Montana Economic Report

An Analysis and Assessment of Montana's Economic Performance
Compiled by the Bureau of Business and Economic Research

2016

A Letter from the Commissioner of Higher Education

Clayton T. Christian

Dear Fellow Montanans,

Welcome to the inaugural edition of the Montana Economic Report.

Many of you are active participants from some of the excellent economic outlook programs that have been produced by the Bureau of Business and Economic Research over the past 40 years. These valuable programs always showcase new and useful information from the Montana University System (MUS) and its insights and analysis on our state's economy. Now, with the launching of this report, we are enthused to share more meaningful information with a wider audience across Montana.

You will perceive in these pages how our economy is faring today and what we see ahead. This report is the work product of university researchers and faculty members who strive to provide pertinent and valuable economic information to you, the citizens, business and government leaders, and decision makers of Montana.

The colleges and universities of Montana have a huge stake in the health of our economy. Nothing is more important to the MUS than our commitment to the men and women whom we prepare to join and lead today's and tomorrow's workforce. To keep capable talent in the workforce pipeline for Montana employers and communities, we challenge ourselves every day to present our future graduates with opportunities and demanding situations that are necessary to thrive in the evolving economy.

We also recognize how the economy performs ultimately affects what state-supported institutions can accomplish and the services we can provide. Here's to a great year for you and your organization.

Sincerely,

Clayton T. Christian
Commissioner of Higher Education

Montana Economic Report, 2016

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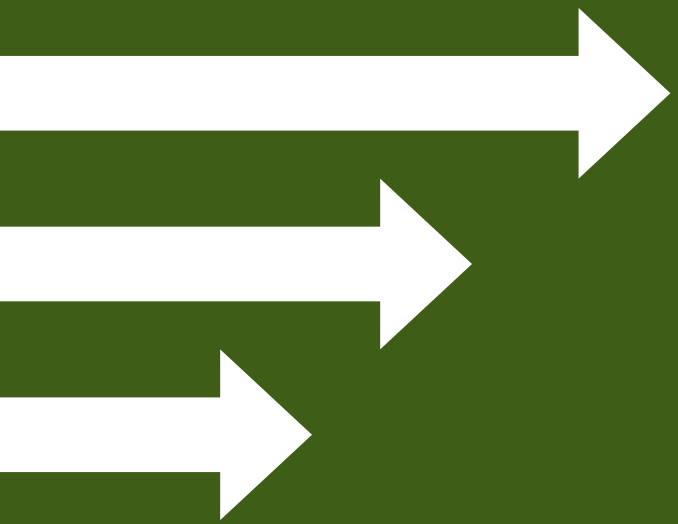
About the Montana Economic Report

Montana Economic Report 2016 is the annual assessment of economic activity in the state of Montana produced by the University of Montana's Bureau of Business and Economic Research. Contributors to this report include presenters in the BBER's Economic Outlook Seminars, held throughout the state. For more information about the Bureau, and to access this report online, please visit the BBER web site at www.bber.umt.edu.

About the Bureau of Business and Economic Research

The Bureau of Business and Economic Research is the main research unit of the School of Business Administration at the University of Montana. Established in 1948, its mission is to inform Montanans about the economic climate in which they live and work. In addition to conducting its Economic Outlook Seminars across the state in the beginning of each year, BBER researchers are engaged in a wide range of applied research projects that deal with different aspects of the state economy, including survey research, economic analysis, health care research, forecasting, wood products research and energy research.



The Year In Review

Major Economic Events of 2015

The Economic Environment Evolves

By Patrick Barkey
Bureau of Business and Economic Research at the University of Montana

Montana joined the list of 31 states who have adopted some form of Medicaid expansion under the Affordable Care Act when the Montana legislature passed SB 405 in May, which extends the health benefits of the federal-state program to families earning up to 138 percent of the federal poverty line. The expansion, which will expire in 2017 unless renewed by a future legislature, is currently taking enrollees and is expected to begin coverage in January 2016.

The fall in grain prices, most notably wheat prices, became more pronounced in 2015, effectively bring to an end a nearly seven-year-long run of above average prices. Lower exports caused in part by a higher dollar and strong wheat production abroad helped end an era that helped Montana farmers and the communities that depend on them thrive.

NorthWestern Energy, the state's largest investor-owned utility, completed its purchase of 11 hydroelectric dams once owned by its now-defunct predecessor, Montana Power, from the company that had acquired them, PPL Montana (now Talen Energy). Even after the Confederated Salish and Kootenai Tribes exercised their option to purchase one of those dams – the 194-megawatt Kerr dam – in September 2015, the purchase moves NorthWestern much closer to being able to meet its customers' daily electric energy needs with its own generation assets.

The slowdown in oil- and gas-related energy activity, which began with the big declines in crude oil prices at the end of 2014, continued. Drilling rig counts fell to near zero in eastern Montana, and to less than half of 2014 levels in North Dakota. As of mid-December, crude oil prices have moved below $40 per barrel, more than 60 percent lower than the triple digit prices of early 2014.

The U.S. Environmental Protection Agency announced its final rules as part of the Clean Power Plan aimed at reducing greenhouse gas emissions from electric power plants. Montana's emissions rate target for year 2030 is 44 percent lower than the 2012 baseline rate, which is a larger reduction than any other state. *MER '16*

Statewide Economic Performance

A Year of Strong Growth

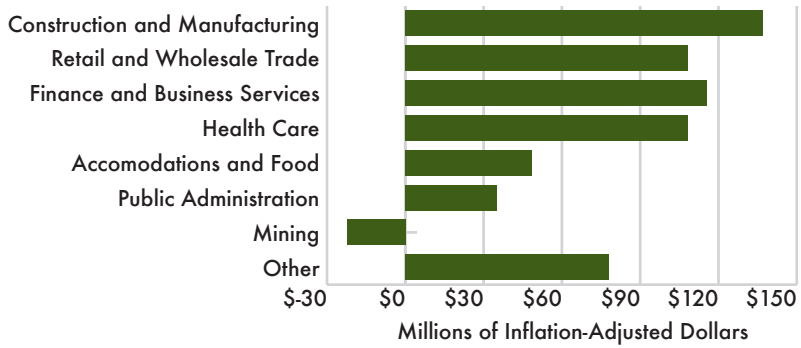
By Patrick Barkey
Bureau of Business and Economic Research at the University of Montana

If you pay close attention, you will notice that almost all economic forecasts have two things in common. The first is that they are optimistic. Recessions are much less common than growth, after all. But those forecasts are usually accompanied by a second item – a long list of things that could make those fundamentally optimistic forecasts go awry.

There was no shortage of things to worry about last year when we looked ahead to forecast how the Montana economy would perform in 2015 – especially for energy, mining and farming businesses. Yet even though these obstacles to growth were real, the strength in other parts of the economy was strong enough to overcome them, and the state economy went on to post a very good year.

Complete data for the calendar year won't be available for several months, but in the fiscal year (FY) 2015, the state economy was up over 6,000 jobs and by more than $600 million in wages and salaries compared to the previous fiscal year. The job growth is in line with the previous three years, but wage growth in FY 2015 was more than twice as strong as 2014. Together with falling unemployment rates and surging tax revenues, 2015 is shaping up to be a year that saw the Montana economy operate much closer to full capacity.

Figure 1
Growth in Total Real Wages, Montana, FY 2014 to FY 2015



Source: U.S. Bureau of Labor Statistics. The Bureau of Economic Analysis.

Looking at the wage growth in some major industry categories in the last fiscal year gives some insights as to how this came about. Except for the declines in mining wages due to setbacks in both oil production and metal mining, the story across Montana's industries was one of growth. Construction and manufacturing were especially strong, posting percentage growth rates of 8.5 and 5.5 percent in FY 2015, respectively. Even public administration, which excludes schools from the government total, registered growth in the four quarter period that ended in June of 2015.

The growth in construction wages does not signal a rebound in single-family home construction, which has only begun to show signs of life after almost six years of very depressed levels. It has been driven largely by multi-family residential, commercial and industrial projects, together with civil construction projects. Western Montana is seeing more residential construction, particularly in Bozeman, with Billings experiencing building tilted more towards commercial and industrial projects.

Signs of the steep decline in crude oil prices since mid-2014 are apparent in the economic performance of the oil patch counties on the eastern edge of the state, which have begun to slide after years of very strong growth. It is too soon to register the impact of lower wheat prices on activity in counties with a high grain farming presence. The strength in retail trade and the accommodations industries, on the other hand, is consistent with estimates of higher spending by nonresident visitors.

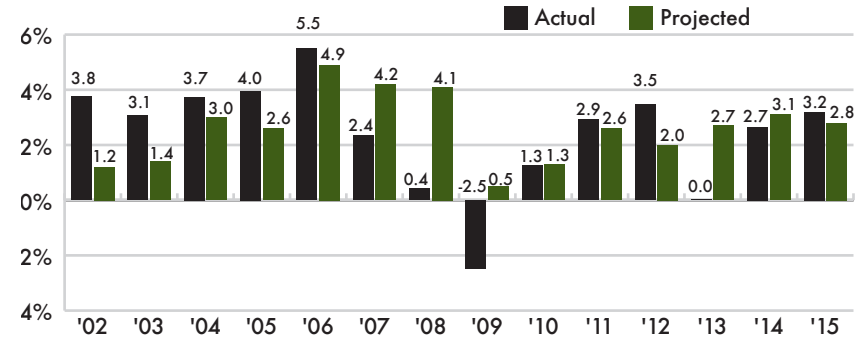
The patterns of greater balance, both geographically and across industries, continued to unfold across Montana in 2015. With the exception of Butte-Silver Bow, whose economy has been buffeted by lower commodity prices, growth in western Montana continues to improve, with the torrid growth in the east cooling significantly. *MER '16*

The Performance of the BBER Forecast

Data Revisions are a Challenge

By Kyle Morrill and Patrick Barkey
Bureau of Business and Economic Research at the University of Montana

Figure 1
Actual and Projected Change in Nonfarm Earnings, Montana, 2002 to 2015



Sources: Bureau of Business and Economic Research. U.S. Bureau of Economic Analysis.

The BBER forecasts have fared reasonably well in recent years. Our 2014 forecast of 3.1 percent in inflation-adjusted nonfarm earnings for Montana was only slightly higher than the published growth of 2.7 percent. While as of this writing, no data are yet available for 2015, thus far it appears that growth will come in around 3.2 percent, higher than the 2.8 percent we projected last year.

The periodic revisions of historical data on statewide economic growth continue to change the apparent accuracy of the BBER forecasts. As stated in the last major revision of income data published by the U.S. Bureau of Economic Analysis, the BBER forecast of growth in inflation-corrected nonfarm earnings has correctly predicted the direction of state economic growth in 13 of the last 14 years. But as can be seen from the figure, for some of those years the growth forecast published by BBER was widely off the mark.

The largest errors over time occurred in the beginning of the Great Recession – and here the BBER was in good company. Most forecasters failed to foresee the length and severity of that downturn. On the other hand, the Bureau's forecast has predicted the economic recovery fairly well. Forecasted growth since the recession deviated from published growth by roughly one percentage point.

Revisions to the income data by BEA cut the published growth rate in the Montana economy to zero in the year 2013, and revised growth for the previous year to 3.5 percent, giving the BBER forecast a smoother trajectory over both these years. We await the final revisions to judge how accurate this projection has turned out to be. *MER '16*

Montana's Regions and Cities

What's Driving Growth?

By Paul E. Polzin
Bureau of Business and Economic Research at the University of Montana

Gallatin County has been the economic growth leader in Montana since the recovery began from the Great Recession. Yellowstone County has been in a solid second place. But this is hardly a new outcome, as an examination of historical growth rates for the state's largest urban counties demonstrates.

Table 1 presents average annual growth rates of real nonfarm earnings for the entire state, as well as the eight largest urban areas for four time periods, roughly corresponding to the decades beginning with the 1970s. For convenience, we combine Silver Bow and Deer Lodge counties and call it the "Butte-Anaconda" area. Real nonfarm earnings are the broad measure of economic performance that we have traditionally used to measure local area economic performance.

It takes only a quick glance at the data presented in Table 1 to see that it is not at all unusual to find Gallatin County in the top growth spot. In three of the four decades, Gallatin County ranked number one in terms of growth. The one exception was the 1990 to 2000 period when it ranked second.

Even though statewide growth rates experienced a big decline followed by a big rebound over the three decades from the 1970s to 1990s, the same six counties were ranked in the top six spots over the thirty year period. Only their rank order changed from one period to the next. For example, Ravalli County ranked 6th in the 1970s, 2nd in the 1980s and 1st in the 1990s. Yellowstone County was 2nd in the 1970s, but then dropped to 6th in the next two decades.

It turns out that the post-2000 period is the real exception. Missoula and Ravalli counties, which were solidly in the upper echelon from 1970 to 2000, dropped to being the slowest growing after 2000. On the other hand, the Butte-Anaconda area, which was last during each of the three earliest decades, rose to number two after 2001.

It is always difficult to try and summarize a decade of economic events in one or two sentences. The most important reason for the downward shift in the Missoula and Ravalli economies were the declines in the wood products, log home and construction industries. In particular, the housing bust hit the log home and construction industries, and the closure of the Smurfit-Stone plant in Missoula eliminated 500

Table 1
Real Nonfarm Earnings, Average Annual Percent Growth, Selected Periods, 1970 to 2013

1970 to 1980			1980 to 1990			1990 to 2000			2000 to 2013		
Rank	Area	Percent Annual Growth	Rank	Area	Percent Annual Growth	Rank	Area	Percent Annual Growth	Rank	Area	Percent Annual Growth
1	Gallatin County	7.1	1	Gallatin County	4.1	1	Ravalli County	10.0	1	Gallatin County	4.9
2	Yellowstone County	7.1	2	Ravalli County	2.6	2	Gallatin County	9.4	2	Butte-Anaconda Area	4.6
3	Missoula County	6.7	3	Flathead County	2.0	3	Missoula County	5.7	3	Flathead County	3.2
4	Flathead County	6.7	4	Missoula County	1.1	4	Flathead County	5.7	4	Lewis and Clark County	3.0
5	Lewis and Clark County	5.8	5	Lewis and Clark County	0.9	5	Lewis and Clark County	5.2	5	Yellowstone County	3.0
6	Ravalli County	5.6	6	Yellowstone County	0.4	6	Yellowstone County	4.3		Montana	2.9
	Montana	4.8		Montana	0.2		Montana	4.2	6	Cascade County	1.8
7	Cascade County	1.5	7	Cascade County	-0.4	7	Butte-Anaconda Area	2.7	7	Missoula County	1.4
8	Butte-Anaconda Area	0.5	8	Butte-Anaconda Area	-1.6	8	Cascade County	1.8	8	Ravalli County	1.1

Source: U.S. Bureau of Economic Analysis.

Table 2

Average Annual Net Migration, Montana and Major Urban Areas, Selected Periods

Area	2001-02	2003-07	2009	2011-14
Montana	635	6,445	2,754	4,977
Cascade County	-569	-417	-207	-167
Flathead County	1,012	1,780	51	663
Gallatin County	957	1,956	-343	1,286
Lewis and Clark County	103	597	554	360
Missoula County	400	502	478	388
Ravalli County	663	631	-157	183
Yellowstone County	552	1,028	1,437	1,143
Butte-Anaconda Area	-595	-34	0	126

Source: U.S. Census Bureau.

Table 3

Federal Civilian Employment, Montana and Urban Counties, 2011 to 2014

Area	2011	2012	2013	2014	Change	Percent Change
Montana	13,846	13,534	13,046	12,968	-878	-6.3
Cascade County	1,780	1,709	1,668	1,615	-165	-9.3
Flathead County	826	809	750	730	-96	-11.6
Gallatin County	658	646	617	598	-60	-9.1
Lewis and Clark County	1,928	1,915	1,912	1,978	50	2.6
Missoula County	1,388	1,366	1,332	1,306	-82	-5.9
Butte-Anaconda Area	376	367	340	314	-62	-16.5
Yellowstone County	1,791	1,744	1,690	1,670	-121	-6.8

Source: Source: U.S. Bureau of Labor Statistics, QCEW.

very well-paying jobs. On the other hand, the improved ranking of the Butte-Anaconda economy may be due to the worldwide commodity boom which led to the reopening of the old Anaconda mine. The future of the mine may be uncertain in light of the recent reversal in global commodity prices.

Changing Migration Trends

Montanans may feel a blush of pride when a newcomer mentions our state's way of life and how natural beauty draws out-of-staters. These attractions do influence potential migrants. But when we look at the data for net migration, we see that changes in net migration are influenced more by economic conditions rather than a region's physical attractiveness.

Table 2 presents annual average net migration for Montana and the eight largest urban areas for selected periods beginning in 2001. A positive number denoted net in migration (more people moving in than out). A negative number means the opposite. The time periods reported roughly correspond to phases of the two most recent business cycles. The periods 2001-02 and 2009 are recession years while 2003-07 and 2011-14 correspond to recovery phases of the cycle.

Statewide net migration is highly correlated with economic growth. Net migration dipped to 635 persons per year during the 2001-02 recession. It also declined in the trough year of the 2007-09 recession, to a net of 2,754 new arrivals statewide in 2009. During the periods of economic growth in the years 2003-07 and 2011-14, net migration was in the range of 5,000 to 6,500 per year.

It is a bit surprising that the lowest net migration occurred during the relatively mild 2001-02 recession rather than the 2008-09 downturn, which has been called the worst in a generation. One contributing factor could be that the 2001-02 recession was concentrated in the high-tech sector, much of which was located in California. With more than 30 million persons and located relatively nearby, California has traditionally been a major source of migration for Montana. Mobility typically declines during poor economic times.

The net migration trends for the state's major urban areas are much more difficult to categorize. For example, the 2009 recession impacts were much greater than those in 2001-02 in Flathead, Gallatin and Ravalli counties. Missoula County, on the other hand, experienced a relatively stable number of annual net arrivals of new residents in both recession and recovery periods.

A New Economic Role for the Federal Government in Montana

The federal government has long been an important component of the Montana economy. In addition to providing about 12,000 Montanans with well-paying jobs, the federal government acted as an economic buffer to more volatile sectors. During recessions or other periods when basic industries would decline, the federal sector could be counted on for stability or even modest growth.

Things may be changing. As shown in Table 3, federal employment has declined every year since 2011. By 2014, there were almost seven percent fewer federal workers than in 2011. Real earnings for the federal sector also declined, but by a smaller percentage.

Not only have the declines been persistent over the last half decade, they are occurring statewide. As shown in Table 3, federal government employment has decreased in every year since 2011 in every urban area except Lewis and Clark. The largest decrease was the 16.5 percent decline in the Butte-Anaconda area. The other decreases were five to 11 percent.

What is going on here? To be honest, we really do not know yet. Are the declines occurring in all agencies? Or are they concentrated in a few government activities? We hope to have answers for these and other questions in the future. *MER '16*

State Revenue Report

Another Growth Year

By Terry Johnson and Patrick Barkey
Bureau of Business and Economic Research at the University of Montana

Montana general fund revenues have increased every fiscal year since 2010, reflecting growth in the economy since the trough of the Great Recession. The nearly $2.2 billion collected in general fund revenues during fiscal 2015 was 5.9 percent higher than the previous year. This was a considerable improvement over the zero growth that occurred in 2013-14.

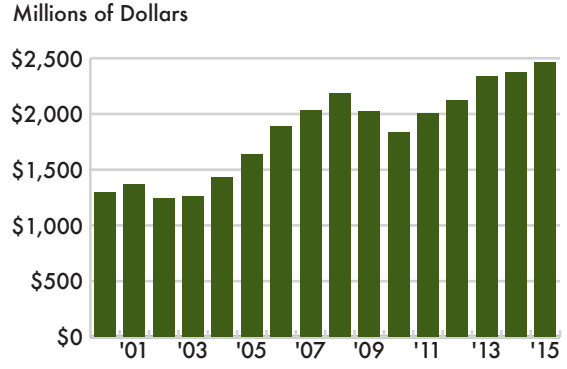
Many, but not all, of the major components of general fund revenues are driven by contemporaneous economic activity. Perhaps the most important of these is income tax withholding, which is driven by changes in wage and salary income as well as other disbursements, most notably pension distributions. In fiscal 2015 withholding was up by 7.2 percent. Other taxes, such as the corporation and the property tax, have less correlation with concurrent economic activity.

The biggest contribution to the strong growth in general fund revenues in FY 2015 was a $128 million increase in revenues from the individual income tax. This was a 12.2 percent increase. Other tax collections in the top seven general fund revenue sources were also up, but were much smaller in revenue terms.

"The biggest contribution to the strong growth in general fund revenues in FY 2015 was a $128 million increase in revenues from the individual income tax."

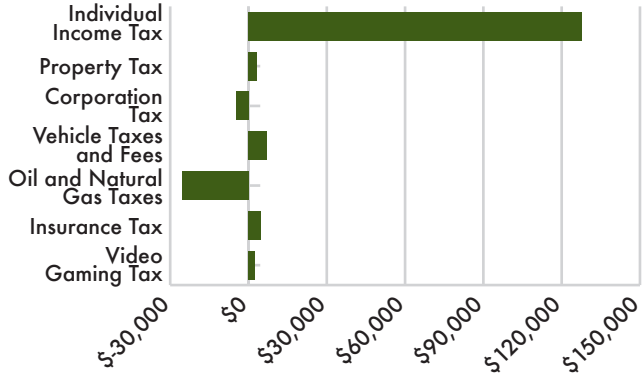
The exception to the trend were natural resource tax collections, which declined sharply in fiscal 2015. The decline was largely due to steep declines in commodity prices, with lower production volumes also coming into play. Within natural resource taxes, the exception was coal severance taxes, which rebounded due to increased production in fiscal 2015. *MER '16*

Figure 1
Montana's Total Tax Revenue Collections, FY 2001 to FY 2015

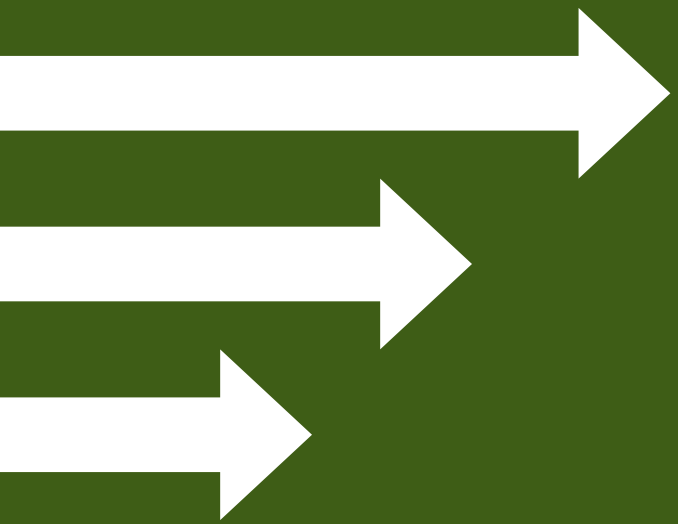


Source: Montana Department of Revenue.

Figure 2
Change in Montana General Fund Revenues, FY 2015 vs. FY 2014, Selected Revenue Sources (Millions of Dollars)



Source: Montana Deparmtent of Revenue.



The U.S. Economy

The U.S. Economy

Good But Not Great

By Patrick Barkey
Bureau of Business and Economic Research
at the University of Montana

Table 1
A Quick Look at the Numbers (Annual Rates)

	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2014	2015	2016	2017	2018
Real GDP (% ch.)	3.9	2.0	1.2	3.0	3.0	2.4	2.4	2.7	2.9	2.6
Federal funds rate (%)	0.12	0.14	0.15	0.48	0.79	0.09	0.13	0.90	1.91	2.90
10-yr. T-note yield (%)	2.17	2.22	2.19	2.48	2.63	2.54	2.14	2.65	2.89	3.45
Brent crude price (%/bbl.)	63.24	51.01	44.74	38.43	43.50	99.83	53.54	47.84	58.37	69.73
CPI (year/year % ch.)	0.0	0.1	0.4	0.9	0.7	1.6	0.1	1.2	2.6	2.7
Housing starts (Millions)	1.158	1.158	1.143	1.217	1.266	1.001	1.109	1.265	1.419	1.509
Light-vehicle sales (Million units)	17.10	17.75	18.06	17.67	17.68	16.44	17.39	17.76	18.19	18.07
Unemployment rate (%)	5.4	5.2	5.0	5.0	4.9	6.2	5.3	4.9	4.9	4.9

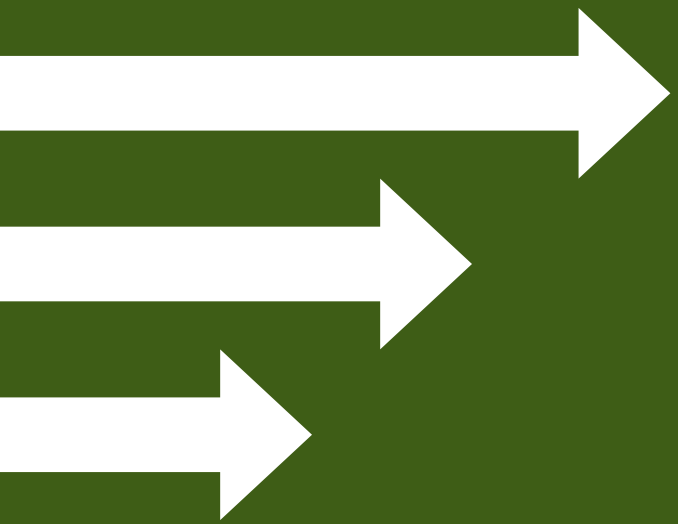
Source: IHS.

If your child got the same grade as the report card on the national economy's performance in 2015, you'd be pretty disappointed. It was another year of ups and downs for overall growth, in what has become an all-too-familiar story of high aspirations dashed by new challenges. High on the list of challenges has to be the stronger dollar, which has hurt manufacturing and worsened the trade balance, even as it has helped keep inflation to very low levels.

The U.S. economy has managed to grow steadily, if not spectacularly, despite a worsened trade situation, largely due to continued growth in domestic demand. Motor vehicle sales are set to come in at the highest levels ever achieved, and consumer spending overall has been healthy. The forecast is for more of the same – growth in the 2.5 to 3.0 percent range for total output, very low inflation, a stronger dollar and a falling unemployment rate.

Here are the top ten predictions for the U.S. economy in 2016, courtesy of IHS, a national forecasting firm:

1. **U.S. growth will remain solid.** The growth rate of the U.S. economy is expected to remain in the 2.5 to 3.0 percent range during 2016 – specifically, the IHS December forecast calls for 2.7 percent growth. Domestic demand, especially consumer spending, will be the mainstay of the economy.
2. **Europe will keep growing at a modest pace.** The Eurozone economy is predicted to expand 1.7 percent in 2016, after growing 1.5 percent in 2015. U.K. economic growth will remain steady, at 2.4 percent.
3. **The Japanese economy will continue to limp along.** Japan's growth rate will be a lackluster 1.0 percent in 2016, after an anemic 0.5 percent gain in 2015. Since the recent financial crisis, Japan has had repeated bouts of negative growth.
4. **China's economic activity will decelerate even more.** Chinese growth is expected to ease from 6.8 percent in 2015 to 6.3 percent in 2016. Continuing problems in the manufacturing sector will be the principal drag on the economy.
5. **Some emerging markets will remain in recession, while growth elsewhere will disappoint.** The recessions in Brazil and Russia are expected to last into 2016, and growth in most emerging markets will remain challenged by weak global growth, exchange rates, and commodity prices.
6. **Commodity prices will reach a trough.** The prices of both oil and other commodities are expected to be flat though the first half of 2016 and then begin to rise gradually in the second half.
7. **Any rise in inflation will be modest.** In light of the vast amount of excess capacity worldwide, inflationary pressures in most parts of the global economy will remain muted throughout much of 2016.
8. **The Federal Reserve, Bank of England, and Bank of Canada will raise interest rates a little, while other central banks will either be on hold or ease more.** During 2016, diverging economic fundamentals will call for different policy actions.
9. **The dollar will rise further.** Given stronger U.S. fundamentals relative to the rest of the world, and given that the Fed is likely to be the first major central bank to raise interest rates, IHS expects that the dollar will appreciate another 3 to 5 percent in the first half of 2016.
10. **The risks buffeting the global economy will likely not derail it.** Since 2011, the upside and downside risks to the world economy have largely offset one another, leaving growth stuck in the 2.5 to 3.0 percent range – the same is likely to be the case in 2016. *MER '16*



In Depth:

The Montana Economy

Assessing the Future of Coal

Is There a Way Back Up?

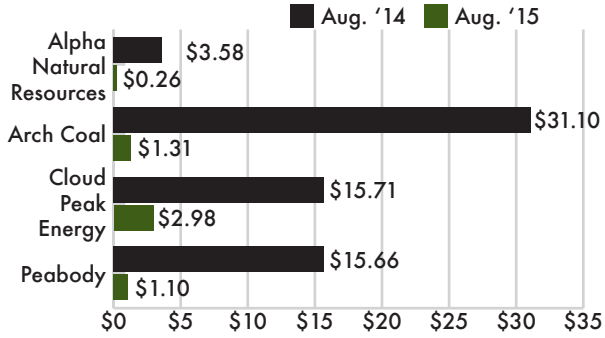
By Patrick Barkey, Paul E. Polzin, and Terry Johnson
Bureau of Business and Economic Research
at the University of Montana

The coal business is a different kind of energy business. Unlike crude oil, coal is not a commodity traded freely on global markets. Unlike natural gas, its price is not generally subject to volatility when winters are colder or warmer than expected. And unlike wind and solar power, its consumption is not encouraged by state renewable energy portfolio mandates for power companies or production tax credits for producers.

It is the nature of the coal business to evolve more slowly than most. Particularly in the western states, which now account for more than half of production nationwide, mining is a capital-intensive business, with years of permitting and infrastructure development required to add capacity. Almost 93 percent of coal consumed in the U.S. is used by producers of electric power, most of it secured through longer term contracts. And in years past, coal has been primarily used to fire base load electric power generation, resulting in fairly stable demand.

But the last few years have seen profound changes that have descended on the industry with unprecedented speed. Producers in western states like Montana, which have benefited from the shift in U.S. production towards western coal as well as the export potential to markets in Asia, are looking at a future that is considerably bleaker than what was envisioned just a few years ago. Market, regulatory and environmental challenges have clouded the outlook for major coal producers, sending the stock prices of the four largest companies plunging by 80-95 percent compared to year-ago levels (Figure 1).

Figure 1
Stock Prices of Publicly Traded Coal Companies, August 2015 vs. August 2014



Source: Wall Street Journal.

Financial challenges have beset many global commodity producers with the unwinding of the commodity boom in the last twelve months. The International Monetary Fund's index of all commodity prices has dropped by a third since summer of 2014. But the reversal of fortune in coal, traditionally less exposed to the boom-and-bust cycle of other energy commodities, has been especially severe. The outcome of the profound adjustments underway will be an important factor in shaping the outlook for states and regions with exposure to the industry's fluctuations, including Montana.

"The domestic coal business has changed because the entire energy business has changed."

Yet the fate of the U.S. coal industry depends on more than markets. Public policy decisions in three key areas – carbon regulation, infrastructure expansion, and management of federal lands – will play an important role in determining the industry's future trajectory. In fact, as troubling as the last two years have been for those who depend on the coal economy, it is the future that will be shaped by these decisions that is of greatest concern.

When the Montana Land Board voted 3-2 to approve the leasing of 570 million tons of coal to be developed by Arch Coal on state-owned land in the Otter Creek tracts in southeast Montana on March 18, 2010, expectations for the coal industry were high. That was particularly so for producers in the Powder River Basin (PRB), whose deposits straddle the Montana-Wyoming border. Even as domestic demand for coal was stagnant, the promise that high quality coal mined from very efficient surface mines in the PRB could tap into the growing Asian markets was attracting attention and investment.

In the five years that have elapsed since that announcement, the fortunes of the industry have soured significantly. A combination of changes in domestic markets, global markets, and regulatory setbacks have produced this outcome.

The Competition From Natural Gas

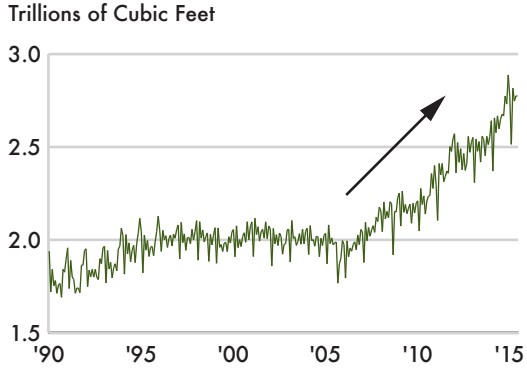
The domestic coal business has changed because the entire energy business has changed. Most of those changes stem from the shale oil and gas boom in the continental U.S. that began in earnest ten years ago. It is difficult to understate the impact of the production of oil, natural gas, and natural gas liquids directly from source rock that innovations in horizontal drilling and hydraulic fracturing have enabled. Those impacts

have propagated to coal markets largely through the increased production and falling prices of natural gas.

Prior to 2005, U.S. natural gas production was largely stable (Figure 2), with increases in domestic demand pushing up both prices and imports. Most imports were sourced from Canada and transported by pipeline. In the pre-2005 era, plans were underway to construct expensive, liquefied natural gas (LNG) terminals to import gas from countries like Qatar, and discussions on a pipeline from the northern slope of Alaska to the lower 48 states were continuing.

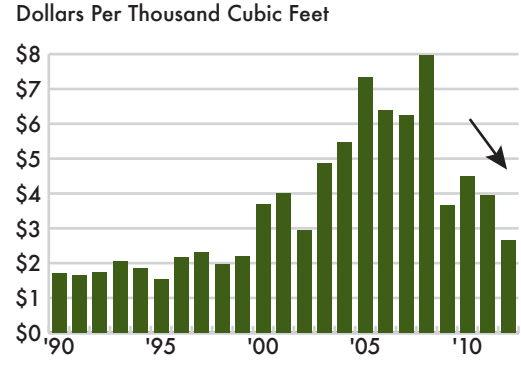
Huge increases in gas production from shale plays in states like Texas and Pennsylvania have ended those discussions. The 40 percent increase in U.S. gas production that has taken place (Figure 2) has caused wellhead prices to fall by more than half of their mid-decade levels (Figure 3). And because the new production is sourced closer to population centers where demand takes place, changes in delivered prices were just as dramatic.

Figure 2
U.S. Natural Gas Production, 1990 to 2015
Monthly Withdrawals, Trillions of Cubic Feet



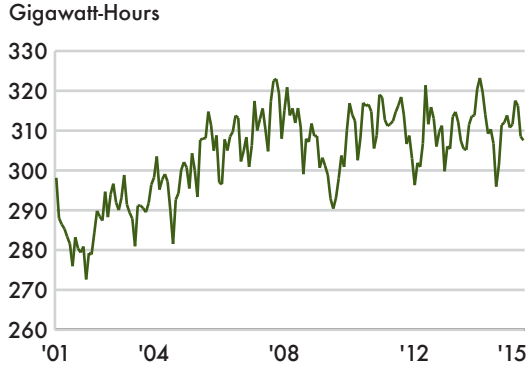
Source: U.S. Energy Information Administration.

Figure 3
U.S. Natural Gas Prices, 1990 to 2012 Wellhead Price, Dollars per Thousand Cubic Feet



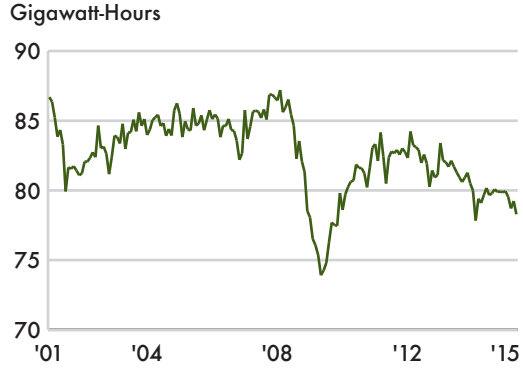
Source: U.S. Energy Information Administration.

Figure 4
U.S. Electricity Consumption, Total Monthly, 2001 to 2015, Gigawatt-Hours



Source: U.S. Energy Information Administration.

Figure 5
U.S. Electricity Consumption, Industrial Monthly, 2001 to 2015, Gigawatt-Hours



Source: U.S. Energy Information Administration.

The Recession's Impact on Electricity Demand

The time that elapsed since the last decade's midpoint also witnessed the most severe economic downturn since the Great Depression of the 1930s. The contraction in economic activity during the 2007-09 recession interrupted the growth trend in electricity consumption nationwide that had been unfolding in the recovery period since the 2001 recession (Figure 4). Perhaps even more significantly, in the recovery since the so-called Great Recession there has been no resumption in demand growth.

What is particularly challenging for coal-fired electric generators is the declining share of electricity demand from industrial customers. These customers are more likely to have high load factors – the percent of time when their demand for electricity is equal to their peak requirements -- which are well suited for power generated from coal. This is because of the technical and economic difficulties in ramping up and ramping down power output from coal-fired generators.

Industrial demand for electricity contracted by more than 15 percent as the recession hit, as shown in Figure 5. But after recouping about three quarters of that loss immediately after the recession ended, industrial demand has entered a period of secular decline. The declining importance of high load factor industrial demand has been one of the factors allowing utilities and merchant power providers to serve markets with natural gas generators, weakening the demand for coal.

The Regulatory Challenges

Coal-fired power plants in the U.S. have also seen cost increases in recent years stemming from the cost of compliance with new environmental regulations from the U.S. Environmental Protection Agency (EPA). Of these, the most important have been Mercury and Air Toxics Standards (MATS) and the carbon emissions limits that are included in the Clean Power Plan.

The legal setback to the MATS handed down by the Supreme Court in July 2015 has come too late to meaningfully impact the investments and other changes made to coal-fired power plants. The rules set standards for mercury and other toxic air pollutants to levels achieved by the best-performing sources currently in operation. They apply to all units in operation with a capacity of 25 megawatts or greater, and went into effect for most in April 2015.

Operators of coal-fired power plants throughout the U.S. have developed strategies to comply with the EPA MATS standards. The costs of the equipment needed to control acid and toxic metal emissions played a significant role in retrofitting and retirement decisions faced by coal plant operators.

The Energy Information Agency (EIA) estimates that 64.3 percent of the U.S. coal generating capacity in the electric power sector already had the appropriate environmental control equipment to comply with MATS and allow their operation past 2016. Another 5.8 percent planned to add control equipment, while 9.5 percent had announced plans to retire the plants.

Owners of the remaining 20.4 percent were faced with the decision of upgrading or retiring their plants. In 2012, these represented 1,308 coal-fired generating units in the United States, totaling 310 GW of capacity. Assuming the EIA projections were correct, almost 30 GW of capacity was retired due to MATS. This included the Corette plant in Billings, which was permanently closed in August 2015.

A more recent development has been the roll-out of carbon emission regulations. In *Massachusetts v. EPA* the U.S. Supreme Court determined "that greenhouse gases, including carbon dioxides, are air pollutants under the Clean Air Act and EPA must determine if they threaten public health and welfare." On December 15, 2008, the EPA found that current and projected concentrations of greenhouse gases endangered the public health and welfare of current and future generations.

> *"The implications of the EPA's ruling on reducing greenhouse gas emissions are stark."*

In August 2015 the EPA published its final rule on reducing greenhouse gas (GHG) emissions from electric generating units. These require states to file carbon reduction plans by 2016 and to meet their first targets for reduction by 2022. Due to a number of substantial revisions that occurred in the time interval that elapsed since the preliminary rules were first published in June 2014, the emissions reduction targets for individual states with heavier dependence on coal production and coal-fired electricity generation were raised considerably.

The implications for the coal industry are stark. An analysis of the old emission targets embodied in the preliminary rules conducted by the EIA predicted that coal-fired electric energy generation would be lower by 600,000 gigawatt-hours in year 2025. This would be a 40 percent reduction from the output of coal electric generating units today. As drastic as this sounds, the analysis of the new rule's effect, when it is completed, will doubtless be even larger.

Yet with the announcement of the final rules as part of the EPA's Clean Power Plan comes a new and unwelcome facet of regulatory policy – uncertainty. The prospect for a reversal of the EPA rule, either through court challenge, Presidential elections or the legislative process, cannot be discounted. The MATS rules affecting mercury emissions remain in litigation, remanded to a lower court to address recent challenge to its legality. While this outcome is probably too late in the game to affect shutdown and investment decisions made to comply with MATS, it plants seeds of doubt in the finality of the CPP.

Federal Land Use Challenges

Given these challenges, this would seem to be an inopportune time to revisit the issue of the appropriate royalty rate that the federal government charges companies who extract coal from federally-owned land. Opening this question introduces another element of policy uncertainty to a business that furnishes the fuel that still provides more electric energy than any other, and an industry that makes a significant economic contribution to states and regions throughout the country.

Yet opening this question is precisely what appears to be happening. The U.S. Department of the Interior's Bureau of Land Management (BLM) conducted "listening sessions" in selected western states as well as in Washington, D.C., to "seek information about how the BLM can best carry out its responsibility to ensure that American taxpayers receive a fair return on the coal resources managed by the federal government on their behalf."

The likely geographic impact of a near doubling in the effective royalty rates on coal – such as the one set forth in an analysis by Headwaters Institute published in January 2015 – would fall overwhelmingly on

western, Powder River Basin coal. These kinds of changes would likely impact the tax, employment and income benefits that are enjoyed by Western states, including Montana.

The Decade Ahead

Coal has been a significant part of our energy portfolio for over a century, and after enduring a series of setbacks for the first half of this decade, its fortunes could yet swing upward again. The appetite for electricity in the developing economies in Asia, coupled with a return to the price volatility that has always characterized its competitor fuel, natural gas, could be part of that optimistic scenario.

Confidence in that rosy scenario – from the point of view of producers – is hard to find. The collapsing stock prices of coal companies, the decline in market share, and the prospect of significant regulatory challenges ahead do not bode well for growth in the industry's future. If setbacks in the industry were to extend to Powder River Basin producers in Montana and especially Wyoming – who are among the most efficient in the world -- then it would impact an important economic driver to our state's economy.

MER '16

"Coal has been a significant part of our energy portfolio for over a century, and after enduring a series of setbacks for the first half of this decade, its fortunes could yet swing upward again."

Higher Education

Explaining the Outmigration of Montana's College-Educated Workers

By Bryce Ward
Bureau of Business and Economic Research at the University of Montana

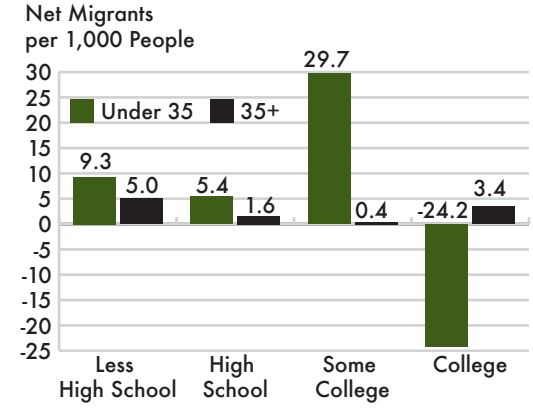
Montanans love Montana. A recent Gallup poll asked whether or not respondents believed that their state was the best, or one of the best, possible states in which to live.[1] 77 percent of Montanans indicated that they thought that Montana was one of the best places to live. This tied with Alaska for the highest percentage. In stark contrast, fewer than twenty percent of people in Rhode Island and Illinois think that their state is one of the best places to live.

Non-Montanans also like Montana. Between 2010 and 2014, 20,502 more people moved into Montana than moved out.[2] Montana's net migration rate – the number of net migrants per 1,000 initial residents – ranked 13th among all states over this period, was three times as fast as the median state (Louisiana), and was on par with states like Massachusetts, Tennessee, South Dakota, and Oregon.

To an economist, this indicates that Montana is healthy.[3] Within the U.S., people can live where they want. If people want to live in your state, then, chances are, your state's economy is performing well. Something must be going right, otherwise people would – on net – move someplace else.

For one group, though, Montana appears less desirable – the college-educated, and particularly the young and college-educated. For many years (at least since 1990), Montana has experienced a net out migration of college graduates. Two facts help illustrate this. First, there are more Montana natives with a college degree than there are college-educated Montana residents. Currently, 221,000 Montana natives have college degrees, but only 200,000 Montana residents have college degrees. Second, growth in the number of college-educated Montanans has not kept pace with Montana's production of college degrees. Since 1990, Montana colleges have produced 120,000 Bachelor's degrees, but Montana's college-educated population only grew by 97,500. Both of these facts suggest that Montana experiences

Figure 1
Montana's Net Migration Rate by Education and Age Group



Source: American Community Survey, 2008-2012.

[1] McCarthy, J. (2014). "Montanans, Alaskans Say States Among Top Places to Live." http://www.gallup.com/poll/168653/montanans-alaskans-say-states-among-top-places-live.aspx [accessed July 17, 2014]
[2] BBER analysis U.S. Census Components of Population Change April 2010 – July, 2014.
[3] Gleaser, E. (2008). Cities, Agglomeration, and Spatial Equilibrium.

net outmigration of people with college degrees.

In recent years, the Census Bureau's American Community Survey (ACS) collected data that showed this outmigration directly (albeit with a large margin of error).[4] The ACS asked people whether they have moved within the past year. In this data, we see that Montana experiences net outmigration of college graduates. On average, during the period between 2008 and 2012, 564 more college graduates moved out of Montana each year than moved in. During this

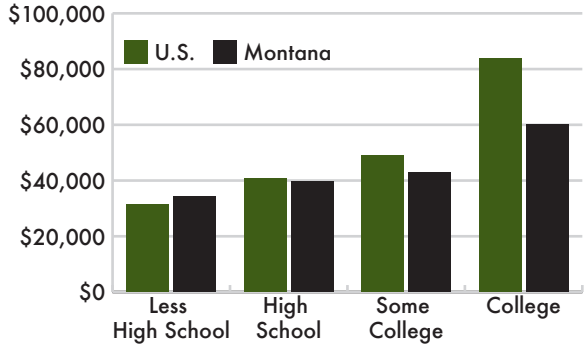
"Montana's economy may not generate sufficient opportunities for young, college-educated workers."

period, Montana's net migration rate (the number of net migrants per 1,000 initial residents) for college graduates was the seventh lowest in the country. Net migration is particularly skewed for college-educated Montanans under the age of 35. Among this group, nearly 1,100 more people moved out of Montana than moved in each year. Montana's net migration rate for college graduates under age 35 ranks 48th – topping only Alaska and Idaho. As shown in Figure 1, Montana's young college-educated are an exception because Montana has a positive net migration rate for every other education-age group.

This pattern does not appear to be driven by people coming to Montana for college and then leaving after graduating. For cohorts enrolled in postsecondary institutions between 1994 and 2006, Montana experienced an average net outmigration of 327 students.[5] While, since 2008, Montana has become a net importer of college students, the magnitude of the net in-migration is too small to explain the observed pattern.[6]

It is important to keep two additional facts in mind when considering these data. First, the vast majority of Montana residents who enroll in Montana colleges remain in Montana after graduation. Data that matched Montana University System graduates from 2011 to 2013 to payroll tax records from Montana employers show that 76 percent of Montana University System (MUS) graduates are employed in Montana within their first year after graduation. In contrast, only 36 percent of non-resident MUS graduates are employed in Montana in their first year after graduation.

Figure 2
Average Earnings for Full-Time, Full-Year Workers by Education



Source: BBER analysis of American Community Survey, 2008-2012.

Secondly, while more young, college-educated workers move out of Montana than move in, the total number of young, college-educated workers is not shrinking. In 2008, there were roughly 38,000 college-educated Montanans under age 35. In 2014, there were over 46,000 college-educated Montanans under age 35.[7] The fact that this population grew while experiencing net outmigration is due to a large cohort of college-aged people passing through college.

This pattern – net outmigration but growing population – hints at a possible explanation for Montana's relative undesirability to young college graduates: Montana's economy simply lacks the capacity to absorb them. Stated in the language of economics, supply is high relative to demand.

Consistent with supply exceeding demand, earnings for Montana's college graduates are very low. The average Montanan with a college degree, working full time (more than 35 hours per week and more than 40 weeks per year), earns almost $24,000 less per year than the average American college graduate. Depending on the precise analysis conducted, Montana ranks last or close to last in average earnings for college-educated workers.[8]

The low earnings for Montana's college-educated reflects two forces. First, across all occupations, college-educated Montanans tend to earn less money than their counterparts elsewhere in the U.S. who have the same job. That is, there is not a single major occupation group where, on average, Montana's college-educated workers report higher earnings than

[4] ACS and Census micro data obtained from Steven Ruggles, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. Integrated Public Use Microdata Series: Version 6.0 [Machine-readable database]. Minneapolis: University of Minnesota, 2015.

[5] Data obtained from Digest of Education Statistics. This average includes first-year enrollees in all Title IV post-secondary institutions. Values change if analysis is restricted to students moving directly from high school to 4-year institutions. Montana has typically been a slight net importer of students moving directly from high school to 4-year schools. It has experienced significant growth in the first from HS to 4-year schools since Fall 2004.

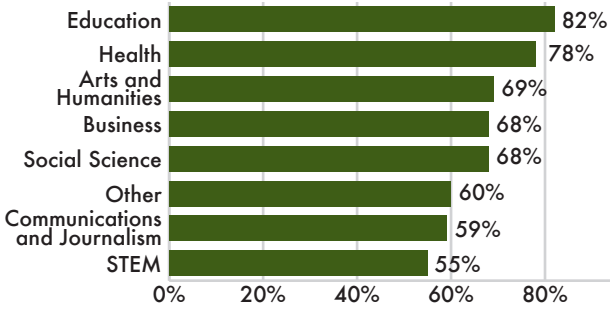
[6] According to data from the National Center for Education Statistics, among all enrollees.

[7] The margin of error for these estimates is non-trivial (+/-) 7-8K.

[8] This conclusion applies to the five year period examined here, 2008-2012. Given Montana's small size, it has fewer observations in the ACS, and, as such, its results tend to vary more across years than other states. Examining different time periods, average earnings for "full-time" college-educated workers is last or close to last.

Figure 3

Percent of 2011 to 2013 MUS Bachelor's Graduates Employed in Montana Within One Year of Graduation, by Major Group



Source: Bureau of Business and Economic Research at the University of Montana.

the U.S. average.[9] The wage gap is particularly large for several high-wage occupations like computer and mathematical, business and finance, management, and legal occupations.

Secondly, Montana has disproportionately fewer jobs in occupations with high average earnings. Montana's college-educated workers tend to be concentrated in lower wage occupations. If college-educated workers in Montana were allocated across occupations in the same proportions as the U.S. economy, Montana would have over 3,000 more college-educated workers working in business and finance or computer and mathematical occupations, over 1,300 more workers in sales and related occupations, and over 600 more workers in legal occupations.

These data suggest that Montana's economy may not generate sufficient opportunities for young, college-educated workers – particularly for those with certain interests or skills. The data on employment outcomes for MUS graduates further support this story. The probability that a graduate is employed in Montana following graduation varies substantially across major fields (see Figure 3). Approximately 80 percent of MUS Bachelor's degree recipients who major in education or health are employed in Montana within their first year after graduation, and the vast majority of these individuals are employed in the education and health industries. In contrast, only 38 percent of MUS Bachelor's degree recipients who major in engineering (and 55 percent of science, technology, engineering and mathematics (STEM) degree holders) are employed in Montana within their first year after graduation. This pattern is consistent with Montana offering relatively robust opportunities to graduates interested working in fields like education or health, but offering weaker opportunities for people interested in STEM.

Thus, low wages and/or lack of jobs associated with insufficient demand provide the most plausible explanation for the net outmigration of young, college-educated Montanans. Other factors that tend to drive migration (like cost of living or quality of life) seem less plausible. Montana is not particularly expensive relative to other places (according to data from the Bureau of Economic Analysis, Montana is the 23rd cheapest state). Montana also offers an exceptional quality of life. In spite of its low wages, people continue to, on net, move to Montana to access its majestic mountains, pristine rivers and lakes, abundant open spaces, and a strong sense of community. It is possible that the young and college-educated desire amenities not offered in Montana (e.g., the restaurants, clubs, concerts, and social scenes of big cities). However, the effect of this on Montana's net migration is likely small. Most likely, the young and college-educated disproportionately leave Montana to seek jobs and incomes not available in Montana.

The loss of young college-educated workers is a weakness in Montana's economy that demands further investigation. If Montanans want a healthy economy and their children's future to be in Montana, they need to understand and address the factors that limit demand for its college-educated workers. In recent decades, regional economists have found that the number of skilled, creative workers in a region strongly predicts long-term regional economic success. The net outmigration of young college graduates from Montana's economy represents the loss of an important regional resource that may affect Montana's long-term economic health. *MER '16*

Montana's Property Tax System

Is the State's Oldest Tax Right for the Future?

By Douglas J. Young
Department of Economics and Agricultural Economics at Montana State University

Montana's property tax is the state's oldest tax, and also the most important. As recently as 1950, property tax revenues were 63 percent of total state and local tax collections. By 2014, the property tax share had declined to 39 percent, but it still dwarfed the next most important tax – the individual income tax – at 27 percent.

But should the property tax continue to be Montana's most important tax? There are several reasons to think not. First, Montana relies more heavily on the property tax than a typical state –

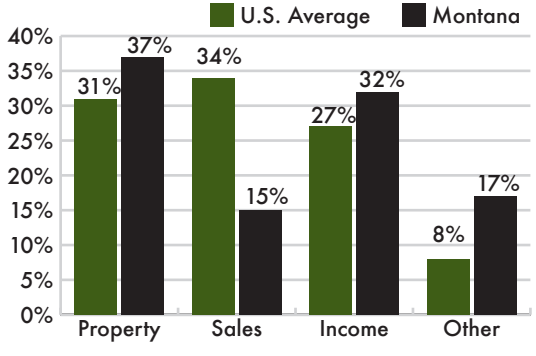
[9] BBER analysis of ACS; again we limit the analysis to people who report working more than 40 weeks per year and more than 35 hours per week.

perhaps it relies too much on the property tax. Secondly, property tax mill levies have risen rapidly in the last 20 years. Thirdly, the burden of the property tax has shifted dramatically toward residential and commercial property. Many citizens are unhappy with the shift, especially if their incomes have risen more slowly than their property values.

Another factor may simply be the difficulty of understanding one's property tax bill. The county treasurer recently informed me that the value of my house for tax purposes is just over $5,000. I had thought it much more valuable. Finally, local governments, which rely heavily on property taxes, have increasingly utilized a variety of "special districts," which are not technically property tax mill levies but nonetheless show up on the property tax bill. Perhaps for all of these reasons, the property tax is widely resented. "Tax revolts" around the country, including Montana's Initiative 105, have often focused on the property tax.

But as the remainder of this paper discusses, it is not clear that Montana should substantially reduce its reliance on property taxes. Most states rely less on property taxes, because they rely more on general sales taxes, and Montanans may not prefer that method of taxation. Montana's property tax rates are below average when compared with other states. The shift in property tax burden toward residential and commercial property is fundamentally a reflection of the changing nature of Montana's economy. Finally, when one examines the characteristics of a "good" tax, the property tax does not look so bad, and deserves an important place in Montana's tax system. Still, there may be ways to improve an already "good" tax.

Figure 1
State and Local Tax Composition



Source: Bureau of Census, FY 2013.

Table 1
Effective Property Tax Rates, Residential Property

State/Metro Area	Median Home Price ($)	Tax ($)	Rank	Effective Tax Rate (Percent)	Rank
California, Los Angeles	296,800	3,668	14	1.2	31
Colorado, Denver	260,700	1,480	44	0.6	52
Idaho, Boise	138,200	1,350	45	1.0	38
Montana, Billings	176,681	1,799	37	1.0	36
Nevada, Las Vegas	130,700	1,491	43	1.1	34
North Dakota, Fargo	148,600	2,328	26	1.6	20
Oregon, Portland	233,900	5,096	6	2.2	9
South Dakota, Sioux Falls	150,800	1,961	33	1.3	27
Utah, Salt Lake City	187,000	1,609	41	0.9	41
Washington, Seattle	290,700	2,719	21	0.9	40
Wyoming, Cheyenne	160,279	1,058	49	0.7	48
US Average	187,715	2,847	–	1.5	–
Region Average	197,892	2,233	–	1.1	–

Source: Montana Taxpayers Association, Montana Taxes: Comparisons with Other States.

Comparisons with Other States

Montana relies more on the property tax than a typical state, as displayed in Figure 1. The typical state receives 31 percent of its tax revenue from property tax, while the figure is closer to 40 percent in Montana. Montana does not have a general sales tax, but it does levy a variety of excise or selective sales taxes on tobacco, alcohol, gasoline, accommodations and other items. Still, when general and selective sales taxes are added together, Montana gets less than half as much from these sources as a typical state does. Montana also receives a larger share of its tax revenue from income taxes on individuals and corporations, and from "Other Taxes" including natural resource taxes.

Despite that reliance, available data suggest that residential property tax rates are at or below average in comparison with other states. Table 2 compares "effective" property tax rates in the largest cities in several western states and national averages. Effective

Table 2
Total Property Taxes

	1995	2015	Growth
Taxes Levied ($ millions)	$704	$1,575	124%
Taxable Value ($ millions)	$1,787	$2,521	41%
Average Mill Rate	394	625	58%

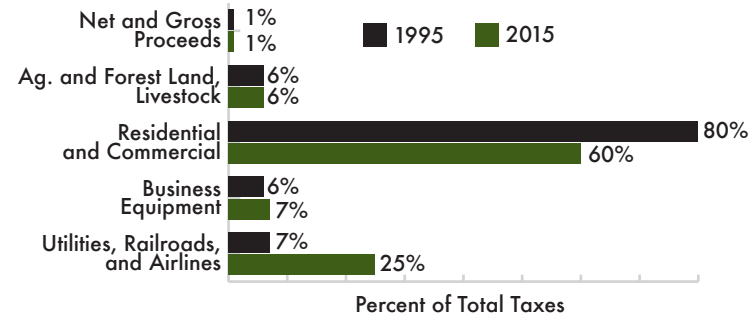
Source: Montana Department of Revenue Biennial Reports.

Table 3
Property Taxes and Personal Income

	1995	2015	Growth
Taxes Levied ($ millions)	$704	$1,575	124%
Personal Income ($ millions)	$16,553	$42,467	157%
Property Tax / Personal Income (Percentage)	4.3%	3.7%	–

Source: Montana Department of Revenue and U.S. Bureau of Economic Analysis.

Figure 2
Taxable Value Shares in 1995 and 2015



Source: Montana Department of Revenue.

property tax rates are the dollar value of property taxes divided by the market value of a property. Effective property tax rates are used for cross-state comparisons, because the property tax structures differ so much between the states that concepts like "mill levies" have very different meanings depending on the state.

The effective residential property tax rate in Billings is estimated to be about one percent, which is below national and regional averages. Billings' effective rate ranks 36th highest (or 15th lowest) in the country. Comparisons of rates on industrial property yield similar conclusions: Effective property tax rates are below national averages and near regional averages.

Montana Property Taxes over 20 Years

Property tax revenues, assessments, and mill levies have undergone significant changes in the last 20 years, largely in response to sharply increasing values for residential and commercial property. Total property taxes more than doubled between 1995 and 2015 while the taxable value of all property in the state increased more slowly (Table 2). Thus, most of the increase in property taxes resulted from changes in mill levies and the fees that appear on property tax bills.

Why did property taxes grow so rapidly? The most fundamental reasons are inflation, population growth, and increases in real income per person, all of which contribute to growth in personal income and the demand for government services. In fact, personal income in Montana rose faster than property taxes, so property taxes declined as a percentage of income (Table 3).

Put differently, the reason that the average mill rate grew so much was that the taxable value of property – the tax base – increased relatively slowly. In fact, growth in the tax base didn't even keep up with inflation and population growth, so higher mill levies were required just to maintain the same level of services.

Why did the tax base fail to keep up with population growth and inflation? The short answer is that the Montana legislature repeatedly increased the Exemption Allowances and reduced the Tax Rates. These actions were taken to offset the dramatic rise in property values that occurred during the real estate boom of the 1990s and much of the 2000s. If no adjustments had been made, additional shifting among different types of property would have occurred. However, because these actions offset essentially all of the increases in market value – including half of general inflation – local governments required higher mill levies and the use of fees just to continue providing the same level of services.

Despite the Legislature's actions, residential and commercial property's share of the property tax base (taxable value) increased from 46 percent in 1995 to 60 percent in 2015 (Figure 2). Consequently, residential and commercial property paid an increasing share of property taxes.

The shift in the property tax burden toward residential and commercial property resulted mainly from new construction and increases in property values. Changes in the property tax laws eased the burden. While property taxes were reduced on business equipment, electrical generation and telecommunications property, and livestock were exempted from tax, a number of provisions benefited owners of residential and commercial property. By 2015, a "homestead" exemption excluded 47 percent of the value of residential property, and a similar

"comstead" exemption excluded 21.5 percent of the value of commercial property. In addition the fraction of taxable value to which mill levies are applied was reduced from 3.86 percent to 2.47 percent. Altogether these changes reduced the taxable fraction of market value of residential property by approximately two-thirds.

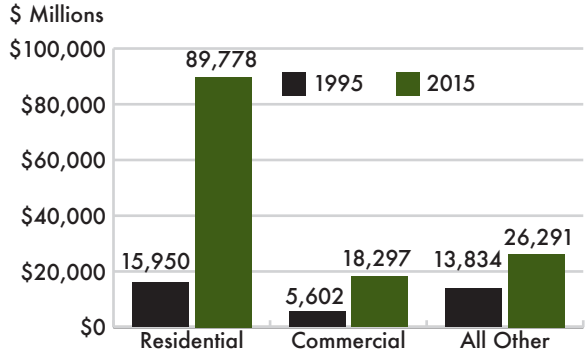
To reiterate, the various changes in the property tax law, taken all together, did not shift the burden onto residential and commercial property. In fact, the law changes, on net, favored residential property. Residential and commercial property do shoulder a bigger share of the burden these days, but that is because they are the kinds of property that have grown the fastest (Figure 3). The market value of residential property increased more than five-fold between 1995 and 2015, while commercial property more than tripled. The market value of all other property increased more slowly, "only" doubling. Put another way, the growth in the market value of residential and commercial property – including both appreciation of existing properties and new construction – accounted for 87 percent of all the growth in the market value of taxable property in Montana, and all of the other classes accounted for only 13 percent of the growth. In this sense, it is not surprising that the share of property taxes paid by residential and commercial property has been increasing.

What is a "Good" Tax System?

A "good" tax system may be an oxymoron to many, because very few people actually like paying taxes. But taxes are how we pay for a good chunk of government services, including schools, roads, health care and others. And some methods of raising taxes are better than others. Here are some criteria for judging a tax or tax system.

First, a good tax system is one that promotes economic opportunity. In recent years, Montanans have seen large numbers of young people leaving the state for better opportunities elsewhere, and most of us who remained behind wouldn't mind an increase in our own salaries as well. To the extent that a tax system can improve that situation, or at least not discourage opportunity, it is desirable. According to the Tax Foundation, Montana's Business Tax Climate is

Figure 3
Market Value of Property in 1995 and 2015



Source: Montana Department of Resources.

the 6th best among all the states in the nation. One reason is the absence of a general sales tax – which would be difficult to maintain if property taxes were markedly reduced – and another reason is Montana's property tax system, which itself is ranked 9th best in the nation.

A second criterion for evaluating a tax system is fairness, which involves who bears the burden of paying taxes. It is very difficult to pin down exactly what constitutes a "fair" tax system. In fact, most people's definition of a fair tax is one that somebody else pays, which accounts for the popularity of taxes on tourists. But even if it is hard to precisely define fairness, it is an important element in judging a tax system. One popular criterion is that taxes should be based on ability to pay. Is the property tax consistent with ability to pay? Wealthier people typically live in more expensive houses, so in that sense the property tax is consistent with ability to pay. But property taxes do not reflect current income, so a retiree may not have the cash flow to easily pay their property tax, especially when a residence has appreciated over the years. The State of Montana offers an Elderly Homeowner/Renter tax credit to lower income households to partially offset property taxes, and some homeowners may use reverse mortgages to pay taxes and other expenses.

A third factor is low administrative and compliance costs. These are the costs borne by the government in collecting taxes, and also the costs borne by the private sector in complying with the tax code. Each year around April 15th, everyone becomes acutely aware that the costs of complying with the income tax code go well beyond the money we finally send in to the government. But it is not evident that administrative and compliance costs are higher for property taxes than for alternative taxes.

A fourth criterion is stability. Income taxes and natural resource taxes fluctuate quite dramatically with the boom-and-bust cycles of the economy. Montana's tourist-oriented sales taxes also fluctuate considerably. When revenues fluctuate, it creates problems for managing the public finances, as legislators and government officials will testify. Property taxes are relatively stable revenue sources in comparison with other taxes.

Finally, a good system should also provide adequate revenues. In fact, revenues to fund government services are just about the ONLY good thing about taxes. Taxes themselves are more likely to discourage economic opportunity than to promote it, fairness

is extremely difficult to achieve, and all taxes have substantial administrative and compliance costs. If it weren't for the roads, schools and other services that are provided by taxes, we could just go home and forget the whole thing. Thus, if property taxes were to be significantly reduced, either matching cuts in services or increases in other taxes would be necessary.

Conclusion

The last two decades have seen dramatic changes in property taxes in Montana, particularly in connection with sharply rising residential and commercial property values. Legislative changes have eased – but not eliminated – the increased burden on homeowners that would have otherwise occurred. But the legislative changes perhaps did "too much:" Growth in the tax base failed to keep up with population growth and inflation, so mill levies and fees rose in response.

The 2015, the Montana legislature simplified Montana's property taxes by eliminating the homestead and comstead exemptions, and by shortening the reappraisal cycle from six years to two years. Additional changes will no doubt be debated in coming sessions, among them redefining the tax base to include Intangible Personal Property, valuing closed industrial properties, and whether the Department of Revenue should reveal the sales price of homes. In short, property taxes are likely to be a continuing source of controversy. But while controversy may not disappear, property taxes still have an important role to play in providing revenue to Montana's state and local governments, if only because the alternatives may be even less palatable. *MER '16*

Expanding Medicaid in Montana

What Do the Experiences of Other States Tell Us?

By Bryce Ward
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In 2012, the Supreme Court gave states the option to decline to expand Medicaid under the Affordable Care Act. Since that time, states have debated the pros and cons of participating in Medicaid expansion. These debates have centered around a number of important questions such as: How many people are potentially eligible? Who are the potentially eligible? How many of the potentially eligible might enroll in Medicaid? How might Medicaid expansion affect the health care sector? How might Medicaid expansion affect state and local government finances? How might Medicaid expansion affect the economy?

As states debated whether or not to expand Medicaid, researchers worked to answer these questions. However, they were largely operating in the dark. No data existed that could describe how Medicaid expansion (and other parts of the ACA) would play out with a high degree of certainty.

In recent months, data on the experiences in states that chose to expand Medicaid in 2014 became available from a variety of sources. As such, we can begin to more rigorously investigate the potential effects of Medicaid expansion. This is timely. Montana has recently begun to implement its own version of Medicaid expansion. As such, it is worth asking what we might learn about the potential effects of Montana's Medicaid expansion from the experience of states that began implementing Medicaid expansion in 2014.

Uninsurance and Participation Rates

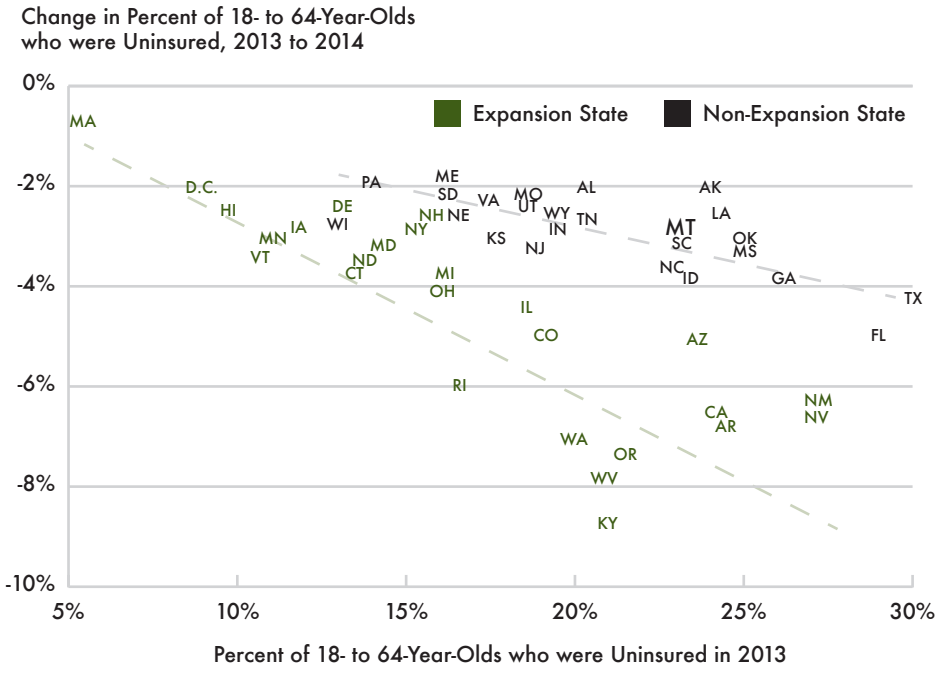
Given that the primary reason to expand Medicaid is to provide health insurance to people who otherwise might not have it, the first question to address is the extent to which Medicaid expansion helps reduce the share of the population without insurance.

Figure 1 presents the relationship between the percentage of 18- to 64-year-olds uninsured in 2013 and the change in the percentage of 18- to 64-year-olds uninsured in 2014. The black dots and black line show states that did not expand Medicaid in 2014, and the green dots and green line show states that did expand Medicaid in 2014. Three things stand out in this figure. First, states that expanded Medicaid saw larger declines in uninsured than states that did not expand Medicaid (the green dots and line are below the black dots and line). Second, states that had a larger share of uninsured people in 2013 experienced larger declines in those shares in 2014 (both lines

"If Montana had expanded Medicaid in 2014, it seems likely that it would have seen a large decline in the share of 18- to 64-year-olds without insurance."

Figure 1

Change in Percent of 18- to 64-Year-Olds Without Health Insurance, 2013 to 2014, by Share Without Health Insurance in 2013 and Medicaid Expansion Status



Source: BBER analysis of 2013 and 2014 American Community Survey data.

slope downward). Third, among states that expanded Medicaid, the changes that occurred in the share of their populations uninsured varied widely.

Based on this figure, if Montana had expanded Medicaid in 2014, it seems likely that it would have seen a large decline in the share of 18- to 64-year-olds without insurance. Expansion states that had a similar share of uninsured 18- to 64-year-olds in 2013 saw declines in uninsured that ranged between 5.0 percentage points (Arizona) and 8.8 percentage points (Kentucky). The difference between Arizona and Kentucky is a difference between approximately 31,000 Montanans obtaining insurance and 54,000 Montanans gaining insurance during the initial months of expansion.

It is important to note that the data used in the analysis above come from the American Community Survey (ACS). The ACS is a large survey conducted by the Census Bureau throughout each year. As such, the results described show the average change in uninsured across the year. One might think of them as, roughly, describing the change in uninsured from mid-2013 to mid-2014.

While most of the increase in Medicaid enrollment in Medicaid expansion states occurred quickly after expansion, Medicaid enrollment continues to grow. Thus, the results described above understate the effects observed to date. For instance, in the first eight months of expansion (through August 2014), the eight expansion states that had greater than 20 percent of their 18- to 64-year-olds uninsured in 2013[1] saw a 50 percent increase in their total (all ages) Medicaid enrollment on average.[2] Over the subsequent twelve months (through August 2015), these eight states experienced an additional 18 percent increase in total Medicaid enrollment.[3]

If Montana follows a trajectory like the average of these eight states, total Medicaid enrollment relative to Montana's pre-ACA baseline might increase by over 86,000 people over the next few years. Not all this hypothetical increase will be attributable to Medicaid expansion. In fact, through August 2015, Montana's total Medicaid enrollment had increased by nearly 30,000 people relative to the pre-ACA baseline. These increases primarily represent people who were eligible for Medicaid under existing rules, but not enrolled, choosing to enroll.

Based on the experience of other states, it seems safe to conclude that Medicaid expansion will result in a net decline in the share of Montana's population without health insurance. It also seems safe to conclude that participation in Montana's Medicaid expansion will spike initially and then grow slowly

[1] These states include: Kentucky, Oregon, Colorado, Arizona, California, Arkansas, West Virginia, and New Mexico.

[2] Again, the range is large, ranging from 24 percent in Arizona and California to 72 percent in Kentucky. The data for these calculations come from average monthly enrollment data produced by CMS and compiled by the Kaiser Family Foundation. The pre-ACA baseline is the average monthly enrollment between July 2013 and September 2013.

[3] The average change in enrollment relative to pre-ACA baseline grew from 49% to 58% between August 2014 and August 2015 – the most recent month with data available.

over time. However, exactly how many people actually participate, and how much Medicaid expansion will reduce the size of the uninsured population in Montana, remains unknown. The uncertainty is compounded by the fact that Montana's version of Medicaid expansion (which includes, among other things, limited premiums and cost sharing and third party administration) differs from the Medicaid expansion in other states.

Implications of Medicaid expansion for Montana's health care sector

Medicaid expansion will benefit Montana's health care sector through two primary mechanisms. First, Medicaid expansion will reduce the amount of uncompensated care provided. Second, the newly insured are likely to increase their use of the health care system. The available evidence confirms that these mechanisms are real. However, the available evidence does not support narrow predictions for the potential size of these effects in Montana.

First, uncompensated care fell after ACA implementation, particularly in Medicaid expansion states. Hospitals in states that expanded Medicaid experienced larger declines in uncompensated care during the first half of 2014. Across five multi-state hospital systems, admissions/discharges of uninsured patients fell by more in Medicaid expansion states (declines between 32 and 72 percent) than in non-expansion states (declines between 0 to 14 percent). Similarly, hospital associations in expansion states report that uncompensated admissions declined by up to 46.5 percent and uncompensated care costs declined by up to 59.7 percent.[4] Given that in 2013, Montana hospitals incurred nearly $400 million in uncompensated care costs, Medicaid expansion could improve health care bottom lines by hundreds of millions of dollars.

Similarly, increased use of care may also inject hundreds of millions of dollars into Montana's health care system. One recent projection suggests that Medicaid expansion may increase Montanans' primary care visits by 2.1 percent, all outpatient visits by nearly 2.8 percent, and inpatient stays by 2.6 percent.[5] While two percent may seem like a small increase, health care spending in Montana is over $7 billion per year.[6] A two percent increase represents over $140 million in new health care spending.

> *"Evidence suggests that Medicaid expansion will contribute to a more financially robust health care sector."*

How reductions in uncompensated care and the growth in use will affect employment or incomes in the health care sector remain uncertain. The available data do not show a clear relationship between changes in uninsured and health care employment growth in recent years. Among states that experienced large declines in the share of people without health insurance, some states (like California, Oregon, and Colorado) experienced rapid (greater than 8.2 percent) health care employment growth between 2012 and 2015 while other states (like Kentucky and Arkansas) experienced more modest (less than 3.5 percent) health care employment growth. [7]

The lack of a clear relationship between insurance coverage and health care employment likely reflects a variety of factors. For instance, in some states the newly eligible may be sicker or choose to obtain more care than in other states. Alternatively, some states may have more underutilized health care capacity than others. The facts that (a) the uninsured in Montana tend to be less healthy, (b) Montana ranks low on crude measures of capacity (like number of physicians per capita), and (c) the Medicaid expansion states in the West have experienced robust health care employment growth all point toward Montana experiencing relatively fast employment growth. While these facts are suggestive, they are not definitive. Montana's health care employment growth in response to Medicaid expansion remains subject to a large number of unknowns.

The evidence from states that expanded Medicaid in 2014 appears to suggest that Medicaid expansion will contribute to a more financially robust health care sector. Medicaid expansion should reduce uncompensated care and lead to an increase in to the amount of health care consumed. However, given uncertain potential enrollment and an uncertain relationship between enrollment and the health care use, a wide range of forecasts are supportable. Only time (and research) will answer these questions.

MER '16

[4] Bachrach, D., P. Boozang, and M. Lipson. "The Impact of Medicaid Expansion on Uncompensated Care Costs: Early Results and Policy Implications for States." State Health Reform Assistance Network Issue Brief, June 2015.

[5] Derived from Glied, S. and S. Ma (2015). "How will the Affordable Care Act Affect the Use of Health Care Services." The Commonwealth Fund Issue Brief. Again, Montana's unique version of Medicaid expansion may render these projections (which were based on regional patterns) inaccurate.

[6] The most recent data on health care spending by state from the National Health Expenditure Data come from 2009. During 2009, health care spending in Montana was $6.5 billion. Adjusted for inflation, this rises to over $7 billion.

[7] BBER analysis of monthly Current Employment Statistics data.

The End of An Era

How Montana Producers will Cope with Lower Wheat Prices

By George B. Haynes and Vincent Smith
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Today's wheat prices are at a six-year low. After enjoying a sustained period of healthy prices, exceeding $8 per bushel at their peak in 2011-12, average prices plummeted to $5 per bushel in 2015. The near-term forecast for wheat prices through 2020 remains below historical averages. The strong dollar, which has dampened exports, and a near record worldwide glut of wheat have contributed to substantially lower wheat prices for farmers and concern about the long-term impact of lower prices.

Price Volatility: A Fact of Life in Agriculture

Montana farmers and ranchers continue to experience markets in which prices for their crops and livestock are highly volatile. Over the past twelve months, while cattle prices have eclipsed previous record highs, wheat prices have declined by over 15 percent. Price forecasts for the next five years, as well as evidence from futures contract prices, suggest that cattle prices (primarily, calf prices) will decline by over 25 percent from their current near-record levels, while wheat prices will be much lower than they have been over the past seven years (between 2007 and 2014) and much closer to their longer-term historical levels (FAPRI, August 2015).

Of course, price forecasting is a challenging endeavor, not least because Mother Nature tends to have a great deal to say about crop yields in any given year. So the prices farmers actually receive for their crops two or three years from now may be very different than those forecasted today.

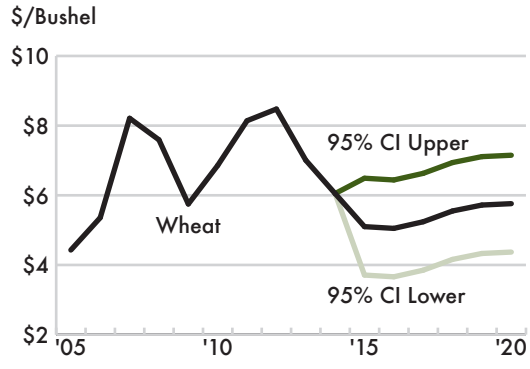
Cattle and grain prices are especially important to Montana farmers and ranchers, businesses supporting the agricultural sector, and communities because wheat, barley, and livestock sales account for nearly 80 percent of gross sales for agriculture. This article will consider the impact of changing prices for one commodity, wheat, which by itself provides over 50 percent of the total revenues Montana farmers receive for all their crops (NASS, 2014).

The annual average price of wheat (adjusted for inflation) has varied between $4.43 and $8.48 since 2005 (Figure 1). Price forecasts for wheat for each crop year through 2020 lie in the range of $5.05 to $5.76 per bushel (FAPRI). However, when the potential for exceptionally poor and good crop yields are taken into account (along with potential variations in other factors affecting crop prices), the highest prices could be near $6.70 and the lowest prices could be close to $4.10 (for statisticians, 95 percent confidence interval).

Wheat prices are heavily influenced by worldwide production. Half of all wheat produced in the U.S. is exported (about 75 percent of all Montana wheat is exported). Figure 2 shows the changes in global and Montana wheat production since 2005. Total world-wide production ranged from less than 610 million metric tons in 2006 and 2007 to over 732 million metric tons in 2015. Montana producers, who accounted for about 0.7 percent of total world production, produced less than 4 million metric tons in 2007 but over 5.7 million metric tons in 2014.

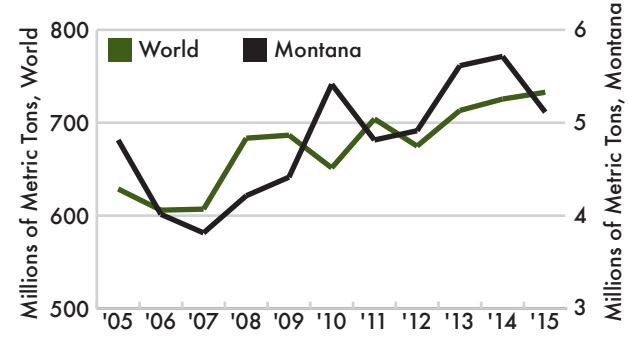
Weather uncertainty, plant diseases and other perils also add financial challenges to Montana farmers as their yields and total production can vary substantially from year to year. As a result, the revenues generated for farmers by Montana's annual wheat crop have ranged from $0.82 billion in 2006 to $1.66 billion in 2011. In 2015, largely because of lower wheat prices, those state wide revenues declined to their lowest

Figure 1
Actual and Projected Wheat Prices, 2005 to 2020



Source: Food and Agricultural Policy Research Institute (FAPRI-MU Report #03-15) and National Agricultural Statistics Service, Montana Office (2015 Annual Bulletin).

Figure 2
World and Montana Wheat Production, 2005 to 2015



Source: National Agricultural Statistics Service, Montana Office (2015 Annual Bulletin) and World Agricultural Supply and Demand Estimates (December, 9, 2015).

total value since 2007 ($0.95 billion). These relatively wide swings in the total value of production caused by volatile prices and yields create management challenges for farmers. Learning how to manage price and yield volatility through the use of farm programs, including the federal crop insurance programs, futures markets, and other risk management tools is important for farmers.

Farm Programs and Risk Mitigation

Farmers have several risk management tools that help them cope with price and yield volatility. The most widely used method of addressing gross revenue (price times yield) volatility is though participating in federal farm programs. The Agricultural Act of 2014 offered two types of assistance for farmers: (1) Price Loss Coverage (PLC) and (2) Agricultural Risk Coverage (ARC). The PLC program establishes a threshold price for each eligible crop and makes payments to farmers on a per bushel basis of eligible production when the annual average national price for that crop drops below the threshold price. The ARC program sets a threshold based on county or farm crop revenues per acre (price multiplied by yield) and makes a per acre payment to farmers on each acre eligible for that payment when per acre crop revenues drop below that threshold.

The prices used in determining the thresholds are all national annual crop year average prices as reported by the USDA National Agricultural Statistical Service (NASS). The yields used are county-wide average yields for the crop year, also as reported by NASS. Farm level yields and prices are not employed in establishing the PLC price and county-based ARC revenue thresholds. However, historical average farm yields will be used to determine total payments to each producer under the PLC program and a special version of the ARC program.

Under the PLC option, the price threshold for wheat is $5.50 per bushel for the next 3 years (through 2018). If the average price of wheat fell to $4.50 per bushel and the farmer had an average yield of 30 bushels per acre, the farmer would receive a payment on 85 percent of their wheat acres or $25.50 ($1 times 30 times 85 percent) per acre.

Under the ARC option, the price and yield thresholds are based on historical prices and yields over the past five years. The price and yield thresholds are multiplied together to set a revenue threshold for each county. If average county revenue is below the revenue threshold, then farmers are paid under the most popular program. For instance, if the county threshold was $200 per acre and the average county revenue for this year was $175 per acre, then the farmer would be paid on 85 percent of their wheat acres or $21.25 ($25 times 85 percent) per acre.

"Montana farmers and ranchers continue to experience markets in which prices for their crops and livestock are highly volatile. Over the past twelve months, while cattle prices have eclipsed previous record highs, wheat prices have declined by over 15 percent."

A second widely-used method of addressing the effects of price and yield volatility at the farm level is to purchase a federal crop insurance policy. Crop insurance, backed by the Risk Management Agency and purchased from local agents, can protect up to 85 percent of a farmer's expected total revenue from a crop such as wheat. For instance, a farmer with a 30 bushel per acre average could have protected up to 85 percent of the crop revenue where any crop losses are valued at a price of $6.41 per bushel (a price set by the Risk Management Agency).

Hedging on the commodity futures market is another method of addressing price volatility. Producers engaging in a hedging strategy can use the commodities futures market to hedge against decreasing prices. For instance, in May 2015 a producer could have purchased a contract for over $6.00 per bushel for September delivery. This $6.00 per bushel price looked very good when prices fell below $5.00 per bushel in September. However, there is some risk with this strategy. If prices would have been above $6.00 per bushel in September, then the farmer would have been required to deliver wheat at a price below the current market price.

In addition, lower grain prices encourage farmers to store their grain and wait for higher prices in the future. Anecdotal evidence reported in Montana suggests that producers are storing more grain this year than in recent years because of low prices at harvest time.

Federal government involvement in farm programs and crop insurance (which is heavily subsidized), coupled with the opportunity for farmers to utilize the commodity exchanges, reduces the risk of farming, limiting the losses that farmers experience from unexpectedly low prices and yields. These programs also reduce the size of any indirect losses to input suppliers, lending institutions, and other agri-businesses resulting from shortfalls in farm incomes obtained from market sales of their crops. They provide some stability in agricultural communities in the short run. However, a spirited debate on long-run viability of farm programs has begun.

While lower grain prices mean lower revenue for grain producers, lower grain prices mean lower feed costs and

higher margins for cattle feeders. Montana ranchers are primarily cow-calf producers; hence, lower feed prices have less impact in Montana than in Nebraska or other cattle-feeding states, where more grain is fed.

Household Impacts

National estimates of farm financial health suggest that net farm income will decline by over 36 percent and net worth will decline by nearly five percent from 2014 to 2015 (ERS, 2015). The impact of lower wheat prices is mitigated in many farm and ranch households by other income earned by household members. In fact, over 85 percent of the incomes received in farm households are generated from off-farm employment and other non-farm sources of income. Off-farm jobs often include health insurance and pension benefits to support the farm household. In many cases, off-farm employment is another risk-management strategy for farmers concerned about volatile wheat yields and prices.

Community Impacts

If lower prices or lower revenues persist, then farm programs and crop insurance thresholds decline and farmers find their safety net shrinking. Lower commodity prices over the longer run translate directly into decreased land values and lower cash rents, and indirectly into lower profits for input suppliers, a lower tax base, and fewer off-farm employment opportunities in the rural communities where most farms are set. The result is declines for agriculture-dependent communities. In addition, longer run downturns weed-out less efficient farmers and their land base is absorbed, either through sales or leasing, by more efficient operators.

Lower grain prices and higher production costs have given farmers the incentive to become more efficient, largely through the adoption of new technologies. Higher efficiency has been accomplished by farming more acres. The changing landscape of agriculture has already had significant impacts throughout eastern Montana, where the consolidation of farms and ranches has contributed to a depopulation of these counties. The populations of Chouteau and Fergus Counties, two of Montana's largest wheat-producing counties, declined by nearly nine percent between 1970 and 2014. And these decreases in county populations are small relative to those experienced by Phillips and Daniels counties, where population declines of 22 and 42 percent occurred over the same 44-year period.

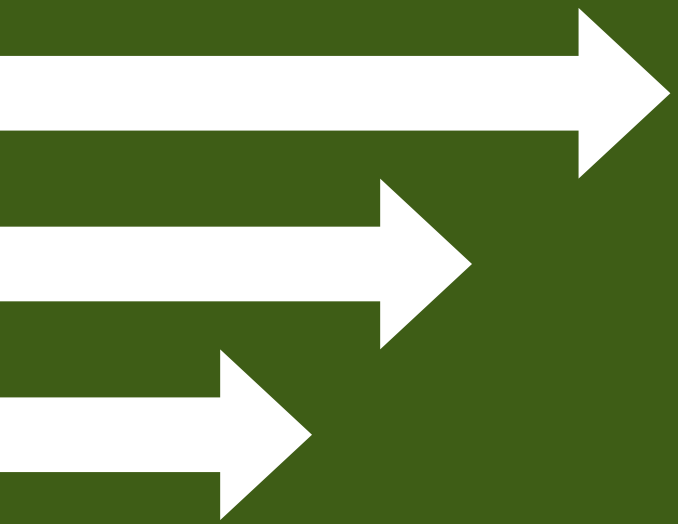
"Even though no alarms are sounding in the short-term, lower wheat prices over the long term will likely mean that less efficient farmers will exit the market."

The impact of agricultural businesses on local communities is tracked by the Rural Mainstreet Index (RMI), a survey of bank officers published by Creighton University. October 2015 marked the third consecutive month that the RMI has declined, reflecting weaknesses in agricultural prices (and other factors, such as declining energy commodity prices and downturns in manufacturing exports). The RMI monthly survey of midwestern states has reported declining agricultural land values and farm equipment sales since January of 2013.

Decreases in farm profitability have adverse impacts on Main Street businesses in rural communities that in any case have experienced substantial declines in their economies over the past two decades. A primary reason for the declining role of Main Street businesses (and the general population) in rural communities has been the substitution of capital for labor on the farm, coupled with lower transportation costs (improved roads, more efficient automobiles, and more recently, lower gasoline prices) that have made access to larger discount retail outlets, machinery suppliers and other farm input suppliers less costly. Lower wheat prices will continue to pressure producers to become even more efficient, which will likely contribute to more substitution of capital for labor. Some community members have attempted to stem this tide by initiating cooperative ventures, such as grocery/general stores in Turner, Victor and Melstone, a clothing store in Colstrip, and air ambulance services in eastern Montana.

Conclusion

Grain prices are always a major topic of discussion at coffee shops in agricultural communities. Since 2012, wheat prices have moved from $8.50 per bushel to $5.10 per bushel, causing concern among farmers, implement dealers, input suppliers, and community members. While a 40 percent downward movement in prices in any industry would warrant concern, farm programs, crop insurance, and hedging opportunities on commodity exchanges can mitigate some of the financial harm associated with those declining prices for major crops. Longer-term price forecasts for wheat suggest prices near or slightly below their long-term average levels. Even though no alarms are sounding in the short-term, lower prices over the long-term will likely mean that less efficient farmers will exit the market by either selling or leasing-out their land base, and the ongoing trend to lower populations in agriculturally-based rural communities will continue. *MER '16*



Assessing Montana's

Key Industries

Farming and Ranching

Prices Fall Back to Earth

By George B. Haynes, Kate Fuller and Vincent Smith
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Montana small grains and corn producers experienced lower prices and revenues, while the livestock sector enjoyed a period of profitability in 2015. Favorable weather this summer resulted in average or relatively good yields for many wheat, barley, and hay producers throughout most of Montana. The exception was northwest Montana, where drought conditions had adverse effects on forage production. A near-record level of worldwide wheat production resulted in wheat prices that at harvest time in 2015 were more than 30 percent lower than in 2014. Barley prices trended downward through the spring of 2015, but had rebounded by October to exceed 2014 fall prices by about 15 percent.

Hay prices have remained relatively stable, around $120 to $130 per ton for the past couple of years. While lower wheat and corn prices have adversely affected revenues for many crop producers, they have lowered feed costs. Although calf prices were lower than the record levels of 2014, they remain strong relative to historical levels. Together with lower feed costs, high prices appear to be providing incentives for some producers to expand their cattle herds.

Grain, Oil Seed, and Pulse Crops

In Montana, wheat production declined by 11 percent and barley production declined by one percent from last year. U.S. wheat production remained essentially unchanged from last year, while barley production increased by 18 percent. A strong dollar coupled with relatively high domestic wheat prices has driven 2015 wheat exports down to 850 million bushels, a post-1960 record low. A near-record global wheat crop has led to a relative glut of wheat on the world market, which has translated into substantially lower prices for Montana producers. Lower corn and soybean prices have led some analysts to suggest that wheat may look attractive to some U.S. farmers. Additional wheat production would likely put further downward pressure on grain prices. Futures prices suggest that wheat prices will be near longer-run historical averages and considerably lower than the near-record prices crop producers experienced between 2007 and 2014.

"In 2016, declining land prices and lower profits are expected to lower farm equity by between four percent and five percent."

Hot and dry conditions in Montana lowered barley yields by 6 bushels per acre. While feed barley prices have moved lower in concert with national and regional wheat and corn prices, malting barley prices have been relatively stable or perhaps slightly lower in the $5.50 to $6.00 per bushel range.

Oilseed and pulse crops continue to be integrated into crop rotations in Montana. Canola production increased by 58 percent, with harvested acreage approaching 80,000 acres. Pulse crops, especially dry peas, have been incorporated into many producers' crop rotations, reducing the number of acres in fallow. Pulse crops were planted on over 700,000 acres, representing just over 13 percent of the total acreage planted to wheat. However, market prices for pulse crops continue to be volatile, and price discovery remains an issue for many producers.

Livestock (Cattle)

U.S. beef production declined by three percent in 2015, an outcome consistent with an early expansion stage for the national beef herd in the cattle cycle. During this stage, female calves are retained for breeding rather than being slaughtered. Even with a substantial downturn in beef production and lower feed costs, cattle prices have declined. Feeder cattle prices are down by $0.50 per pound from one year ago. U.S. beef exports continue to struggle, declining by 12 percent from one year ago, due to the stronger dollar and decreased global demand for beef. If drought conditions persist in the West and Southern Plains, where 60 percent of the pasture in California, Oregon, and Washington is rated as poor or very poor, beef price declines are likely to moderate. Futures prices for 2016 livestock contracts suggest that cattle prices will trend downward over the next 15 months, but remain above historical averages.

Farm Financial Conditions

The farm and ranch sector has experienced several excellent financial years over the last eight years. However, net farm income is expected to decline by 36 percent in 2015, compared to 2014. In 2016, declining land prices and lower profits are expected to lower farm equity by between four percent and five percent. *MER '16*

Forest Products

Challenges and Changes for Montana's Forest Products Industry

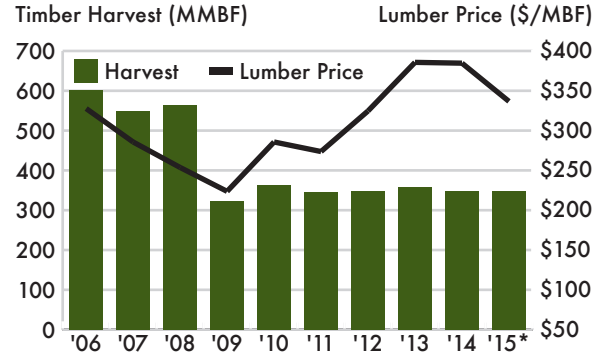
By Todd A. Morgan, Steven W. Hayes, Colin B. Sorenson, and Chelsea McIver
Bureau of Business and Economic Research at the University of Montana

2015 was a year of challenges and disappointments for wood products markets. New home starts in the U.S. failed to materialize at predicted levels. The Chinese economy's slowdown reduced exports of logs, lumber, and other wood products from U.S. and Canadian producers to Asia. The U.S. dollar gained against most currencies, particularly China's and Canada's, making the U.S. a prime destination for wood products and further challenging domestic producers' abilities to sell into weakening domestic and foreign markets. Finally, the Softwood Lumber Agreement (SLA) between Canada and the U.S. expired in October, causing significant uncertainty for U.S. lumber producers concerned about Canadian mills flooding the already over-supplied U.S. market.

The Canadian wood products industry is thought by many in the U.S. to be unfairly subsidized by the Canadian and provincial governments, providing timber to mills at below market value. To promote fairer trade and reduce uncertainty caused by disputes, the SLA imposed quotas and tariffs on Canadian lumber imports based on U.S. lumber prices. The expiration of the U.S. and Canadian SLA was of particular concern to Montana lumber producers, who produce many of the same products and species as mills in British Columbia and Alberta which now have unfettered access to the U.S. lumber market.

Along with these recent national and international hurdles, Montana wood products firms faced the more localized and ongoing challenges of limited log availability and relatively high log costs. Timber harvest in Montana has changed very little since 2009 (Figure 1). While 2015 lumber prices in the U.S. were about 13 percent lower than 2014, and panel prices were down about three percent, delivered sawlog prices in Montana were down only slightly.

Figure 1
Montana Timber Harvest and U.S. Lumber Price, 2006 to 2015



Sources: US Forest Service; Montana Department of Natural Resources and Conservation; Bureau of Business and Economic Research, University of Montana; Random Lengths.

Since the Great Recession, most Montana mills have only been able to operate at 60 to 75 percent of capacity, despite increased demand from slowly growing housing starts and several years of rising lumber prices. During the summer and fall, several Montana sawmills announced curtailments, cutting production and employment from two shifts to one. Through the first three-quarters of 2015, Montana lumber production was down about 12 percent from 2014. However, employment was relatively unchanged for Montana wood products manufacturing overall because down time that panel facilities took during 2014 offset the 2015 sawmill layoffs. The November announcement of the potential merger of Weyerhaeuser and Plum Creek created new uncertainties, with the deal expected to close in early 2016.

The failure of new home starts to significantly increase, slackening demand from China, and the strengthening U.S. dollar all contributed to the over-supplied wood products markets and depressed prices currently affecting U.S. mills and further reducing operating levels in Montana. How long these factors will continue remains uncertain. The possibility of a new U.S. and Canadian lumber agreement is not clear, and the potential Weyerhaeuser – Plum Creek merger raises even more questions in the near term, but the combined impacts on Montana's wood products industry and forest-dependent communities could be long-lasting. *MER '16*

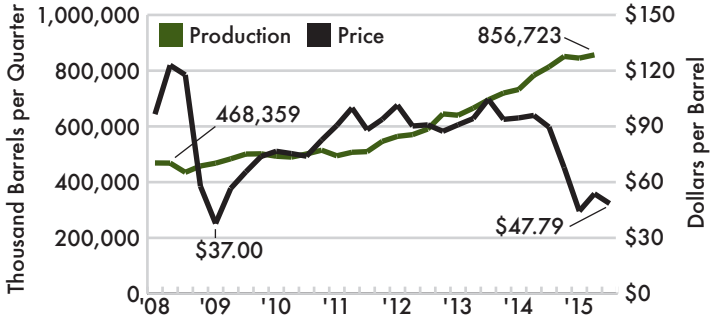
Oil and Natural Gas

New Technology Paradigm?

By Terry Johnson and Bill Whitsitt
Bureau of Business and Economic Research at the University of Montana

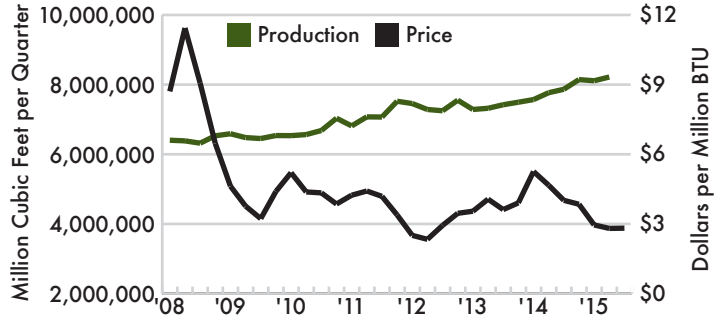
The US oil and natural gas industries have encountered some turbulent headwinds in the past year. Excesses in world production, political unrest, and new technologies have all contributed to the variability in oil, and to some degree, natural gas prices. Although oil prices have

Figure 1
U.S. Oil Statistics, Production vs. Price Trends, 2008 Q1 to 2015 Q3



Source: U.S. Energy Information Administration.

Figure 2
U.S. Natural Gas Statistics, Production vs. Price Trends, 2008 Q1 to 2015 Q3



Source: U.S. Energy Information Administration.

declined significantly in the last year, it is apparent that current production trends suggest that lower prices have not translated to a corresponding drop in U.S. production amounts. For natural gas, prices have been more stable but still well below historical averages. Oil production nationally has only mildly decelerated, despite sustained low prices. By the second quarter of 2015, production had increased to 856.7 million barrels for an annual increase of 9.0 percent. Annual growth accelerated during the period 2011 to 2015 by over 14 percent. This growth occurred even though well head prices were rather erratic. For example, third quarter 2015 prices averaged $47.79 per barrel compared to the 2011-2015 post-Great Recession prices of about $90. Since late 2014, prices have plummeted and have averaged about $48 per barrel. With significantly lower well head prices, it would be reasonable to expect production to decline unless lower prices promote higher consumption.

According to the Energy Information Administration (EIA), total world output of oil has increased by 10.2 percent from January 2008 to March 2015. Conversely, total world oil consumption has declined by almost nine percent. For the past 15 months, output and consumption have been almost equal. Even with more affordable oil getting to market, world consumption has declined. And, with lower well head prices, there has not been a reduction in production amounts.

EIA data shows that production in the U.S. increased by 38.6 percent from 2011 to 2015, whereas all other world production increased by only 1.4 percent. As Dr. Bill Whitsitt pointed out in his keynote presentation at last year's "Economic Outlook Seminar," the energy revolution has changed the energy landscape, especially for the U.S. oil sector. Horizontal drilling, hydraulic fracking, mobile drilling rigs, and multi-well drilling pads have all contributed to enhanced production in the U.S. Implementation of these new technologies has increased production at lower costs. Most of these increases came from tight oil plays in North Dakota, Texas, and New Mexico.

Although oil production is expected to rise in 2015 and again in 2016, the growth is not expected to be as strong as in 2014. Since mid-2014, the price of crude oil has fallen, which has slowed production in marginal drilling areas and focused investment in the more developed areas of tight oil plays. Annual crude oil production is expected to grow at a slower rate, 8.1 percent this year and 1.5 percent next year, according to EIA's latest Short-Term Energy Outlook (STEO).

Natural Gas Discussion

Figure 2 shows the U.S. natural gas production and price trends since 2008. Production has increased by over 28 percent since 2008, or about one percent per year. Since the post-Great Recession period, prices have averaged about $3.75 per million BTUs. Recent prices in 2015 have averaged $2.80 per million BTUs.

Similar to oil, the energy revolution has had a profound impact on natural gas production. For example, production from the Marcelles region in Pennsylvania has increased by more than 1,400 percent since 2009. Horizontal drilling and hydraulic fracking technologies have enhanced production in shale formations throughout the U.S.

Because of the strong growth in natural gas production, prices have softened, even though natural gas is experiencing increased demand from the industrial sector. The environmental issues with coal have caused a shift from coal to natural gas for electricity generation. Even with this shift, prices are expected to remain low because of the oversupply of gas, especially from the Marcellus region. The backlog of uncompleted wells is expected to be reduced which will more than offset the production declines from the Gulf of Mexico. Imports from Canada are at all-time lows while inventories remain above five-year averages. Mexico exports may increase, provided the demand in Mexico continues to increase. Adequate supplies will result in relatively flat prices in the short-term. *MER '16*

Manufacturing

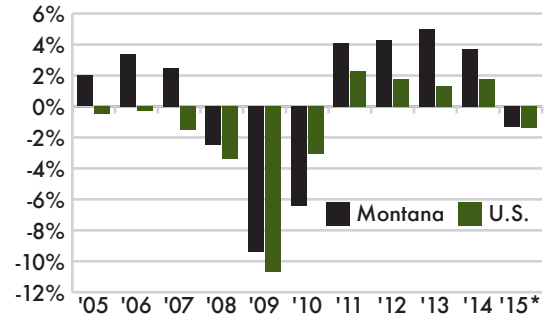
A Year of Change for Montana's Manufacturing Industry

By Todd A. Morgan, Colin B. Sorenson, and Charles E. Keegan
Bureau of Business and Economic Research
at the University of Montana

After four consecutive years of growth, it appears that 2015 was the first year that Montana saw a decline in manufacturing jobs. Montana's manufacturing sector had experienced steady gains since the Great Recession ended. Manufacturing employment in the state grew between 3.5 and 5.0 percent annually from 2011 through 2014, outperforming manufacturing employment growth at the national level (Fig. 1). And, over the same period, Montana manufacturing income grew by 3.5 to 7.5 percent annually. These gains were due, in part, to growth in a variety of manufacturing industries in the state, including brewing and distilling, oil refining, fabricated metals, computers and electronics, and printing. Even wood products grew, as new home starts slowly increased nationally.

Several changes during late 2014 and 2015 have created challenges for Montana manufacturing. The stronger U.S. dollar has put domestic manufacturers at a disadvantage in foreign markets and made imports cheaper at home. In concert with the strong dollar, slowing foreign economies have led to reduced exports, especially to China and Europe. The value of Montana-made exports dropped more than three percent annually from 2013, and exports have slipped from 10 to eight percent of Montana manufacturers' total shipments. Slower than expected U.S. housing starts and over-supplied lumber markets hampered wood products during 2015, and substantially lower crude oil prices have begun to reduce sales by manufacturers serving the oil industry in the Bakken.

Figure 1
Percent Change in U.S. and Montana Manufacturing Employment, 2005 to 2015



Source: Bureau of Economic Analysis, U.S. Department of Commerce.
*BBER estimate.

Nationally, unemployment remains fairly low, and consumer spending saw some growth during 2015. Other factors benefiting manufacturers in Montana include lower energy costs from the declines in natural gas and crude oil prices, as well as lower prices of other commodities (e.g. metals), which have helped to reduce costs of inputs for many manufacturers in Montana, including oil refineries and chemical producers. Reduced activity in the Bakken may indirectly benefit manufacturing firms in central and eastern Montana by freeing up some skilled labor, which has been in short supply. House Bill 478, Montana's cottage food law, which took effect Oct. 1, 2015, streamlines regulations affecting in-home or mobile food establishments. The new law may benefit some small-scale food manufacturers who do only direct (in-person) sales, do not sell out-of-state, and do not use a commercial kitchen.

The new Trans-Pacific Partnership (TPP) trade agreement among 12 Pacific Rim nations, including the U.S., Canada, and Mexico (but not China) still requires Congressional approval. The TPP would impact roughly 40 percent of global GDP and could help improve the competitiveness of U.S. manufacturers by eliminating tariffs and other trade barriers, protecting intellectual property, and otherwise promoting fair competition in foreign markets. However, there are numerous concerns about the new trade rules, and approval by Congress is uncertain. It is not yet clear how the various manufacturers in Montana would be impacted by this important trade agreement. *MER '16*

Travel, Tourism and Recreation

Millennials Shake Up Travel Paradigm

By Norma Polovitz Nickerson
Institute for Travel and Recreational Research
at the University of Montana

The Montana nonresident travel industry has a $5 billion impact on the state, supporting jobs and wages across a wide spectrum of industries throughout Montana. Trends and developments that shape the outlook for the industry in Montana are driven by developments in the national economy, the global pursuit of vacation travel, and demographic shifts in the U.S.

The U.S. Economy

Consumers are feeling good about the national economy, and their higher levels of disposable income translate into more money for travel. Today's travelers, however, are less interested in 'things' and more interested in experiences. This requires businesses to provide local foods and products that bring Montana to mind, guided trips, and gear to rent for outdoor activities. For today's travelers, it is not just about 'seeing' something, it's about the experience.

Global Developments

In 2015, both Glacier National Park and Yellowstone National Park experienced record visitation, up by one percent and 16 percent, respectively. This occurred despite the fire in Glacier

> *"Millennials are embracing the sharing economy, such as Airbnb, Uber, and Trip4real or Vayable. Friends are made. Less money is spent. Experiences soar."*

that closed the east entrance for two weeks. One reason is that these iconic national parks are a draw for many international visitors. Pair that with reduced visa requirements in China, for example, and there is a sudden boom. In 2008, a VisaVue report showed that Chinese spending in Montana was not even in the top 12 in a ranking of spending by visitors from other countries. In 2014, Chinese spending was in the top 5. Nationally, the number of visitors from China to the U.S. currently ranks as the 7th highest visitor group. By 2020, Chinese visitors are expected to be one of the largest groups of visitors to the U.S., trailing Canada and Mexico.

Chinese visitors want to visit national parks and experience the natural beauty and the open space they do not have in their everyday lives. Unlike most overseas visitors, Chinese are less likely to be English speakers, causing communication challenges. Montana needs to be ready with signs, guidebooks, web pages, and brochures written in Mandarin to direct the type of land-ethic and travel behavior expected of our visitors.

Demographic Shifts

Changing demographics are challenging the 'usual' way we look at travel. According to a U.S. Travel Industry report, 2015 marked the first time the Baby Boomer generation no longer was the largest population cohort. The 75 million Millennials (born 1980 through 1995) surpassed the number of Baby Boomers (born 1946 through 1964). Millennials now represent one-quarter of the U.S. population. And yet, while total travel expenditures by the Boomers grew 45 percent in 2014, travel expenditures for Millennials actually decreased.

Millennials are embracing the sharing economy such as Airbnb (sleeping in someone's home), Uber (rideshare services), and Trip4real or Vayable (tour guide services by a local). These services are usually at a fraction of the price of the mainstream hotels, taxis, or guided trips. Besides being less expensive, peer-to-peer services provide the 'local' immersion into a destination. Friends are made. Less money is spent. Experiences soar. A recent study found that 27 percent of Millennials traveling for leisure used Airbnb or VRBO (vacation rental by owner) compared to five percent of Boomers. This travel behavior trend will require different business models throughout the state. *MER '16*

Health Care

Spending Hits a Speed Bump

By Bryce Ward
Bureau of Business and Economic Research at the University of Montana

For many years, the economic story of health care was pretty simple. Health care spending, employment, and wages increased – usually at faster rates than the rest of the economy. Between 1990 and 2007, health care spending in Montana grew, on average, by seven percent each year.[1] Over this same period, health care employment grew by an average of 3.1 percent each year and never grew by less than 1.5 percent.[2] Between 2001 and 2007, total wages paid in health care grew, on average, 7.3 percent each year.[3]

In recent years, however, health care has entered a period of major change. A partial list of the changes currently underway include: expanded insurance coverage, increased use of high deductible plans, and payment reforms that emphasize quality over quantity.

We do not yet know how the various changes will play out over the long term, but the simple economic story of health care has changed in recent years. Spending growth, employment growth, and wage growth have all slowed relative to long-term trends. Nationally, over the past several years, health care spending growth was well below the long-term average and grew roughly at the same rate as the rest

[1] Center for Medicare and Medicaid Services, National Health Expenditure Data, Health Expenditures by State of Residence 1991-2009.
[2] Bureau of Labor Statistics, State and Metro Area Employment data (based on Current Employment Survey (CES)).
[3] Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

"In the past couple of years, health care employment grew at the slowest rate observed over the past 25 years."

of the economy. In 2014, health care spending grew at a rate closer to the long-term average (5.3 percent). In contrast to previous periods, though, this growth was fueled by expansions to health care coverage and not more expensive care.

The slow down in health care growth is apparent in Montana. Since 2008, health care employment has grown by an average of only 1.7 percent each year.[4] In the past couple of years, health care employment in Montana grew at the slowest rate observed over the past 25 years. Over the 12 months ending in August 2015, health care employment grew by 0.5 percent. Over the twelve months prior, it grew by 0.6 percent.[5] Wage growth has been slightly more robust, but still lags historical levels. In recent years, health care wages have been growing at rates in the four to five percent range (2.0-3.5 percent adjusted for inflation).

Looking ahead, Medicaid expansion should boost Montana's health care sector, but the magnitude of these effects is uncertain, as discussed in the article in the previous section of this report. Nationally, health care spending is projected to return to levels only slightly below the long-term average. However, there remains substantial uncertainty about whether the host of changes currently underway in health care will yield a more persistent slowdown in the health care sector's growth. *MER '16*

[4] Based on data from the CES. The QCEW estimates show two percent average annual growth over this period. I use the CES because it goes back to 1990 and is available through more of 2015.

[5] The QCEW shows slightly higher growth rates (0.9 percent) over this same period.

Transportation and Logistics

The Commodity Business Cools

By Paul E. Polzin
Bureau of Business and Economic Research at the University of Montana

Montana sits astride the northernmost route from the East and Midwest to the West Coast. Long-distance trucking and railroads carry goods originating from outside the state to destinations also beyond Montana's borders. Because they are transporting goods from one part of the nation to another, both industries are very sensitive to overall economic conditions. The earnings and employment of Montanans working in long-distance trucking and railroad industries are important components of the economic base of the state and certain communities.

As shown in Table 1, there were 2,652 workers in long-distance trucking in 2014. These data do not include the truckers employed by out-of-state companies who are simply passing through the state. Missoula and Yellowstone counties are the two major centers of long-distance trucking in Montana, with each accounting for roughly 18 percent of total statewide employment in 2014. The Montana long-distance trucking industry was slow to recover from the recession, mirroring the trends in most other sectors of the economy. Statewide employment in 2014 had barely returned to its pre-recession level in 2005. The preliminary data for 2015 show weakness.

Two major rail lines cross Montana: the "highline" and the "low line." BNSF and Montana Rail Link (MRL) are the two major railroads in Montana, with several smaller lines serving specific areas of the state. The major rail centers are Billings, Missoula, Havre and Whitefish.

We do not have employment data for railroads due to a federal confidentiality requirement. Shipments data are available and provide long- and short-term trends. Over the past decade or so, railroads have benefited from the worldwide growth in commodities and raw materials, as well as technological improvements such as unit trains and multi-modal containers. The Great Recession significantly reduced all the demand for all forms of transportation, and the volume of railroad shipments have not yet returned to the earlier levels. During the past year, the volume of rail shipments has softened.

Table 1
Employment in Long Distance Trucking, Montana and Selected Counties, 2005 to 2014

Year	Montana	Yellowstone County	Missoula County
2005	2,665	645	556
2006	2,488	616	500
2007	2,378	553	484
2008	2,512	421	514
2009	2,435	403	575
2010	2,421	372	583
2011	2,509	468	639
2012	2,593	492	645
2013	2,659	504	565
2014	2,652	421	487

Source: U.S. Bureau of Labor Statistics.

The recent weakness in both long-distance trucking and railroads is, in part, due to worldwide economic trends and the strengthening of the dollar. The latest rail shipments data show declines across the board with the biggest drop in the metallic ore and metals category, which is mostly associated with exports and imports. *MER '16*

Technology and Innovation

Faster Growth for High-Tech Firms

By Christina Quick Henderson
Montana High Tech Business Alliance

In February 2015, a University of Montana Bureau of Business and Economic Research (BBER) survey of Montana High Tech Business Alliance (MHTBA) members captured – for the first time – data measuring the size and growth potential of Montana's high-tech sector. The report found Montana high-tech and manufacturing firms are growing eight to ten times the rate of the overall state economy and pay an average of about $50,000 – twice the median wage.

The high-tech industry in Montana is not limited by geography. While more prominent concentrations of high-tech firms are located in Gallatin and Missoula counties, companies in this sector are boosting local economies across the state, including the Flathead, the Bitterroot, Great Falls, Helena, Billings, and Butte-Anaconda. Central Montana's manufacturing cluster in Lewistown has created upwards of 500 jobs in a community of 6,500 people.

Montana's high-tech firms are diverse, but software/software-as-a-service is by far the largest industry sub-group with dozens of firms in Montana. Perhaps the most prominent example, RightNow Technologies, employed 1,100 people, half in Bozeman, with average wages of $86,000 when it sold to Oracle in 2011 for $1.8 billion. Other software leaders include EDULOG in Missoula, founded 35 years ago and employing around 150 people, and Zoot Enterprises in Bozeman, founded 25 years ago and employing around 250 people.

37 percent of respondents in the high-tech industry survey said Montana's quality of life provided a significant advantage to doing business. More than a quarter of firms cited Montana's high-quality workforce as an advantage.

These advantages are persuading more tech firms with headquarters elsewhere to locate offices in Montana, including Workiva (Bozeman and Missoula), Helix Business Solutions (Dillon and Bozeman), Advanced Technology Group (Missoula), and SoFi (Helena). As they ramp up their growth, competition for talented workforce is heating up. Montana salaries at some companies can range from $50,000-$75,000 with senior people earning more than $100,000. Perks like bonuses, free meals, and on-site gyms are becoming more common.

"Reflecting nationwide trends, recruiting skilled workers is the largest impediment to growth for Montana's high-tech firms. However, a growing number of fast-track training programs are helping to expand the talent pool in Montana."

Reflecting nationwide trends, recruiting skilled workers is the largest impediment to growth for Montana high-tech firms. In addition to Montana's two- and four-year colleges, a growing number of fast-track training programs are helping to expand the talent pool, including Code Montana, Montana Code School, and Rev Up Montana.

"Montana high-tech and manufacturing firms are growing eight to ten times the rate of the overall state economy."

Access to capital is the second most common barrier to growth. In 2015, Montana was the #1 state for entrepreneurial activity, according to the Kauffman Foundation, for the third year running, but ranked dead last for venture capital dollars invested according to the National Venture Capital Association's state-by-state report. There is hope for improvement as Next Frontier Capital, a Bozeman-based venture capital firm, announced the initial closing of its inaugural $20 million fund in May 2015.

The growth of high-tech has huge implications for higher education, government and business across the state and challenges older stereotypes about Montana's economic base. BBER and the MHTBA will release another high-tech industry survey in early 2016. *MER '16*

Real Estate and Residential Construction

The Market Remains Strong

By Sue Larew and Paul Olson
First Interstate Bank

In spite of the global financial markets and economic concerns, the U.S. economy continues to grow. When it comes to determining the strength of the economy, the housing market is a true litmus test of the economic health of a community. In Montana, the housing market remains strong due to the reduction of unemployment. Because income is up, we are seeing an increase of new households – from new home purchases to new home construction, as well as the rise of housing developments in urban areas. Homebuilding is expected to continue its growth through 2016. In fact, there is a supply/demand issue for consumers looking for homes in the $250,000 (and less) price range. The stronger economy has seen a large increase in state-to-state migration, especially in the oil and gas industry. Today, we are experiencing some outmigration as a result of the drop in oil prices and the slowdown of drilling. As a result, the need for man camps and additional housing has all but disappeared.

Single-Family Construction

In Montana, construction of single-family housing starts slipped in August; however, construction is up 14.9 percent nationally. Montana shows 2.5 percent growth in new home construction but the value of these homes is up 5.99 percent. This begs the question: are builders simply constructing more expensive homes, or has the cost to build new homes increased that greatly?

"With the growth in households plus an improving economy, the national housing market looks strong through 2024."

The U.S. is on track to build 552,000 new homes this year, far from the over one million new homes built per year just 10 years ago. Nationally, new home sales are up five percent, but we are seeing a slowdown in the issuance of building permits in comparison to last year. Even with growth, new home sales are falling further behind the new household generation, which is causing a growth in multi-family construction. This has also led to dramatic rent increases. Have builders lost their confidence?

Multi-family Construction

Nationally, multi-family construction continues to grow along with a large increase in rental prices. This is primarily due to job growth and new household formation as a result of the increase in state-to-state migration. The emergence of Millennials into the workforce is also a cause of the insurgence of multi-family housing, as they move out of their parents' homes and into their own apartments and condos.

Existing Home Sales

Existing home sales in the nation are up 6.2 percent from 2014, but again, inventory remains tight. First-time home buyers are up a whopping 32 percent in 2015, which is very encouraging. Again, this trend could be attributed to the growth of the millennial generation. However, tight inventory levels and increasing home values are keeping some potential buyers on the sidelines. Nationally, home prices are up 7.1 percent. Until new home construction matches the level of new household growth, we can expect prices to continue to increase.

Demographics

While the entrance of Millennials to the market has generated some strong economic indicators, we must factor in the impact of other influences on this segment. As Millennials enter the workforce, many are saddled with high student-loan debt. This, combined with low wages and high rental prices, may keep them living at home with their parents instead of establishing a household of their own. This in turn affects another significant population: the Baby Boomers. While some are beginning to downsize, many Boomers are still financially supporting adult children or providing them a place to live, free of charge.

The Future

In the next 10 years, the U.S. will see the establishment of 15.9 million new households, the majority of this growth being driven by Hispanics and non-Whites. Of this number, approximately 10.3 million will purchase a home, with the other 5.6 million choosing to rent. With the growth in households plus an improving economy, the national housing market looks strong through 2024. *MER '16*

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