

## LABOR MARKET TRENDS IN WISCONSIN

By Tessa Conroy, Assistant Professor, Department of Agricultural and Applied Economics, UW–Madison, and Economic Development Specialist, UW–Extension

**W**isconsin is expected to experience positive job growth through 2022, but will the state have workers to fill these jobs? Challenges include the retirement of baby boomers, migration patterns that do not favor Wisconsin, as well as skill and geographic mismatches between available workers and available jobs. The state has a unique opportunity to meet these challenges by leveraging evidence-based policy options such as using data to better align education and workforce training programs with employers' needs, providing more practical experiences to students who will be future workers, accelerating the preparation of low-skilled workers to meet current demand, and finding ways to engage and support the chronically unemployed. Policymakers might also consider proactively shaping the future labor market by encouraging entrepreneurship and the growth of high-skilled jobs, facilitating community efforts to attract residents, and strengthening policies that support working families.

### DOES WISCONSIN HAVE A LABOR SHORTAGE?

The Wisconsin labor market is receiving a lot of attention in the news and on Main Street,<sup>1</sup> and the situation that legislators are hearing about likely differs depending on who is talking. The labor market is multidimensional, and what you see depends on where you stand. Employers, on the demand side of the labor market, may struggle to find workers even after raising wages, particularly in rural areas. However, some workers may struggle to find jobs in their city, or can't take available jobs because of transportation or child care difficulties. These seemingly conflicting experiences of employers struggling to find workers and, at the same time, workers struggling to find jobs, has led to a lack of specificity in describing the labor market in Wisconsin.

Recent projections suggest that nearly all industries will have positive employment growth through 2022, which is a key component of the state's future economic performance.<sup>2</sup> As further evidence of expanding employment opportunities, in late 2017, the number of job openings in the Midwest exceeded the number of unemployed. However, new job opportunities lead to growth only if they can be filled with appropriately skilled workers. In Wisconsin, with unemployment already quite low and a large share of the workforce headed for retirement, the more pressing issue is the availability of workers to enter new jobs in the future. Understanding the supply of workers requires an understanding of changing demographics, migration patterns, skills mismatches, and spatial or geographic mismatches.

The term "labor shortage" implies that Wisconsin is facing a quantity-based problem—one that can be remedied by simply expanding the pool of workers. But, adding more workers alone is typically not a solution. As the state's economy grows, ideally, demand and supply of labor align in such a way that job openings are matched with suitably skilled workers. Additional workers must have the appropriate skills for available jobs and be located near employers, so that they can get to work. These skill- and

---

*Recent projections suggest that nearly all Wisconsin industries will have positive employment growth through 2022.*

---

spatial-match aspects of the labor market may look like a shortage, as both may result in unfilled job openings, but they are distinct issues with their own policy implications.

***Migration (and Retirement): Does Wisconsin Have a “Brain Drain” Problem?***

“Brain drain”—the idea that educated workers are leaving the state—is often cited as a concern in Wisconsin. Although any amount of out-migration will erode the pool of available workers, compared to other states, Wisconsin actually has a fairly low rate of out-migration of the college-educated, working-age population. That is, workers are not fleeing the state for other parts of the country. Instead, Wisconsin is average or better in retaining residents.

The potential weakness of the state is getting new residents to move here. In-migration to Wisconsin is quite low compared to other states, and the state does not attract enough in-migrants to offset those who leave (see Figure 1). In other words, Wisconsin suffers less from a “brain drain” problem than from a “brain gain” problem.

This follows the general rural-to-urban migration trend in the United States, in which workers are moving from rural areas to urban cities. Wisconsin, a relatively rural state, also has somewhat smaller urban centers that are unlikely to have the same pull for workers as large metro areas such as Minneapolis-St. Paul and Chicago.<sup>3</sup> Furthermore, people have become less mobile generally across the United States; thus, while the state can expect some increases in in-migration in the coming years as the economy grows and presents new opportunities, the effects will likely be modest given the broader national urbanization trend.

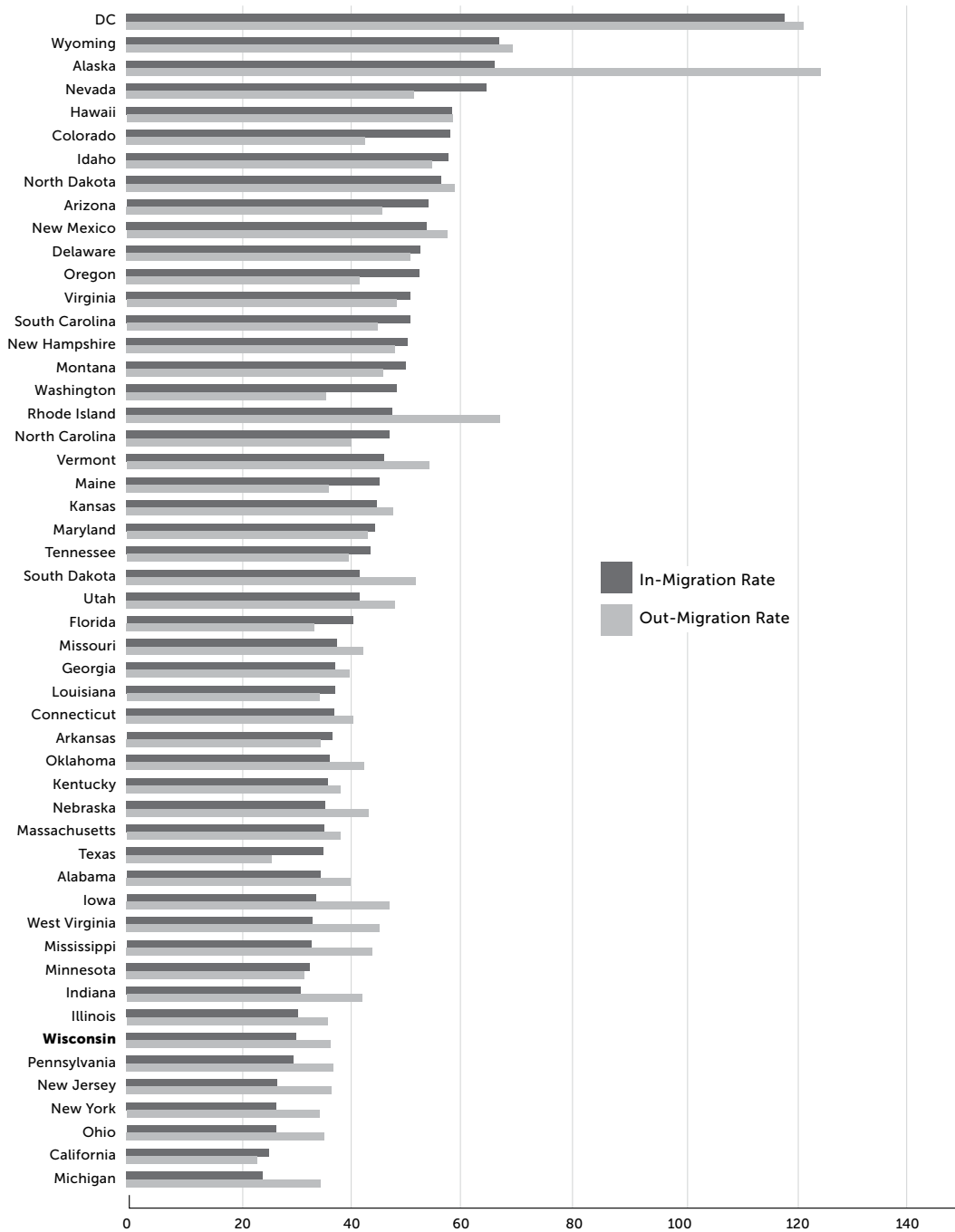
Alternatively to talent lost to out-migration, the more threatening “brain drain” may be the talent and experience the state is losing as a large portion of the working population nears retirement. The Wisconsin Department of Workforce Development (DWD) projects a shortage of workers over the next decade, primarily due to the retirement of baby boomers.<sup>4</sup> The state’s population is aging, with the share of retirees doubling by 2040 and the share of the working age (18-64) population shrinking.<sup>5</sup> According to DWD estimates, as many as 46,000 jobs could go unfilled in 2022 as a consequence of the labor shortage. While these demographic trends may be driving a good portion of the shortage, other factors influence the state’s labor market as well.

---

*According to  
Department  
of Workforce  
Development estimates,  
as many as 46,000  
Wisconsin jobs could  
go unfilled in 2022.*

---

**FIGURE 1**  
**In- and Out-Migration Rates (per 1,000 of the population)**  
**Age 18 to 64 with a Bachelor's Degree or Higher**  
**2011-2015**  
*Ranked by In-Migration Rate from Highest to Lowest*



*Wisconsin's in-migration rate is quite low compared to other states and is not enough to offset those who leave.*

*Note: Data from U.S. Census Bureau, 2011-2015 American Community Survey (ACS).  
 Extracted from the Integrated Public Use Microdata Series (IPUMS). Values are subject to margins of error.*

### **What about Wages?**

Economic theory indicates that prices respond to the availability of a good or service in a market. When a good or service is in short supply, prices tend to increase. Small, widespread growth in prices is characteristic of a stable and growing economy. Quickly rising prices in just one market, on the other hand, can be a sign of a shortage.

Labor markets work similarly to markets for other goods and services. If workers, who are selling their labor, are in short supply, they should be able to command a higher wage. These higher wages increase the incentive to work and pull more workers into the labor force; thus, alleviating the quantity issue, or shortage of workers. Given this definition, the wage-based evidence of a labor shortage has been modest. While employers are offering higher wages than before, some wage growth over time is expected. Additionally, from a worker's perspective, *relative* wages matter. Simply increasing wages will not be enough to attract more workers if wages in other industries are higher or growing faster. Such may be the case with manufacturing in Wisconsin. Wages have been growing in manufacturing but are growing more slowly than in some other sectors such as health care. Workers may choose to pursue jobs in those higher-wage sectors, leaving jobs in lower-paying sectors unfilled.

In combination with offering higher wages, we might also expect businesses to ask their workers to put in more hours when there is a shortage. Again, data on average weekly hours worked provides only modest evidence of a labor shortage. Average weekly hours worked increased steadily coming out of the recession and has grown to levels higher than 2007, but has remained relatively stable since 2014.

In sum, there is evidence of a "tight" labor market with only a small pool of available workers, but that could evolve into a more serious labor shortage given statewide demographic trends, such as the increasing number of retirees and net loss of educated workers. Looking at this from an economist's lens, however, there may be other factors at play besides a lack of workers. These other factors discussed next might better capture what is happening in Wisconsin.

## **DOES WISCONSIN HAVE A SKILLS MISMATCH PROBLEM?**

In addition to the potential shortage of workers—a *quantity* issue—some places in Wisconsin may be facing a skills mismatch—a labor *quality* issue. A "skills gap" or "mismatch" occurs when, despite a high number of job seekers, employers report difficulty finding appropriately skilled workers for available positions, and, at the same time, workers report that they can't find a job despite there being unfilled positions. Based on projections through 2022, Wisconsin faces a potential skills mismatch in jobs that require advanced education, including associate's, bachelor's, and master's degrees.<sup>6</sup>

### **Too Many Low-Skill Jobs**

For example, there appear to be more jobs than workers for low-skill positions requiring a high school diploma, in both urban and rural areas throughout the state. This is largely due to the industrial and occupational composition of the state. The state appears to be attractive to firms that generate growth in low-skill occupations; yet, a large share of the workforce is qualified for more skilled work. If skilled workers take positions for which they

---

*Based on projections through 2022, Wisconsin faces a potential skills mismatch in jobs that require advanced education, including associate's, bachelor's, and master's degrees.*

---

are over-qualified, this leads to underemployment and perhaps even unemployment of lower-skilled workers as they are crowded out.

Another explanation for unfilled entry-level job opportunities may be geographic. These jobs may be located a distance from a worker's home; i.e., the low-skilled jobs are not in the same place as job seekers, causing a geographic (or spatial) mismatch. For example, after accounting for several factors, one study found that black workers in Milwaukee commute far longer to their jobs, which suggests they are located farther from employers who are offering jobs at their skill level.<sup>7</sup> Further, there is evidence of an oversupply of low-skill labor in the inner city, which has required low-skill workers, largely blacks and Latinos, to commute to the suburbs for employment. Costly or long commutes without higher wages can lead to poor employment outcomes for those living in the inner city.

Geographic mismatch also occurs in rural areas. Many large employers located in smaller communities must draw from a large geographic area to find a sufficient pool of workers. With limited public transportation, workers must shoulder all commuting costs. For higher-paying jobs, these costs may be a small factor because wages can support the expense of the commute (e.g., a reliable car, gas, time) and still make the job worthwhile. For lower-paying jobs, however, these costs represent a larger share of income and may reduce the feasibility of the daily commute as well as the incentive to take the job.

### **Too Few High-Skill Jobs**

At the other end of the spectrum, the projected surplus of higher skilled workers is also largely due to the state's industrial and occupational composition. Wisconsin has yet to adequately attract and foster the kind of industries and businesses that offer high-level jobs for skilled workers. This high-skill surplus is also at least partly due to geographic factors. The shortage of job openings for college degree holders may partly explain the net negative migration of young educated workers in Wisconsin. Without adequate employment opportunities, those with college degrees look for jobs at their skill level in other states. These young, talented workers are attracted to "thick" labor markets, which feature a lot of employers and job opportunities, characteristic of large metro areas, as well as urban and natural amenities such as scenic terrain, making places like Denver, Colorado, a persistently popular destination.

## **HOW DOES AUTOMATION AFFECT THE LABOR FORCE?**

The skills mismatch in Wisconsin is further complicated by the state's changing industrial profile. Manufacturing is becoming leaner, partly as a result of automation, which *reduces* labor needs. At the same time, technology can change production in a way that *increases* the need for workers in other tasks (known as a complementarity between workers and technology). As one step in the production process becomes more efficient, the other steps also must become more productive. For example, as computers are tasked with reading x-rays and medical images, there will be a greater need for surrounding tasks involving patient intake, consultation, and subsequent treatment. Therefore, while some jobs will be replaced by automation and technology, the demand for others may increase. The net effect of automation on employment, then, will depend on the relative sizes of these competing effects.

---

*The effect of automation on employment will vary because some jobs will be replaced by technology, but the demand for related jobs may increase.*

---

In addition to affecting the *number* of jobs available, automation and new production processes can change the *type* of jobs available, including the skills and education required for the jobs that do exist. As noted above, there are fewer jobs that require mid-level skills because they are often associated with routine tasks that can be automated. Tasks requiring a high level of mastery, analytical capability, and inductive reasoning that are characteristic of professional, managerial, and technical positions are difficult to replicate with technology.<sup>8</sup> At the other end of the skill distribution, manual tasks such as those requiring situational adaptability, visual and language recognition, and interpersonal interaction are also less likely subject to automation. Most often, mid-skill workers are being replaced (substituted) by employees with higher-level engineering skills required to maintain and repair the new technologies.

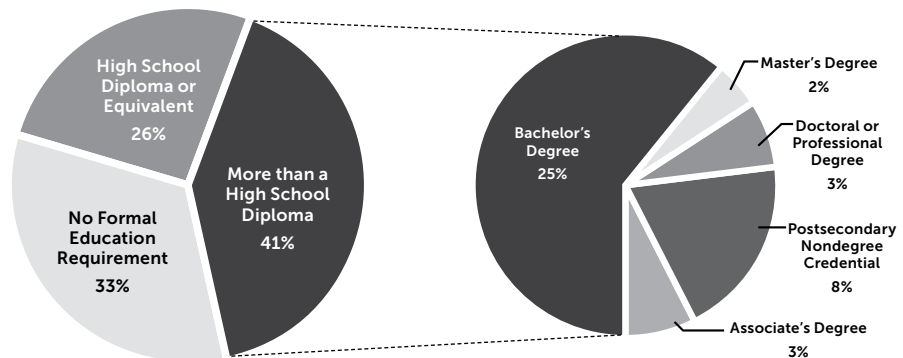
---

*The fastest-growing jobs require a high school diploma or less. These low-skilled jobs are easy for workers to transition into, which can drive down wages and may lead to growth in Wisconsin's working poor.*

---

Because jobs requiring high and low skill levels are more difficult to automate, they are growing in a process called "job polarization"<sup>9</sup> (see Figure 2). The U.S. Bureau of Labor Statistics reports that the 10 fastest growing jobs, both nationally and in the tri-state area of Illinois, Indiana, and Wisconsin, require a high school diploma or less.<sup>10</sup> Job polarization also raises interesting wage questions. Many high-skilled jobs require a college or even graduate degree. When companies demand more workers at this level, there can be a 4- to 10-year lag time to build a supply of workers.<sup>11</sup> The low supply of high-skilled workers has kept their wages relatively high. Low-skilled jobs are relatively easy for workers to transition into, which can drive down wages; however, persistently low pay could lead to significant growth in Wisconsin's working poor.

**FIGURE 2**  
**Wisconsin Occupational Education Forecasts 2014-2024**



*Note: Based on Long-Term Occupational Employment Projections from the Wisconsin Department of Workforce Development, excluding suppressed values.*

## WHAT ARE POLICY OPTIONS FOR ADDRESSING WORKFORCE ISSUES?

The goal of any good workforce policy is to match the skills of workers with the needs of employers. Historically, employers provided a large share of employee training. They provided apprenticeships, on-the-job training, and internships; thus, cultivating a labor pool with the skills they needed. Now, with rapid technological advancement and globalization making it difficult to forecast their future labor needs, employers have less incentive to

provide in-house training. Companies are reluctant to invest in training because they might not see a return on their investment if workers take their new skills to competitors. As a result, the task of training workers is increasingly falling on various organizations in the public sector, with uneven results.

### **Strategies to Match the Skills of Workers with the Needs of Industry**

The federal Workforce Innovation and Opportunity Act (WIOA) requires states to develop a streamlined workforce development plan. The plan should help job seekers find employment, education, training, and support services, and employers find the workers they need. With WIOA as a backdrop, the Federal Reserve Bank of Chicago and the Center for Governmental Studies at Northern Illinois University have put forth several effective, evidence-based workforce development policy options, which are summarized below.

- **Use data to better align workforce and education programs with employers' needs.** States can analyze regional clusters of firms in related industries and use other data tools to design policy initiatives that better align workforce and education programs with employers' needs and high-growth industries. The Engineering Technology Program Collaboration used this approach to identify the shortage of workers with engineering skills in northeast Wisconsin.
- **Provide more practical work experiences for students.** States can expose students to a professional environment sooner. Some examples include apprenticeship-style workforce opportunities for high school students, mentorship programs with local small business owners, and using schools as business incubators to expose students to entrepreneurial experiences.
- **Accelerate the preparation of low-skill adult workers.** States can combine programs that provide basic skills and technical/professional training. Low-skilled workers often have other barriers to their productivity, including inadequate child care or unreliable transportation, which need to be addressed. (See Karin Martinson's chapter in this report for a discussion about programs for low-skilled workers.) These workers also could benefit from entrepreneurship and small business development opportunities.
- **Address the chronically unemployed.** States can connect workers who face barriers to employment, including people who are homeless or who have criminal records, with programs like transitional jobs to move them into the workforce. (See Marc Pelka's chapter in this report for more information on programs for people with criminal records.) This may require providing social services such as access to mental health care or recovery treatment and support.

---

*The Engineering Technology Program Collaboration used data to identify and address the shortage of workers with engineering skills in northeast Wisconsin.*

---

### **Following the Employer's Lead**

The skills that employers will require in the future will vary. Many companies will prioritize critical-thinking and problem-solving skills, as well as the ability to exhibit entrepreneurial behavior and be an effective team member. Often workers will be expected to have versatile soft skills and learn the specific technical skills required of the job. Wisconsin's educational system must be flexible enough to provide a quality workforce that satisfies both ends of the skills spectrum.

States have an opportunity to adjust the current higher education system to better prepare future workers for success in an evolving economy. This is similar to the early 20<sup>th</sup> century, when states responded to the increasingly industrialized economy by requiring universal



---

*A growing body of evidence indicates that younger, smaller companies are driving positive net job creation in Wisconsin.*

---

high school education. Now, education investment could be central to a long-term strategy for skills that will be required to support and work alongside new technologies.

### **Shaping the Future Labor Force**

While meeting the needs of current employers, policy levers also can be used to proactively shift the industrial makeup of Wisconsin. A growing body of evidence indicates that younger, smaller companies are driving positive net job creation in Wisconsin.<sup>12</sup> Policies could be enacted that support entrepreneurs to produce more business startups and expand industries that require highly skilled employees.

- States such as California have encouraged “economic gardening” programs that focus on supporting young, high-growth-potential companies by connecting them with strategic market information and encouraging the development of critical infrastructure.<sup>13</sup>
- Tax incentives or loan guarantee programs that encourage financing for new businesses could be targeted to new and young businesses with demonstrated potential.
- There may be opportunities to redirect incentives historically used to recruit out-of-state businesses toward Wisconsin’s entrepreneurs who are just getting started.

Raising awareness of these types of programs and making them easily accessible is important, because business owners may miss opportunities due to lack of knowledge about them or simply because the time requirements are burdensome.

### **Attracting Workers and Their Families**

Although data suggest that people in the United States are becoming less mobile, there are opportunities to attract workers to Wisconsin. The historical pattern of “people following jobs” has shifted to “jobs following people.” Why is this happening? First, we are shifting from larger manufacturers as a primary source of employment to a more service-oriented economy. Many of these services are aimed at meeting the needs of households, and when the population of a place increases, these businesses move in or start up. Second, people are increasingly focused on quality of life and are willing to give up some income to live in a preferable location.

Many communities are pursuing a strategy broadly defined as “place making.” In an effort to improve the quality of life, communities are making investments in natural amenities, roadway conditions including benches, sidewalks, and landscaping, as well as key public services such as fire protection and safety. Some also have enhanced their cultural facilities (e.g., libraries), events (e.g., concerts), and, most importantly, their schools. The end goal is to make the community as attractive as possible to future residents and entrepreneurs.

### **Supporting Working Families**

There are also several ways for states to support parents in the workforce. A growing body of evidence suggests that working parents, especially mothers of young children, are largely affected by child care availability. Women are still responsible for the majority of child, spousal, and elder care, putting extra strain on their work day. Low-income and single-parent households are among the most vulnerable to these challenges. Without available, affordable, and reliable child care, it is difficult for parents to accommodate the demands of conventional employment, which often features limited, if any, schedule flexibility and few opportunities to work from home. When young mothers have access to care, they are more likely to stay in the workforce while raising their children. Effectively, this also supports



employers who risk losing highly trained and experienced workers to the demands of child rearing. If working parents are able to stay employed, businesses save on recruitment and training costs. Thus, the interests of both workers and employers are represented in child care policy.

## KEY TAKEAWAYS AND NEXT STEPS

This chapter highlighted some labor market challenges for policymakers to address.

- There aren't enough younger workers to replace the growing population of retiring workers.
- Although few workers are leaving the state (out-migration), even fewer are moving to the state (in-migration). Wisconsin has a brain gain problem.
- The state is experiencing job polarization. The jobs that are growing are at the low end of the skills spectrum (those that require a high school diploma or less) and at the high end (those that require an associate's or bachelor's degree, or higher).
- Middle-skill jobs that handle routine tasks are decreasing due to automation and technology. This has had a ripple effect on the number and type of jobs that are available. It has led to a growth in jobs that support the automated processes, which offsets some (but not all) of the initial job loss. It also has led to an increasing overall demand for higher-skilled workers to manage the technological advancements.
- Despite the high growth of jobs requiring a bachelor's degree or higher, Wisconsin has too many high-skilled workers for the number of jobs. This could be one reason these workers leave the state—to find employment that matches their skill level. This trend is expected to continue, which may lead to continued out-migration of young, talented workers.
- Low-skilled jobs are growing extremely fast; however, there are not enough appropriately skilled workers to fill them. This skills mismatch is partly due to workers not living where the jobs are located (a geographic mismatch). One concern with the growth of low-skilled jobs is that it could lead to a growth in the number of working poor in Wisconsin, because these jobs often do not provide the wages and benefits that support a higher quality of life.

There are several strategies for addressing the worker shortage and geographic and skills mismatches, some of which were described above.

- With the federal Workforce Innovation and Opportunity Act (WIOA) as a backdrop, there are several strategies Wisconsin can use to match the skills of workers with the needs of employers.
- As job growth in the state continues to cluster at the high and low end of the skills distribution, it is worth considering what a desirable mix of future job offerings looks like and how it can be achieved. In particular, the use of data for workforce planning, alternative and accelerated training programs, and the higher education system can offer the training and resources that benefit high-skilled workers.

- Another state-level strategy is to be more forward-looking and shape future industry growth, rather than solely respond to the demands of current employers. For example, promising policy options include supporting entrepreneurial start-ups and focusing on efforts that increase high-skill positions.
- At the local level, some communities have pursued a “place making” strategy to improve the quality of life and attract residents and entrepreneurs. At the state level, investing in infrastructure and education could make Wisconsin communities more appealing. Further, hosting workshops and funding grant programs for communities pursuing such initiatives could help build desirable living destinations for families.
- States can also attract and retain working families by enacting policies that facilitate parents’ successful participation in the workforce, such as available, affordable, and reliable child care.

Although Wisconsin’s current labor market and future trends could evolve into a more serious labor shortage, the state has a unique opportunity to leverage rigorous policy research and proactively change its course. For example, now, as employers need qualified workers, they may be more open to training under-skilled workers or hiring people they would not otherwise consider (e.g., people with criminal records, the chronically unemployed). Successful approaches for working with these populations, to help them move into higher-paying, family-supporting jobs, are addressed in the following chapters in this report. Using such evidence-based strategies, state policymakers can create the conditions under which employers and workers are successfully matched, and the state economy can prosper.<sup>14</sup>

*Tessa Conroy is an Assistant Professor in the Department of Agricultural and Applied Economics at the University of Wisconsin–Madison and an Economic Development Specialist with UW–Extension. Her research focuses on Wisconsin’s economic development and labor market, entrepreneurship, and business climate. As an Extension specialist, she has produced reports, briefs, and fact sheets on Wisconsin’s economy, job creation, and the education pipeline. During her graduate studies, she served as a policy research assistant with both the Congressional Research Service and Center for Economic and Policy Research in Washington, D.C. Conroy earned her Ph.D. in Economics from Colorado State University.*

*\*This chapter was based on the following brief:*

Controy, T., Kures, M., and Deller, S. (2016). *Labor market trends in Wisconsin: Potential worker shortage and changing skill demand* (Patterns of Economic Growth and Development Policy Brief No. 4). Madison, WI: UW–Extension Center for Community and Economic Development.

## REFERENCES

- <sup>1</sup> DeFour, M. (2017, September 10-18). Workers wanted: Wisconsin's looming crisis [Special series]. *Wisconsin State Journal*. Retrieved from [http://host.madison.com/wsj/news/local/govt-and-politics/workers-wanted-wisconsin-s-looming-crisis/collection\\_1e27dc95-df35-54c1-a0e6-cfb4780db7cf.html](http://host.madison.com/wsj/news/local/govt-and-politics/workers-wanted-wisconsin-s-looming-crisis/collection_1e27dc95-df35-54c1-a0e6-cfb4780db7cf.html)
- <sup>2</sup> Wisconsin Department of Workforce Development. (2016). *Workforce Innovation and Opportunity Act Combined State Plan*. Retrieved from [https://dwd.wisconsin.gov/wioa/pdf/wi\\_wioa\\_state\\_plan\\_1216.pdf](https://dwd.wisconsin.gov/wioa/pdf/wi_wioa_state_plan_1216.pdf)
- <sup>3</sup> Keller, J., Robinson, B. D., & Walzer, N. (2016, April). *Workforce 2020: Is it time for disruptive innovation?* Retrieved from <https://www.chicagofed.org/publications/profitwise-news-and-views/2015/workforce-2020>
- <sup>4</sup> Wisconsin Department of Workforce Development. (2016). *Workforce Innovation and Opportunity Act Combined State Plan*. Retrieved from [https://dwd.wisconsin.gov/wioa/pdf/wi\\_wioa\\_state\\_plan\\_1216.pdf](https://dwd.wisconsin.gov/wioa/pdf/wi_wioa_state_plan_1216.pdf)
- <sup>5</sup> Egan-Robertson, D. (2013). *Wisconsin's future population: Projections for the state, its counties and municipalities, 2010-2040*. Madison, WI: UW-Madison Applied Population Laboratory. Retrieved from [https://apl.wisc.edu/publications/FinalProjs2040\\_Publication.pdf](https://apl.wisc.edu/publications/FinalProjs2040_Publication.pdf)
- <sup>6</sup> Loritz, M., Nerad, B., Sletten, P., & Cunha, J. (2013). *Examining the skills gap in Wisconsin*. (La Follette School of Public Affairs Workshop Report Prepared for the Wisconsin Legislative Council). Retrieved from [https://www.lafollette.wisc.edu/images/publications/workshops/2013-Leg\\_Council.pdf](https://www.lafollette.wisc.edu/images/publications/workshops/2013-Leg_Council.pdf)
- <sup>7</sup> Ewing, M. (2004). *Testing for spatial mismatch in Milwaukee: A comparison of methodologies* (Unpublished master's thesis). Madison, WI: University of Wisconsin-Madison Department of Agricultural and Applied Economics.
- <sup>8</sup> Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), 3-30. Retrieved from <https://www.aeaweb.org/articles?id=10.1257/jep.29.3.3>
- <sup>9</sup> Standage, T. (2016, June). The return of the machinery question [Special report]. *The Economist*. Retrieved from <https://www.economist.com/news/special-report/21700761-after-many-false-starts-artificial-intelligence-has-taken-will-it-cause-mass>
- <sup>10</sup> Keller, J., Robinson, B. D., & Walzer, N. (2016, April). *Workforce 2020: Is it time for disruptive innovation?* Retrieved from <https://www.chicagofed.org/publications/profitwise-news-and-views/2015/workforce-2020>
- <sup>11</sup> Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), 3-30. Retrieved from <https://www.aeaweb.org/articles?id=10.1257/jep.29.3.3>
- <sup>12</sup> Conroy, T., & Deller, S. (2015). *Employment growth in Wisconsin: Is it younger or older businesses, smaller or larger?* (Patterns of Economic Growth and Study Series No. 3). Madison, WI: UW-Madison Department of Agricultural and Applied Economics & UW-Extension Center for Community and Economic Development. Retrieved from [https://trinaty.aae.wisc.edu/thewisconsinconomy/wp-content/uploads/sites/11/2015/10/Conroy-and-Deller-EmpDynamics\\_Report\\_FINAL.pdf](https://trinaty.aae.wisc.edu/thewisconsinconomy/wp-content/uploads/sites/11/2015/10/Conroy-and-Deller-EmpDynamics_Report_FINAL.pdf)
- <sup>13</sup> Ewing Marion Kauffman Foundation. *Economic gardening* [Web page]. Retrieved from <http://www.kauffman.org/what-we-do/resources/policy/economic-gardening>
- <sup>14</sup> Holzer, H. J. (2017, August 8). Labor market is primed—we must take advantage. *The Hill*. Retrieved from <http://thehill.com/blogs/pundits-blog/labor/346611-labor-market-pump-is-primed-we-must-take-advantage>