Will Montana Face a Worker Shortage?

Montana Labor Force Projections 2014-2024

by Christopher Bradley, Economist

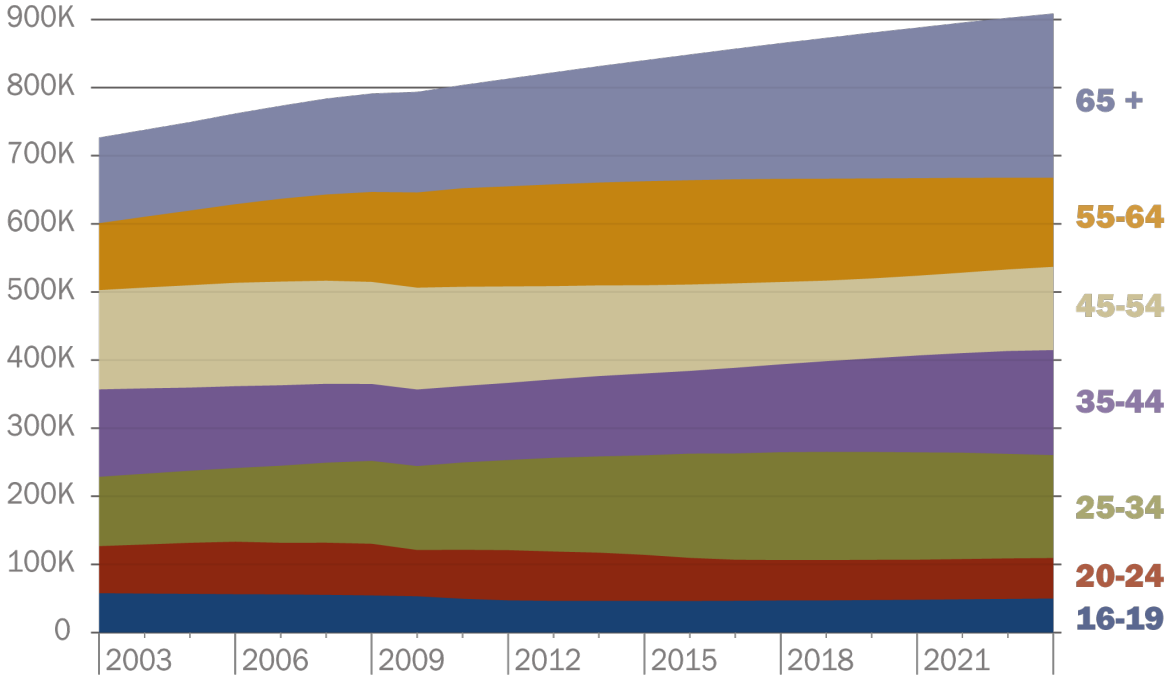
Montana's economy has been growing for over four years, and total employment in the state is expected to add about 6,400 jobs per year over the next decade. However, the concern of high unemployment has now switched to concerns about a worker shortage. Montana's relatively small population of younger workers entering the labor force, and large number of older workers preparing to retire, may keep the labor force from growing as fast as employer demand for workers. Without a sufficient supply of labor, businesses will have difficulty finding workers to produce goods and services, limiting economic growth. This article will explore Montana's labor force and its projected growth over the next ten years to determine whether worker supply will meet demand.

Demographics and Participation Behavior Shape the Labor Force

The labor force is defined as the civilian and non-institutionalized working age population that is actively working or seeking employment. Currently, Montana's population demographics are not favorable for labor force growth. The large baby boomer generation moving into retirement age, coupled with a population of 15 to 24 year olds that has been shrinking since 2006, has resulted in a slow-growing and overall older population.[1] Figure 1 illustrates the projected population in Montana by age group, with the population over 65 growing steadily while the younger working age population aged 16 to 65 is fairly stagnant.

Figure 1:

Age Demographics of Montanans 16 Years and Older, Historical and Projected: 2003-2024



Source: Montana Census and Economic Information Center

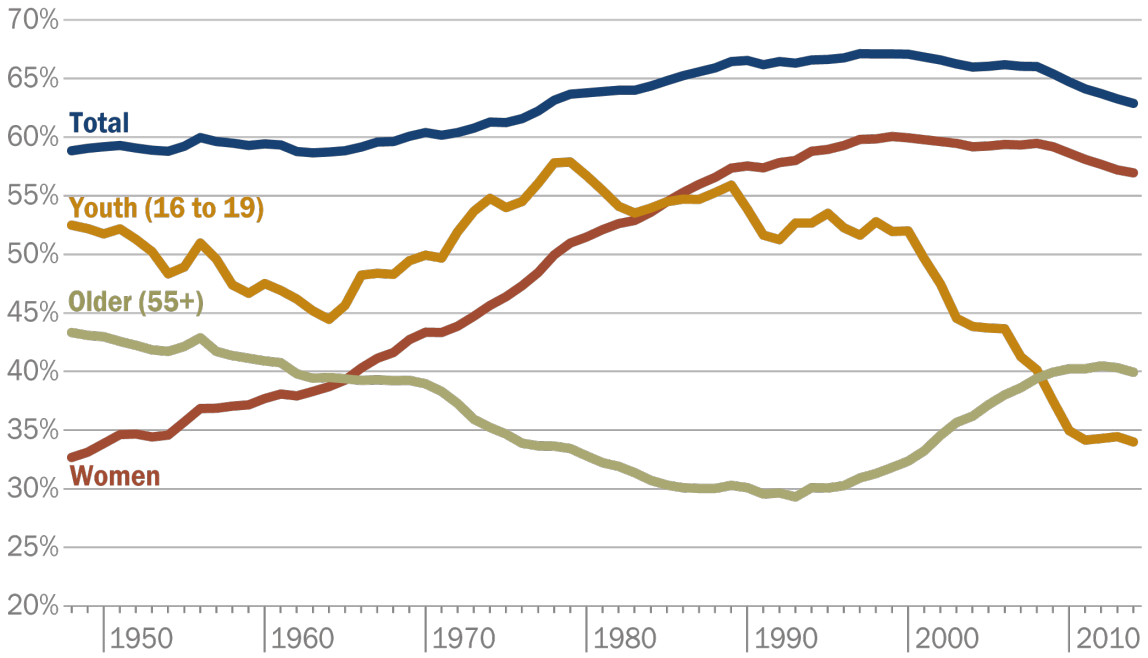
Under these circumstances, the working population aged 16 to 64 will not grow quickly enough to match growing employment demand. Montana is only expected to add 716 people aged 16 to 64 each year, leaving a shortfall in the amount of workers needed to fill the expected 6,500 jobs each year. The only way to accommodate the excess growth is to increase labor force participation rates. Labor force participation refers to the percentage of the population who are either working or looking for work. Montana's labor force participation rate is already above the national rate, with 64.8% of our population either working or looking for work in 2014, ranking 22nd in the nation. But we will still need improvement in order to have sufficient workers in the future.

The economic environment can influence labor force participation in the short term. For example, growth in wages provides an incentive that draws more people into the workforce. However, long-term trends generally reflect cultural changes in how often and in what capacity people work. The long-term trends in labor force participation rates by selected demographic are shown in Figure 2 below. Labor force participation for the total population reached historic highs around the turn of the century, and was followed by a slow decline over the last 15 years. Both the increase and a portion of the decrease can be attributed to a change in the patterns of female labor force participation. Participation by women grew steadily starting in the 1950s, but hit a high near the turn of the century, followed by a more recent decline. Women first pushed up overall labor force participation rates, then contributed to a decline.

Another demographic with significant changes in labor force participation rates are youth aged 16 to 19, whose labor force participation rates have been declining since the 1970's. The decline in labor force participation rates for young people is a result of more youth staying out of the labor force in favor of further education. A more educated workforce ultimately helps the labor market; however, the 2007 recession resulted in a sharp decline in youth labor force participation that has not recovered along with the rest of the economy. The only age group with increasing labor force participation rates are older workers over 55 years, who have been participating at higher rates since about 1993 due to improved health and changing perspectives on retirement.

Figure 2:

U.S. Labor Participation by Selected Demographics: 1948-2014



Source: US Bureau of Labor Statistics, Current Population Survey

Projections of the Labor Force

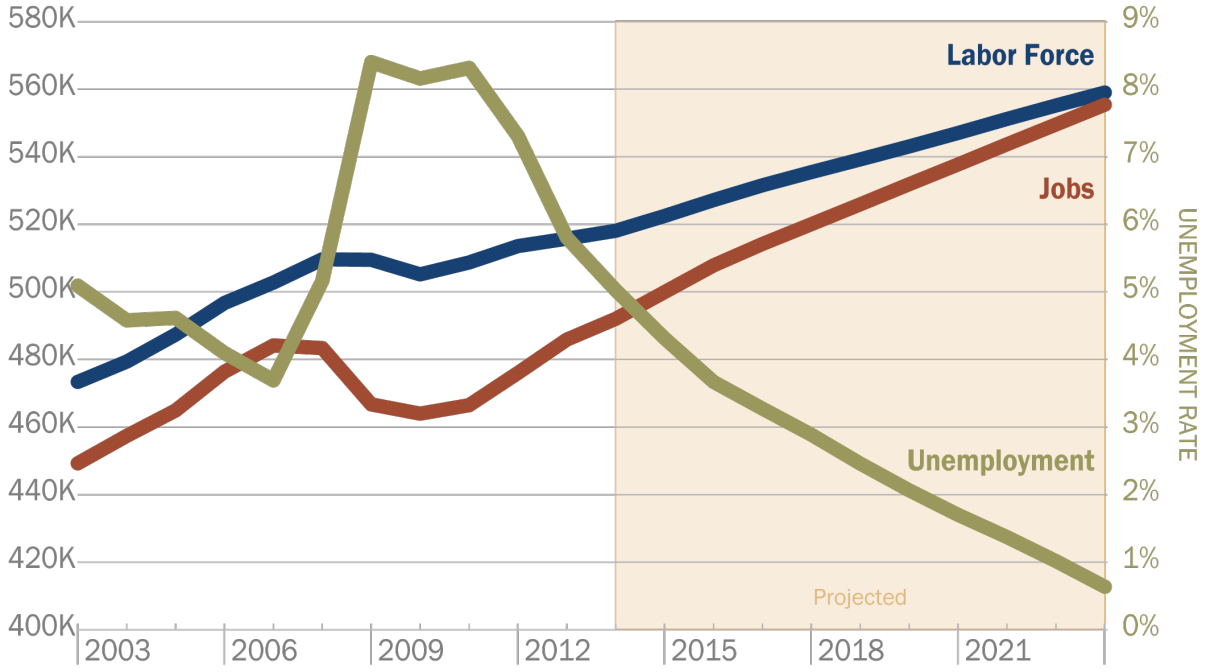
The labor force was projected over the next ten years in order to quantify the upcoming labor shortage and demonstrate the need for increased labor force participation rates. Projections of the size of the labor force were created by applying forecasted U.S. labor force participation rates to population projections from the Montana Census and Economic Information Center (CEIC). Labor force participation rates were forecasted by age and gender to account for the differences in participation between groups and the changing demographics. Additionally, because Montana's participation rates are higher than the U.S., the forecasted participation rates were adjusted to align with Montana data. For example, across all ages, women in Montana participate at higher rates than the national average, while men's participation is both above and below the national average depending on the age group.

The projections are not meant to demonstrate specific numbers and rates, but the trends that are expected in the future. Labor force participation rates are expected to change as a result of the impacts of the labor shortage. The projections use conservative estimates of changes in labor force participation to incorporate that effect. The projections can help illuminate the impacts that will come from the labor shortage and provide background on which workers, businesses, and policymakers can react. The labor force projections can be seen in Figure 3, alongside employment projections and the resulting unemployment rate.

By 2024, the labor force is projected to add nearly 41,000 new prospective workers at an average annual growth rate of 0.8%, slower than the 0.9% growth expected in the population. The difference between the two is reflective of the aging population. As seen in Figure 3, employment is projected to grow faster than the labor force and push the unemployment rate down to extremely low levels.

Under normal circumstances, growth in the labor force is driven by a growing working age population, from ages 16 to 65. However, the extremely slow growth of this age group makes increases in labor force participation necessary for labor force growth. Overall changes in the labor force can be seen in Figure 4. Participation rates

Figure 3:
Labor Force Projections 2014-2024, with Employment Projections and Unemployment Rate



Source: MT Department of Labor and Industry, Research and Analysis Bureau

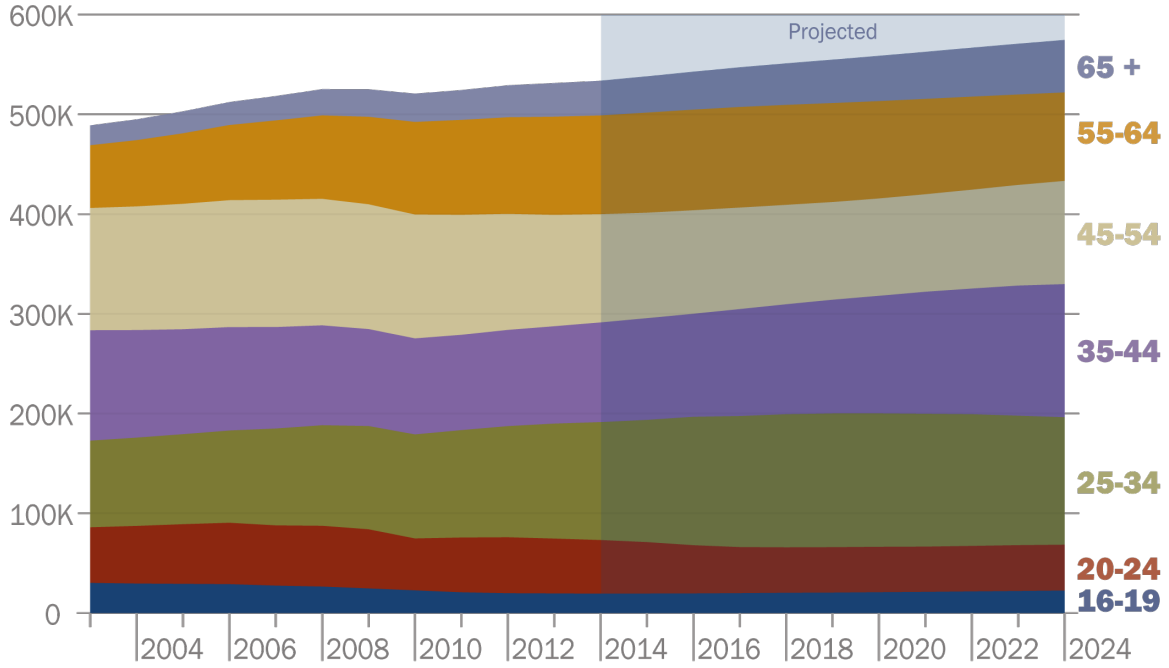
among 55 to 64 year olds is projected to increase, but the overall number of participants in this age group will still decrease as the population ages. Also of note, the youngest two age groups are expected to shrink slightly over the projection period. As mentioned before, Montana's young population is stagnant, and even with small increases in labor force participation, their contribution to the size of the labor force will shrink. The loss of older workers and small number of young labor force participants will contribute to the impending labor shortage despite increases in labor force participation.

Impacts of the Shortage

Changing demographics and minimal changes in labor force participation will result in an imbalance between the supply and demand for workers. The labor force participation projections are based on a conservative estimate of behavioral changes. However, market forces are likely to result in more drastic changes that better balance labor demand and supply. Some incentives, such as higher wages, will increase labor force participation by working age adults and increase supply. On the other hand, employers will be encouraged to invest in productivity-enhancing technologies that reduce labor demand. Wages in Montana have been increasing since 2013, and at the current low unemployment rate of 3.9% the tight labor market will begin to impact worker and employer decision making.

As the number of jobs becomes closer to the size of the labor force, wages will increase. Scarcity of labor will result in competition between employers for productive and qualified employees and will drive up average wages. While it may be difficult for employers to find workers in highly specialized positions because of their significant training and education requirements, employers will also have difficulty finding workers for low-skill jobs. Higher pay positions can attract workers currently at lower wage levels without requiring a significant increase in the position's pay level. However, the jobs low on the career ladder will only be able to attract workers with competitive pay, not through opportunity to advance skill sets and increase responsibilities. Ultimately, this drives faster wage growth in low-skill jobs than in high-skill jobs. As wages increase,

Figure 4:
Labor Force Levels by Age: 2003-2024



Source: MT Department of Labor and Industry, Research and Analysis Bureau

potential workers not in the labor force will be enticed by the increased financial benefit of working. Higher wages and more job opportunities will entice more workers who were discouraged by the 2008 recession to return to the labor force. Similarly, in-migration may increase and ease the labor shortage. However, the aging population that is driving the labor shortage will affect the entire country. While in-migration may increase, its change is not expected to be large.

The effect of wage increases will be large for lower-participation age groups. For high school age workers, it is unlikely that labor force participation will change drastically. Research has suggested that the wage premium of a college education and the benefits of tuition assistance from merit-based scholarships outweigh the small wages earned by a high school student.[2] However, the college age population will likely be more sensitive to increased work incentives. Not only will wages earned while working during the school year or summer increase, but employers are likely to tap college age workers through internships or paid positions. Not only does this provide employers with the workers they need, but the early access to students will encourage them to work with them in the future. Older workers will also see larger increases in participation rates, as many may postpone or opt out of retirement as employers offer raises to older workers in order to retain their knowledge and services for longer.

For employers facing scarcity of labor, there are multiple courses of action to take, including offering higher wages to current or future employees. However, employers may also ward off the effects of labor scarcity by reducing their demand for it. Employers will use innovative techniques to maximize the productivity of their employees, particularly when the process improvements are at lower cost to the firm than hiring a new employee. The adoption of new technologies will depend heavily on the severity of the labor shortage as well as how easily labor can be substituted with machines or technology. As wages increase, it becomes more likely that the returns to investments in technology will be higher than investments in labor. This bias towards technology will be more likely to occur later in the projected period, as the gap between employment and the labor force shrinks.

Conclusion

Despite the potential of an economic slowdown, in many ways the labor shortage is an opportunity that can provide lasting benefits. As the demand for labor grows nearer to supply, it becomes an opportunity to find work for long-displaced workers, raise wages, improve the skill set of the existing labor force, improve the matching of education and skills to jobs, and increase productivity. Creative methods of addressing the shortage, by both businesses and policymakers, can play a large part in helping the population meet employment needs. Employers can utilize apprenticeships and retraining programs to help workers quickly learn new skills for specific jobs and fill openings. Improved collaboration between higher education systems and employers can help ensure that graduating students have the skills that employers demand. Policies promoting improved benefits such as paid family leave and child care can help encourage skilled workers who are not in the labor force to go back to work. These solutions cannot solve the entire supply shortage; however, they can help ease its impacts, ensure a productive labor force for years to come, and improve overall welfare in Montana.

Works Cited

[1] Montana Department of Commerce, Census and Economic Information Center, State and County Population Projections. http://ceic.mt.gov/Population/PopProjections_StateTotalsPage.aspx

[2] Explaining the Decline in Teen Labor Force Participation. Daniel Aaronson, Kyung-Hong Park, and Daniel Sullivan. Chicago Fed Letter, January 2007 Number 234.

Who Uses OES Data? by Jauna Anderson, OES Specialist

The Occupational Employment Statistics (OES) Survey estimates employment levels and wages for occupations across Montana. The survey also provides localized estimates for Billings, Missoula, and Great Falls as well as regions that make up the rest of the state.

Job seekers can use OES data to learn about the typical wage rates for an occupation in a particular city or region to compare wages or help them negotiate a starting salary. Educational administrators can use OES data to guide students into occupations in industries and locations that are high-paying and in-demand for their field of study.

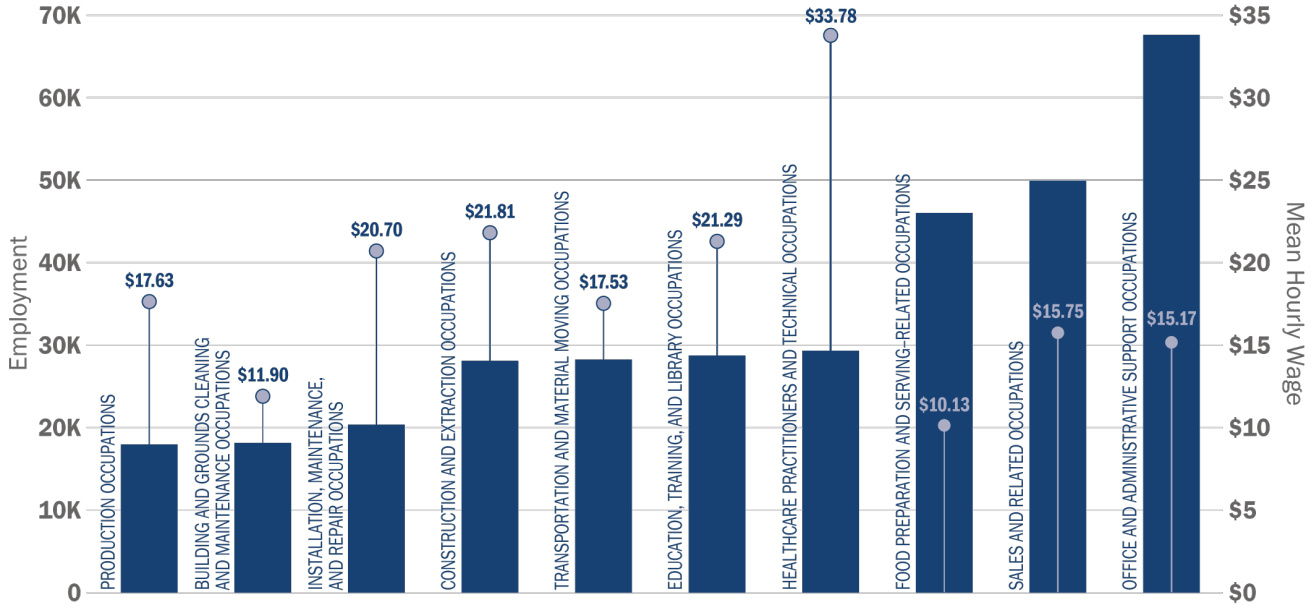
Employers can use OES data to ensure their wages remain competitive within their industry or geographic area. They can also use regional OES data to decide where to locate, or whether to relocate, their business. OES data can help employers determine whether a geographic area has the type of workers their organization needs, and to estimate the cost of wages for that location.

Economists use OES data as an input when calculating employment projections, which are used to predict educational and employment demands, and determine whether training opportunities for certain occupations will be needed in the future.

Regional OES data can be used by states to compare occupational information between areas of the state or across many states. Regional data can help us understand differences in labor markets, such as whether wages are higher across all occupations or just in more specialized high-paying jobs. It can be used to assess labor market features in a particular area, and to show the diversity of occupations in a regional economy, which can indicate an economy's flexibility under adverse conditions.

OES data is made possible by the thousands of Montana and national employers that respond to this survey. With continuing support from our local employers, the OES program will continue to provide data that is helpful for job seekers, businesses, educators, and other professionals. This data is collected at the state and national level and published yearly. View Montana's current OES publication at: http://www.lmi.mt.gov/publications/oes-wages.aspx.

Montana's Employment and Hourly Mean Wages by Major Occupational Group, 2014



Source: Occupational Employment Statistics, May 2014
**Note: Major occupational groups are collections of similar, more detailed occupations.*