

Economic Growth in Rural Montana

by Barbara Wagner, Chief Economist



In 1916, the Wagner family joined thousands of Americans searching for a better life when they homesteaded in Northeast Montana. Since then, improvements in agricultural equipment and technology has reduced labor needs in agriculture, requiring fewer and fewer workers. While the Wagner farm continues to be productive and profitable for those that remained, other family members left the area in search of better economic opportunities in fields that interested them.

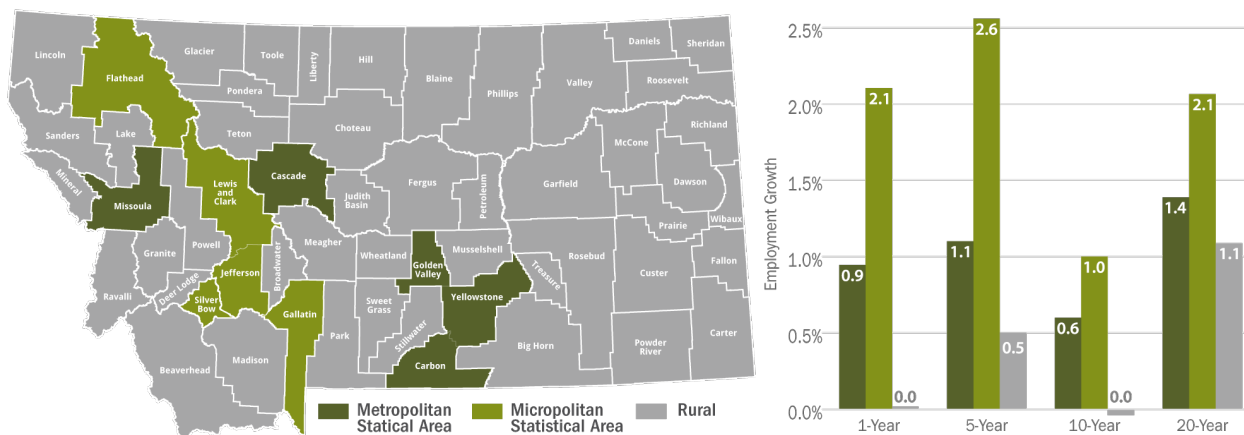
The story of the Wagner family mirrors other Montana families and rural communities in our state, raising concerns about the ability of rural areas to continue their economic growth. In fact, throughout history, urban areas have held significant appeal with diverse consumer options, concentration of employment opportunities, and the potential for higher wages. But the migration of rural youth towards urban areas in the long term raises concerns about sustainability of growth in a state as rural as Montana. The economic outcomes of Montana's rural areas are important for the overall state's growth. This article reviews the growth in rural versus urban areas of Montana to see how our rural areas are faring and, in the process, highlights certain characteristics that can spur economic growth.¹

Official Definitions of Rural

One of the biggest challenges in examining rural versus urban growth is defining what we mean by rural. The U.S. Office of Management and Budget officially defines urban areas as either "Metropolitan Statistical Area" or "Micropolitan Statistical Area." These terms refer to the urban population center, the surrounding county, and any counties surrounding the population center that have a high degree of integration with the city core. If the city (including the core and surrounding areas) is greater than 50,000, it is a Metropolitan Statistical Area. If the city has 10,000 to 50,000 population, it is considered a Micropolitan Statistical Area. In concept, the inclusion of the surrounding areas is designed to include suburban areas where residents often commute into the city core for work, entertainment, or shopping. However, outlying counties are considered integrated based solely on work patterns. If 25% of the workers in a particular county travel to the urban center for work, the county is included as a part of the MSA.

¹ The article uses payroll employment data from the Quarterly Census of Employment and Wages over 1-year, 5-year, 10-year, and 20-year periods, with all timeframes ending in the second quarter of 2017.

FIGURE 1:
Montana's Metropolitan and Micropolitan Statistical Areas



Source: 2016 Population Estimates, U.S. Census Bureau and QCEW, MTDLI

According to these official definitions, Montana's metropolitan areas include Missoula, Cascade, Yellowstone, Golden Valley, and Carbon counties, as shown in [Figure 1](#). Most Montanans would agree with Missoula, Great Falls, and Billings being urban, but the description of Golden Valley and Carbon counties as urban usually results in a laugh and puzzlement. The counties of Golden Valley and Carbon are included as urban areas because over 25% of their labor force travels into the city of Billings for work. Therefore, even though Golden Valley and Carbon are quite sparsely populated, they are considered urban because they are "suburbs" of Billings.

Montana also has several smaller cities that are micropolitan urban areas, including Kalispell, Helena, Butte, and Bozeman, also shown in [Figure 1](#). The micro MSA of Helena includes both Lewis and Clark County and Jefferson counties. All other counties in Montana are not considered to be part of an urban area, and could be termed rural.

Using this official definition for MSAs, Montana's cities have grown faster than our rural areas over the last twenty years, with metropolitan counties growing at 1.4% annually since 1997 compared to 1.1% annually for rural counties. However, the fastest growing areas are not the largest cities. Montana's micropolitan areas grew the most quickly, at a pace of 2.1% annually over the last 20 years. The micropolitan areas were also the fastest growing for the 1-year, 5-year, and 10-year timeframes.

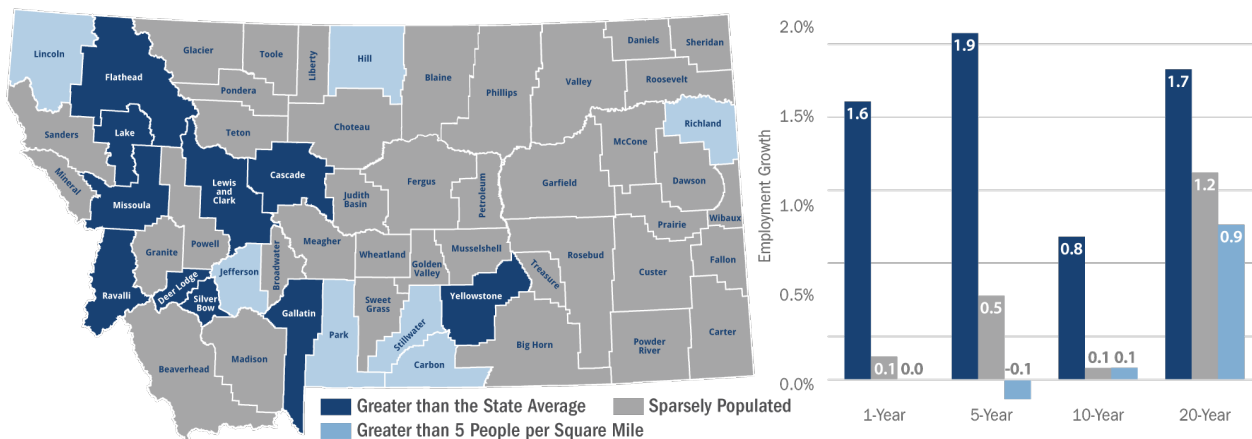
Alternative Definitions of Rural

Montana's urban areas are growing faster than rural areas, but it is the mid-sized cities that are the best performers. But perhaps this result is simply because of the use of the official definitions of urban. Many Montanans may think other cities or areas should be included as urban. [Figures 2 and 3](#) investigate the rural versus urban growth in Montana using two other common definitions of urban – population and population density.

Population density is one of the most commonly used metrics to measure urban areas because it directly measures how many people inhabit one space. Overall, Montana has a population density of 7.16 people per square mile of land area (removing square miles of lakes and rivers). There are 10 Montana counties with population density greater than the statewide average in 2016, as shown in **Figure 2**.

Using population density highlights many of the same counties as the official MSA definitions, but adds in the above average population density counties of Lake, Ravalli, and Deer Lodge, where population density is higher because of the proximity to a larger city. In addition, the less-population-dense counties of Golden Valley and Carbon are put in the sparsely populated category. Counties with population density greater than the statewide average added employment at a rate of 1.7% annually over the last 20 years, and 1.9% over the last five years.

FIGURE 2:
Montana's Population Density by County

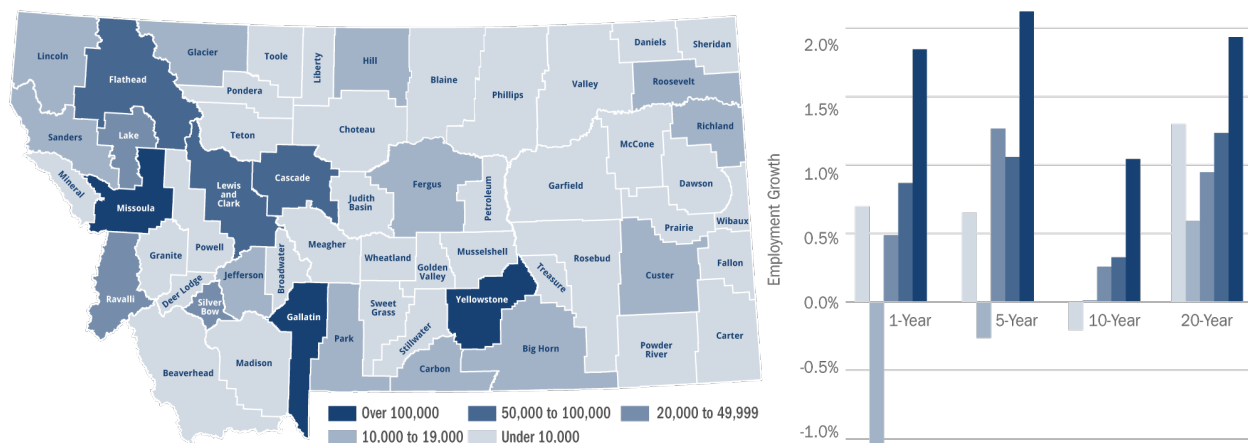


Source: 2016 Population Estimates, U.S. Census Bureau and Quarterly Census of Employment and Wages, Montana Department of Labor & Industry

Figure 2 also illustrates another seven counties that have population density between five people per square land mile and the statewide average of 7.16 people per square land mile, which we can term “middle density counties.” These medium density counties are the slowest growing grouping, with employment growth of only 0.9% annually over the last 20 years. In fact, the sparsely populated counties grew faster than the medium density counties.

Using two different definitions of urban versus rural have led to somewhat confusing results. Official MSA counties grow faster than rural areas, and highly dense population counties tend to grow faster than sparsely populated counties. However, in the MSA analysis, the middle grouping of small cities is the fastest growing, while the density analysis indicates that middle population density counties are the slowest growing grouping. Perhaps using yet another definition of rural versus urban will shed some light on these seemingly contrary results.

FIGURE 3:
Montana Population by County



Source: 2016 Population Estimates, U.S. Census Bureau and Quarterly Census of Employment and Wages, Montana Department of Labor & Industry

Figure 3 presents one more method of examining population and employment growth by dividing counties into five categories based on population. This measurement simply examines the number of people, not the population density. The counties with populations over 100,000 people include Yellowstone, Gallatin, and Missoula. These large population counties have had the fastest growth over the last 20 years, gaining employment at 2.1% annually.

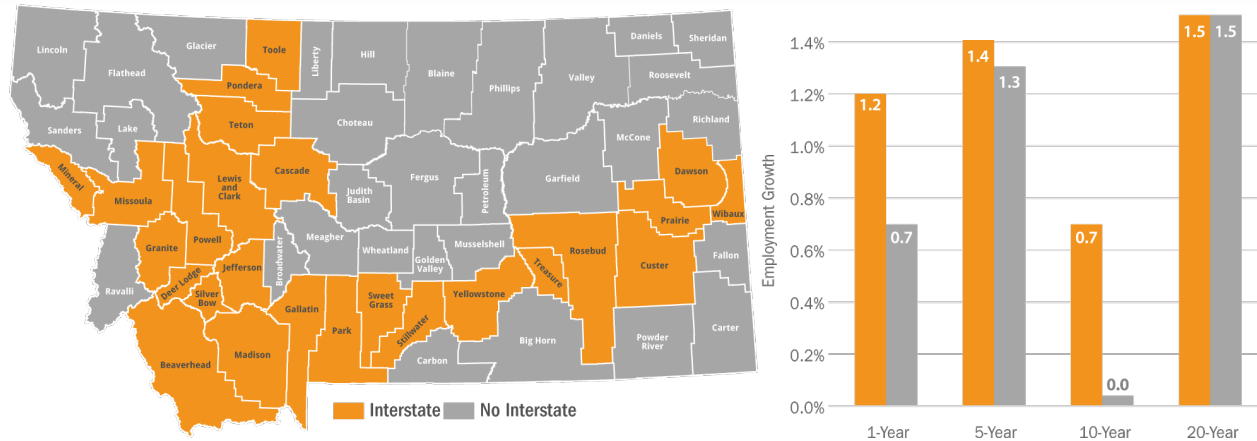
In general, the larger areas tend to have slightly faster growth, except for the two smallest population categories. The category with the slowest employment growth is not the smallest population counties, which grew at a pace of 1.4% over the last 20 years, but the group including counties with populations between 10,000 to 19,999. Counties between 10,000 to 19,999 grew at only 0.6% per year over the last 20 years, and had negative growth over the last year and last five years.

The above analysis has demonstrated two important points to understanding rural versus urban growth trends. First, the results depend on how you define urban and rural. Second, population and population density influences growth, but it is not the only factor influencing growth. The relationship between urbanness and employment growth is more complex than it first appears.

Major Infrastructure

Perhaps it is not population or population density that explains the different employment growth patterns in Montana. Montana's more urban areas also have greater access to infrastructure, including interstates and airports. Access to infrastructure lowers transportation costs for businesses shipping their product to their customers, and even lowers the costs of inputs being shipped to the business, thus allowing them to be more competitive.

FIGURE 4:
Montana Counties with Interstate Highways

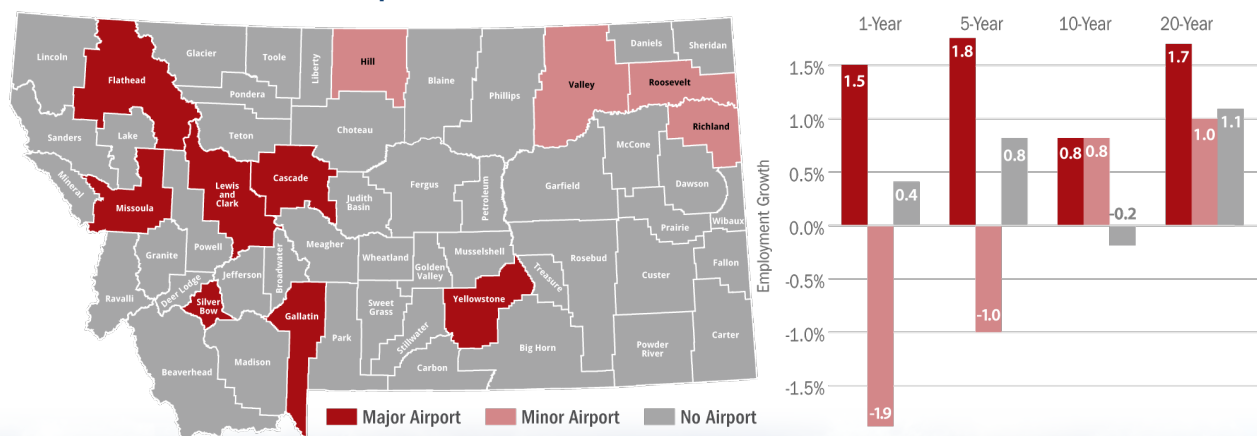


Source: Quarterly Census of Employment and Wages, Montana Department of Labor & Industry

Figure 4 illustrates the counties of the state that have access to an interstate. Employment growth between interstate and no interstate counties is at the same pace over the last 20 years, with fairly small differences in growth over other time periods. While access to the interstate certainly reduces costs for businesses and makes it easier for residents to travel, it does not seem to make significant differences in employment growth.

Another commonly heard theory on differences in growth is that areas with airport access have faster growth. **Figure 5** examines the employment growth based on access to airports. Counties are divided into three categories based on the level of regularly scheduled commercial passenger service provided to the airport: major airports, minor airports, and counties without regularly scheduled commercial passenger air service. Employment growth is certainly faster in counties with large airports, but these are also the largest urban areas. These counties may also have faster growth because of higher demand from a large gathering of consumers and greater access to a labor supply. A better comparison of the impact of airports might be the differences between the counties with minor airports versus the counties without regularly scheduled passenger service. Over the last twenty years, there is little difference in employment growth; but in recent years, counties without air service have been growing faster than counties with small airports.

FIGURE 5:
Montana Counties with Airports

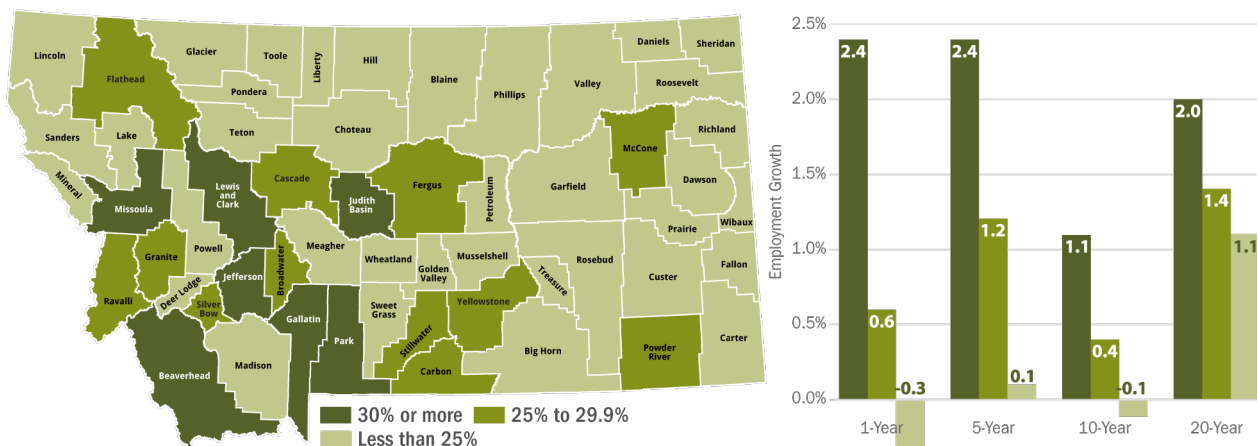


Source: Quarterly Census of Employment and Wages, Montana Department of Labor & Industry

Human Capital

What then, are the drivers of economic growth that result in differences between the urban versus rural counties of Montana? Population certainly is a factor, but if population alone was enough, the largest cities would grow more quickly than mid-sized cities. Infrastructure differences likely influence quality of life for residents, but make little differences to employment growth rates. However, modern macroeconomic growth theory provides one more insight that might be helpful for understanding rural versus urban growth – the importance of human capital in a community to improve productivity and technology innovation and dissemination. **Figure 6** illustrates the counties of Montana by the level of bachelor degree attainment among people 25 and older. This division of the state provides the most clear-cut and obvious influence on growth. Counties where over 30% of the population have a bachelor's degree grew at a rate of 2% over the last 20 years, and outperformed other counties across all timeframes. Further, counties with 25% to 29.9% of their population with a bachelor's degree performed better than counties with the lowest educational attainment. Educational attainment appears to have a stronger relationship with employment growth than either population or transportation infrastructure.

FIGURE 6:
Bachelor's Degree Attainment by County



Source: American Community Survey 5-Year estimates, and the Quarterly Census of Employment and Wages

Conclusion

Over time, generations of rural families have found their prosperity in the diverse employment options offered by urban areas. But urbanization is not the end of the road for Montana's rural economies. Population and population density certainly influence employment growth, but urbanness is not the only driver of economic growth. In fact, consistent with modern economic growth theory, educational attainment can have a strong influence on growth rates. As online educational opportunities continue to expand, and technologies allow for greater spread of new ideas and best practices, rural areas may even be able to increase the human capital of their population even if the college or university is several counties away. Education, innovation, and distribution of knowledge can be an effective economic development tool for rural areas.