

7-12-2023

How the Manufacturing Extension Partnership Can Anchor U.S. Workforce Development

Matthew D. Wilson

Great Cities Institute, University of Illinois Chicago

Nichola Lowe

The University of North Carolina at Chapel Hill, nlowe@email.unc.edu

Greg Schrock

Portland State University, gschrock@pdx.edu

Rumana Rabbani

The University of North Carolina at Chapel Hill, rumana.rabbani@unc.edu

Allison Forbes

Center for Regional Economic Competitiveness, aforbes@crec.net

Follow this and additional works at: https://research.upjohn.org/up_policybriefs



Part of the [Labor Economics Commons](#)

Citation

Wilson, Matthew D., Nichola Lowe, Greg Schrock, Rumana Rabbani, and Allison Forbes. 2023. "How the Manufacturing Extension Partnership Can Anchor U.S. Workforce Development." Policy and Research Brief. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/pb2023-50>

This title is brought to you by the Upjohn Institute. For more information, please contact repository@upjohn.org.

POLICY BRIEF

How the Manufacturing Extension Partnership Can Anchor U.S. Workforce Development

Matthew D. Wilson, Nichola Lowe, Greg Schrock, Rumana Rabbani, and Allison Forbes

BRIEF HIGHLIGHTS

- *By coupling workforce services with customized business assistance, the Manufacturing Extension Partnership (MEP) provides a promising model to address a range of operational and competitive challenges faced by manufacturers.*
- *Between 2011 and 2019, MEP centers grew their number of workforce projects nearly sevenfold, and the share of all MEP projects in workforce jumped from 3 to 12 percent.*
- *MEP leaders viewed the COVID-19 pandemic as an opportunity to scale workforce development services intended to address preexisting workforce concerns that were exacerbated by the pandemic.*
- *MEP centers have increasingly shifted their emphasis from skill development meant to help individual workers find jobs to preparing the workplace to attract, train, and nurture the manufacturing workforce.*

For additional details, see the full working paper at https://research.upjohn.org/up_workingpapers/371/.

As the U.S. economy rebounds from the COVID-19 pandemic, strategies that promote long-term transformation toward high-quality jobs will be critical. If not sufficiently addressed, long-simmering workforce shortages, which intensified during the pandemic, could undermine job growth. Manufacturing is a case in point. Leading up to the pandemic, an estimated 500,000 manufacturing job openings went unfilled. For some legacy manufacturing regions, especially those with many older businesses that have not modernized their technology, difficulties with worker recruitment and retention are especially pronounced. The “Great Resignation” of 2021–2022 has only worsened matters, with workers voluntarily quitting jobs at historically high rates. Although this phenomenon is widespread, it has added to the particular challenges facing the manufacturing sector.

In a related [paper](#), we offer a promising institutional fix: centering workforce development within the U.S. Manufacturing Extension Partnership (MEP), a program based at the National Institute of Standards and Technology (NIST), within the U.S. Department of Commerce. In this brief, we summarize how this could work by documenting the workforce- and workplace-enhancing strategies that MEP centers have adopted since their inception in the mid-1990s. While workforce development is unevenly implemented across today’s MEP network, leading centers within the network are devising strategies to transform business practices to improve the quality of frontline manufacturing jobs. Our discussions with MEP network leaders and center directors point to three concurrent approaches that MEP centers have adopted to better integrate workforce solutions in their service delivery models:

- 1) **Closely couple high-demand business services with workforce services.** MEP center staff pair services explicitly requested by employers, such as lean process improvement services, product design and development, and marketing and sales assistance with workforce services.
- 2) **Don’t just help individual workers move into jobs; prepare the workplace to attract, retain, and nurture the manufacturing workforce.** MEP staff assist employers in identifying and resolving problematic organizational, interpersonal, and institutional dynamics, helping to improve the workplace and job quality.
- 3) **Leverage the immediate need for workforce development services during the pandemic to scale these services more broadly and for the longer term.** The COVID-19 pandemic has exacerbated preexisting concerns around workplace safety and employee benefit costs, but MEPs can emphasize job-improvement strategies to make firms more viable and resilient to future crises, whether due to health, climate, or other factors.

How the Manufacturing Extension Partnership Can Anchor U.S. Workforce Development

For decades, federal and state workforce development systems, including those focused on U.S. manufacturing, have sought to address purported skills shortages, rather than tackle broader concerns related to worker retention and turnover.

MEP Workforce History and Overview

On their own, traditional workforce development institutions—such as community colleges, vocational training centers, or even worker-advocacy groups—are unlikely to solve the problems of high workforce vacancies and turnover. These institutions focus too narrowly on preparing individual job seekers to enter the labor market rather than helping businesses develop and sustain effective in-house workforce solutions. This is especially the case when it comes to manufacturing firms, especially those that are smaller or lack resources for effective training. These businesses need help to develop their workforce, but that help must come from organizations with a deep working knowledge of established manufacturing systems and practices, along with sufficient network reach to influence meaningful and enduring change. Those characteristics are found within the U.S. MEP.

The MEP dates to 1988, when federal industrial policies designed to boost the global competitiveness of U.S. regional manufacturing economies were adopted. Today, every state (plus Puerto Rico) has one or more MEP centers, and they collectively employ around 1,400 manufacturing specialists who provide technical assistance to more than 11,000 small and medium-sized manufacturing firms annually. Workforce development—programs and institutions that support investments in workforce skills and improvements to jobs through career pathways—is an evolving focus for MEP. While state- and local-level MEP centers universally promote process and product improvements, growing numbers are experimenting with complementary strategies that push changes to workplace structures and routines that improve the manufacturing work experience, thus increasing frontline worker retention.

MEP Workforce Expansion and Experimentation

MEP representatives are well-positioned to diagnose job quality and other related workforce problems since they help business owners and managers address a range of operational and competitive challenges. However, we know relatively little about MEP's engagement with workforce development. To address this question, we conducted interviews with leadership from the national MEP system, including with directors from 10 MEP centers, to gain insight into how MEPs have helped manufacturers navigate employment challenges and opportunities.

Between 2011 and 2019, MEP centers reported that their number of workforce projects grew nearly sevenfold, and the share of all MEP projects in this domain quadrupled, from 3 percent to 12 percent (Figure 1). But within that decade, workforce activities waxed and waned. There was a significant surge in workforce projects between 2013 and 2015, led by centers in states like Ohio, Pennsylvania, Illinois, and Iowa; growth ebbed to some extent in 2016 and 2017, only to bounce back after 2018. Over time, more centers engaged in workforce activities. By 2019, workforce projects accounted for at least one-tenth of the total projects for 30 out of 50 centers (Figure 2).

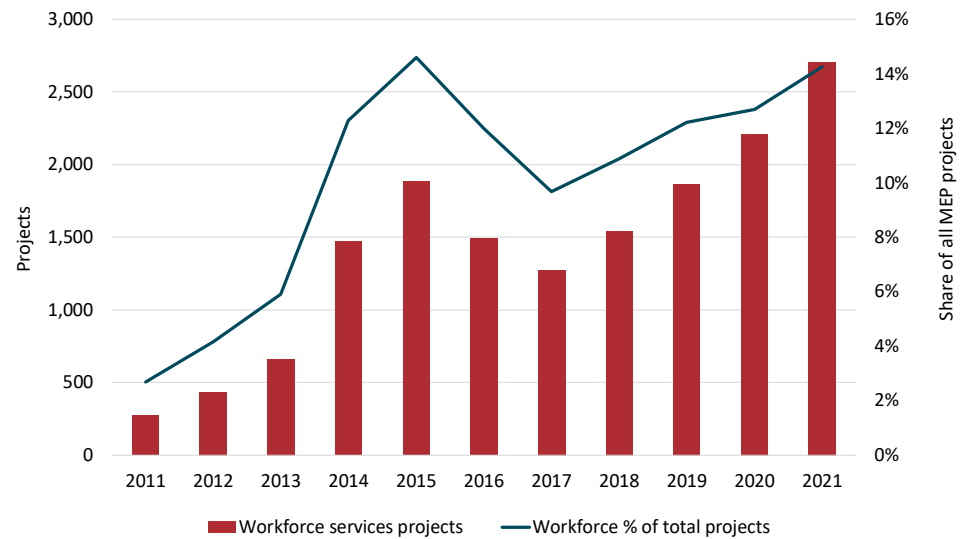
During this time, MEP renewed efforts toward a national, systemwide approach to workforce development programming, promoting learning and diffusion across centers. These efforts included, for example, providing a three-year, \$1 million grant to the Missouri center to start a new initiative called America Works. Implemented in partnership with MEP centers in northeast Ohio, New Jersey, Iowa, and Indiana, and managed by workforce staff from Cleveland, America Works centralizes and coordinates workforce services nationally, and shares best workforce practices throughout the network (Fieldman 2021).

Strategies by Workforce-Leading MEPs

Our discussions with MEP leaders point to three concurrent strategies that MEP centers have adopted for better integration of workforce solutions. The first strategy

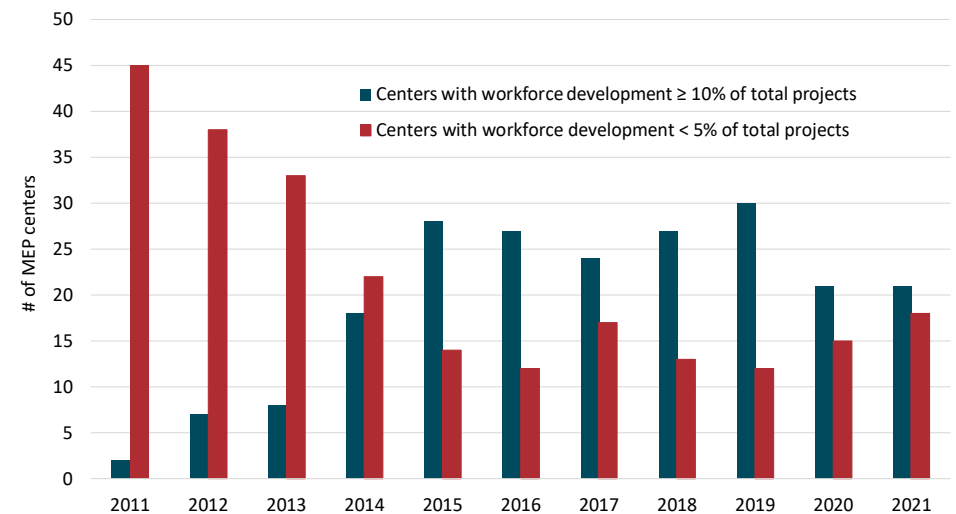
While actions taken by MEPs can vary, the key is a shared emphasis on resolving an “interest gap” rather than a “skills gap”—the job of employers is to provide a supportive environment that values worker ingenuity and supports ongoing career success.

Figure 1 MEP Workforce Services Projects by Year, 2011–2021



SOURCE: Authors’ calculations of NIST-MEP administrative data.

Figure 2 MEP Workforce Service Project Diffusion, 2011–2021



SOURCE: Authors’ calculations of NIST-MEP administrative data.

entails close coupling of workforce services with high-demand business services. When businesses request support for expanding their markets, for example, MEP center staff intentionally introduce options for concurrent improvements on the workforce side.

The second strategy involves shifting emphasis from preparing individual workers for specific jobs to preparing the workplace to attract, retain, and nurture the manufacturing workforce. This involves identifying and resolving problematic organizational, interpersonal, and institutional dynamics. Training and technical skill development are extended beyond frontline manufacturing workers to also support supervisors, managers, and executives. Even the most technically sophisticated workers, as well as top-level managers and executives, need to learn how to supervise and lead. While actions taken by MEPs can vary, the key is a shared emphasis on resolving an “interest gap” rather than

How the Manufacturing Extension Partnership Can Anchor U.S. Workforce Development

MEP representatives are well-positioned to address job quality and related workforce problems since they already help business managers address multiple operational and competitive challenges.

a “skills gap”—the job of employers is to provide a supportive environment that values worker ingenuity and supports ongoing career success.

The third strategy comes out of the disruption from the COVID-19 pandemic, which exacerbated preexisting workforce concerns about safety. Many MEP centers, not just those at the frontier of workforce programs, offered services in 2020 to help client firms reopen their factories safely after an initial closure and avoid a subsequent shutdown by minimizing the risk of the virus spreading throughout the worksite. The pandemic also reinforced the connection between business performance and employee benefits, including paid sick and family care leave, that enabled workers to stay home and care for themselves or family members, further reducing the risk of workplace infection. Some pioneering centers even explored options for helping clients and their workers navigate school closings.

The pandemic also catalyzed new approaches to ongoing workforce training, with MEP centers advising on which elements of existing training systems could be done online and which elements required an immersive, in-person experience (and could be postponed until the risk of COVID-19 infection was reduced). Some centers even experimented with augmented and virtual reality training options they co-developed in partnership with local technology firms, pitching these novel applications to make manufacturing more attractive to a younger generation of tech-savvy job seekers.

An especially novel solution, called the Talent Exchange and developed by Polaris MEP in Rhode Island, helped connect manufacturing firms with furloughed workers from other factories. These workers could showcase their skills and secure short-term employment contracts with firms able to retool their production systems to meet emergency demand. More broadly, MEP centers across the country helped client firms retool production systems and repurpose existing supplier-matching systems to meet heightened demand for personal protective equipment.

Reflections on MEP’s Workforce Future

Not every MEP center is fully committed to workforce development, and some centers have only recently begun to focus on workforce issues. Others, with more experience, have had more time to tinker with their approach, including combining and recombining established tools and practices. There are nonetheless still ample opportunities for further experimentation with workforce solutions to move workforce development from the margins into MEP’s service core.

First, MEP leaders can push for greater federal financial support for MEP centers to engage in workforce development. This would add capacity for all centers to offer additional, noncore services to support workers. It could also address a related financial challenge, raised by interviewees, of the heavy reliance by centers on client fees required as a local match to draw federal funding. These fees can push companies to favor immediate cost-saving measures or revenue-generating activities rather than investing in workforce solutions with sizable, but delayed, payoffs. Second, MEP could deepen its connection to local and regional workforce intermediaries. As we have learned throughout our research, centers with workforce development experience often work with community colleges and other local partners to co-create client solutions. Third, MEP leadership could expand communication throughout the network of centers, passing on best practices and other lessons learned from the innovations of individual centers. These lessons could include how to promote racial diversity, equity, and inclusion within U.S. manufacturing and MEP centers.

Reference

Fieldman, Matt. 2021. “America Works—An Innovative Approach to Workforce Development.” *Manufacturing Innovation Blog*. National Institute of Standards and Technology, March 9.



W.E. Upjohn Institute for
Employment Research



@UpjohnInstitute

WEBSITE

upjohn.org