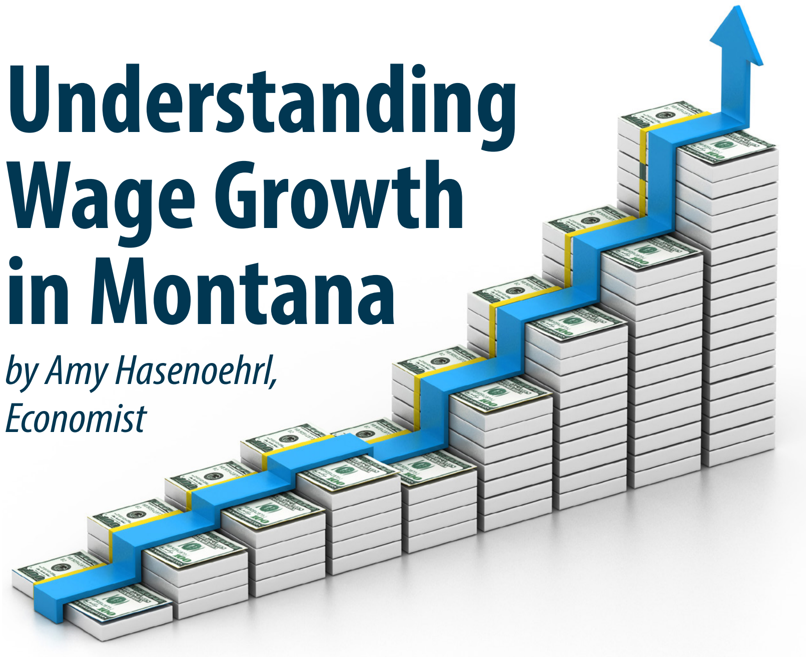
Understanding Wage Growth in Montana

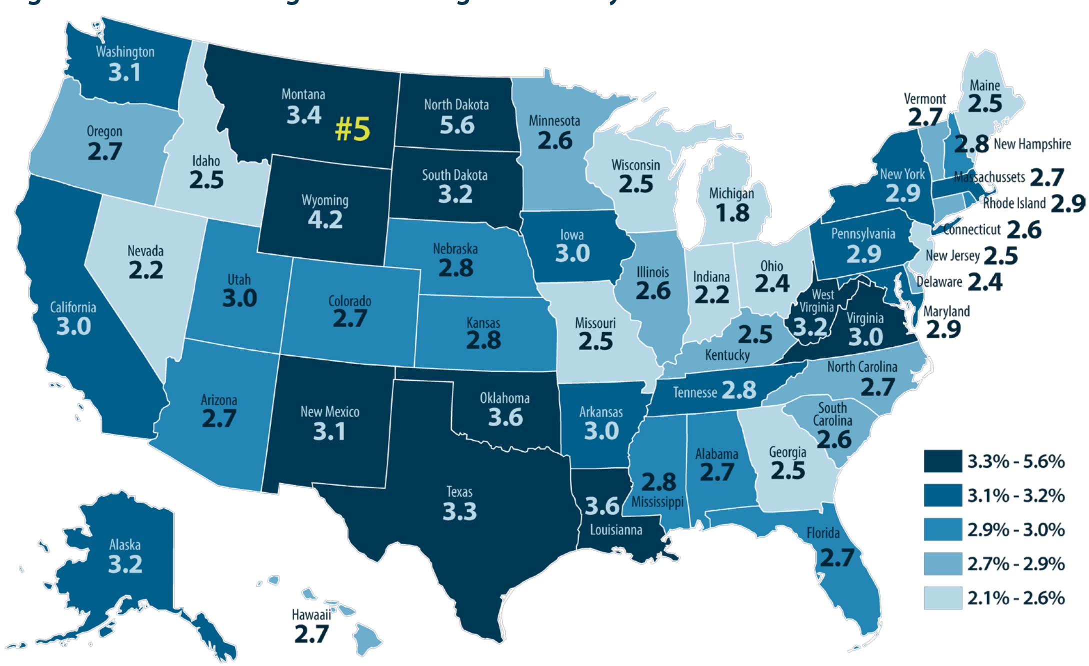
by Amy Hasenoehrl, Economist



In every year since 2004, Montana has experienced faster wage growth than the national average. In fact, Montana ranks 5th in terms of average annual wage growth over the past ten years. Montana's strong wage growth was driven by the private sector, which had the second fastest growth in the nation in 2012, with the average wage increasing by 4.3 percent over the year. Wage growth is an important element of a healthy economy because it suggests an increase in the standard of living for working Montanans and is an indicator of future economic growth.

In general, Montana has maintained a relatively strong demand for labor, particularly in industries influenced by the Bakken developments as well as health care services and tourism. The steady demand for labor, coupled with worker shortages in particular areas of the state, explains why Montana's wage growth has outpaced the national average. Most of the wage growth in Montana has been driven by wage growth in the private sector, specifically in the business services, mining and utilities, and financial activities industries. All of these industries are outperforming the national average for their respective industries. Furthermore, health and education, trade and transportation, and leisure activities industries, which employ the largest number of Montanans, also have experienced wage growth above their national industry averages. Figure 1 shows a map of the ten-year average annual wage growth by state in the nation.

Figure 1. 10 Year Average Annual Wage Growth by State 2003-2013



SOURCE: 2013 Quarterly Census of Employment and Wages, Bureau of Labor Statistics and MT Dept. of Labor and Industry

What is wage growth and why do we care?

According to economic theory, wages and employment are determined in a competitive labor market, based on the supply and demand of labor. In general, businesses are willing to pay wages up to the amount of value the worker adds to the business. For example, if hiring an additional cashier in a grocery store is expected to increase profits by $30,000 per year, then the business should be willing to pay that cashier up to $30,000. When workers are in over-supply and unemployment is high, workers are usually willing to accept less than this wage because they have bills to pay and a budget to meet. However, when workers are rare, or workers with a particular skill set are rare, then businesses may have to pay higher wages to continue to produce goods and to attract the best talent. Once hired, businesses generally increase wages in order to retain workers and to provide monetary incentives for workers to perform at higher levels.

Wage growth is described in two ways – nominal and real. Nominal wage growth is the amount that wages have increased over time, measured in dollars or percent. Nominal wage growth comparisons are the most commonly used by workers, businesses, and the media. However, economists like to know whether wages are increasing faster than inflation by putting wage growth in "real" terms. Real wage growth adjusts the wages for inflation and therefore provides an indication of whether or not workers can afford more goods and services with their wages. For example, if a worker's wage increases by two percent over the year, the worker had a nominal wage increase of two percent. That sounds great, but if the price of the goods purchased by the worker increased by three percent, then the worker is not able to afford the same goods and services as the prior year, even though their wages increased. Therefore, economists consider real wage growth (equal to negative one percent in the example) to evaluate whether or not wage growth has made workers better off.

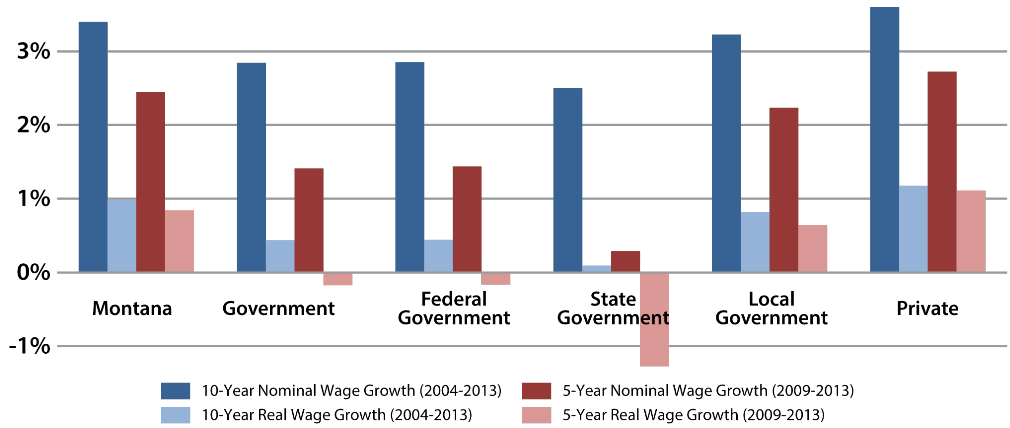
Wage growth is calculated as a change in the average wage. However, it is important to note that the average wage does not represent all workers, and it remains a fairly blunt measure of worker well-being. If one worker has a large wage gain while a second worker has a small wage loss, the average wage can still increase without both workers being better off. The mix of wages within the state can also impact the average wage. For example, in 2008, the average wage in Montana increased during a time when most workers had wage freezes and many workers lost their jobs. The average wage increased in 2008 because the state lost more low-wage jobs than high-wage jobs during the recession. Fewer low-wage jobs resulted in an increase in the average annual wage, even though individual workers did not experience strong wage gains.

Wage growth is an important indicator of the health of an economy for a couple of reasons. First, it often means an increase in the standard of living for working Montanans. More money in the economy drives increases in consumer spending, savings, and investments, all of which speed the rate of future economic growth. Second, as wages in Montana grow at a faster rate than other states, this could attract new workers to the area, improve labor availability for businesses, and lead to increases in production. Wage growth is correlated with future growth because it increases savings and investments, and because it increases the amount of labor that can be utilized for production.

Where is the wage growth in Montana?

As a whole, Montana has experienced positive real wage growth, although there are differences between the public and private sector wage growth. Wage growth in the private sector has outpaced Montana's average wage growth both over the ten-year and five-year timeframes. However, wage growth in the public sector has not been fast enough to keep up with inflation, creating a decrease in real wages over the last five years. Both state government and federal government employees have experienced pay

Figure 2. Average Annual Wage Growth by Sector



SOURCE: 2013 Quarterly Census of Employment and Wages, Bureau of Labor Statistics and MT Dept. of Labor and Industry

freezes over the last five years. The private sector has experienced over a one percent increase in real wages over the same period, which suggests private sector wage growth has resulted in an improvement in workers' standard of living. Figure 2 shows the ten-year and five-year real and nominal wage growth rates by sector.

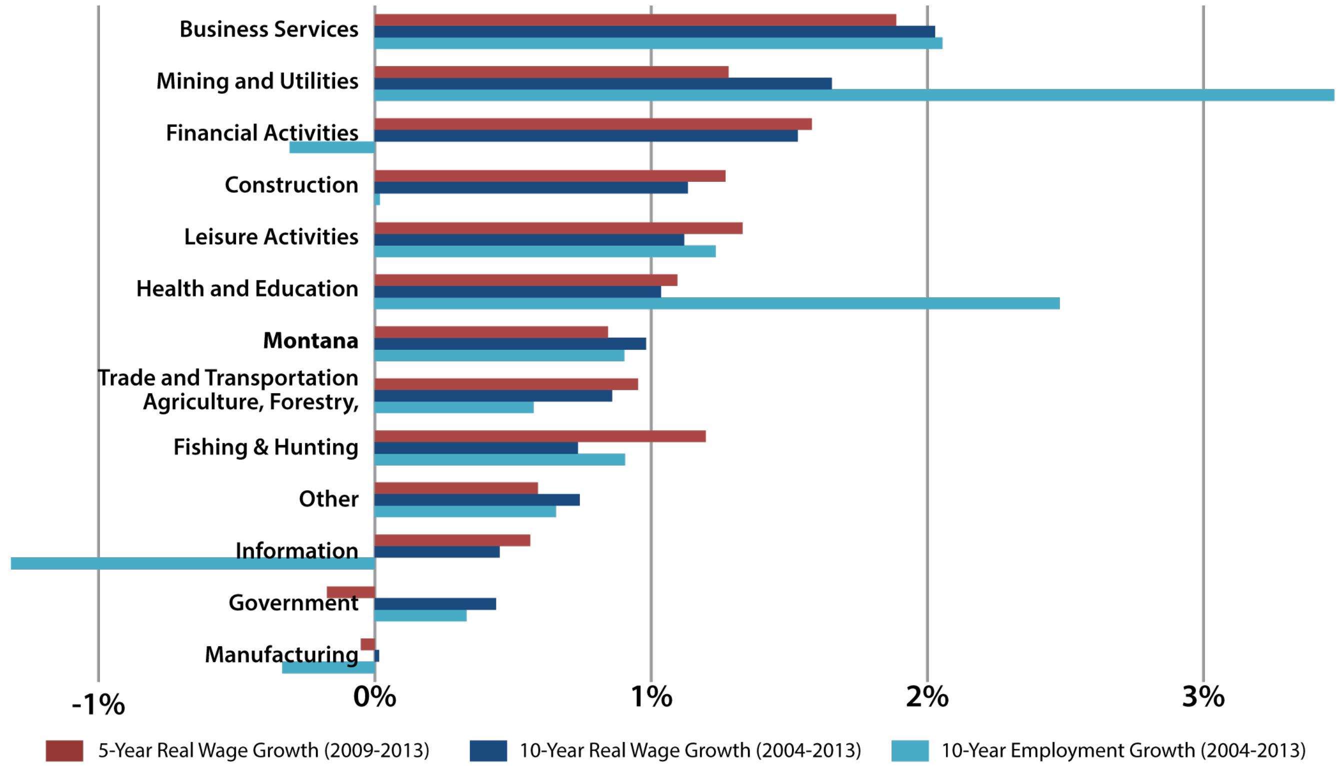
Within the private sector, wage growth has been driven by growth in the business services, mining and utilities, and financial activities industries. All three of these industries have experienced more rapid wage growth than the private sector average over the last ten years. Manufacturing, government, and information on the other hand, have been experiencing the slowest wage growth. Real wages have declined over the past five years for both government and manufacturing. The differences in wage and employment growth by industry are highlighted in Figure 3.

Business services posted the largest growth in wages over both the ten and five year periods. This industry consists of management, administrative, professional, scientific, and technical services. Wage growth in business services was accompanied by relatively large employment growth over the last ten years. Like the financial activities industry, employment opportunities in the business services industry are often well-paid positions requiring higher levels of education and training. Growth in business services and financial activities industries is important to the Montana economy because it leads to highly paid, advanced, and technical employment opportunities in Montana.

The mining and utilities industry has also experienced high levels of wage and employment growth. This industry consists of oil and natural gas extraction, coal mining, metal ore mining, electrical power generation, natural gas distribution and water, sewage and other systems. The mining and utilities industry has experienced the fastest employment growth and second-fastest wage growth over the past ten years. Most of the growth in this industry centers on the developments in the Bakken area in Eastern Montana. New technological developments in the drilling industry have led to an increase in demand for workers in the Bakken area. This increase in demand, coupled with worker shortages in Eastern Montana, has driven the wage growth in the mining and utilities industry.

More recently, wage growth in the financial activities and leisure activities industries has surpassed wage growth in the mining and utilities industry. Over a ten-year period, financial activities ranks third in terms of wage growth, but surpasses mining and utilities over a five-year period to rank second. The difference in the two industries' wage growth rates occurred primarily over the past two years. Financial activities outpaced mining and utilities by four percentage points in 2012 and 0.9 percentage points in 2013. The wage growth gap between the two industries

Figure 3. Average Annual Real Wage and Employment Growth by Industry



SOURCE: 2013 Quarterly Census of Employment and Wages, Bureau of Labor Statistics and MT Dept. of Labor and Industry

in 2012 could be due to a shift in the mix of jobs in the mining and utilities industry. In 2012, mining and utilities saw large employment gains with relatively little wage growth. However, in 2013, this was not the case. Wage growth in the mining and utilities industry returned to more average levels in 2013, yet workers in the financial activities industry still experienced a greater percentage increase in their wages on average.

The wage growth in leisure activities surpassed mining and utilities over a five-year period as well to rank third. The wage growth in this industry can be explained by the shift in the mix of jobs during the most recent recession. Leisure activities saw significant wage growth in 2009 and 2010 because of low-wage job losses. As low-wage workers left, the average wage paid to all workers in the industry increased. Thus, wage growth in 2009 and 2010 primarily resulted from a change in the mix of jobs, not from an increase in individual worker wages. However, in 2013, leisure activities posted employment and wage growth, which suggests that the industry is regaining some of the job losses from earlier years, and that the average wage growth in 2013 was caused by increased wages to individual workers.

Montana wage growth has been heavily concentrated in the Eastern region. Increased demand for workers in the Bakken and a labor supply shortage in Eastern Montana has driven the rapid wage growth in that region of the state. The increased demand for workers has also spilled over into the South Central region largely because the Billings area serves as a hub for commercial activity in the Bakken. The Southwest region has also seen some of the growth in wages from the business services industry, as well as leisure activities, and construction. The Northwest region has experienced the slowest real wage growth. High unemployment and job losses in the wood products and construction industries during the most recent recession resulted in an over-supply of workers, putting downward pressure on wages. Figure 4 shows a map of the average annual real wage growth by region from 2008 to 2013.

The Eastern region of the state has been the dominant source of wage growth since 2008, experiencing almost three percent real wage growth on average per year. The South Central region has seen the next largest real wage growth, averaging just less than one percent per year. The Northwest, Southwest, and North Central regions have experienced real wage growth as well, but not nearly as rapid, averaging less than a half percent growth per year.

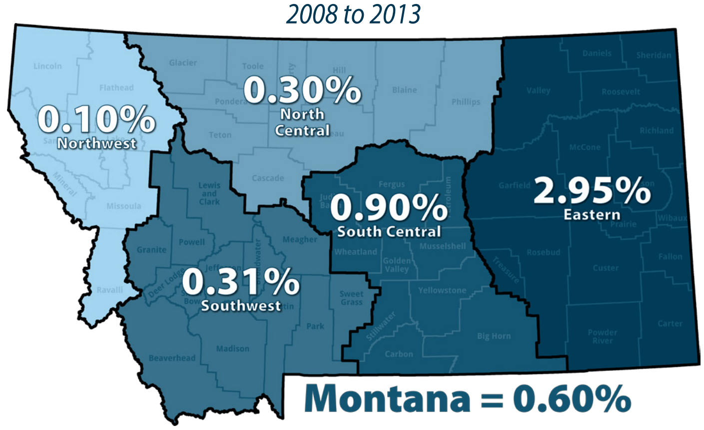
Why has the wage growth in Montana outperformed the nation?

In general, wage growth in Montana has outperformed the national average because of a stronger demand for labor and a relatively limited supply of workers compared to the nation. Montana's unemployment rate has been consistently lower than the national average since 2001, signaling a tighter labor market. Wage growth in Montana has been driven by an increase in demand for workers due, in part, to the Bakken developments, and by the limited supply of workers due to the aging population and low in-migration.

Although the business services, mining and utilities, and financial activities industries have seen the fastest wage growth in the state, growth in these industries does not necessarily explain why Montana's wage growth has outpaced the nation. Growth in leisure activities, construction, trade and transportation, and health and education all help explain Montana's rapid wage growth. These industries, as well as mining and utilities, are more concentrated in Montana than in the nation as a whole, and they have outperformed the national

Figure 4. Average Annual Real Wage Growth by Region

2008 to 2013



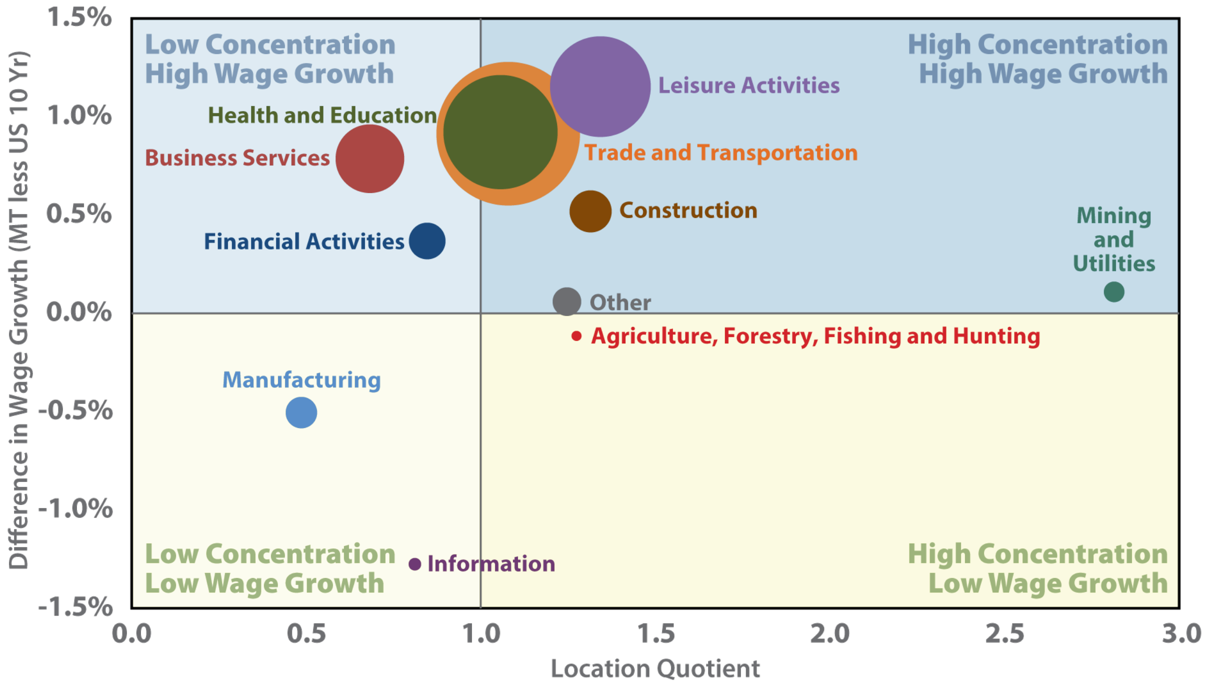
SOURCE: 2013 Quarterly Census of Employment and Wages, Bureau of Labor Statistics and Montana Department of Labor and Industry

average for their respective industries over the past ten years. Figure 5 shows Montana industry wage growth and concentration relative to the United States. The relative size of each industry in Montana is also represented in Figure 5, measured as a percent of total employment.

Of the top three wage growth industries, the mining and utilities industry is the only one that is also more concentrated in Montana, represented by a location quotient above one. The mining and utilities industry contributes to Montana's wage growth because it is a heavily concentrated industry and has had rapid wage growth. However, because the rapid wage growth in mining and utilities in Montana is consistent with the national trend, it does not explain much of the difference between Montana's average wage growth and the national average. Of the more concentrated high-wage growth industries, mining and utilities makes up the smallest percentage of total employment. Health and education, trade and transportation, and leisure activities industries employ the most Montanans.

Health and education, trade and transportation, construction, and leisure activities industries are more heavily concentrated in Montana than in the United States and have above average wage growth when compared to the national industry average. The wage growth in health and education has been driven by an increase in demand for health care services resulting from

Figure 5. Montana Wage Growth and Concentration by Industry Relative to the United States



NOTES: Location quotient is the ratio of analysis-industry employment in the analysis area to base-industry employment in the analysis area divided by the ratio of analysis-industry employment in the base area to base-industry employment in the base area. The relative size of each industry data point corresponds to the industry's percent of total employment in 2013.

SOURCE: 2013 Quarterly Census of Employment and Wages, Bureau of Labor Statistics and MT Dept. of Labor and Industry.

Montana's aging population. The trade and transportation, construction, and leisure activities industries all experienced low-wage job losses that resulted in wage growth during the most recent recession. Over the past few years, due to increased demand for workers in the Bakken area and the presence of many tourist attractions in the state, these industries have seen a greater increase in wages relative to the nation.

Conclusion

Wage growth is one of the strengths of the Montana economy. Over the past ten years, Montana ranks 5th in terms of annual wage growth, averaging over three percent wage growth per year. In general, Montana has maintained a relatively strong demand for labor, particularly in industries influenced by the Bakken developments as well as health care services and tourism. The steady demand for labor, coupled with worker shortages in particular areas of the state, explains why Montana's wage growth has outpaced the nation. Most of the wage growth in Montana has been driven by wage growth in the private sector, specifically in the business services, mining and utilities, and financial activities industries. Over the past five years, these industries have experienced over 1.2 percent real annual wage growth on average, suggesting an increase in the standard of living for workers over this time period.

Wage growth is an important element of a healthy economy. Real wage growth means an increase in the standard of living for working Montanans. More money in the economy drives increases in consumer spending, savings, and investments, all of which speed the rate of future economic growth. As wages continue to grow, higher wages attract workers to the state, increasing labor availability and production potential. Strong wage growth in Montana is a signal of future employment and GDP growth in the years to come.