

The State and National Economic Outlook

Coming Off a Very Good Year



**BUREAU OF BUSINESS AND
ECONOMIC RESEARCH**
UNIVERSITY OF MONTANA

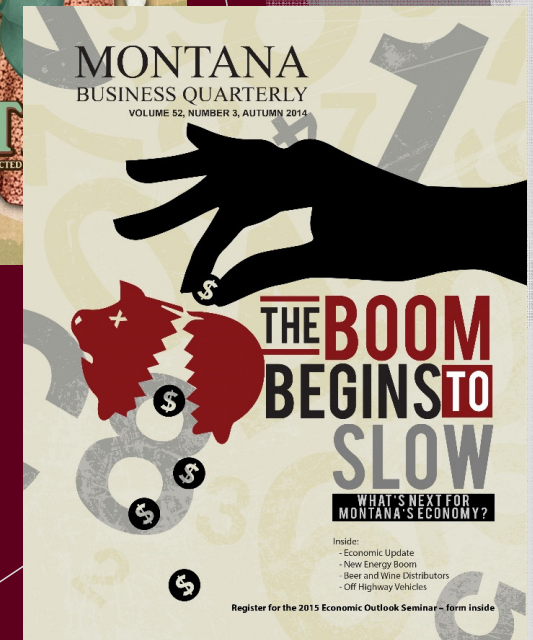
Patrick M. Barkey, Director

MONTANA BUSINESS QUARTERLY

The **Montana Business Quarterly** is the state's premier business magazine – helping Montanans better understand the state's economic climate.

For nearly 50 years, the award-winning **Montana Business Quarterly** has provided a comprehensive overview of business and economic trends throughout the state.

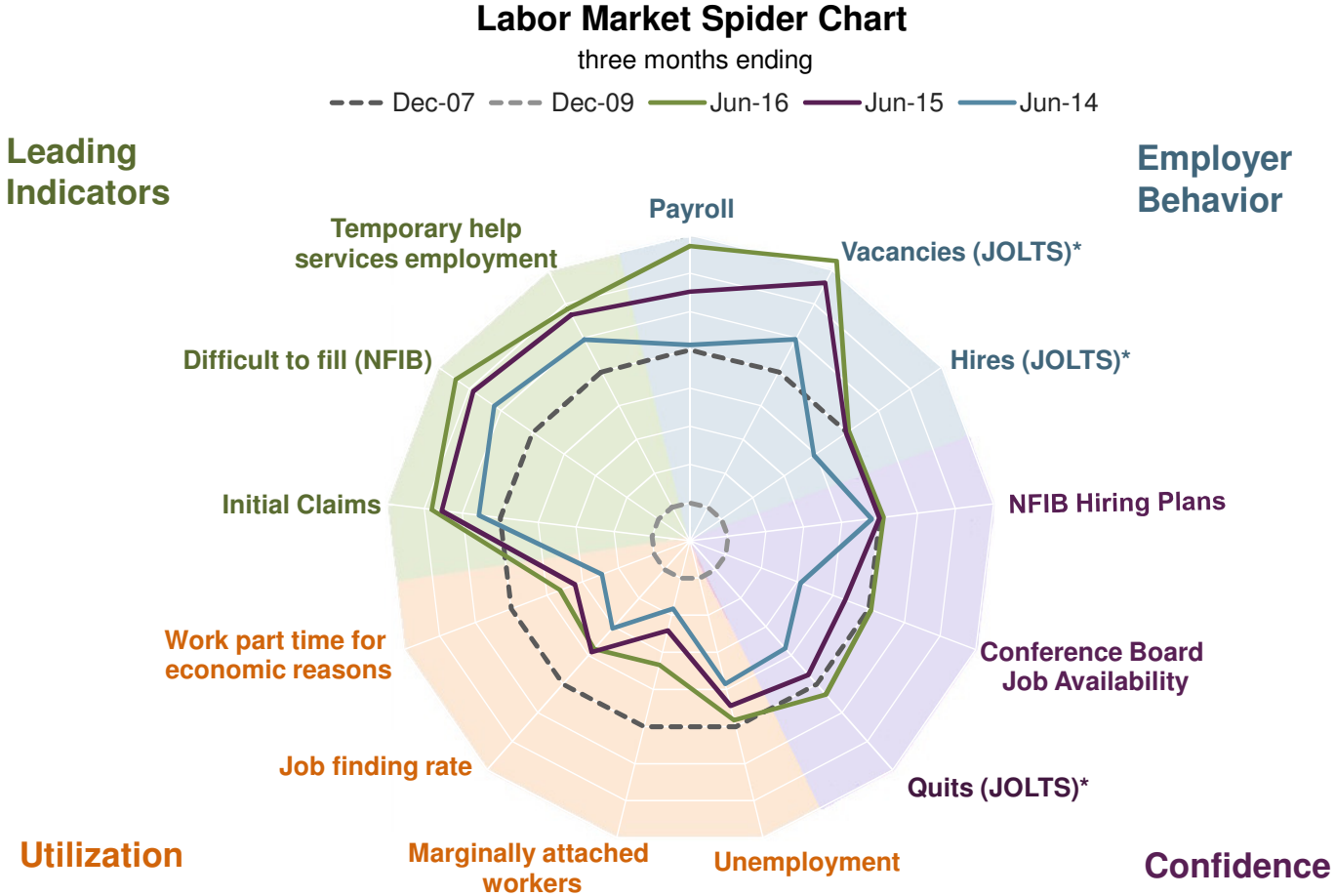
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The U.S. Economy: Good But Not Great

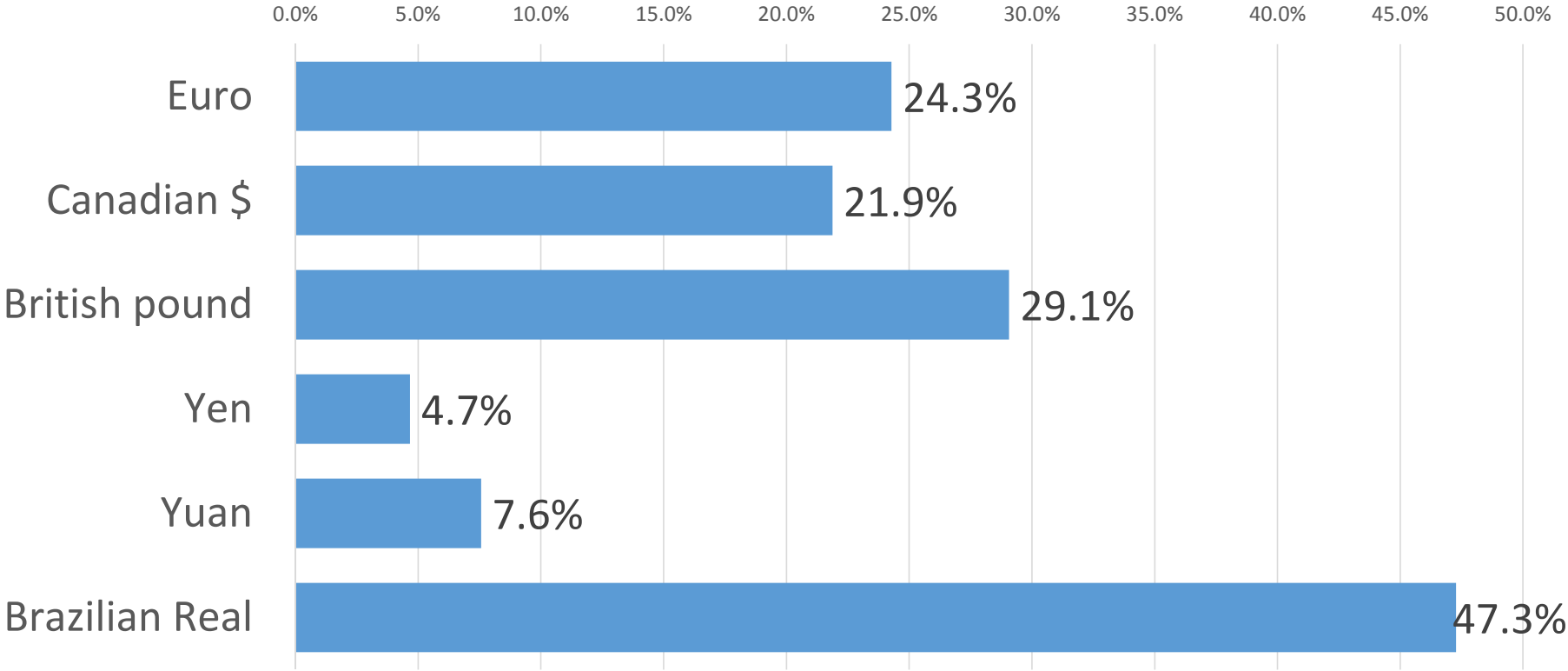
- Even slow growth in the world's largest economy eventually adds up
- Easy credit has arrived
- Weakening economies abroad, stronger dollar combine to hurt exports
- U.S. job growth engine still firing
- Business cycle may be peaking
- Where is the Fed?

Seven Years of Growth Has Transformed the Labor Market



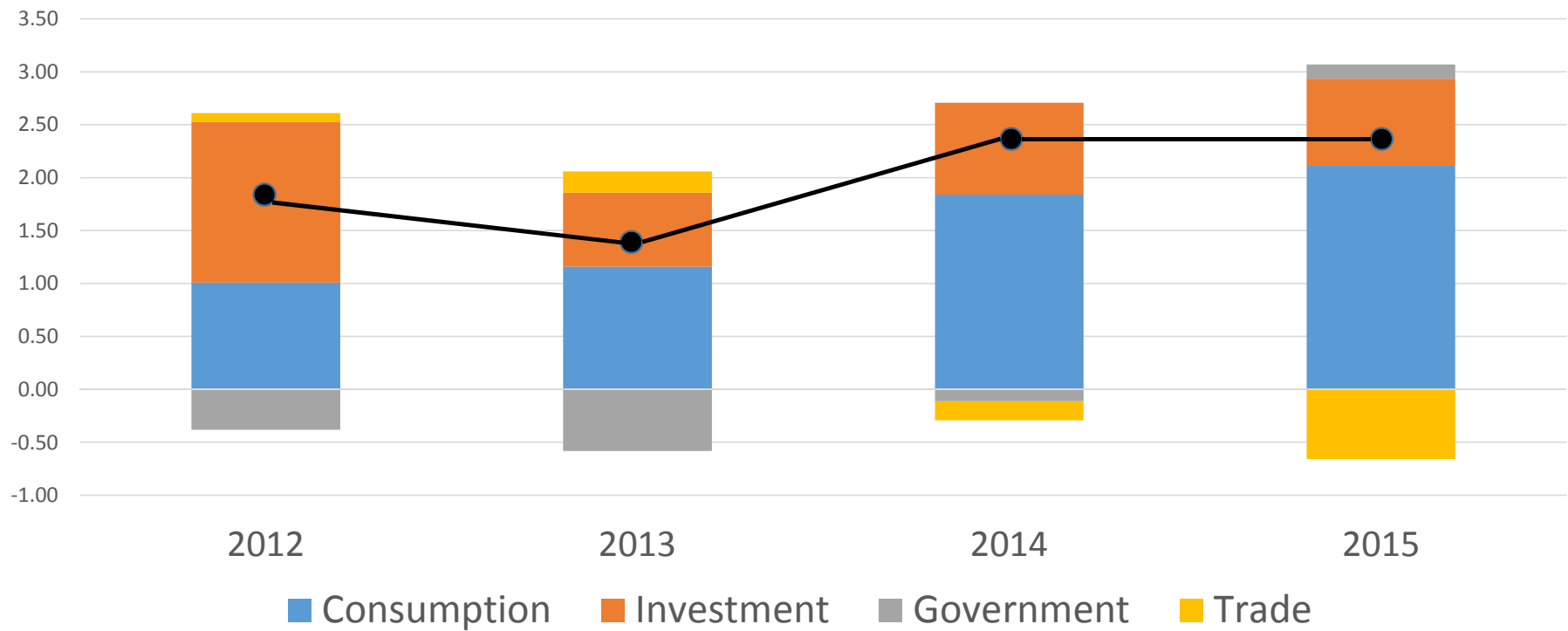
*JOLTS data are March to May average
Source: U.S. Bureau of Labor Statistics, U.S. Department of Labor, National Federation of Independent Business and The Conference Board

U.S. Goods Are More Expensive Than Two Years Ago



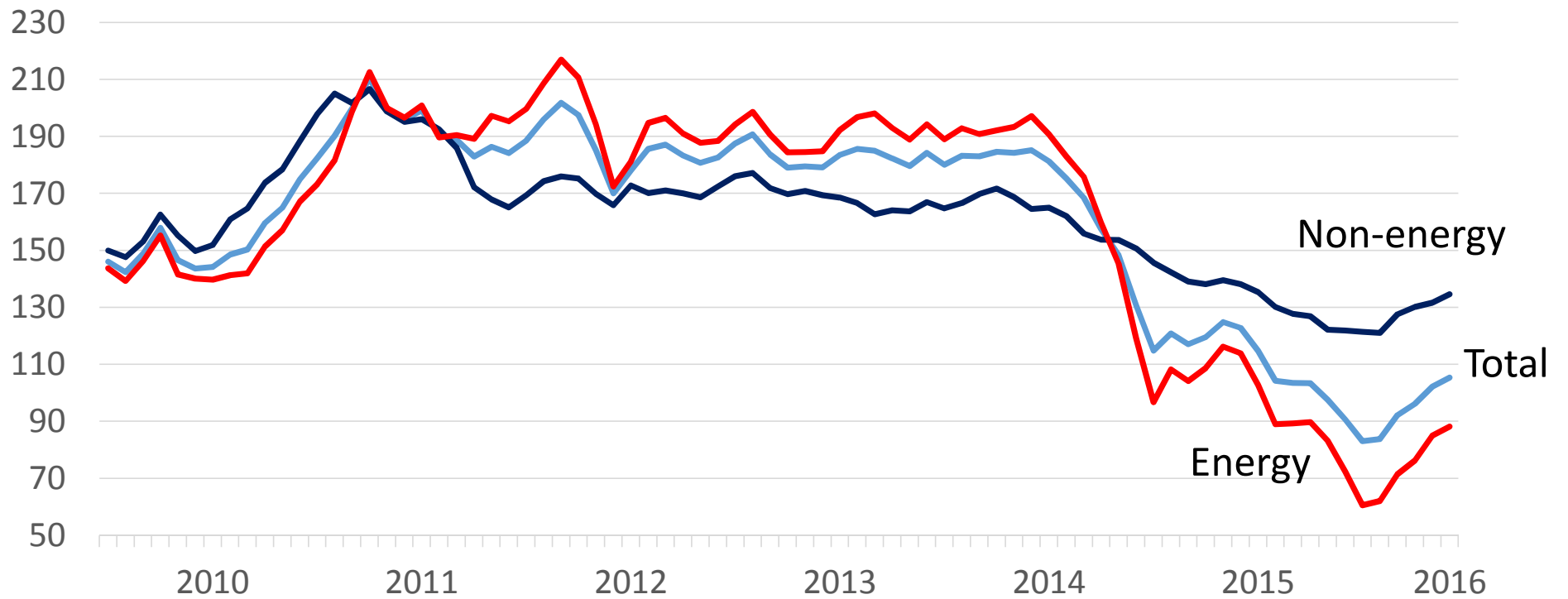
Percent Change in Dollar Purchasing Power, Jul 2016 – Jul 2014
Source: Federal Reserve Bank of St. Louis

The Nature of U.S. Growth Has Changed



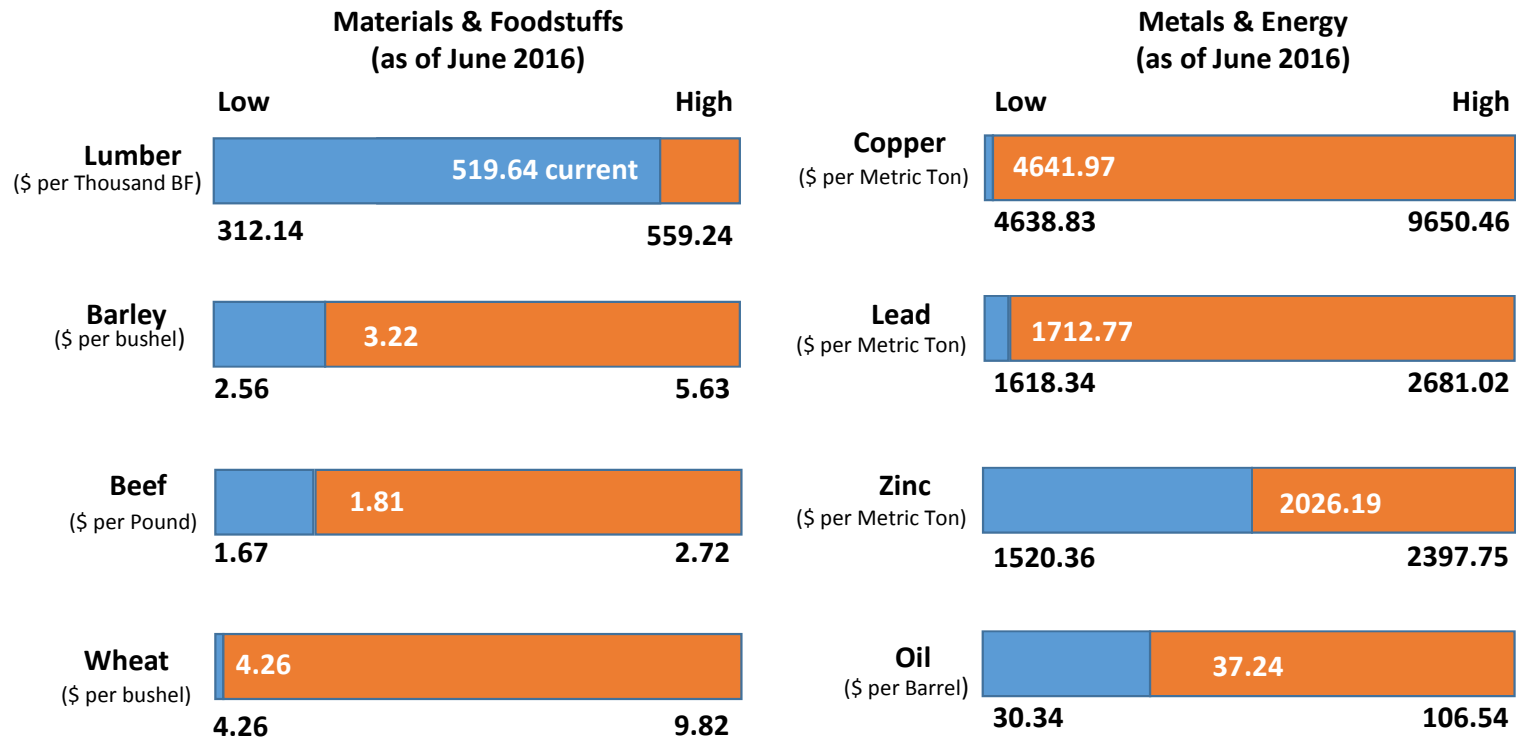
U.S. GDP Growth, Percent
Source: U.S. Bureau of Economic Analysis.

Commodity Prices Finding Bottom



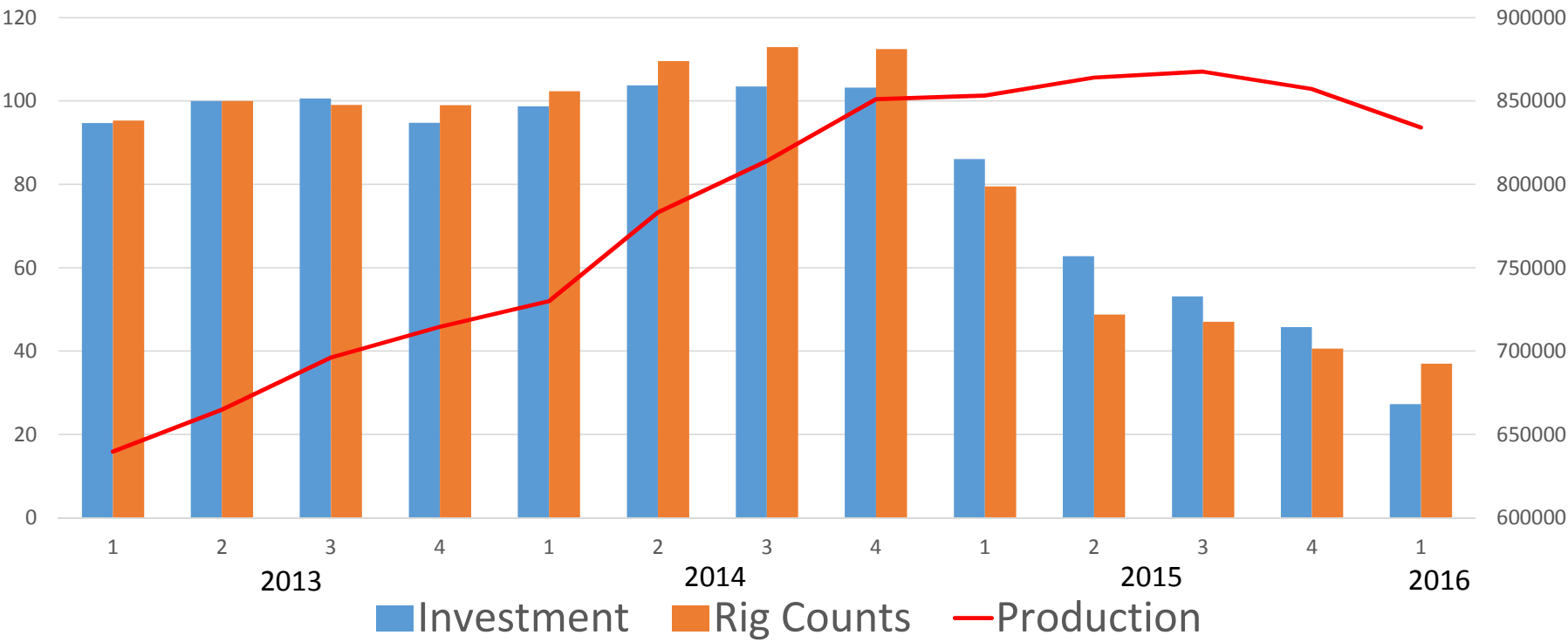
Indices of Primary Commodity Prices
Source: International Monetary Fund.

Metals, Agricultural and Oil Prices Rebounding From Five Year Lows June 2016 vs. 5-Year High and Low



Indices of Primary Commodity Prices
Source: International Monetary Fund.

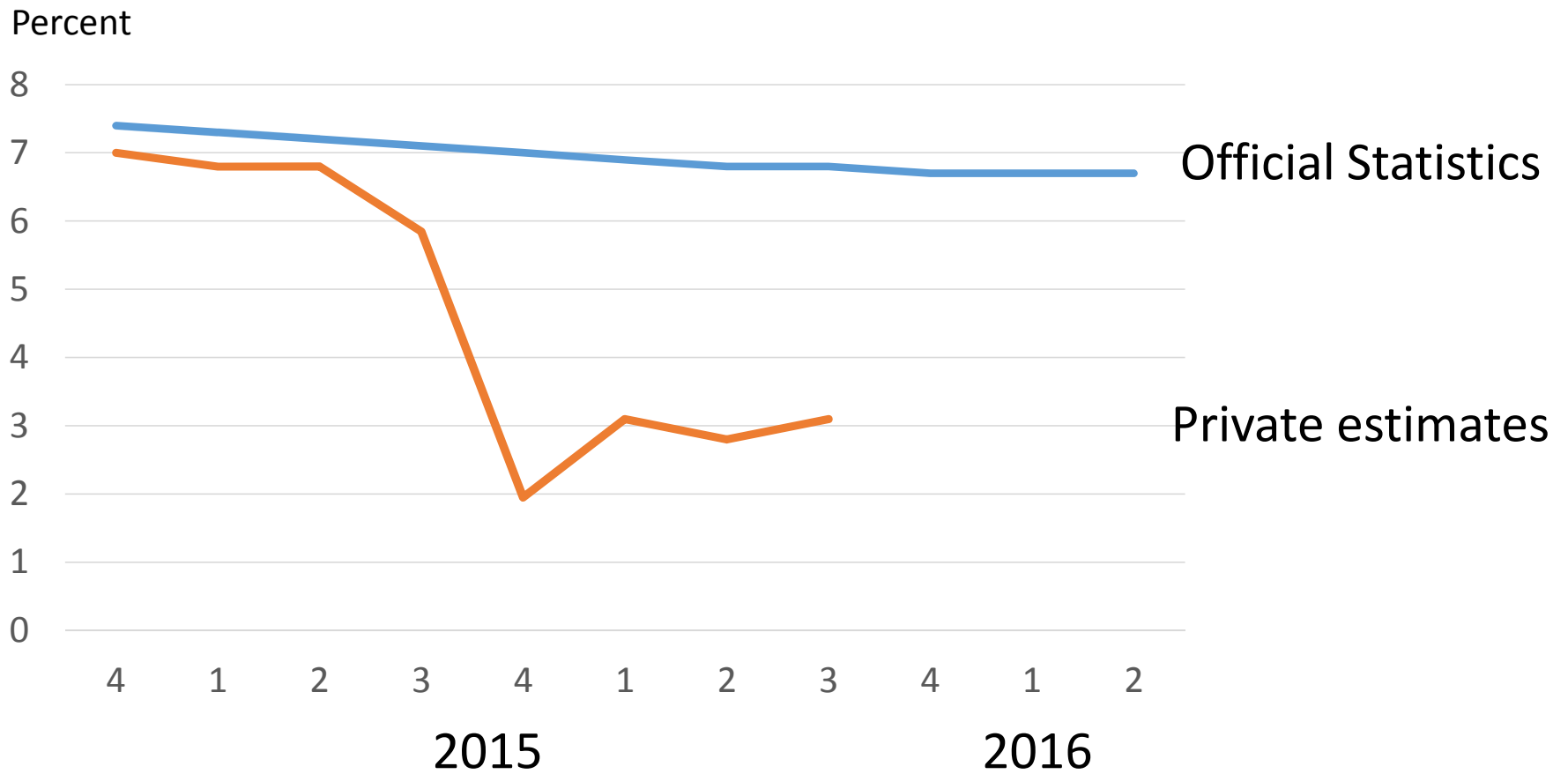
Cratering Investment Finally Ends Oil Production Growth



Real Oil and Gas Investment and Oil Rig Counts (index) vs. Crude Oil Production (bbl. Per day)
 Source: U.S. Bureau of Economic Analysis, U.S. Energy Information Administration, Baker-Hughes.

Does Anyone Know What Chinese Growth Is?

GDP Growth, Percent, China



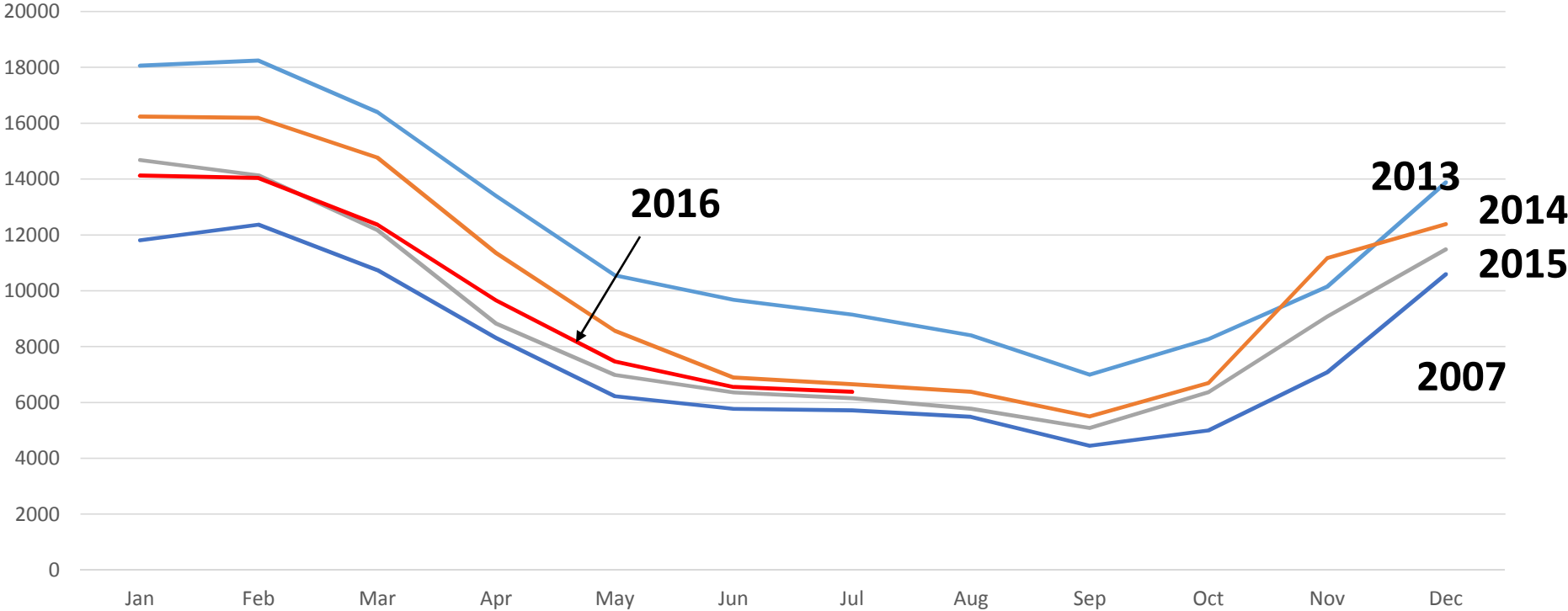
U.S. Outlook Summary

- U.S. consumer spending now powering the economic recovery
- Old fuel for growth – business spending, global growth – is spent
- Global slowdown is most evident in the strength of the dollar and commodity prices
- Federal Reserve policy is an unknown
- How much longer can the U.S. go it alone?

The Montana Economy Reaches Full Employment

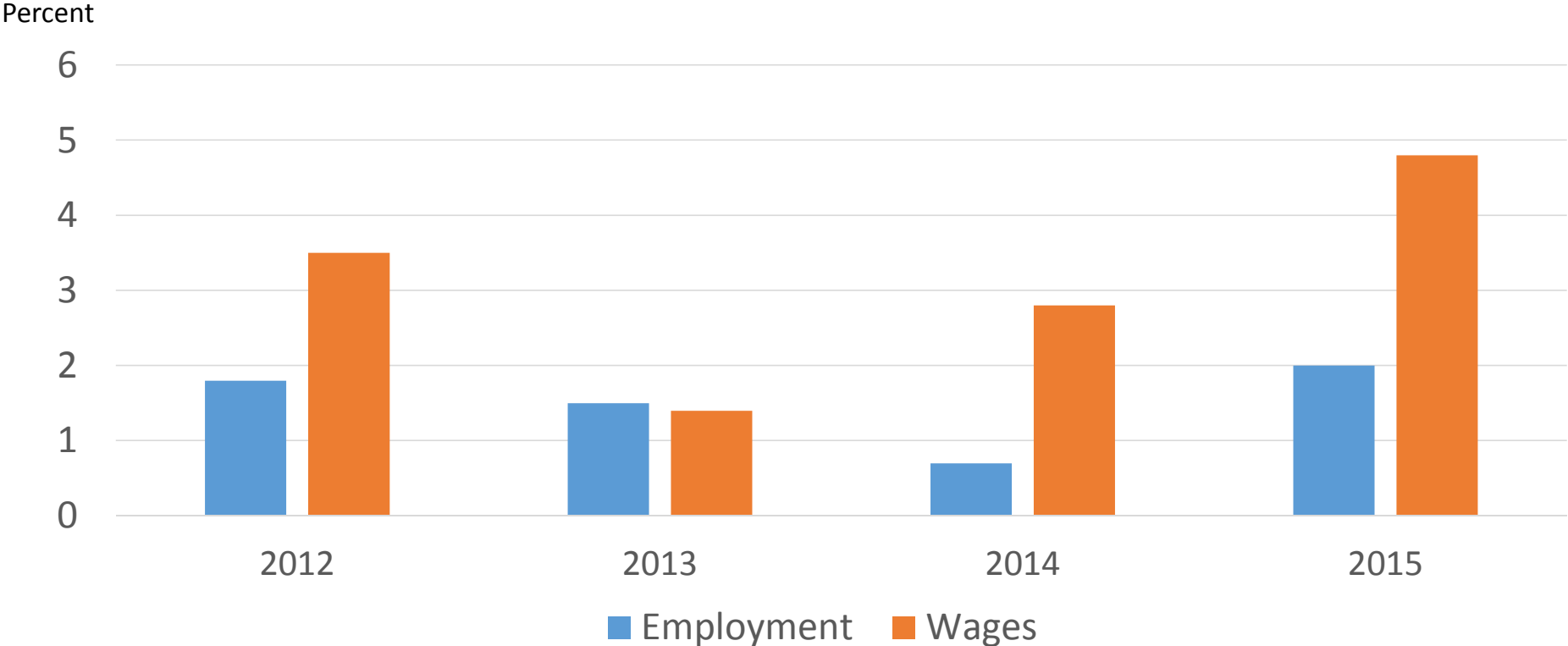
- Growth has shifted west as commodities stumble and construction improves
- Labor market slackness has largely disappeared
- Broad growth across most industries helps boost tax revenues, wages
- Commodity prices, grain prices and the weak Canadian dollar are spoiling the party for some
- 2015 was a great year for the economy, 2016 less so
- New troubles for coal and wood products

Labor Market Slackness Stabilized in 2016



Monthly Unemployment Claims, Montana.
Source: Montana Department of Labor and Industry.

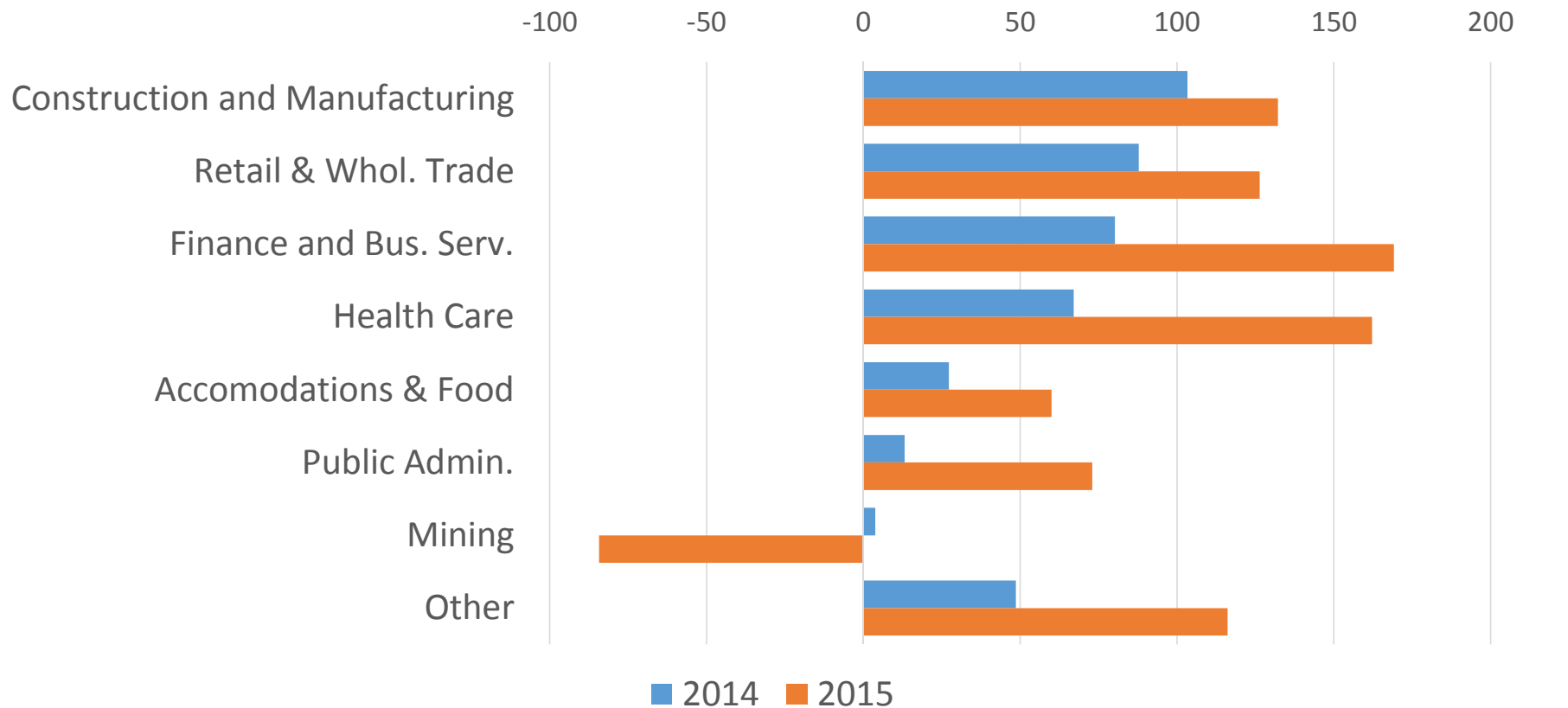
Wages Grew Faster Than Employment Last Two Years



Percent Change in Payroll Employment and Inflation-Corrected Wages, Montana
Source: U.S. Bureau of Labor Statistics U.S. Bureau of Economic Analysis

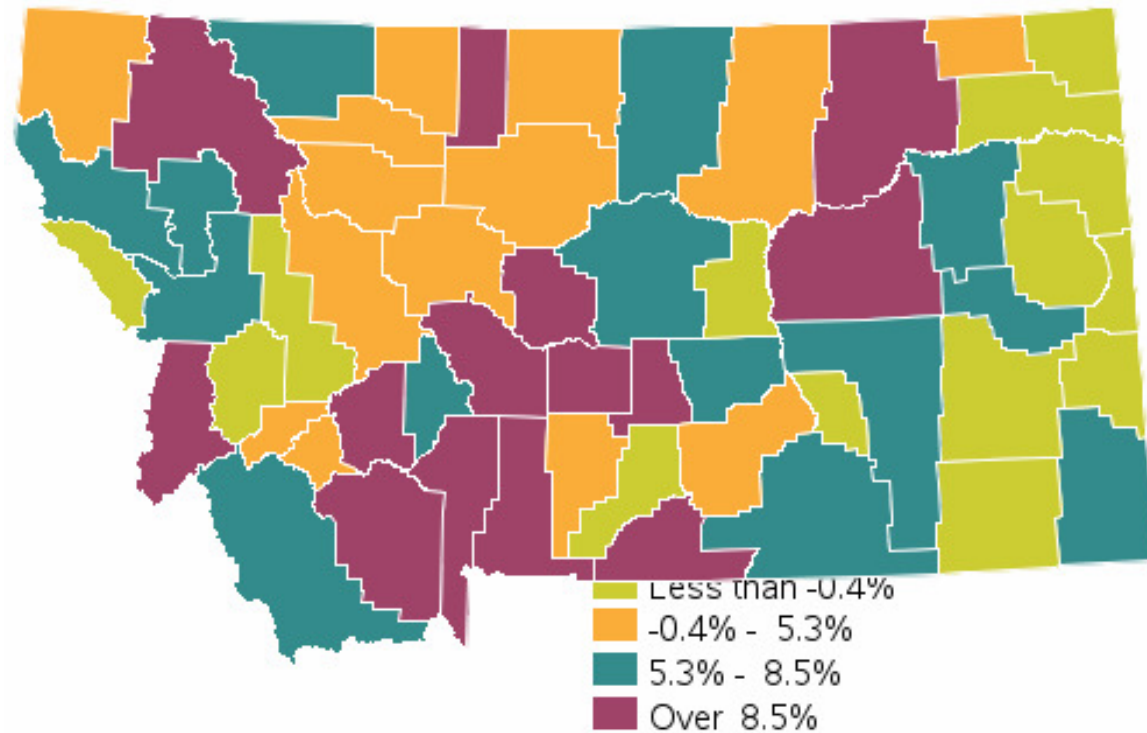
What's Driving Growth in Montana: Wage Growth

\$ Millions



Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

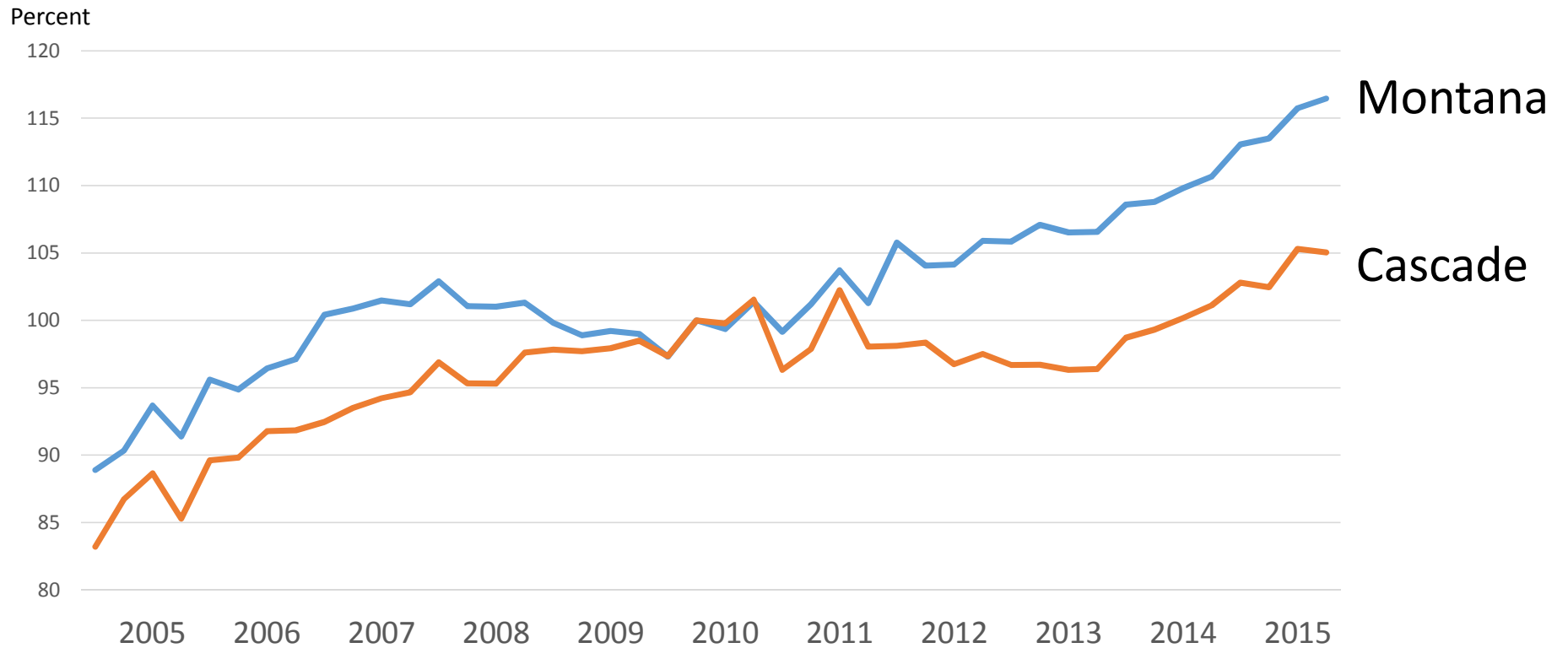
Pattern of Growth Has Shifted West



Inflation-Corrected Wage Growth, Percent, 2014Q4 – 2015Q4
Source: U.S. Bureau of Labor Statistics , U.S. Bureau of Economic Analysis

Total Wages, Inflation-Corrected, 2005-15

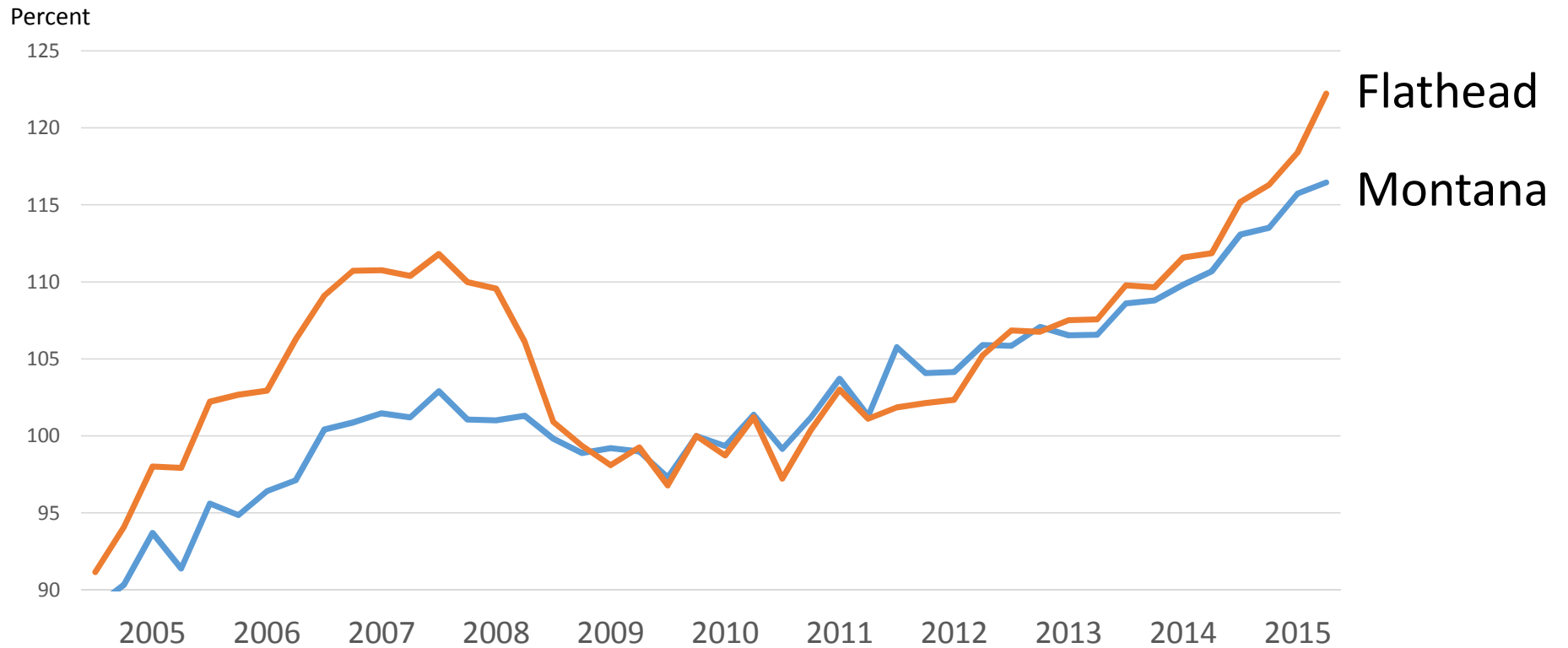
Cascade County vs. Montana



Index, 2005Q4=100, seasonally adjusted by BBER.
Source: U.S. Bureau of Labor Statistics and Bureau of Economic Analysis.

Total Wages, Inflation-Corrected, 2005-15

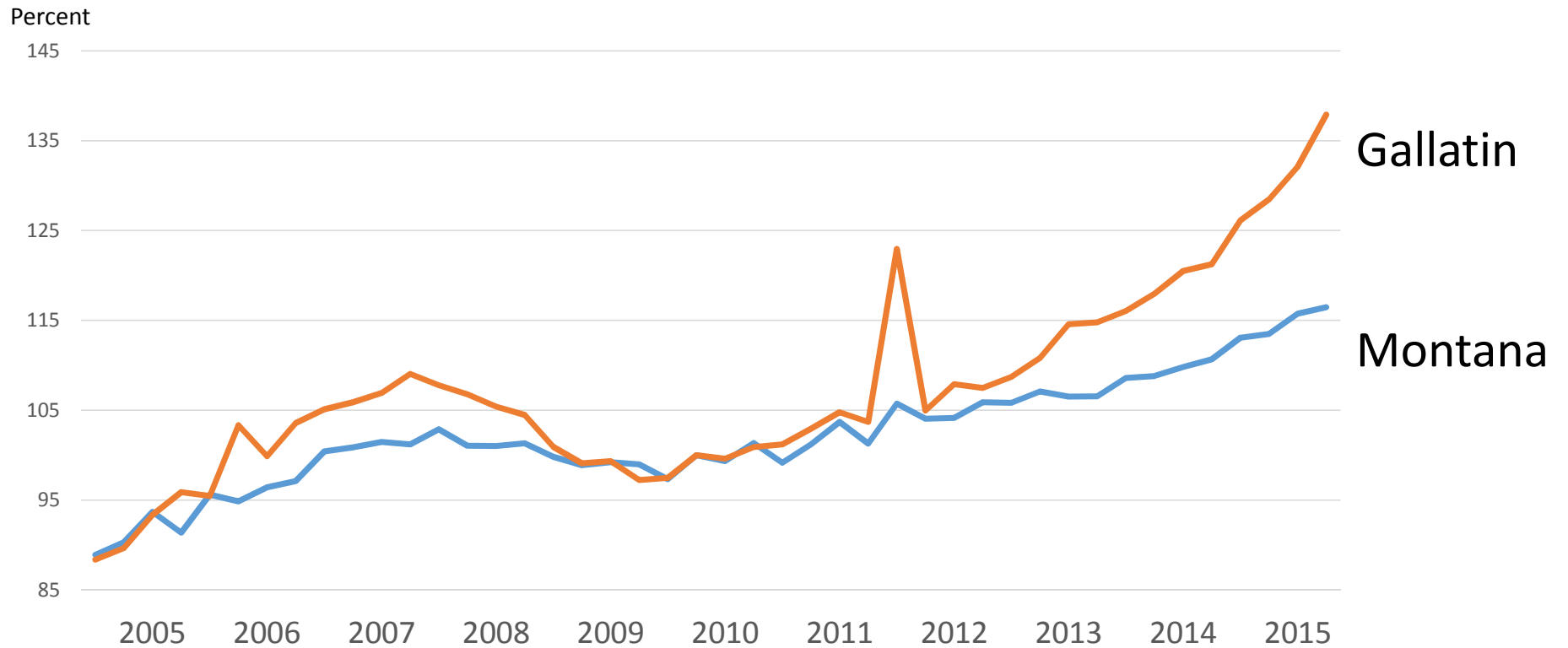
Flathead County vs. Montana



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

Total Wages, Inflation-Corrected, 2005-15

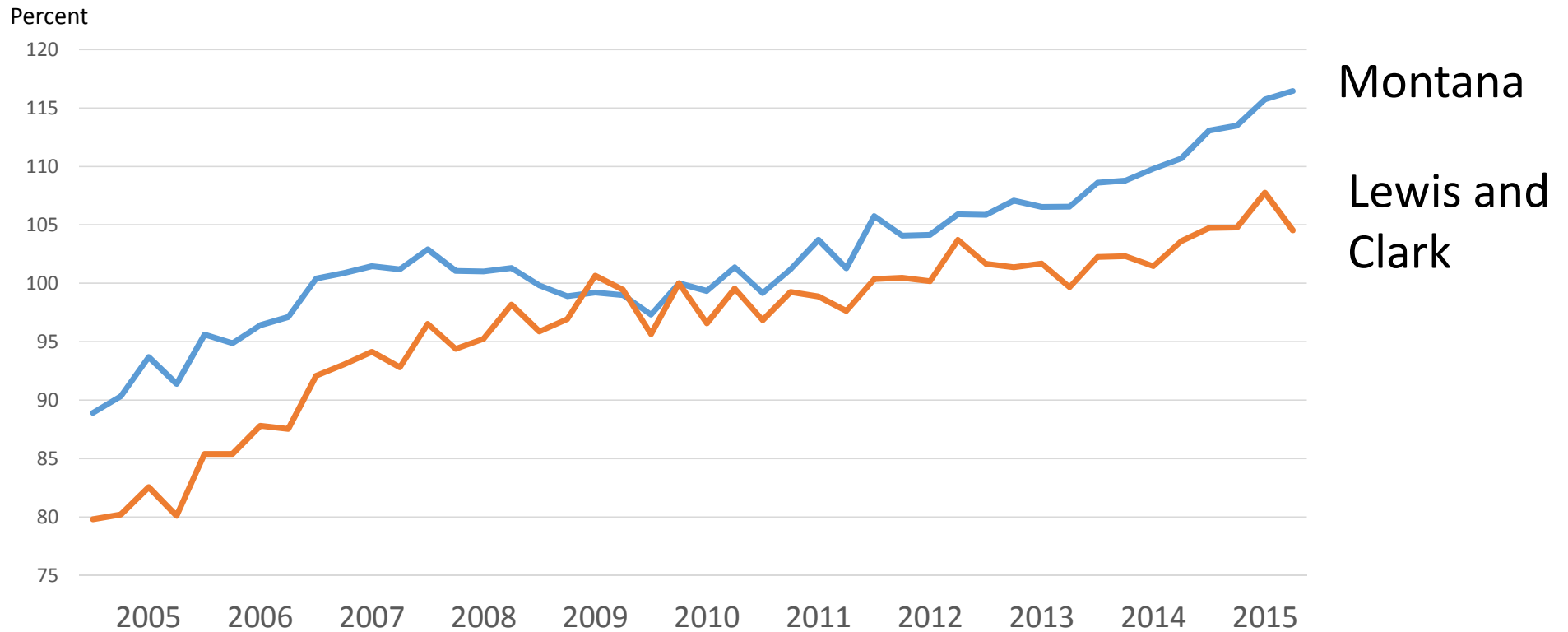
Gallatin County vs. Montana



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

Total Wages, Inflation-Corrected, 2005-15

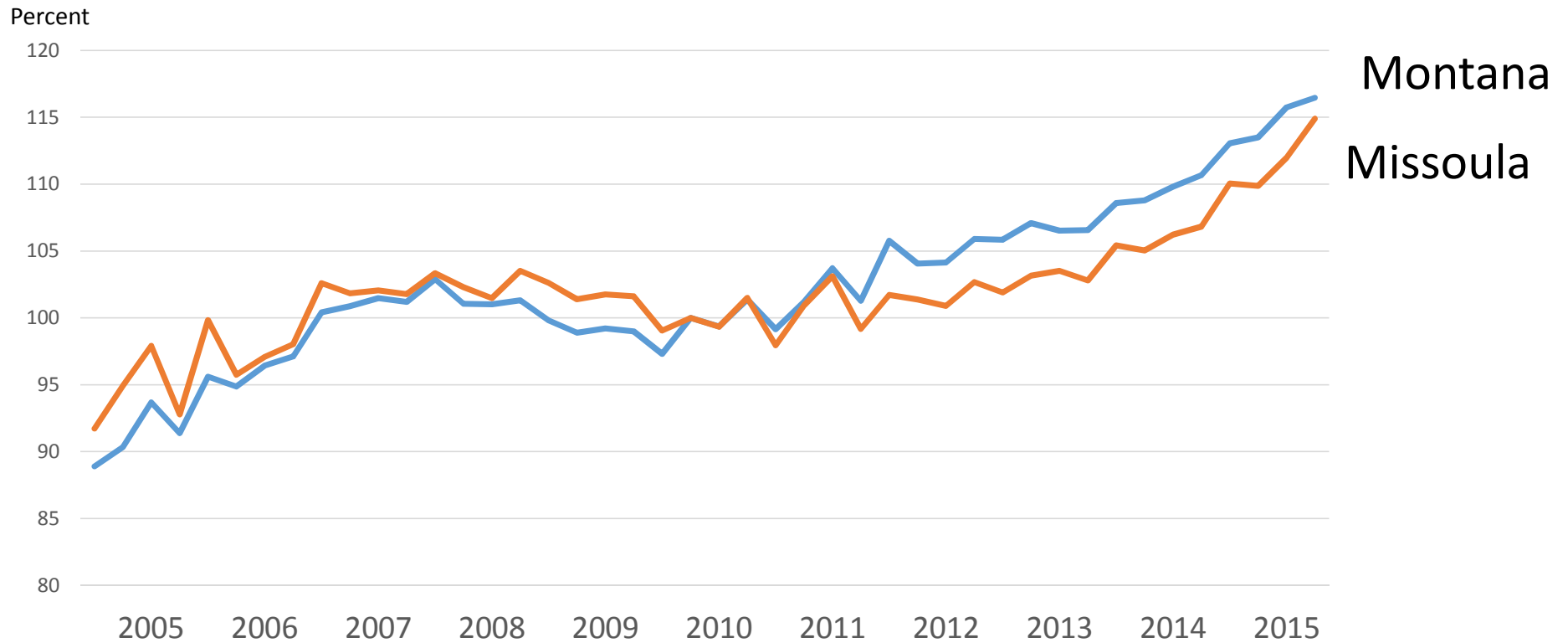
Lewis and Clark County vs. Montana



Index, 2005Q4=100, seasonally adjusted by BBER.
Source: U.S. Bureau of Labor Statistics and Bureau of Economic Analysis.

Total Wages, Inflation-Corrected, 2005-15

Missoula County vs. Montana



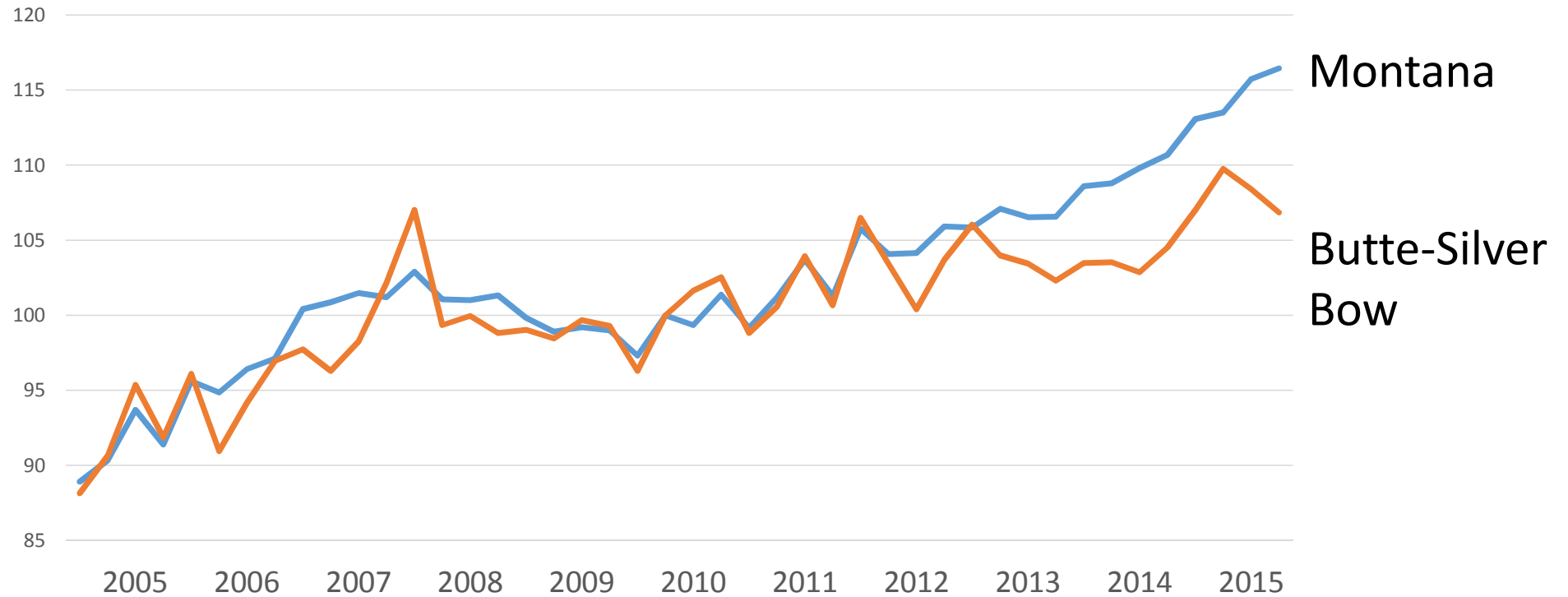
Index, 2005Q4=100, seasonally adjusted by BBER.

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

Total Wages, Inflation-Corrected, 2005-15

Butte-Silver Bow vs. Montana

Percent

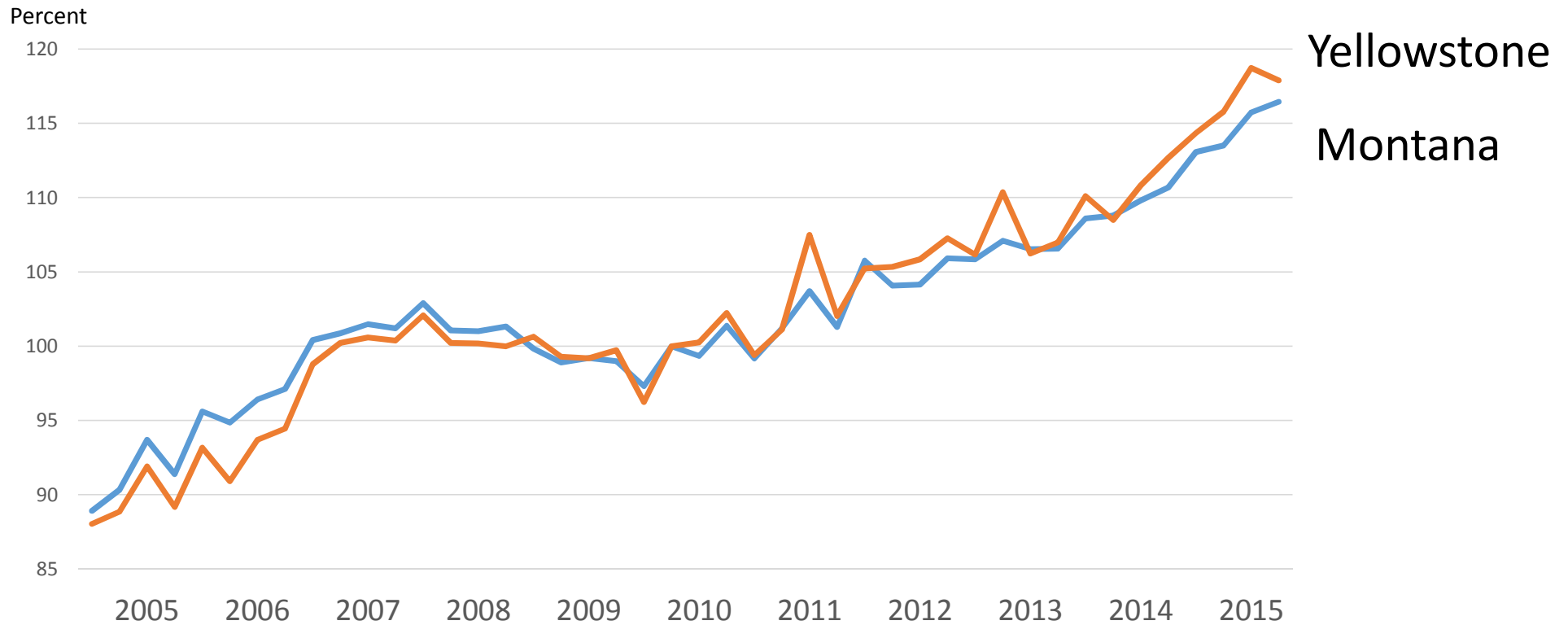


Index, 2005Q4=100, seasonally adjusted by BBER.

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

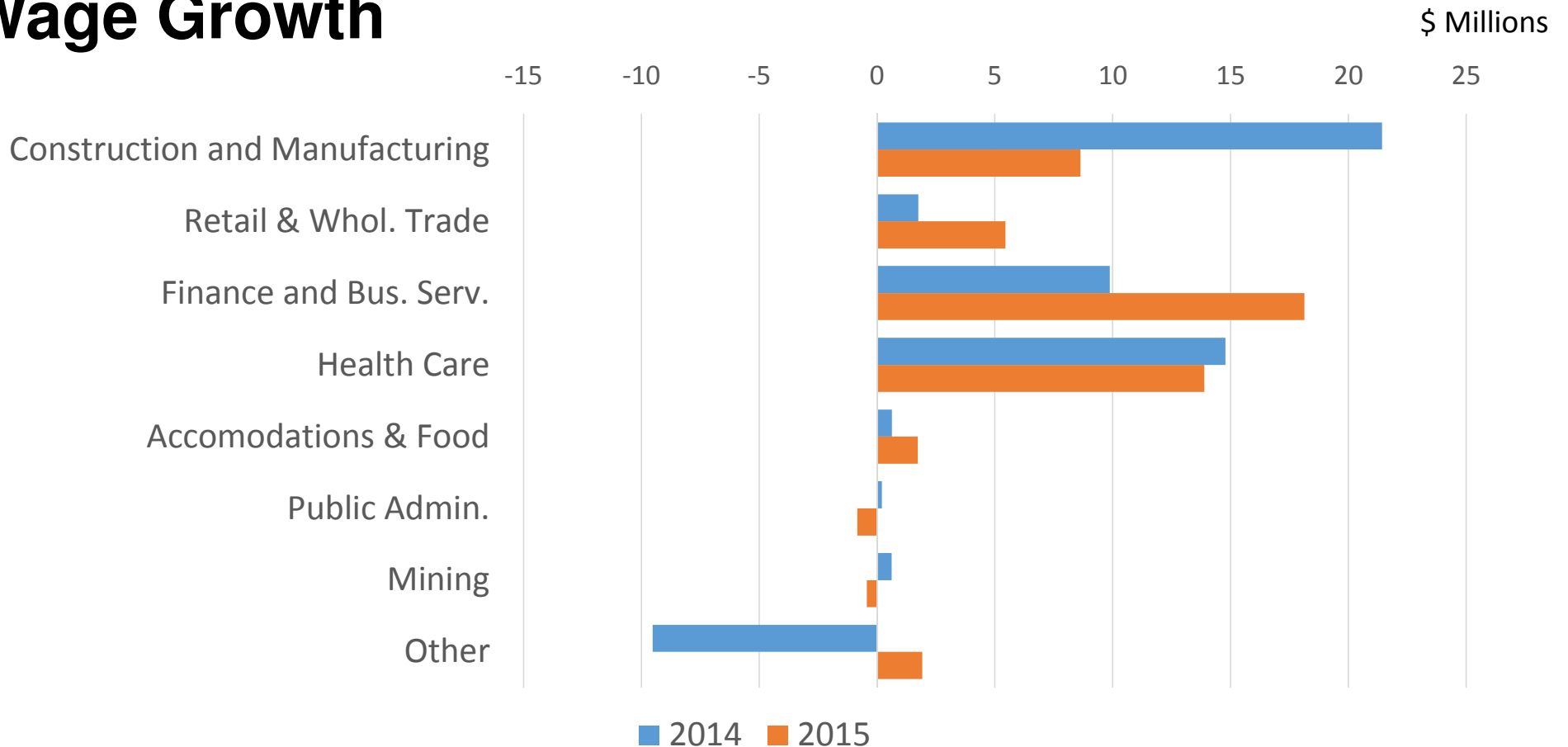
Total Wages, Inflation-Corrected, 2005-15

Yellowstone County vs. Montana



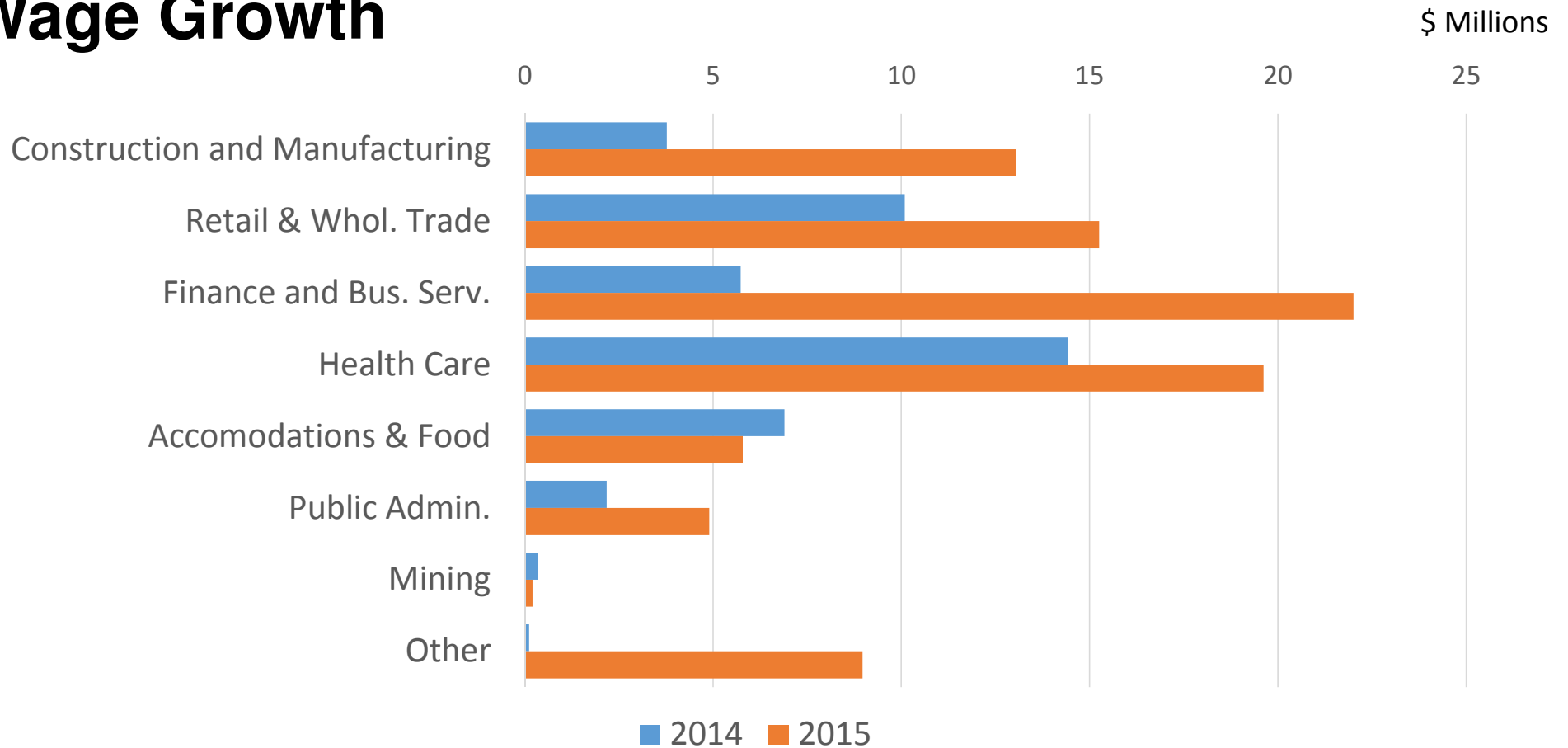
Index, 2005Q4=100, seasonally adjusted by BBER.
Source: U.S. Bureau of Labor Statistics and Bureau of Economic Analysis.

What's Driving Growth in Cascade County: Wage Growth



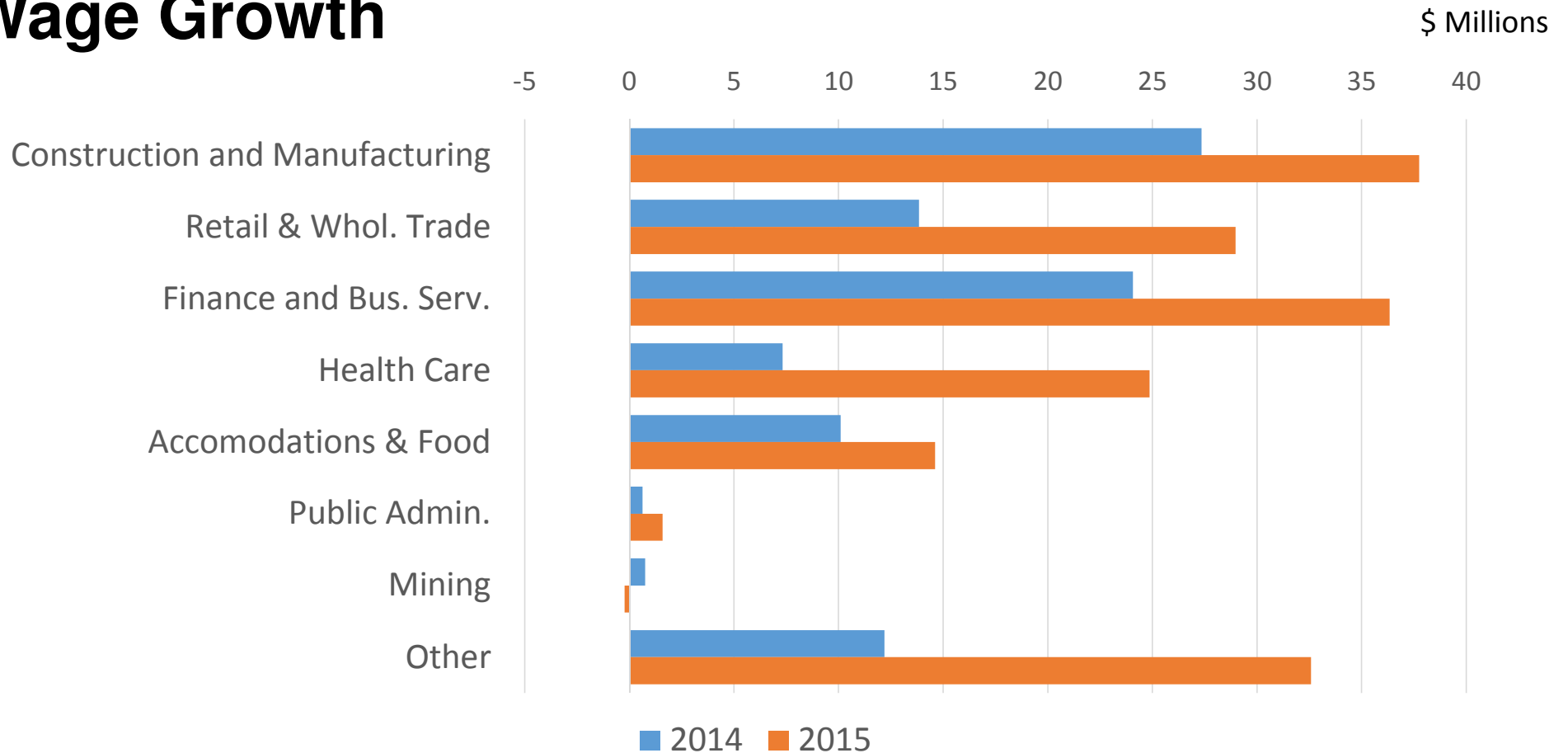
Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

What's Driving Growth in Flathead County: Wage Growth



Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

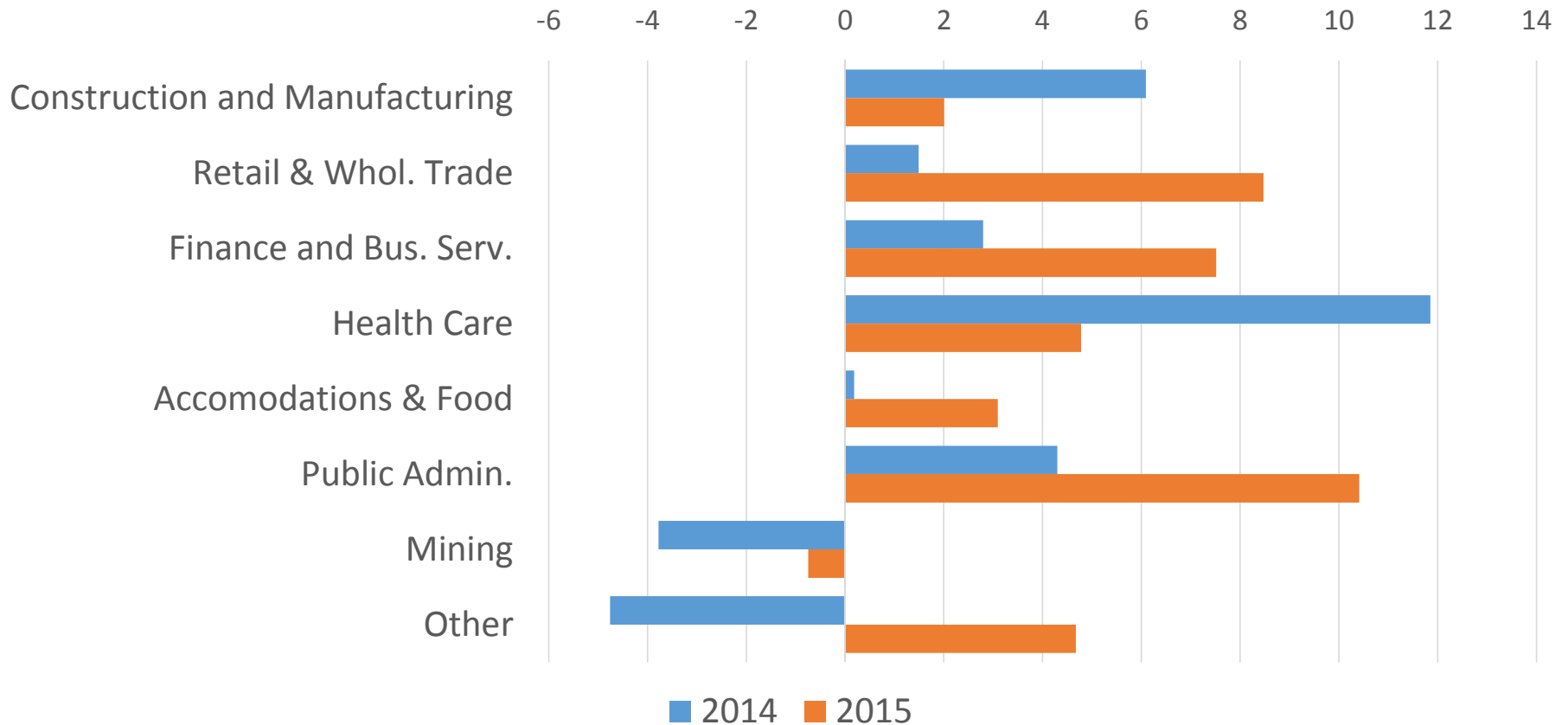
What's Driving Growth in Gallatin County: Wage Growth



Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

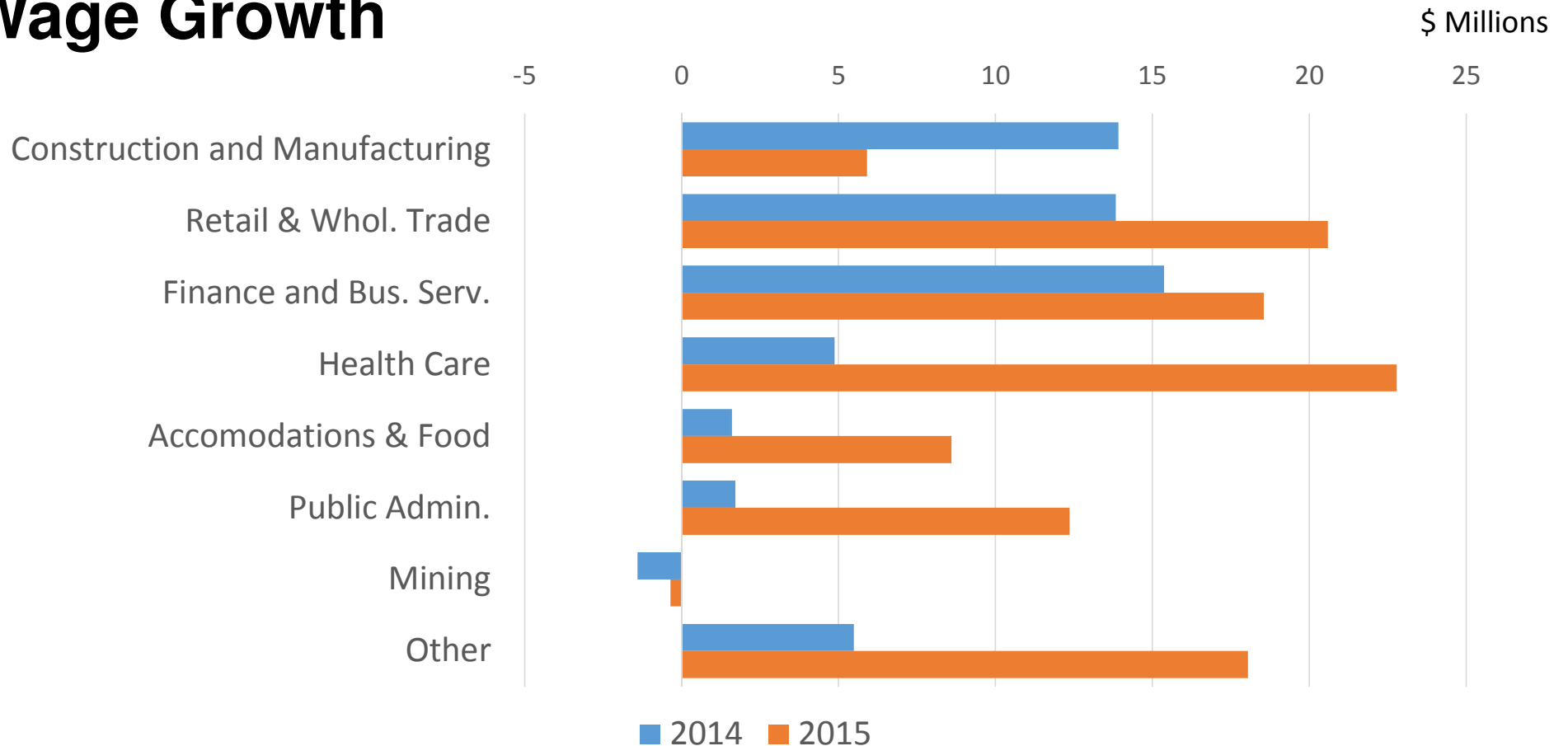
What's Driving Growth in Lewis and Clark County: Wage Growth

\$ Millions



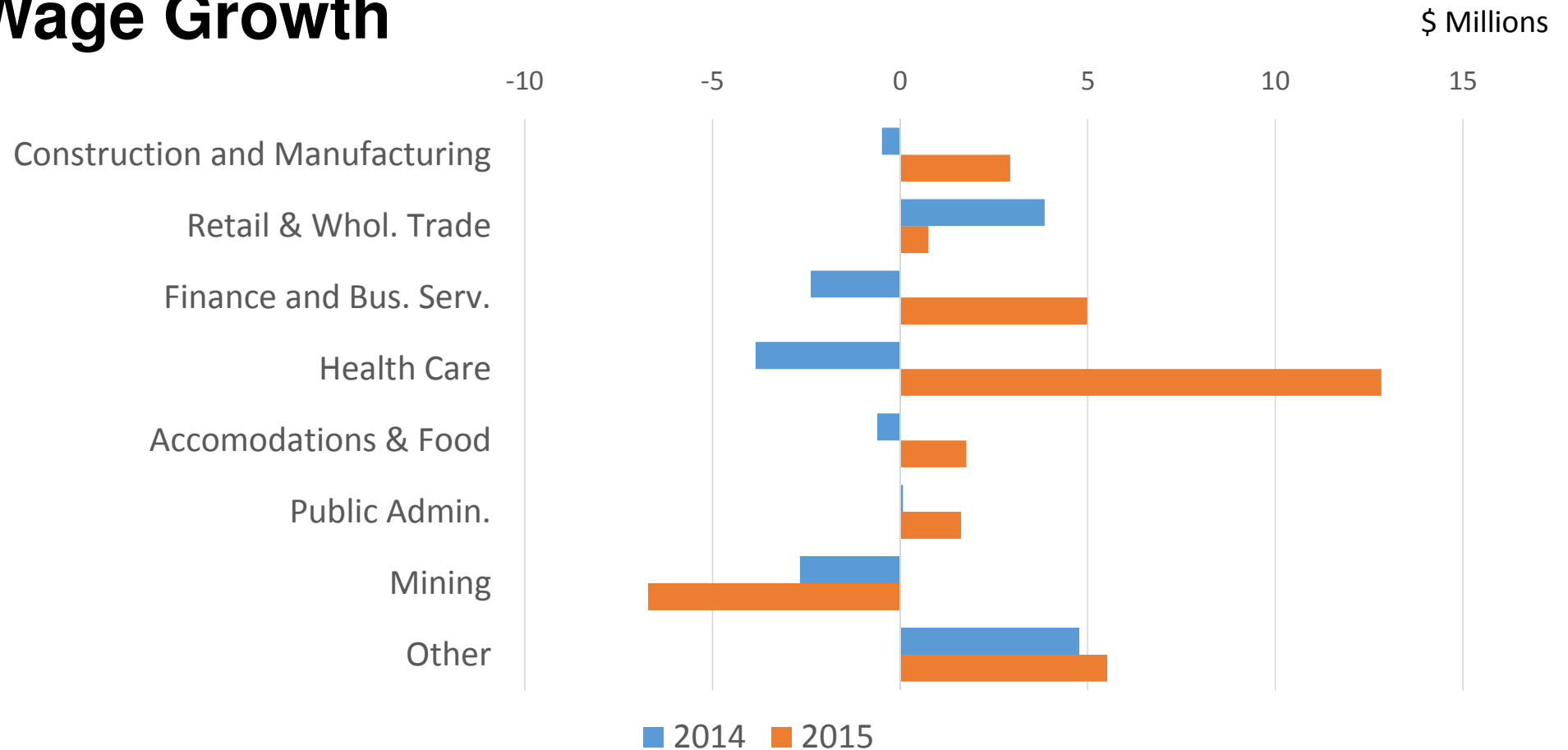
Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

What's Driving Growth in Missoula County: Wage Growth



Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

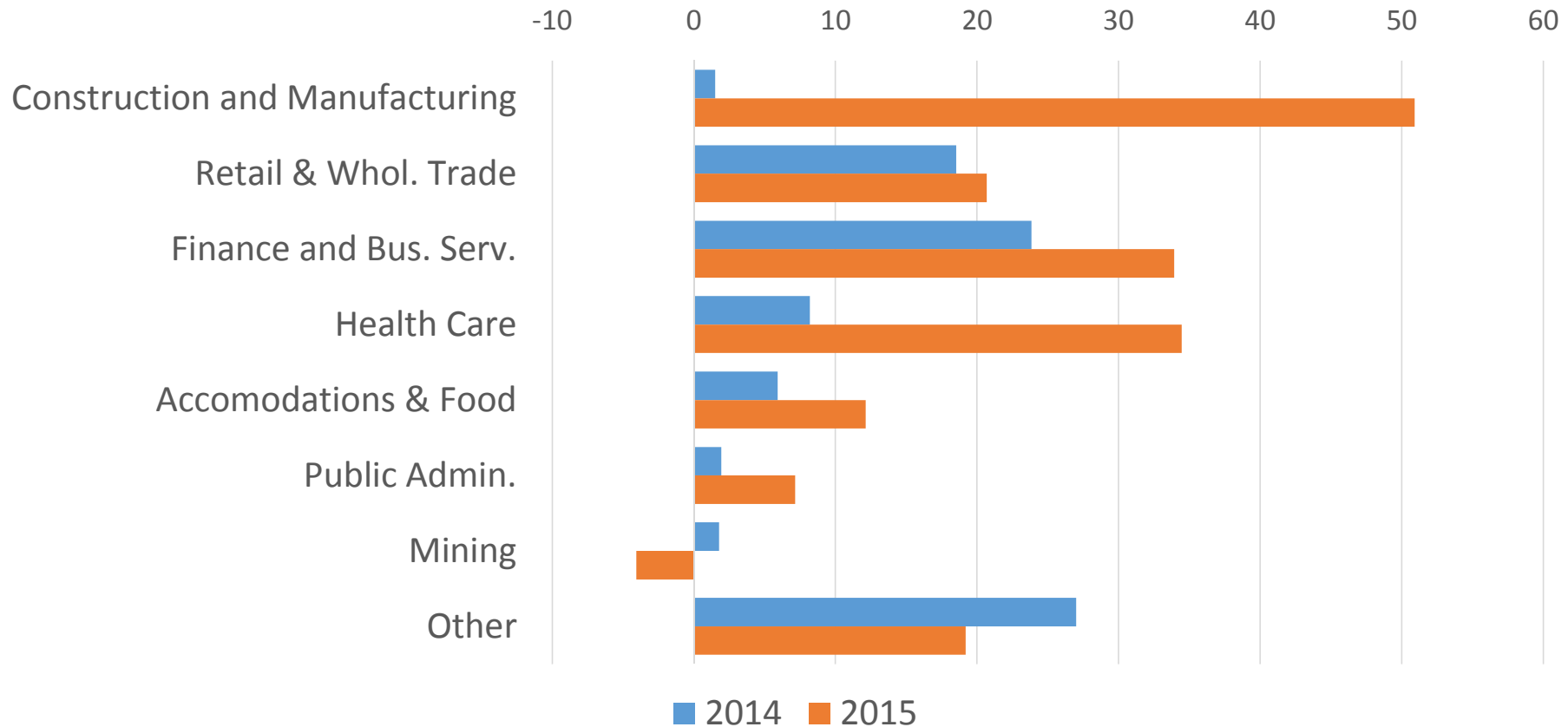
What's Driving Growth in Butte-Silver Bow: Wage Growth



Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

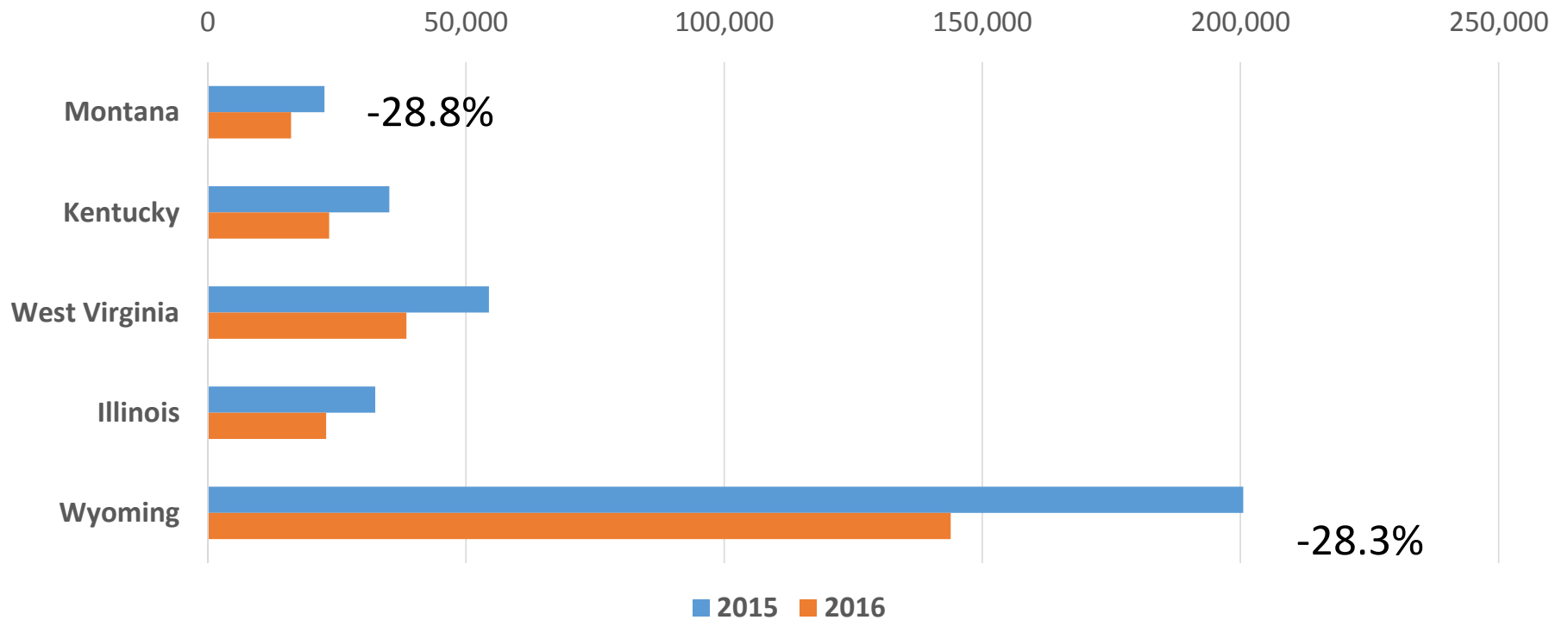
What's Driving Growth in Yellowstone County: Wage Growth

\$ Millions



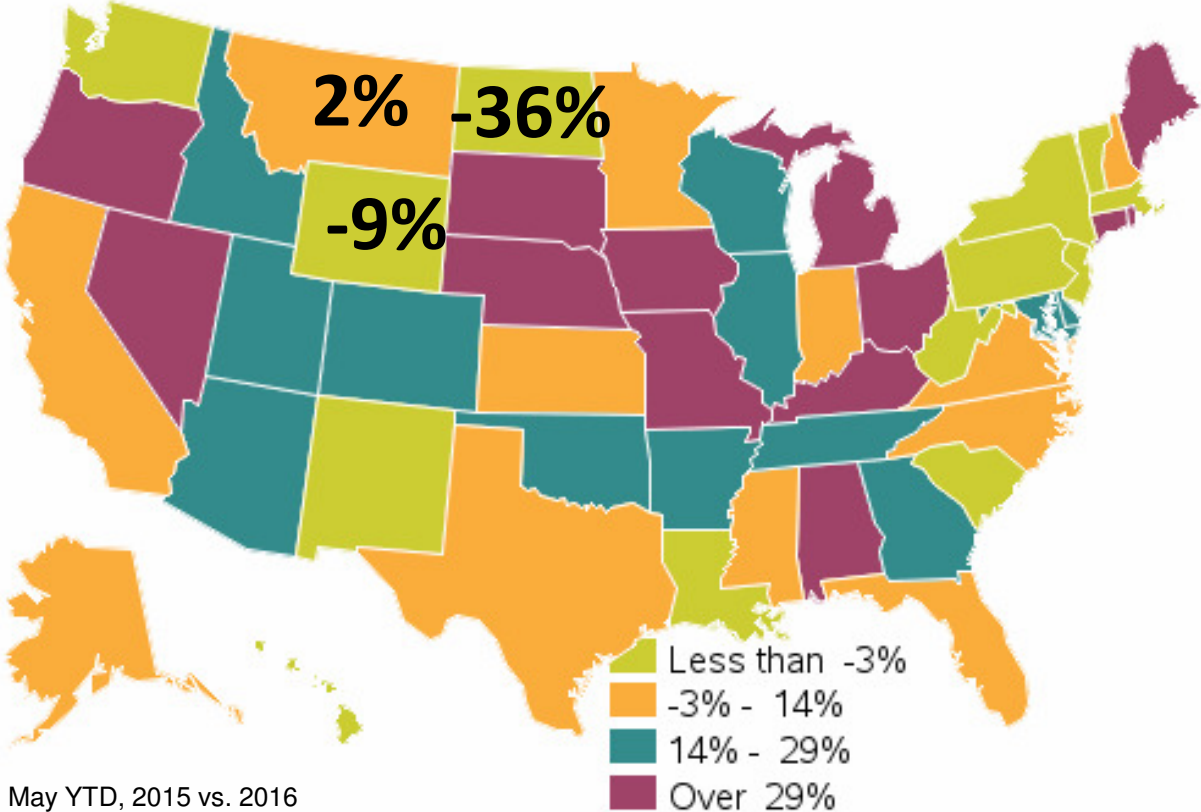
Growth in Inflation-Corrected Wages, Difference in Annual Totals, \$ Millions.
Source: U.S. Bureau of Labor Statistics, U.S. Bureau of Economic Analysis

Disastrous Year for the U.S. Coal Industry



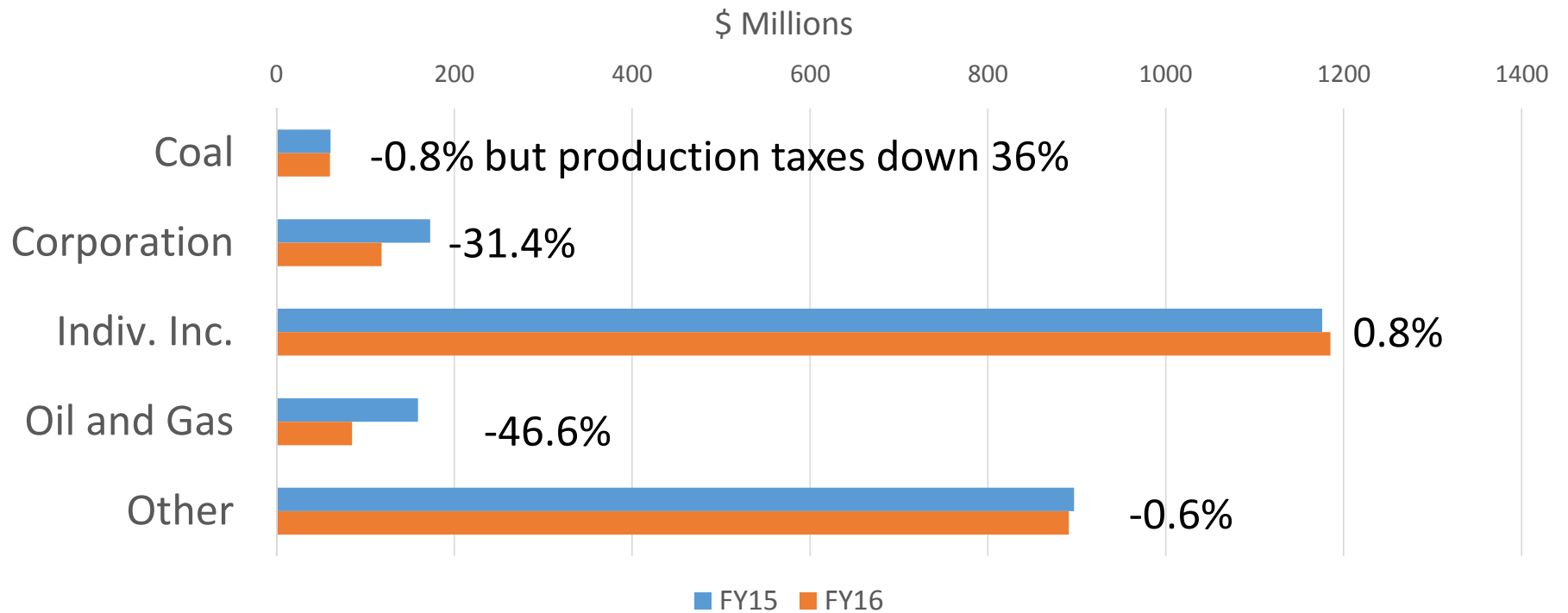
Coal Production, selected states, July year-to-date, 2015 and 2016 (thous. short tons)
Source: U.S. Energy Information Agency.

Housing Construction Growth Remains Modest



Percent change, building permits, May YTD, 2015 vs. 2016
Source: U.S. Bureau of Census.

A Weak Year for Montana Revenues



Montana Tax Receipts, Fiscal Year 2015 vs. 2016, Millions of Dollars.
Source: Montana Department of Revenue.

What's Ahead for Montana's Key Industries?

- Construction, manufacturing, and visitor spending continue to be bright spots
- Worst of the impacts for energy lie ahead
- Agriculture producers are looking at a different price environment
- Pressures on government spending have eased significantly
- 2016 will not be as good as 2015

What's Ahead for Flathead County?

- 9.3 % wage growth in 2015 was only second to Gallatin County among the most populous counties
- Construction, visitor spending (except Canada), health care and professional services saw strong growth
- 2016 has brought major setbacks to wood products companies
- Strong population trends (in-migration) have resumed
- Growth in the rest of the economy will offset wood products malaise

What's Ahead for Yellowstone County?

- Remained in the top tier of populous counties with 5.6 percent wage growth in 2015
- Trends in construction activity are masked by big projects at the oil refineries
- Consolidation and concentration in banking and health care have helped growth
- Impacts of energy malaise are still arriving
- Growth in 2016 will not be as good as 2015

What's Ahead for Gallatin County?

- Topped all the most populous counties in 2015 with 10.5 percent growth in wages
- Technology, construction, health care, visitor spending pacing growth
- Consolidation and concentration in banking, health care and retail have been key factors
- Wage growth not as impressive as job growth
- Home affordability, labor availability emerging as problems
- Gallatin County will continue to pace the state

What's Ahead for Lewis and Clark County?

- Has experienced wage growth lower than the state average since 2012
- State government growth has resumed after several years of stagnation
- Construction and health care were particularly weak in 2015
- Visitor spending, retail rising in importance
- Loosening federal budget restrictions will be of benefit
- We look for growth in 2016 about the same as 2015.

What's Ahead for Butte-Silver Bow?

- Commodity price slump has hit wages hard
- Gains in health care, manufacturing and temp help services helped economy bounce back in 2015 from a weak 2014 performance
- NorthWestern Energy and Montana Tech remain stabilizing forces
- Visitor spending, retail rising in importance
- We look for growth in 2016 about the same as 2015.

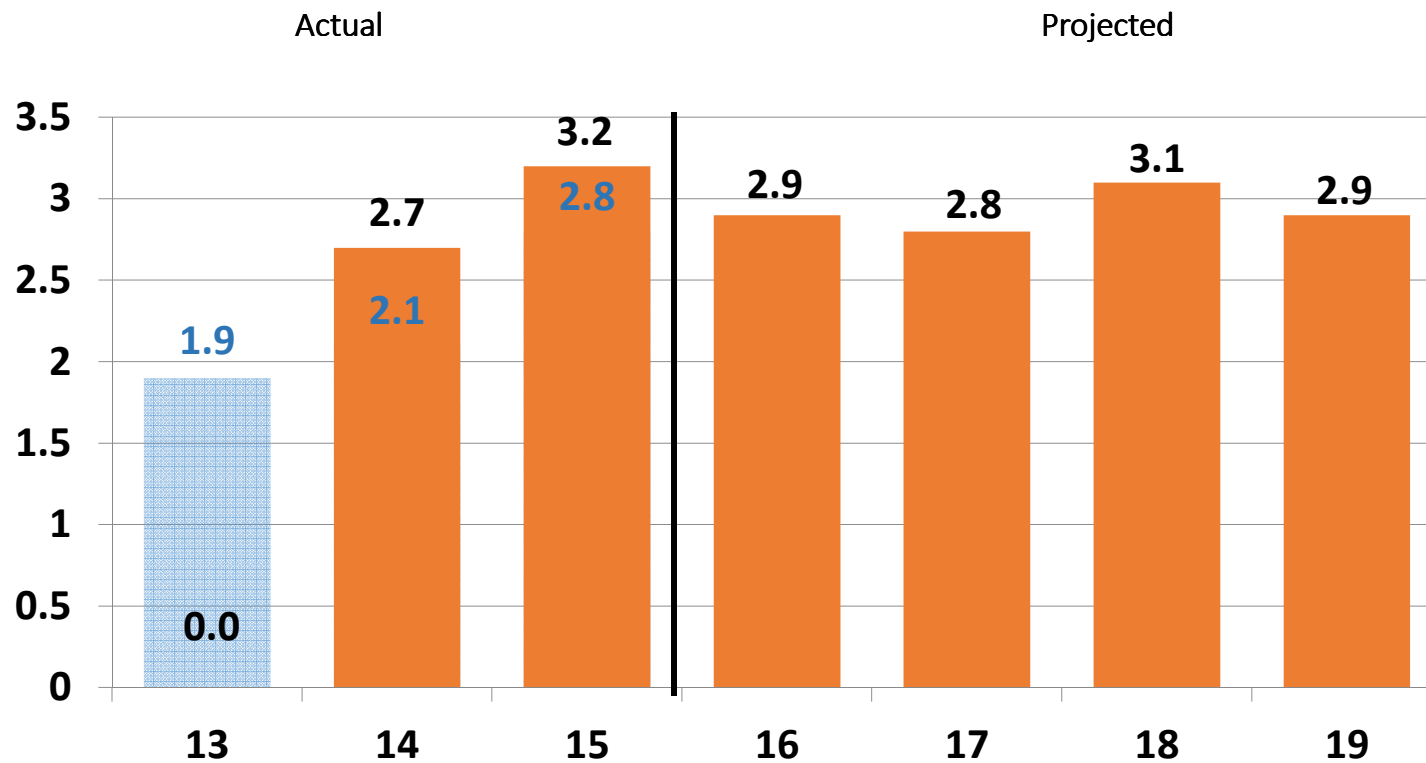
What's Ahead for Cascade County?

- Growth back on track after post-recession stagnation
- Manufacturing gains helped power the expansion
- Prospects for Health Care are brightening
- Consumer spending affected by changes in Malmstrom
- Impact of lower grain prices starting to show up
- Forecast of growth lower than state average remains on track

What's Ahead for Missoula County?

- Missoula's growth has accelerated recently
- Pickup in health care is primarily responsible, but growth has been broad-based
- Tech activity is registering in growth
- Wood products, MRL, University have been challenged
- Residential construction is underwhelming
- We expect Missoula to outperform the state average in 2016

Change in Nonfarm Earnings, Montana, 2013-2019



Growth in Inflation-Corrected Nonfarm Earnings, Percent, Actual and Forecast.

Source: U.S. Bureau of Economic Analysis and University of Montana Bureau of Business and Economic Research.

Montana's Economic Future

Labor Shortages Ahead?



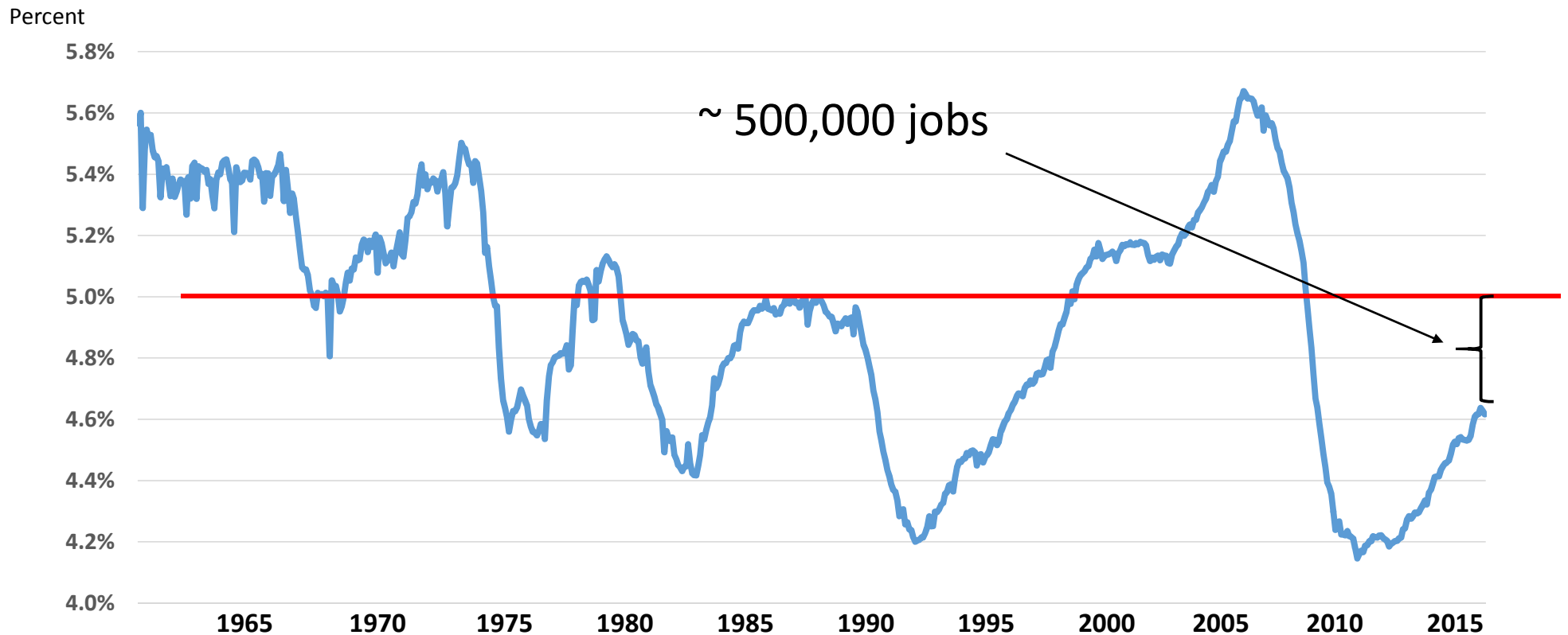
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Is Montana Running Out of Workers?

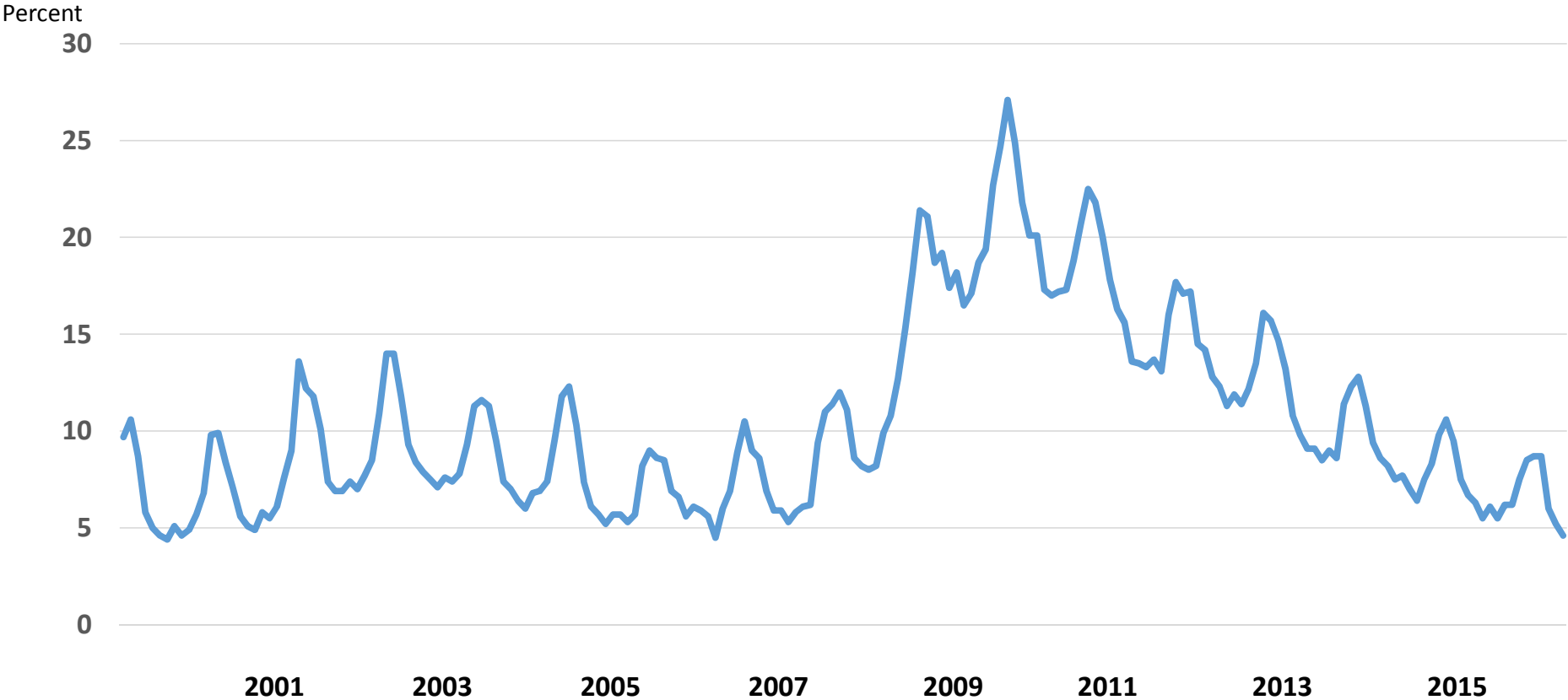
- Talent is always in short supply
- Construction and Health Care are two pressure points
- “Straight line” forecasts are misleading
- Migration, technology and wage adjustments will be part of the solution

U.S. Construction Employment Share is Low in Comparison With History



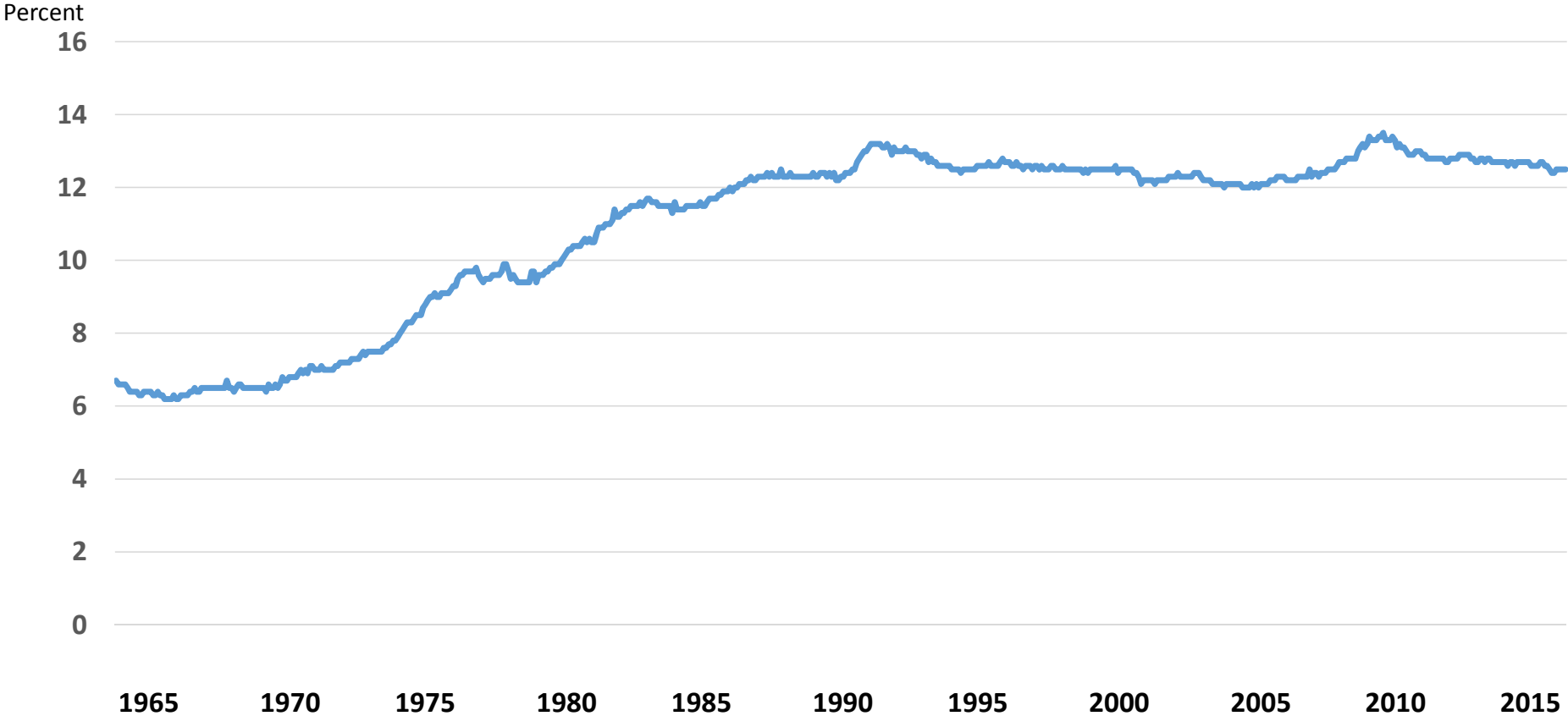
U.S. Construction Employment as a Percentage of Total Employment
Source: Federal Reserve Bank of St. Louis.

Construction Unemployment Rates Near an All Time Low



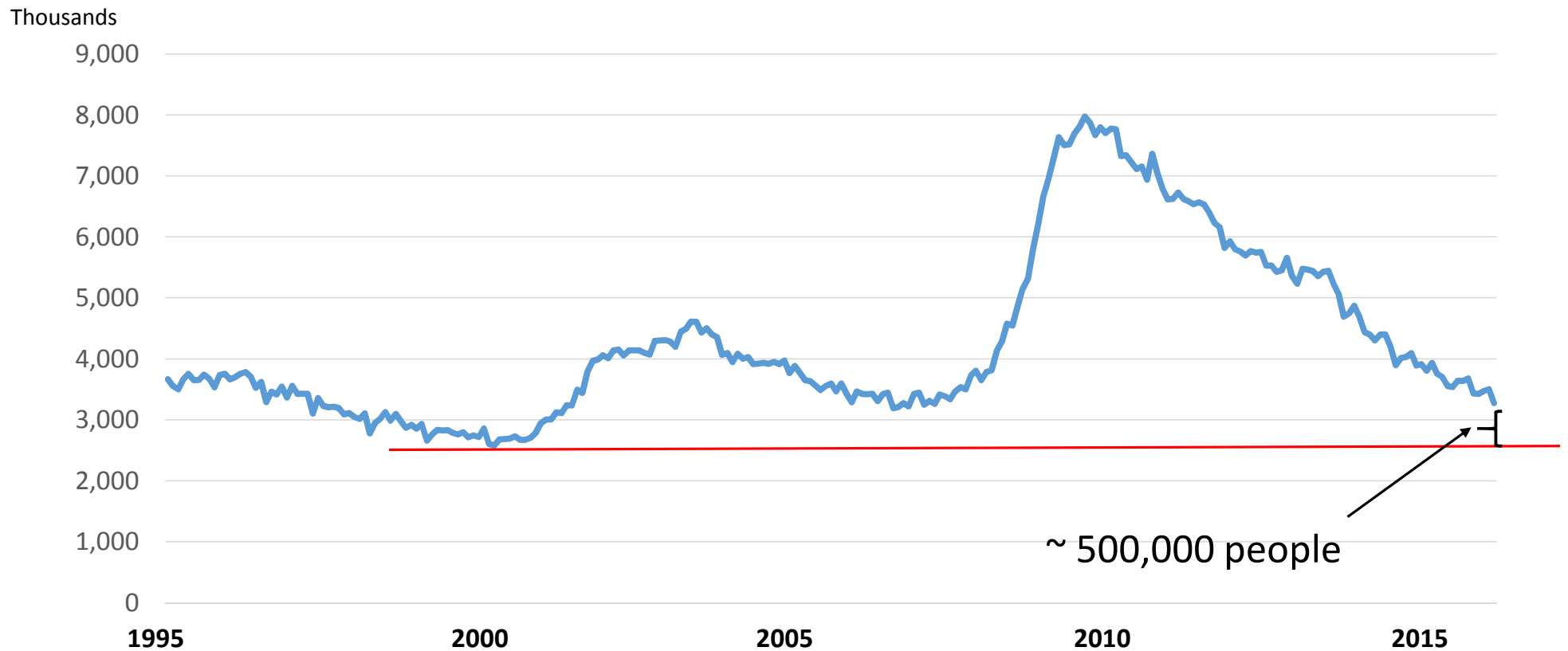
U.S. Unemployment Rate, Construction Industry, Percent, Not Seasonally Adjusted.
Source: Federal Reserve Bank of St. Louis.

Construction Workforce Remains Male Dominated



U.S. Ratio of Women Employees to All Employees, Construction, Percent, Seasonally Adjusted.
Source: Federal Reserve Bank of St. Louis.

Pool of Unemployed Men Aged 55 and Under is Shrinking



U.S. Unemployed Males Aged 55 and Younger, Thousands.
Source: Federal Reserve Bank of St. Louis.

Connecting the Dots

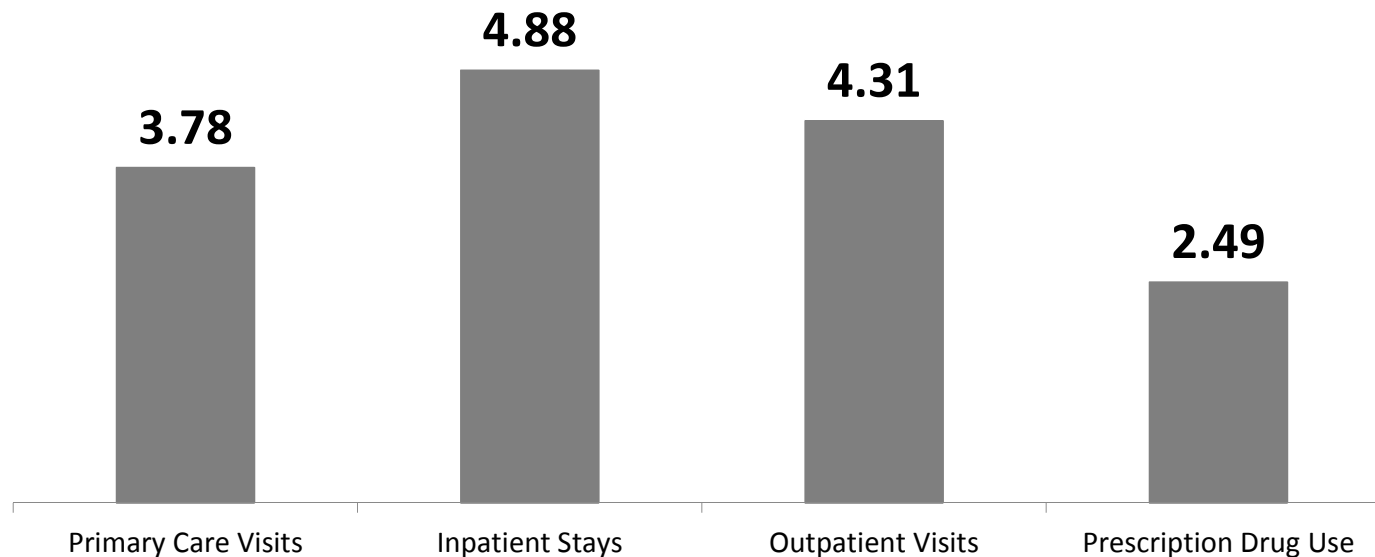
- Slack does not exist to add 500,000 more construction jobs
- All of the available male workforce 55 and under would have to go into construction (an impossible outcome) for this to occur
- Construction employers will bid away workers from other industries over time (e.g., manufacturing, agriculture)
- Workers will migrate from slower growing regions to the south and west
- Foreign immigration has historically been important (28 percent of construction workers are Hispanic)
- Rising construction costs may choke off some growth

Health Care's Growth Engine Keeps Firing

- Aging populations
 - Montana's 65+ population will grow from 17 to 23 percent in 15 years
 - Aging will add \$2.3 billion to health care spending (31%) by 2030
- Health innovation
- Insurance expansion

More people with insurance leads to more health care use.

Expected percent increase in Montana health care use attributable to ACA insurance expansion (from Glied and Ma (2015))



Montana will need more health care workers.

Projected change in employment and total job openings for health care occupations by education required

Education Required	2014 Employment	Projected emp. increase through 2024	Job openings due to growth and replacement	Projected increase as % of 2014 emp.	Projected openings as % of 2014 emp.
Total	40,100	6,727	15,557	17%	39%
Doctoral/ Professional	5,390	844	2,177	16%	40%
Master's	1,850	509	933	28%	50%
Bachelor's	10,890	1,675	4,190	15%	38%
Associate's	3,430	593	1,241	17%	36%
Postsecondary training	13,930	2,406	5,470	17%	39%
High School	4,610	701	1,547	15%	34%

Filling Health Care's Pipeline

- Figures may understate Montana's health workforce needs (we have one of the oldest doctor populations in the nation)
- MUS institutions produce about 1,200 health graduates (at all degree levels) per year currently
- Rising labor costs will spur technological innovations (e.g., telemedicine)

Questions?