Wyoming Economic Indicators

WYOGOV

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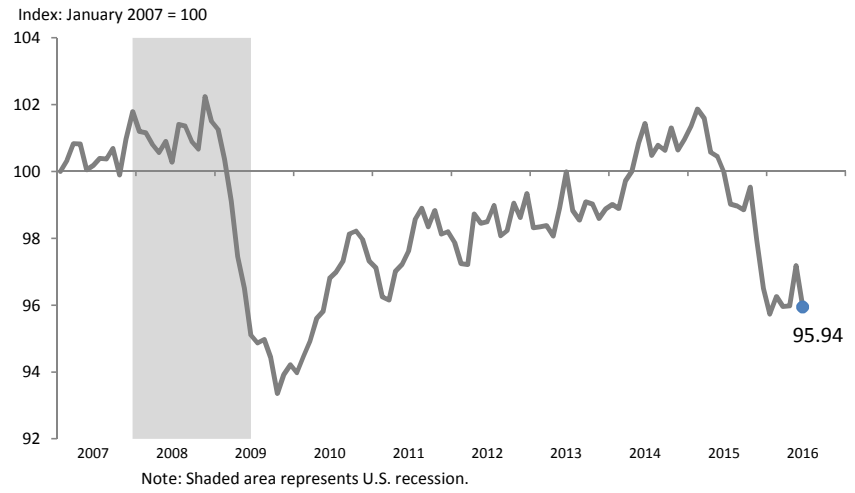
Chart 1: Wyoming Business-Cycle Index as of June 2016



Note: Shaded area represents U.S. recession.

SUMMARY: The Wyoming Business-Cycle Index (WBCI) registered an index value of 95.94 in June 2016 (see Chart 1), a decline compared to the May 2016 value of 97.18 and also a decline by comparison to the June 2015 value of 99.99.

The January through March period suggested that the WBCI had bottomed out and then started to improve over the next three months with the June index falling by 4.05 percent compared to a year ago (see Chart 2).

As Chart 3 demonstrates, only one of the four components of the WBCI was positive in June while the other three were negative. There was an increase in visits to the state's national parks while the state's unemployment rate worsened, in year-over-year comparisons. The private wages component fell with two of its three sub-components, private jobs and hours worked, decreasing while the third sub-component, hourly wages, showed a slight increase. The last component, the state's collection of the 4 percent sales and use tax associated with the mining sector, recorded a decrease of 2.01 percent.

Chart 2: Change in Business-Cycle Index — Last 6 Months

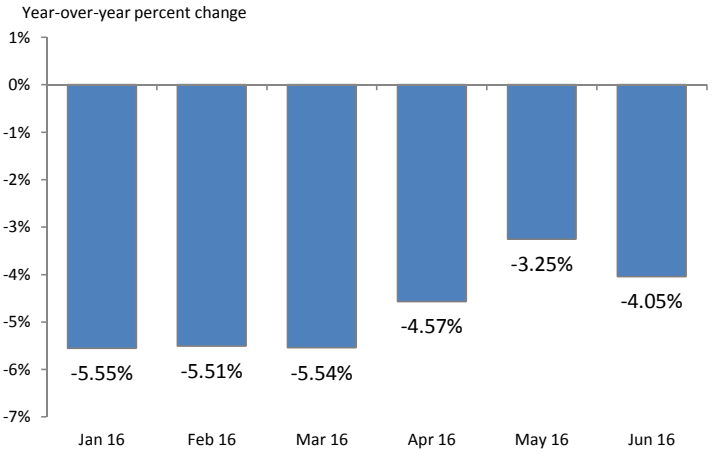
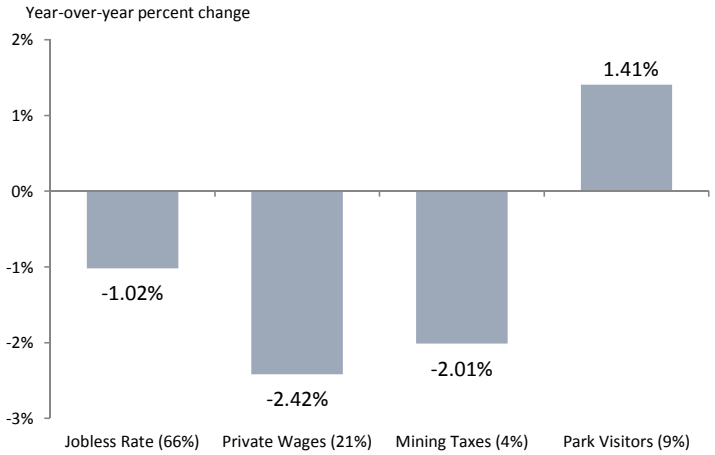
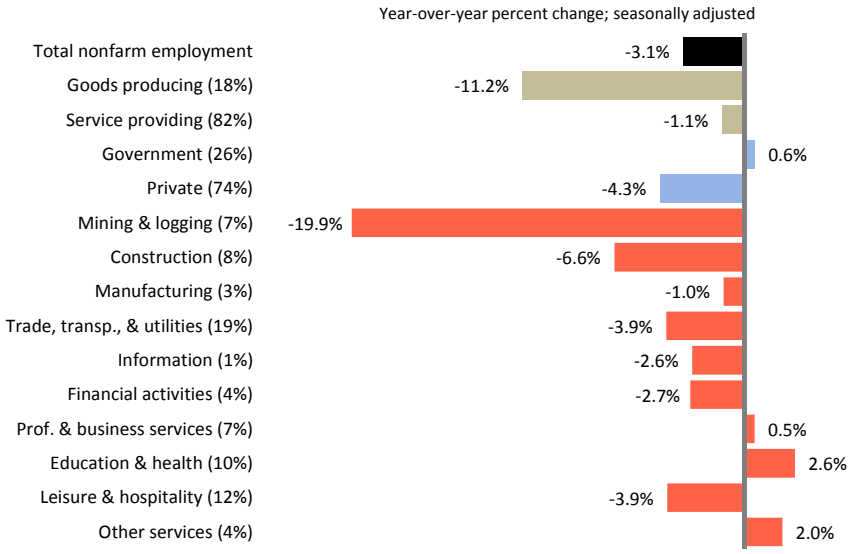


Chart 3: Component Changes in the Index — June 2016



Note: Values in parentheses are the respective weights of each component.

Chart 4: June 2016 Employment Growth



Note: Values in parentheses represent share of total employment.

The number of jobs in Wyoming decreased at a 3.1 percent pace (-8,900 jobs) in June in a year ago comparison as seen in Chart 4. Education & health (+700), other services (+200), and professional & business services (+100) each added jobs in June while mining incurred the largest decline (-4,700 jobs).

NOTE: The Wyoming Business-Cycle Index unites four state-level indicators to sum up current economic conditions in a single number. The indicators consist of **(1) the state's monthly unemployment rate**, **(2) private sector wages**, estimated by multiplying the total number of private sector workers in Wyoming each month by the average hours worked per week and by the average hourly wage, **(3) monthly sales and use tax collections related to the mining sector**, and **(4) monthly national park recreation visits**. All data is seasonally adjusted; all dollar amounts are inflation adjusted.

SOURCES: **Business-cycle index**: Economic Analysis Division; **private sector wages** and **unemployment rate**: U.S. Bureau of Labor Statistics; **mining sales and use taxes**: WY Dept. of Revenue; **national park visits**: National Park Service Visitor Use Statistics.

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Wyoming Business-Cycle Index Values			
			YOY
Year	Month	Index	Change
2007	Jan	100.00	
2007	Feb	100.33	
2007	Mar	100.83	
2007	Apr	100.82	
2007	May	100.04	
2007	Jun	100.18	
2007	Jul	100.39	
2007	Aug	100.38	
2007	Sep	100.69	
2007	Oct	99.89	
2007	Nov	100.97	
2007	Dec	101.79	
2008	Jan	101.20	1.20%
2008	Feb	101.16	0.83%
2008	Mar	100.81	-0.02%
2008	Apr	100.57	-0.25%
2008	May	100.90	0.86%
2008	Jun	100.28	0.10%
2008	Jul	101.40	1.01%
2008	Aug	101.36	0.98%
2008	Sep	100.89	0.20%
2008	Oct	100.67	0.78%
2008	Nov	102.24	1.26%
2008	Dec	101.50	-0.29%
2009	Jan	101.25	0.06%
2009	Feb	100.36	-0.79%
2009	Mar	99.11	-1.69%
2009	Apr	97.46	-3.09%
2009	May	96.50	-4.36%
2009	Jun	95.11	-5.16%
2009	Jul	94.86	-6.45%
2009	Aug	94.97	-6.30%
2009	Sep	94.43	-6.40%
2009	Oct	93.35	-7.27%
2009	Nov	93.92	-8.14%
2009	Dec	94.22	-7.17%
2010	Jan	93.98	-7.19%
2010	Feb	94.48	-5.86%
2010	Mar	94.92	-4.23%
2010	Apr	95.60	-1.90%
2010	May	95.82	-0.71%
2010	Jun	96.81	1.79%
2010	Jul	97.00	2.25%
2010	Aug	97.30	2.45%
2010	Sep	98.13	3.92%
2010	Oct	98.22	5.21%
2010	Nov	97.97	4.32%
2010	Dec	97.32	3.29%
2011	Jan	97.11	3.34%
2011	Feb	96.24	1.87%
2011	Mar	96.15	1.30%
2011	Apr	97.01	1.48%
2011	May	97.22	1.46%
2011	Jun	97.62	0.83%
2011	Jul	98.57	1.63%
2011	Aug	98.90	1.64%
2011	Sep	98.34	0.21%
2011	Oct	98.83	0.62%
2011	Nov	98.12	0.15%
2011	Dec	98.20	0.90%
2012	Jan	97.87	0.78%
2012	Feb	97.24	1.04%
2012	Mar	97.21	1.10%
2012	Apr	98.72	1.76%
2012	May	98.45	1.27%
2012	Jun	98.50	0.90%
2012	Jul	98.98	0.42%
2012	Aug	98.07	-0.84%
2012	Sep	98.22	-0.12%
2012	Oct	99.05	0.22%
2012	Nov	98.62	0.51%
2012	Dec	99.33	1.16%

Wyoming Business-Cycle Index Values			
			YOY
Year	Month	Index	Change
2013	Jan	98.31	0.45%
2013	Feb	98.35	1.13%
2013	Mar	98.38	1.21%
2013	Apr	98.06	-0.67%
2013	May	98.90	0.46%
2013	Jun	99.99	1.52%
2013	Jul	98.83	-0.15%
2013	Aug	98.54	0.48%
2013	Sep	99.09	0.88%
2013	Oct	99.03	-0.03%
2013	Nov	98.59	-0.03%
2013	Dec	98.87	-0.46%
2014	Jan	99.01	0.71%
2014	Feb	98.89	0.55%
2014	Mar	99.72	1.36%
2014	Apr	100.00	1.98%
2014	May	100.85	1.97%
2014	Jun	101.43	1.44%
2014	Jul	100.48	1.66%
2014	Aug	100.79	2.28%
2014	Sep	100.63	1.56%
2014	Oct	101.30	2.29%
2014	Nov	100.64	2.08%
2014	Dec	100.95	2.10%
2015	Jan	101.36	2.37%
2015	Feb	101.87	3.01%
2015	Mar	101.59	1.87%
2015	Apr	100.57	0.57%
2015	May	100.45	-0.39%
2015	Jun	99.99	-1.42%
2015	Jul	99.03	-1.44%
2015	Aug	98.97	-1.81%
2015	Sep	98.85	-1.77%
2015	Oct	99.53	-1.75%
2015	Nov	97.95	-2.67%
2015	Dec	96.49	-4.42%
2016	Jan	95.73	-5.55%
2016	Feb	96.25	-5.51%
2016	Mar	95.96	-5.54%
2016	Apr	95.98	-4.57%
2016	May	97.18	-3.25%
2016	Jun	95.94	-4.05%
2016	Jul		
2016	Aug		
2016	Sep		
2016	Oct		
2016	Nov		
2016	Dec		

Wyoming Business-Cycle Index Addendum

The Wyoming Business-Cycle Index (WBCI) is a coincident economic indicator and is designed to provide a current assessment of the state's economy. There are four main components of the WBCI. Two of these components, unemployment rate and private sector weekly wages, are included to capture aggregate economic activity for Wyoming. The third component, mining taxes, gauges economic activity related to mineral production in the state while the fourth component, national park visits, serves as a proxy for the impact of tourism.

Unemployment Rate: The first component of the WBCI is the unemployment rate. This statistic measures the percentage of people in Wyoming who want to work but don't have jobs. Within the WBCI model, the employment rate statistic (1.00 or 100% minus the unemployment rate) is indexed rather than the unemployment rate because an increase in the employment rate, similar to increases in private wages, mining taxes, and park visits are considered to be positive impacts on the economy. This statistic is available monthly, in seasonally adjusted form, from the U.S. Bureau of Labor Statistics. It is included as a component because it provides an assessment of the state's overall well-being.

Private Sector Weekly Wages: The second component of the WBCI is total private sector weekly wages. This component is estimated by multiplying the number of private sector employees in Wyoming each month by the average weekly hours and then multiplying this product by the average hourly earnings to achieve a dollar value of private sector employees in the state. Each of these statistics are available monthly from the U.S. Bureau of Labor Statistics. The data are seasonally adjusted and all dollar amounts have been converted to constant dollars using the Consumer Price Index – All Urban Consumers database. This indicator is included because it is another broad-based measure of the state's economic health. Since earnings account for about 67 percent of Wyoming's personal income, this component serves as a partial estimate of this income statistic.

Mining Taxes: The third component of the WBCI is the State of Wyoming's sales and use tax collections attributed to the mining sector. Because sales and use tax collections received by the state for a given month represent transactions that took place 4 to 6 weeks prior, the data is lagged one month for use in the WBCI model. This statistic is available monthly from the State of Wyoming's Department of Revenue. The data are seasonally adjusted and all dollar amounts have been converted to constant dollars using the Consumer Price Index – All Urban Consumers database. This indicator is included because it represents mining activity which is an important part of the Wyoming economy. As of 2014, almost 36 percent of Wyoming's annual GDP was attributed to the mining industry.

National Park Recreation Visits: The fourth component of the WBCI is national park recreation visits. This statistic is compiled by the National Park Service Public Use Statistics Office and is available monthly. The park visits statistic includes recreational visits to all national sites located in Wyoming including Yellowstone and Grand Teton National Parks, Devils Tower and Fossil Buttes National Monuments, Ft. Laramie National Historic Site, Bighorn Recreation Area, and the John D. Rockefeller, Jr. Memorial Parkway. The data are seasonally adjusted. Park visits are included because they capture another critical part of Wyoming's economy – tourism.

Methodology: After the data for each component are seasonally adjusted, each series is standardized starting in January 2007 resulting in a value of 100.00 for each component and the WBCI in that month. As the components change from month to month, so does the value of the WBCI. Monthly index values for each of the components not including the unemployment rate are then smoothed using a weighted moving average. The unemployment rate is excluded from this treatment because the data are relatively stable to begin with. Next, the standard deviation of each component's monthly standardized values is determined followed by the calculation of the inverse of each component's standard deviation. Finally, the individual inverse standard deviations are standardized resulting in weights that sum to 1.00. The rationale for this weighting approach is the same used by the U.S. Conference Board implying that those components that are more stable over time will generate a smaller standard deviation but a larger inverse standard deviation, and thus, a larger weight. A substantial shift in a traditionally stable data series would provide a more compelling signal of economic change than a large shift in a series that commonly has large shifts.

Prepared by: Economic Analysis Division, Dept. of Administration & Information, WY State Government.