
- Conduct a more detailed financial analysis of reshoring potential and of the additional state support needed for “transition costs” associated with reshoring.
- Select companies to assist with reshoring based on the probability of success, the cost per reshored job, and the other criteria established initially.
- Evaluate the success of the effort, including estimating the number of jobs reshored and the cost per job; developing recommendations for refining reshoring technical assistance programs to best meet the needs of OEMs, suppliers, and startups; and developing a “reshoring guide” for other states and cities that want to support reshoring.

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## Notes

<sup>1</sup> Texas S.B. 1289, enacted June 1, 2017, available at <https://s3.amazonaws.com/fn-document-service/file-by-sha384/3eb32644bfa66a5d293ba5f8582d8e170f77656edab35d2826bdf3554ba5bb3f11cf5d295ec8b5dd1e33b057d7918297>.

<sup>2</sup> Kenneth Rapoza, "China-Like Wages Now Part of U.S. Employment Boom," *Forbes*, August 4, 2017, <https://www.forbes.com/sites/kenrapoza/2017/08/04/china-like-wages-now-part-of-u-s-employment-boom/#1bc90aa5128a>.

<sup>3</sup> The actual increase in U.S. manufacturing jobs since 2012 has been about 700,000, although much of this increase reflects the growth of the U.S. economy as a whole, and not reshoring in particular. See "Economic News Release: Current Employment Statistics, Table 5: Employees on nonfarm payrolls by state and selected industry sector, seasonally adjusted," U.S. Bureau of Labor Statistics, U.S. Department of Labor, last modified January 24, 2017, available at <http://www.bls.gov/news.release/laus.t05.htm>.

<sup>4</sup> In Pennsylvania, these two skills are the same as those deployed by the Steel Valley Authority (SVA) to implement its Strategic Early Warning Network (SEWN), which uses strategic state technical assistance to implement layoff aversion services at firms that are financially viable. See the SEWN website at <https://www.steelvalley.org/sewn>.

# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 4: Foster Sector Partnerships*

MAY 9, 2019 — ANDREW STETTNER, THOMAS CROFT, MICHAEL SHIELDS, JOEL S. YUDKEN, STEVE HERZENBERG, JACK MILLS AND CHRISTY VEEDER, PH.D.

### *Rationale*

In a dynamic, global, knowledge-based economy, manufacturers and workers need a stronger sectoral skills development infrastructure. Without that, small- and medium-sized manufacturers struggle to attract good young workers. Training and education programs disconnected from industry also fail to deliver the soft and technical skills manufacturers seek or the opportunities job seekers want. Too often, when U.S. manufacturers can't find the workers they want, they choose lower-wage, lower-skill paths to profitability.

In response, regions and states have invested in sector partnerships. These partnerships bring together multiple employers with overlapping skill needs, in some cases jointly with their unions. Partnerships aggregate employer demand, identify common skill gaps, and make it possible for job seekers and workers to fill them. Sector partnerships can cost effectively deliver training that meets industry needs, develop curricula and credentials, and strengthen career pathways within and across firms. Partnerships can also identify and spread—including through peer learning—organizational and human resource practices that achieve high performance for employers, increase hiring and fair

treatment of employment of underrepresented groups, and lead more employers to pay better and invest more in training on and off the job.

High-quality research documents positive outcomes of sector partnerships for workers across race, ethnicity, and gender lines.<sup>1</sup> The 2014 federal Workforce Innovation and Opportunity Act (WIOA) requires policy and funding in states to support sector partnerships.<sup>2</sup>

### *Key Actions*

- States should seek to stabilize and scale up public-private joint investment in industry-led and worker-centered manufacturing sector partnerships.<sup>3</sup> States can appropriate general funds, and many have flexible state training funds financed by small contributions from employers. Combining flexible state funds with funding for specific groups of workers (e.g. from WIOA, Temporary Assistance for Needy Families, transportation funds, corrections, Supplemental Nutrition Assistance Program employment and training, etc.), and aligning K-12 and community college training with employer needs can further grow available resources for

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sector partnerships. Private sector match for public funds is crucial for sustaining and scaling up sector partnerships.

- States should create training and peer learning opportunities for sector partnership staff and employer and labor representatives. Such learning opportunities can increase partnership capacity to promote improvements in management and organizational practices that have the biggest productivity, profitability, and job quality payoff.<sup>4</sup>
- States should require sector partnerships to use WIOA reporting requirements regarding repeat business, earnings, and industry-recognized credentials, and to report earnings and credentials for sub-populations, such as by race, ethnicity, and gender.<sup>5</sup>

### *Issues to Remember*

- Improving job quality, company performance (productivity etc.), and employment equity should be criteria for distributing funds to and evaluating manufacturing sector partnerships. Currently, most state sector partnership policy (and funding, where states provide it) is about closing skill gaps for employers and increasing access to good jobs and career paths for job seekers and workers—but it also needs to be about upgrading employer policies and practices.<sup>6</sup>
- In addition to upgrading employer policies and practices, sector partnerships can be effective in changing public policy and institutional practices.<sup>67</sup> States should also evaluate strategies sector partnerships pursue for making these changes, as well as the results they obtain.

### *Recent Progress*

- In rural South Carolina, auto manufacturing employment is growing and the labor market is tight.

Orangeburg–Calhoun Technical College president Walt Tobin has convened local manufacturing plant managers since 2017 for quarterly discussions on how to be employers of choice. Concludes Tobin, “With the right training and preparation, local workers can fill these high-skill jobs. But to attract and retain workers, employers need to demonstrate they are creating good jobs with good working conditions.”<sup>8</sup>

- Pennsylvania’s 2016 WIOA plan outlines a comprehensive sector partnership performance management and continuous improvement system, including capacity building for partnerships, and competitive grants to multiple industry partnerships in a specific cluster (e.g., advanced manufacturing) that agree jointly to develop and use sector-specific benchmarking tools that track the impact of strategic workforce investments on employer outcomes. Outcomes might include turnover in long-term care, scrap rates, and uptime in manufacturing). These tools would be another way to encourage sector partnerships to tackle higher-order organizational improvement issues with a potential to increase the return on investment.<sup>9</sup>

### *Model Program*

- Pennsylvania began funding industry partnerships (IPs) in 2004 and has since provided annual appropriations of state funds of as much as \$20 million (and to as many as seventy partnerships) annually. The Pennsylvania IP program was put into statute in Act 67 of 2011.<sup>10</sup> As a complement to its IP program, Pennsylvania in the 2000s established a statewide sector partnership, the Center for Advanced Manufacturing Careers. This served as a vehicle for research, policy development, identification of best practices, and manufacturing-specific peer learning among, at one point, the state’s fourteen regional manufacturing sector partnerships.

- In Maryland, legislation passed in 2013 established the Employment Advancement Right Now (EARN) Maryland program.<sup>11</sup> The statute provides for grants to sector partnerships, and gives priority to ones that “maximize the potential of the collaboration through direct financial or in-kind contributions by members of the target industry.” By statute, a yearly state report on EARN Maryland requires information from grant-funded sector partnerships on the number of participants, their sex, race, national origin, income, county of residence, and educational attainment, and the number who have obtained a credential or an identifiable skill, a new employment position, a title promotion, or a wage promotion. Fifty-nine sector partnerships are currently funded with state dollars, including three in manufacturing, and more will be funded in 2018. By April 2018, 850 employers had participated in the program, more than 2,300 Marylanders had obtained employment because of it, and an estimated 4,400 incumbent workers had advanced their skills. For every dollar spent on EARN Maryland, the state’s return on investment is nearly \$19.<sup>12</sup>

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## Notes

<sup>1</sup> “What Works in Job Training,” U.S. Departments of Labor, Commerce, Education, and Health and Human Services, July, 2014; see especially page 10 and the references therein, available at <https://www.dol.gov/asp/evaluation/jdt/jdt.pdf>. See also Mark Elliot and Anne Rader, “Escalating Gains: Project QUEST’s Sectoral Strategy Pays Off,” Economic Mobility Corporation, April, 2017, <https://economicmobilitycorp.org/escalating-gains-project-quests-sectoral-strategy-pays-off/>

<sup>2</sup> “Public Law 113-128,” (Workforce Innovation and Opportunity Act), U.S. Government Printing Office, Washington, D.C. See requirements for state funding of sector partnerships, Section 134 (a) (3) A (i), and requirements for local workforce board funding, Section 134 (a) (3) (c) (1) (v), available at <https://www.gpo.gov/fdsys/pkg/PLAW-113publ128/html/PLAW-113publ128.htm>.

<sup>3</sup> Sheila Maguire et al, “Tuning In to Local Labor Markets: Findings from the Sectoral Employment Impact Study,” Public/Private Ventures, 2010, available at <https://clear.dol.gov/study/tuning-local-labor-markets-findings-sectoral-employment-impact-study-maguire-et-al-2010>.

<sup>4</sup> “Effectiveness in Serving Employers Specs,” U.S. Department of Labor, April, 2016, <https://www.doleta.gov/performance/pfdocs/Effectiveness%20in%20Serving%20Employers%20Specs%20-%204.20.2016%20FINAL.pdf>.

<sup>5</sup> “WIOA Annual Reporting Requirements,” U.S. Department of Labor, December 4, 2017, [https://www.doleta.gov/performance/pfdocs/ETA\\_9169\\_12.4.2017.pdf](https://www.doleta.gov/performance/pfdocs/ETA_9169_12.4.2017.pdf).



- 6** “WIOA Annual Reporting Requirements,” U.S. Department of Labor, December 4, 2017, [https://www.doleta.gov/performance/pfdocs/ETA\\_9169\\_12.4.2017.pdf](https://www.doleta.gov/performance/pfdocs/ETA_9169_12.4.2017.pdf).
- 7** Maureen Conway and Robert P Giloth, “Connecting People to Work.” Aspen Institute, June 24, 2014. See pages 7, 8, 164, and 259. <https://www.aspeninstitute.org/publications/connecting-people-work/>
- 8** Recent grant guidelines and annual reports for Pennsylvania Next Generation Industry Partnerships can be found online at “Pennsylvania’s Next Generation Industry Partnerships,” Pennsylvania Department of Labor and Industry, <http://www.dli.pa.gov/Businesses/Workforce-Development/Pages/Industry-Partnerships.aspx>.
- 9** “Workforce Innovation and Opportunity (WIOA) Combined State Plan,” Pennsylvania Department of Labor and Industry, June 16, 2016, 337–339, <https://www.dli.pa.gov/Businesses/Workforce-Development/Documents/Pennsylvania%20WIOA%20Combined%20State%20Plan%20-%20As%20Substantially%20Approved.pdf>.
- 10** Act 67 can be found online at <http://www.dli.pa.gov/Businesses/Workforce-Development/Pages/Industry-Partnerships.aspx>. Recent grant guidelines and annual reports for Pennsylvania Industry Partnerships can be found online at <http://www.dli.pa.gov/Businesses/Workforce-Development/Pages/Industry-Partnerships.aspx>.
- 11** Statutes – Article: Labor and Employment,” General Assembly of Maryland, section 11, 701–710.
- 12** “State Announces Request for Proposals for EARN Maryland,” Maryland Department of Labor, Licensing, and Regulation, April, 2018, <http://www.dlir.state.md.us/whatsnews/earnspring.shtml.</a>

# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 5: Nurture Industrial Apprenticeships*

MAY 9, 2019 – ANDREW STETTNER, THOMAS CROFT, MICHAEL SHIELDS, JOEL S. YUDKEN, STEVE HERZENBERG, JACK MILLS AND CHRISTY VEEDER, PH.D.

### *Rationale*

In the post-World War II heyday of U.S. manufacturing, companies offered good paying, stable jobs and supplemented workers' experience with internal company training and mentoring, as well as with apprenticeship for many skilled trades (e.g., tool-and-die workers and machine repair workers). As employment flatlined and then fell, companies no longer provided job security, and many dismantled their apprenticeship programs.

More dependent today than in the past on hiring talent from outside the company instead of developing the skills of current employees, many manufacturers report difficulty attracting and retaining good new workers: companies expect 3.5 million manufacturing job openings over the next decade but 2 million of those to go unfilled.<sup>1</sup>

Apprenticeship offers a proven approach to training skilled workers and customizing classroom education ("related instruction," as it is called in apprenticeship curricula), as well as providing work-based learning on the soft and technical skills required on the job. Apprenticeship delivers benefits for employers, workers, and the community at large. For every dollar invested in apprenticeship, Mathematica estimates a return of \$36 in benefits over the career of an apprentice.<sup>2</sup>

Renewed interest in apprenticeship has come along with innovation in its application to manufacturing. As technical skill requirements have decreased in increasingly automated factories, a new hybrid "industrial manufacturing technician" apprenticeship has been developed that provides a new "middle rung" on manufacturing career ladders, and a way to recognize (and make more portable) the skills of experienced manufacturing workers and new hires.<sup>3</sup> To support small, high-tech startups, another competency-based apprenticeship program, the Maker Professional, has been developed that provides an introduction to "the digital toolset," and a platform for further skill development, including more advanced apprenticeships.<sup>4</sup>

### *Key Actions*

- Increase subsidies for manufacturing apprenticeships that lead to good-paying jobs. These may come in the form of grant funding and/or tax credits, or by articulating apprenticeship-related instruction with college credit and making apprenticeship classes eligible for federal Pell grants and state support for community colleges.

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- Provide technical assistance to employers and apprenticeship sponsors. Apprenticeship is underutilized in the United States in manufacturing (and other sectors) in part because employers don't know about it, and because some non-union employers assume that apprenticeship only exists in unionized companies. Outreach to employers can be done by hiring staff with experience in sales, through a statewide marketing campaign, and with validation from employers with successful apprenticeships.
- Use group approaches to expand apprenticeship more rapidly. A growing number of states embrace "group apprenticeships" in which at least the classroom portion of the curriculum is coordinated across companies by a sector partnership, technical or community college, or other intermediary.
- Use the workforce development system to grow manufacturing apprenticeships.
- Promote capacity building and peer learning among manufacturing apprenticeships, emulating "sector academies" that have helped grow sector partnerships.
- Build community-based pathways to manufacturing apprenticeships in low-income communities and among diverse demographic groups and women.
- Expand youth apprenticeships, pre-apprenticeships, and other pipelines to apprenticeship, including by articulating the latter stages of high-school career and technical education and career pathways with manufacturing apprenticeships.

### *Issues to Remember*

- High-road manufacturing companies (e.g., in the precision machining sector) invest their own funds

heavily in apprenticeship and, like many high-tech manufacturers, have no trouble attracting great workers.<sup>5</sup> These champions can teach other manufacturers that training is an investment and not a cost, and encourage partnering with educators on solutions instead of blaming schools for the low skills of their graduates.

- As with sector partnerships, job quality and employee turnover should be used as criteria for distributing funds to and evaluating manufacturing apprenticeships. With any state workforce investment, a danger exists that some of the employers most interested in training money are those with low-quality jobs, high rates of turnover, and an ongoing appetite for a new group of workers trained (at least partly) at public expense.<sup>6</sup>

### *Recent Progress*

- In 2017, New York established the Empire State Apprenticeship Tax Credit for employers who hire registered apprentices in occupations outside of construction. The tax credit is \$2,000 for the first year, and it increases to \$6,000 for fifth-year apprentices. The tax credit is higher for employers hiring disadvantaged youth (ages sixteen to twenty-four), ranging from \$5,000 to \$7,000.<sup>7</sup>
- In 2017, Maryland passed the More Jobs for Marylanders Act (SB 317), which provides employers with a tax credit (\$1,000) for each apprentice hired for at least seven months of the taxable year.<sup>8</sup>

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## Notes

<sup>1</sup> “2018 Deloitte and The Manufacturing Institute Skills Gap and Future of Work Study,” Deloitte, 2018, available at <https://www2.deloitte.com/us/en/pages/manufacturing/articles/boiling-point-the-skills-gap-in-us-manufacturing.html>.

<sup>2</sup> Debbie Reed et al, “An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States,” *Mathematica Policy Research*, July, 2012, Table V.6, 41, available at [https://wdr.doleta.gov/research/FullText\\_Documents/ETAOP\\_2012\\_10.pdf](https://wdr.doleta.gov/research/FullText_Documents/ETAOP_2012_10.pdf).

<sup>3</sup> See the Industrial Manufacturing Technician Apprenticeship website, <https://www.imtapprenticeship.org/>. See also Rhandi Berth, Laura Dresser, and Emanuel Ubert, “Moving Apprenticeships into Manufacturing’s Future: Industrial Manufacturing Technician,” Center on Wisconsin Strategy, February 2017, [https://www.cows.org/\\_data/documents/1826.pdf](https://www.cows.org/_data/documents/1826.pdf).

<sup>4</sup> For a case study of the app project that led to the Maker Professional apprenticeship, please see “New App for Making in America,” Workforce Innovation Fund, July, 2015, available at [https://innovation.workforcecegs.org/resources/2016/03/28/15/26/New\\_APP\\_for\\_making\\_it\\_in\\_America](https://innovation.workforcecegs.org/resources/2016/03/28/15/26/New_APP_for_making_it_in_America).

<sup>5</sup> In a survey of manufacturing establishments, Weaver and Osterman found that despite higher skill requirements, “...high-tech plants do not experience greater levels of hiring challenges.” See Andrew Weaver and Paul Osterman, “Skill Demands and Mismatch in U.S. Manufacturing,” *ILR Review*, volume 70, number 2, March 2017, 275–307, <http://web.mit.edu/osterman/www/SkillDemandsAndMismatch.pdf>.

<sup>6</sup> For a discussion of this issue in the context of workforce and industry partnership investments generally, see Laura Dresser, Hannah Halbert, and Stephen Herzenberg, “High Road WIOA: Building Higher Job Quality into Workforce Development,” Economic Analysis Research Network, COWS, December, 2015, [https://www.keystoneresearch.org/sites/default/files/KRC\\_WIOA.pdf](https://www.keystoneresearch.org/sites/default/files/KRC_WIOA.pdf).

<sup>7</sup> “Empire State Apprenticeship Tax Credit (ESATC),” New York State Department of Labor, accessed April 1, 2019, <https://labor.ny.gov/apprenticeship/empire-state-tax-credit.shtm>.

<sup>8</sup> Bryan Wilson, “Work-Based Learning Policy for Out-of-School youth and Disadvantaged Adults: Toolkit,” National Skills Coalition, October, 2017, [https://www.nationalskillscoalition.org/resources/publications/file/NSC-WBL\\_PolicyToolkit.pdf](https://www.nationalskillscoalition.org/resources/publications/file/NSC-WBL_PolicyToolkit.pdf).

# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 6: Increase the Number of Minorities and Women in Manufacturing*

MAY 9, 2019 — ANDREW STETTNER, THOMAS CROFT, MICHAEL SHIELDS, JOEL S. YUDKEN, STEVE HERZENBERG, JACK MILLS AND CHRISTY VEEDER, PH.D.

### *Rationale*

America's manufacturing workforce needs are forecasted to grow, but it's unclear if women and people of color, and black and Latinx workers in particular, will have access to those opportunities. (Before proceeding, it's important to note that research on "people of color" in manufacturing focuses mostly on black and Latinx experience, but some researchers include all non-whites in their definitions, while others define "people of color" as black and Latinx alone.) Despite employers' recognition of the multiple benefits of diverse workplaces, participation by African American and Hispanic people working in manufacturing increased only modestly over the past twenty-five years.<sup>1</sup> This slow diversity growth suggests that companies will need new strategies to hire and retain the growing numbers of people of color in the country, who are projected to comprise half of the U.S. workforce by 2045.<sup>2</sup> Similarly, although women make up 47 percent of the total U.S. workforce, they fill only 29 percent of manufacturing jobs,<sup>3</sup> and women were hired for a mere 7 percent of the 650,000 manufacturing jobs that were created in the United States between 2010 and 2014.<sup>4</sup>

Women's low participation in the manufacturing sector is not due to having bad experiences in factory employment or a lack of interest. In a 2012 survey, over 70 percent of women working in manufacturing described their careers as interesting and rewarding, highlighting good pay and opportunities for challenging assignments as top reasons to stay in the industry.<sup>5</sup> Women and people of color present an enormous untapped human resource, and states should support programs that can strengthen and build on the work some manufacturers are already doing to grow their inclusive hiring practices.

### *Key Actions*

- In order to increase the number of women and people of color in manufacturing jobs, programs need to address barriers to entry. Two primary barriers are access to childcare and transportation. Childcare in particular can be an especially difficult obstacle for single parents who may be new on the job and are required to work night shifts, during

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which access to reliable, affordable childcare may be hard to find.

- Opportunities for “earn-and-learn” training are also hugely important. Low-wage workers may be interested in switching to a manufacturing career, but leaving a wage-paying job to take training courses may not be a viable option: even if the cost of the training is covered, workers are still giving up a valuable paycheck.
- All workers—including women and people of color—are much more likely to seek employment in a particular sector if they can imagine themselves in a job in that sector. Unlike fields such as IT and medicine, many people can’t easily visualize what manufacturing work is like, hence in a sense it can remain an invisible option to job seekers. Mentoring programs—both at the career-coaching stage and the post-placement stage—are low-cost initiatives that can build a sense of “manufacturing identity” and potentially yield outsized results for recruiting people of color and women; these programs can be especially impactful if they come from within the local community.
- Educational outreach both to young people and adults has the potential to greatly increase enrollment in the manufacturing workforce: manufacturing-focused STEM programs for K–12 students can tap the next generation of workers who will be needed to replace the millions of current manufacturing employees who are slated to retire over the next decade. At the same time, contextualized education for adults who may need additional literacy and/or numeracy skills can get workers into the many available jobs that need to be filled right now.
- The U.S. Employment Plan is a policy tool that government agencies can use in their requests for proposals to directly address hiring in the

manufacturing sector.<sup>6</sup> While an agency’s minority and women’s business enterprise standards can support inclusivity for small business owners, the U.S. Employment Plan accomplishes similar goals for workers: manufacturers bidding on federally funded agency contracts can win extra points on their bids by committing to inclusive, high-road hiring plans should they be awarded the contract.

### *Issues to Remember*

- The U.S. Employment Plan has been shown to not have a significant impact on price or the number of bidders,<sup>7</sup> and was therefore found to be consistent with the federal laws and regulations<sup>8</sup> that require all procurement involving federal funds be conducted in a way that maximizes full and open competition.

### *Recent Progress*

- In March 2018, Illinois State Representative Mary Flowers introduced H.B. 5062, a bill to sustain and expand advanced skills manufacturing training and education programs in Illinois public schools.<sup>9</sup> The bill directs the state board of education to institute a program aimed at facilitating education in advanced manufacturing technical skills in twelve public high schools where the youth unemployment rate is at least twice the national average. The bill ensures that the participating high schools will each have funding for at least one industry coordinator, tutoring, pre-employment and on-the-job mentoring, professional and leadership development, and life and financial management instruction.
- In January 2018, the Los Angeles County Metropolitan Transportation Authority (Metro) Board of Directors unanimously adopted a motion to establish an agency-wide Good Jobs and Equity Policy:<sup>10</sup> for federally funded train, bus, and related equipment purchases, Metro will apply the U.S. Employment Plan to all projects above \$100

million to incentivize companies bidding on Metro contracts to create and retain high-quality jobs, partner with community and labor organizations to develop and implement apprenticeship programs, and hire disadvantaged workers.<sup>11</sup> It is estimated that the policy can support up to 20,000 jobs if Metro replaces its entire fleet and the work is performed domestically.

### *Model Programs*

- The Manufacturing Connect (MC) program has successfully reintroduced industrial education into African-American neighborhoods in the City of Chicago.<sup>12</sup> Their model program includes work-based learning, training up to NIMS metalworking credentials, and state of the art equipment. The program is undergirded by the Chicagoland Manufacturing Renaissance Council, a longstanding sectoral coalition between community organizations and local manufacturers who provide work-based learning experiences, job opportunities, and constant feedback to the program.<sup>13</sup> Critically, MC's Young Manufacturers Association provides ongoing mentoring and career counseling from people of color who have been successful in the manufacturing sector to new trainees.
- States can bring together their departments of education and departments of labor in coordination with Perkins funding to develop comprehensive manufacturing-focused recruiting, training, and education programs, using programs like Manufacturing Connect as a prototype. Ohio has developed such a program: the state's Department of Education Career-Tech Education (CTE) team, in collaboration with the National Alliance for Partnerships in Equity, used Perkins funding that was earmarked for outreach to nontraditional populations to create a set of resources (one for students and parents, and one for teachers) specifically designed to recruit female students and students of color to manufacturing careers.<sup>14</sup>
- The National Skills Coalition provides guidance on state policy for alignment programs, which have been shown to be key to building career success for low-income and/or low-skilled adults.<sup>15</sup> Comprehensive alignment programs can be focused to address manufacturing workforce needs, and should include integrated education and training; career counseling; support services; attainment of high school diplomas or equivalent credentials; training leading to industry-recognized and stackable postsecondary credentials; and industry engagement. Among other key elements, alignment policies should include multiple entry and exit points for adult education and middle-skills training.
- Multiple examples of applications of the U.S. Employment Plan can be found on the Jobs to Move America website.<sup>16</sup>

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# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 7: Invest in Innovation*

MAY 9, 2019 — ANDREW STETTNER, THOMAS CROFT, MICHAEL SHIELDS, JOEL S. YUDKEN, STEVE HERZENBERG, JACK MILLS AND CHRISTY VEEDER, PH.D.

### *Rationale*

Strong manufacturing communities depend on the ability of firms to innovate. Innovation is a vital component of a sustainable manufacturing future, because the new products and processes that result drive growth and create new wealth. And because being close to the production process can support innovation, a focus on innovation can be a manufacturing retention strategy.

State investments in innovation should focus on strengthening regional industrial clusters. Building resources to support research and development (R & D) can be a cost-effective way of supporting networks of manufacturers and anchoring them to the region. R & D creates value that regions can capture and keeps firms competitive in the global market. Yet small- and medium-sized firms, which comprise a growing share of the manufacturing base, often lack R & D capabilities of their own. To be effective, states must carefully direct resources to activities that will create growth among firms that operate in the region and retain investments in a thriving workforce. States can build out

existing resources to establish an industrial commons of public resources that all local manufacturers can tap.

Lastly, states should anticipate the impact of innovation on the manufacturing workforce and take steps to both support job-creating innovation and to mitigate job losses from technological changes in the production process.

### *Key Actions*

- Build capacity for innovation to strengthen regional industrial clusters. States can do this by supporting manufacturing innovation through formal, funded relationships with state universities to engage in applied research. For example, a group of Ohio's institutes originally formed through its Edison program, such as the University of Akron's Edison Polymer Innovation Center and Ohio University's Edison Biotechnology Institute, deliver an applied research capacity that can create new marketable technologies and work with existing firms to solve engineering and research challenges. State

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programs can provide cost-share grants to such projects and centers in support of the fourteen federally funded regional Manufacturing USA Institutes, which are developing next generation advanced manufacturing, often in partnership with higher education.<sup>1</sup>

- Manufacturing extension programs (MEPs) provide another vehicle for innovation that strengthens regional manufacturing infrastructure.<sup>2</sup> MEPs already excel at assisting individual manufacturers with a wide variety of competitiveness issues. States should increase capacity and specifically task MEPs with identifying and leading process and supply chain innovation strategies that could benefit whole clusters in manufacturing industries that are vital to the region, thereby giving small and medium manufacturers a greater role in the state's innovation ecosystem.
- Choose investments to help manufacturers to overcome a specific hurdle in the development process of an otherwise marketable product. Clearing a production hurdle for a good that has (or can generate) consumer demand enables firms to expand. Innovation vouchers and research and development tax credits are two forms of state support to address these challenges.

### *Issues to Remember*

- Innovation can take the form of either product development or changes in the manufacturing process. Product innovation tends to be job-creating—at least within the scope of a given firm—because it results in a new or better product that the firm must scale up to produce. Process innovation is important in a different way, because it increases productivity, which is vital to sustained economic growth and keeping manufacturers competitive and viable.

- States should focus on helping firms to identify how new technologies and automated production strategies can augment workers instead of replacing them. Innovation investments should require that technology design take interactions into account and require state-funded innovation projects to partner with education and training institutions and employers to develop specific trainings for new technology. A good example is the federally funded Lightweight Innovations for Tomorrow in Detroit, which has developed multiple educational programs to prepare students and incumbent workers for careers in advanced manufacturing focusing on lightweight metal.<sup>3</sup>
- States must also tackle the fact that process innovations can cause job losses. Improving layoff notification and strengthening unemployment insurance are some important state actions.
- Investing in manufacturing innovation is a key component for retaining and reshoring strong industry clusters. Because proximity to the physical manufacturing process enables a clearer understanding of challenges and better problem-solving, manufacturers that offshore the production portion of their work often lose their competitive edge.

### *Recent Progress*

- Rhode Island provides innovation vouchers of up to \$50,000 for small manufacturers to partner with Rhode Island universities, research centers, or medical centers to develop and commercialize a new product.<sup>4</sup> Unlike R & D tax credits, the program focuses on small companies who have the most trouble accessing scientific and engineering expertise. Similarly, MassDevelopment is a new voucher program to provide grants to start-ups and small- and medium-sized firms to use University of Massachusetts labs to help develop product prototypes.

- The Massachusetts Mass Life Sciences program provides tax incentives to companies engaged in life sciences research and development, commercialization, and manufacturing in Massachusetts. More than 200 awards totaling over \$181 million have been awarded to life sciences companies across the state. Massachusetts also has committed up to \$20 million for five years for life sciences projects that are part of the Manufacturing USA National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL)<sup>5</sup>.

### *Model Programs*

- Manufacturing extension partnerships help firms to problem-solve by connecting small- and medium-sized companies that lack their own research departments or engineers to a team of experts with the skills to meet their needs. Ohio has seven MEPs located strategically across the state funded by a combination of federal and state funding, as well as by fees from manufacturers that use their services. Cleveland-based Manufacturing Advocacy and Growth Network (MAGNET) helps firms to overcome hurdles in product development or marketing, and gives them access to capital resources such as CNC machines, which smaller firms may not own.<sup>6</sup> MAGNET also supports regional manufacturing hubs by linking firms to supply chain partners. MEPs could be tapped to build regional manufacturing clusters.
- The Massachusetts Technology Collaborative's Massachusetts Manufacturing Innovation Initiative (M2I2) runs multiple projects that bolster state and federal investments for regional innovation.<sup>7</sup> The M2I2 program provides capital cost-shares for Massachusetts projects within Manufacturing USA institutes, targeting photonics, robotics, fabrics, and flexible electronics. Similarly, the Mass Ramp-Up program provides supplemental funding to firms awarded federal Small Business Innovation

Research or Small Business Technology Transfer grants to commercialize technologies developed through federal research.<sup>8</sup>

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# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 8: Invest Responsibly*

MAY 9, 2019 — ANDREW STETTNER, THOMAS CROFT, MICHAEL SHIELDS, JOEL S. YUDKEN, STEVE HERZENBERG, JACK MILLS AND CHRISTY VEEDER, PH.D.

### *Rationale*

Many cities and states are tapping a growing source of capital right in their backyards: workers' capital, which represents an enormous share of economic and capital market wealth. In 2017, global pension assets in major markets rose to over \$41 trillion, according to Willis Towers Watson.<sup>1</sup> U.S. defined pension funds alone stand at over \$10 trillion, and worker trustees can be represented on public and multi-employer pension boards with assets of around \$4 trillion. That's a lot of capital.

The pension funds of hard-working Americans across the country—such as public employees, teachers, construction workers, and steelworkers—are collectively bargained, deferred wages that are owed to them. They were won only after decades of fighting to ensure retirement security once their working lives had ended. These social gains were a result of the movement of labor and social reformers who sought to balance the power of the “marketplace” with the American dream, paving the way for a prosperous and stable middle class, decent working conditions, and

environmentally clean and safe communities. This capital, part of a larger pool of institutional investments owned by working people (and including mutual funds and 401(k)s, insurance funds, endowments, and bank deposits), has been instrumental in the development of the U.S. economy and its capital markets, and those of our global neighbors, fueling growth and prosperity.

While pension funds must provide a good rate of return, these trusts have long-term horizons and growing financial incentives, fiduciary duties, and legal directives to invest responsibly. The 2015 U.S. Department of Labor pension guidance on legality of economically targeted investments (ETIs) recommitted to investments that produce “collateral benefits,” targeting investments in business, affordable housing, sustainable energy, and similar concerns that yield good jobs and benefit residents.<sup>2</sup> ETIs are investments that provide risk-adjusted market rates of return, while providing additional benefits to a targeted geographic target area.

Joining many other countries, the United States also encouraged investors to consider environmental, social,

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and governance (ESG) matters in their investments. In the United States and globally, state and national pension funds, banks, and corporations have signed on to the United Nations Principles of Responsible Investment (PRI), which now has around 2,000 signatories representing about \$80 trillion in assets.

### *Key Actions*

While states should explore a variety of capital strategies, their most powerful option is to establish a responsible pension investment policy with an economically targeted, in-state component. A responsible investment policy can be applied to other state assets, such as the treasury, and to other sources of the people's money.

- State and city pension funds, and other institutions, should adopt the United Nations PRI, or similar ethical and sustainable investment policies. With this policy enacted, pension managers can apply ESG criteria across all asset classes. For corporate equities investments, that means that the funds can monitor firms on their workforce relations and environmental practices. In fixed income investments, managers can invest in affordable housing and “green bonds.”
- State and city pension funds should enact alternative and fixed income investment policy measures to comply with the DOL 2015-1 guidance on economically targeted investments. These investments can include direct, indirect, and pooled investment for advanced manufacturing, efficient transportation, affordable housing, commercial and green construction, infrastructure, and renewable energy.
- Historically, critics have done their best to downplay responsible investments by falsely alleging that they yield concessionary returns. Evidence does not bear this conclusion out: a battery of responsible investment performance meta-studies by institutions like the University of Oxford,

Harvard Business School, and Mercer Consulting demonstrate that investors who pay attention to ESG and good corporate governance produce comparable returns and sometimes financial outperformance.

### *Issues to Remember*

- Public and multi-employer pension funds are generally required to include employee/labor representatives on their boards of trustees. In addition to ensuring that pensions are well funded and deliver a solid return, union trustees should use their power to ensure pensions are investing in the interests of beneficiaries and the well-being of the communities where they live. They should champion a long-term, responsible, and activist approach to the management of workers' assets.
- Pension fund fiduciaries can consider ESG factors in their investment decisions. The DOL 2015-1 guidance allows pension funds to take ESG benefits into account as “tiebreakers” when investments are otherwise equal. These criteria can include good human capital and fair labor practices, diversity in corporate boardrooms, and good community neighbor and sustainable environmental practices. Many of these practices—and the avoidance of ESG risk—lead to better long-term productivity.
- ETI and ESG criteria can include job quality and community development. Social criteria in ETI and ESG can include economic development of depressed areas and delivery of high quality jobs. State pension funds should beef up social criteria alongside the implementation of more well-known environmental and corporate governance rules.

### *Recent Progress*

- CalPERS, the California Public Employees Retirement System, has been a leader in responsible and economically targeted investments.<sup>3</sup> In 2001,

following extensive due diligence and board approval, CalPERS established the California Initiative, a \$1 billion ETI. The California Initiative has invested in hundreds of firms across a variety of sectors, including the industrial, energy, and information technology sectors. More recent investments have focused on infrastructure.

- Since the 1960s, the State of Wisconsin Investment Board has operated the Wisconsin Private Debt Program, which offers senior and subordinated debt financing to companies with operations in the state.<sup>4</sup> In an effort to avoid competing with banks, the program focuses on longer-term, fixed-rate loans to smaller-sized businesses. The board also offers a private equity program focused on Wisconsin-based businesses.
- The New York City Employees' Retirement System (NYCRS) allocates 2 percent of pension assets towards ETIs.<sup>5</sup> The ETI program is designed to address market inefficiencies by providing capital or liquidity to underserved communities and populations citywide. The ETI program's investments have historically been targeted towards affordable or workforce housing for low-, moderate-, and middle-income neighborhoods and populations in the five boroughs, and has invested over \$2 billion in neighborhoods since the 1980s.<sup>6</sup>

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## Notes

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# 9 Steps to Revitalize America's Manufacturing Communities

## *Action 9: Create State Manufacturing Task Forces*

MAY 9, 2019 – ANDREW STETTNER, THOMAS CROFT, MICHAEL SHIELDS, JOEL S. YUDKEN, STEVE HERZENBERG, JACK MILLS AND CHRISTY VEEDER, PH.D.

### *Rationale*

When it comes to manufacturing and economic development, state and local governments have focused on the needs of individual factories, providing tax breaks or other economic development incentives, especially targeted to luring factories from other states or countries. These efforts do little to bolster the competitiveness of existing manufacturers through the development of the industrial commons, which Harvard Business School professors Gary Pisano and Willy Shih characterize as the resources and capacities required to sustain and foster innovation and a strong advanced manufacturing base.<sup>1</sup> States serious about a competitive manufacturing economy need to develop a state manufacturing strategy to building up such resources for research and development, access to suppliers and equipment, and a skilled workforce, with a special focus on those manufacturing specialties where the state has a competitive advantage.

### *Key Actions*

- States can appoint a manufacturing task force to develop a next-generation manufacturing strategy. Membership should include business, higher

education institutions, manufacturing extension and assistance programs, and labor leadership alongside representatives from key state agencies, like those responsible for economic development and labor.

- The goal of the task force should be to produce actionable recommendations for state government, including both executive and possible legislative moves. The charge of the commission should include innovation, workforce development and education, retention of the current manufacturing base, financing needs of manufacturing, land use, urban manufacturing, and making ownership and employment in manufacturing more inclusive of women and communities of color.
- State manufacturing task forces should consider holding field hearings and other open public meetings to get input and develop widespread support.

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## *Issues to Remember*

- Strategy efforts correctly focus on advanced or next-generation manufacturing; however, task forces should be careful not to limit their efforts to new products like nanotechnology and biomaterials. Instead they should focus on how advanced manufacturing production processes can bolster existing manufacturing strengths as varied as primary and fabricated metals, sewn trades, and papermaking globally competitive.
- The manufacturing strategy should be keenly focused on retention of small and medium manufacturers, who often have the least bandwidth to benefit from publicly supported research and development and workforce programs.
- Workforce development should not be considered a separate part of a state manufacturing strategy. Rather, strategies targeting priorities like manufacturing technologies or supply chain optimization should be designed in ways that maximize good paying jobs for the communities that need them the most.

## *Recent Progress*

- Eight states (California, Colorado, Connecticut, Kansas, Massachusetts, New York, and Pennsylvania) worked with the National Governors Association's Best Practices Academy to develop advanced manufacturing strategies, resulting in new programs like a publicly funded innovation voucher that allowed small and medium manufacturers in Connecticut to work with research institutes.<sup>2</sup>
- Under Governor Ed Rendell, Pennsylvania developed a Next Generation Manufacturing Strategy, leading to a number of innovative efforts, including the establishment of a state office of fair trade to, among other things, help Pennsylvania companies lodge fair trade complaints.<sup>3</sup>

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