

NORTH CENTRAL WEST VIRGINIA



ECONOMIC OUTLOOK 2017-2021

North Central West Virginia Economic Outlook

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Executive Summary

North Central West Virginia remains one of the state's strongest economic regions, as evidenced by employment and numerous other indicators. In this report, we present a detailed discussion of recent trends in the region's economy along with our forecast for the likely path of economic activity over the next five years.

Several key facts behind the recent economic performance of North Central West Virginia are as follows:

- **North Central WV employers have added more than 6,000 jobs since 2010, growth of around 6 percent.** However, job growth has been relatively mild since early-2013.
- **Monongalia County has shown the strongest economic growth** in recent years among the region's four counties. Marion is the only county in the region to suffer significant job loss over the past decade.
- **Most major industrial sectors have added jobs at rates that exceed statewide averages in recent years.** Strong performance has been observed in sectors such as healthcare, and the consumer-driven sectors of retail trade and leisure and hospitality.
- **Not all sectors have added a significant number of jobs over the past few years.** Employment within natural resources and mining has declined as a result of falling coal mine employment and falling natural gas employment more recently. The public sector has seen payrolls remain flat due to state and federal budget concerns.
- **Unemployment in the region is substantially lower than the statewide average.**
- **Labor force participation is higher in the area compared to the state overall.** However the region lags the nation.
- **Per capita personal income has grown at an average annual rate over the past five years that slightly exceeds that of both the state and nation.**
- North Central WV has posted the second-largest increase in population of any West Virginia region, lagging only the Eastern Panhandle. Since 2000, the region's resident population increased by more than

27,000, whereas the remainder of the state (outside of the Eastern Panhandle) lost residents. The area's population is younger and more highly educated on average than the overall state population.

Our forecast calls for a pickup in growth in North Central WV compared to the last three years or so. Key aspects of our North Central forecast are as follows:

- **We expect employment to grow at an annual rate of 0.7 percent per year in North Central WV over the next five years.** This rate is higher than expected growth for West Virginia overall (0.6 percent) but lags expected growth nationally (0.9 percent).
- **Monongalia County is expected to exhibit the highest rate of job growth among the region's four counties in coming years.** Harrison County also shows potential for stronger growth.
- **The professional and business services, education and health, and construction sectors are expected to produce above-average rates of job growth going forward.**
- **Unemployment is expected to ease slightly lower in coming years and will likely remain lower than the statewide average throughout the outlook period.**
- **Real per capita personal income is expected to increase at an annual average rate of 2.2 percent over the next five years.** This rate of growth is better than the nation and West Virginia as a whole.
- **The region's population is expected to continue to grow in coming years.** Most of the expected growth will be in Monongalia County.

Recent Economic Performance

While many of the state’s regions have faced some degree of economic turbulence, the economy of North Central West Virginia¹ has proven to be one of the state’s steadiest-performing economies during the past several years. Following a mild, albeit prolonged, episode of job losses during the Great Recession, payroll levels in the four-county area have increased nearly 6 percent (more than 6,000 jobs) since early-2010. Furthermore, while the region’s job gains stalled out in 2015 and through the first half of 2016, it has still managed to outperform the balance of the state, which has seen payroll levels deteriorate since the beginning of 2012 and have reached levels last seen since late-2003.²

PERFORMANCE BY COUNTY Monongalia County serves as the functional epicenter of the North Central West Virginia Region’s economy, due in large part to the presence of West Virginia University. With its roughly 29,000 students and 6,500 faculty and staff, WVU and its associated entities typically act as a stabilizing force for the region. In recent years, however, several large-scale construction and renovation projects across the university have enabled it to provide a boost to the region. In addition to WVU’s construction efforts, Monongalia County has also benefited from newly-added infrastructure and increased commercial development in and around the University Town Centre along I-79. Overall, aside from a soft stretch between early-2013 and mid-2014, Monongalia County has managed to grow fairly steadily since 2010 and local employers have added nearly 2,000 jobs (3.6 percent) over the last two years alone.

Harrison County, which contains nearly one-third of the region’s jobs, was also a steady performer for the North Central Region’s economy, but conditions have weakened since the end of 2014. Indeed, after registering a net gain of nearly 2,500 jobs between 2010 and

2014, total payrolls in the county have declined by nearly 1,000 on net in the past six quarters. Much of the county’s softer performance in recent quarters can be traced back to persistently-low natural gas prices, which has negatively affected a range of industries from gas exploration to business support services.

After a volatile performance between 2010 and 2013, Preston County’s employment situation has improved measurably and total payrolls in the county have

Figure 1: Total Employment

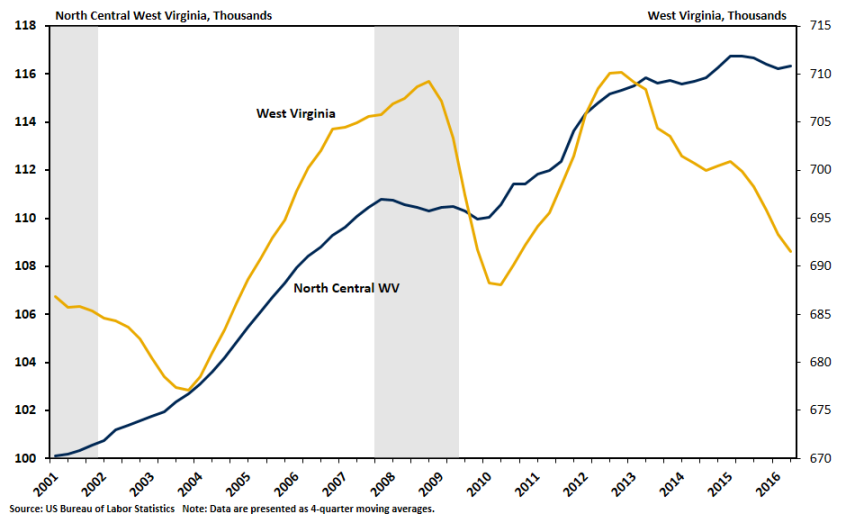
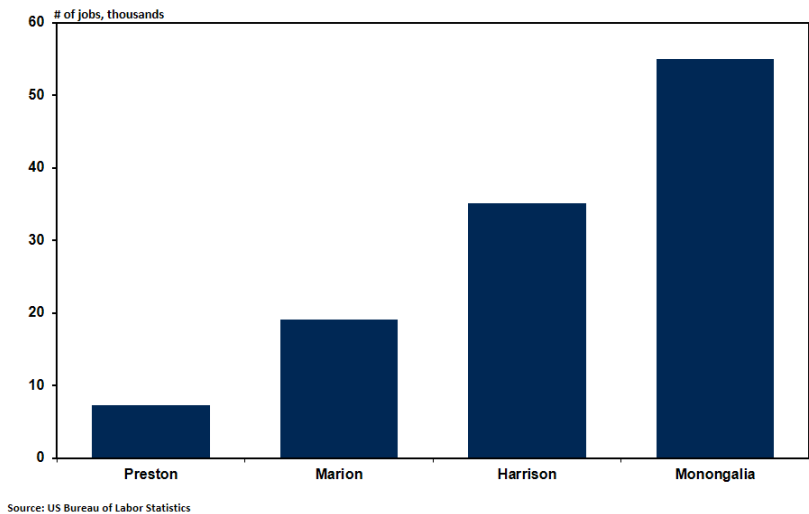


Figure 2: Total Employment by County (2015)



¹ For the purposes of this report, North-Central West Virginia consists of Harrison, Marion, Monongalia and Preston counties.

² Sources for historical information are noted in each figure.

surpassed their pre-recession peak. Unfortunately, Marion County remains the weakest of the region’s four counties, as job losses across several key sectors have caused employment to drop nearly 11 percent since mid-2012 and fall to its lowest level since 1998.

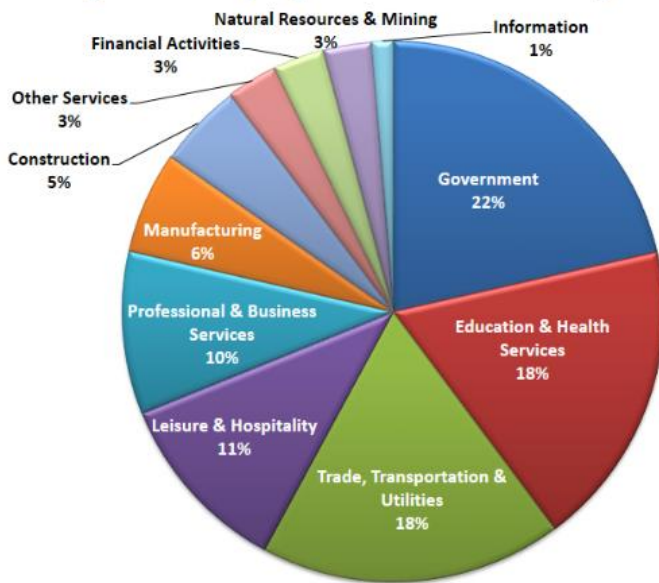
PUBLIC SECTOR The public sector is a major feature of North Central West Virginia’s economic landscape. In addition to the presence of public higher education institutions, namely WVU and Fairmont State University, several major federal installations can be found in the area, including the FBI’s Criminal Justice Information Services Division, Department of Energy’s National Energy Technology Laboratory, Louis A. Johnson VA Medical Center, National Institute for Occupational Safety and Health (NIOSH) and US Bureau of Prisons. Overall, government employment combined at the federal, state and local levels accounts for just above 1 in 5 jobs (22 percent) locally. In addition to the protracted problems for the West Virginia state budget, public sector employment in the region has also been under pressure in recent years due to sequestration and generally slow growth in federal spending.

EDUCATION AND HEALTH Education and healthcare services also represents another linchpin to the North Central Region’s economy. J.W. Ruby Memorial Hospital and the Mon General Hospital System employ more than 8,000 people in Monongalia County alone and WVU Medicine remains in the midst of a series of expansions, including the 114-bed tower at Ruby Memorial and new outpatient care facilities at University Town Centre, and mergers with other hospitals operating in the region and elsewhere in the state. Mon General has undertaken several projects during the past several years, including the recent completion of the Mon Health Medical Park adjacent to Route 705 in Morgantown. The sector as a whole has added roughly 2,000 jobs on net since the beginning of 2010, with most of these gains occurring in Monongalia and Harrison counties.

CONSUMER SECTOR Given the headwinds caused by job losses in several high-paying industries, consumer spending in many parts of West Virginia has been under significant pressure. In addition, a significant portion of the state’s leisure and hospitality sector faces much greater competition for spending by out-of-state visitors as a result of new gaming venues in Maryland, Ohio, and Pennsylvania. Despite these broader statewide trends, consumer-oriented sectors operating in the North Central Region have recorded solid increases in employment during the last several years thanks to a healthier labor market and strong income growth. Gains have been realized in each of the region’s four counties, but the University Town Centre and Suncrest Towne Centre in Monongalia County along with Charles Pointe and White Oaks in Harrison County have emerged as magnets for consumer-oriented development activity in recent years.

CONSTRUCTION With the start and completion of numerous large-scale construction projects throughout the region, construction payrolls have been quite volatile in North Central West Virginia for the past several years. A significant portion of the region’s construction activity has been centered in Monongalia County and much of it has been associated with WVU, WVU Medicine and Mon Health System. In addition to the aforementioned healthcare-related projects, recently-completed or projects underway include the University Park and UPlace complexes, Evansdale Crossing, the College of Physical Activity and Sports Sciences building, as well as new buildings for

Figure 3: Employment Distribution by Sector



Source: US Bureau of Labor Statistics. Data are for 2015.

engineering and agricultural sciences. Approximately \$100 million in renovations and upgrades are being performed on several athletic department facilities.

Aside from the WVU-related and healthcare construction activity, the University Town Centre, Suncrest Towne Centre and Fort Pierpont developments have accounted for a sizable portion of the region’s commercial construction activity, but the build-out of the Charles Pointe and White Oaks developments in Harrison County have also spurred growth in construction payrolls in recent years. Major projects such as the addition of Exit 153 on I-79 in Monongalia County and the extension of White Oaks Boulevard not only bolster the region’s transportation access and infrastructure, but have likely also set the stage for future development along the I-79 corridor.

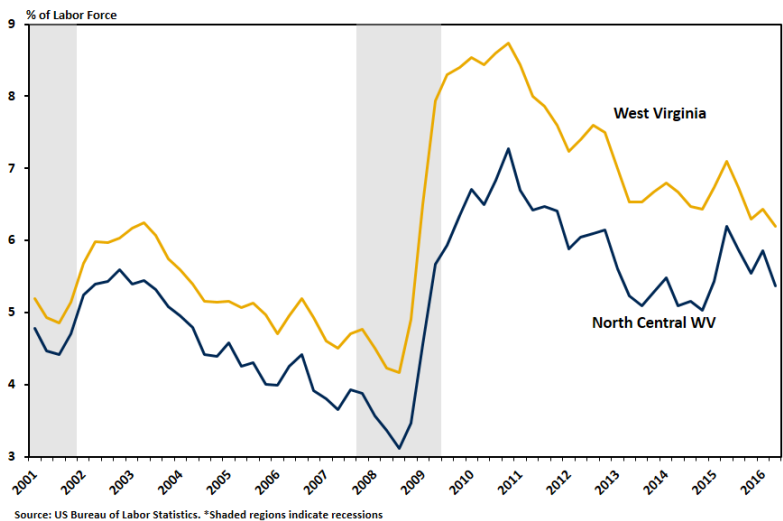
NATURAL RESOURCES & MINING Although the natural resources and mining sector accounts for a relatively small share of jobs in the region, it has had a disproportionate impact on the North Central Region’s performance, due in large part to the shale gas boom. Harrison County has traditionally been among the state’s top producers of natural gas, but even as production volumes have not increased as much compared to Doddridge, Ritchie, Tyler and Wetzel counties, many of the drilling and field support service firms operating in these outlying counties are headquartered in and around the Clarksburg area. Overall, the oil and gas industry now employs roughly double the number of workers that it did as recently as early-2010, not including contract labor. Unfortunately, the industry has shrunken in size over the past 18 months as the protracted low price environment has led to a sharp reduction in rig counts, new exploration and capital spending activity.

In addition to the region’s natural gas assets, North Central West Virginia contains an appreciable amount of coal production, primarily at Murray Energy operations located in Monongalia and Marion counties. During 2015, mines in the region produced nearly 20 million short tons of coal, or a 12 percent drop from the previous calendar year. Unfortunately, the region’s coal production continued to fall through the first half of 2016 as warmer-than-normal winter weather combined with very low prices for natural gas pushed demand for coal-

fired electricity generation to extremely low levels. Several of the mines operating in the region have either idled production or eliminated shifts, resulting in the loss of more than 1,500 coal mining jobs in the area since mid-2014. For calendar year 2016 as a whole, coal output from area mining operations will cause production to fall to approximately 15 million tons.

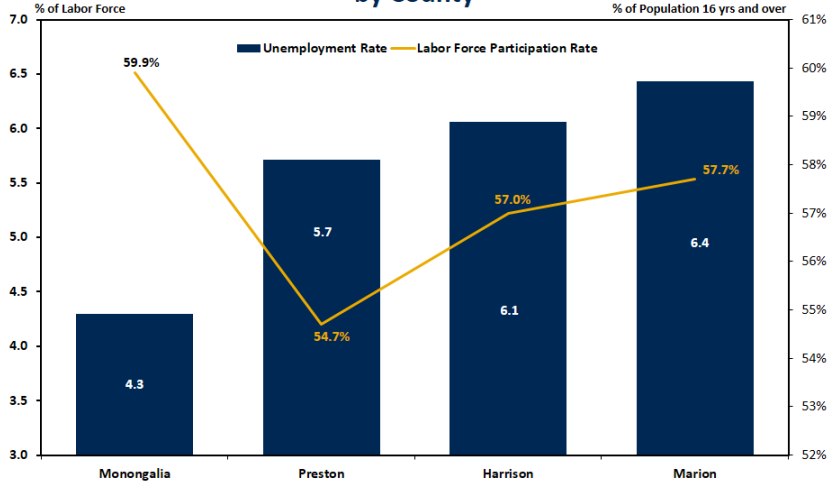
UNEMPLOYMENT North Central West Virginia consistently has an unemployment rate that comes in well below the statewide average. The four-county region’s jobless rate reached its lowest level on record in mid-2008 at just above 3 percent before more than doubling to a peak of 7.3 percent by the end of 2010. After falling steadily over the subsequent four years to a low of 5 percent in the fourth quarter of 2014, energy industry layoffs and uncertainty in the public sector have created some volatility in the region’s unemployment rate. Indeed, the jobless rate surged more than 1.2 percentage points in the span of two quarters, but has since re-traced much of this gain back down to 5.4 percent by mid-2016. Among the four counties, Monongalia possesses the lowest rate in the region at 4.3 percent, while Marion County contains the highest incidence of unemployment at 6.4 percent.

Figure 4: Unemployment Rate



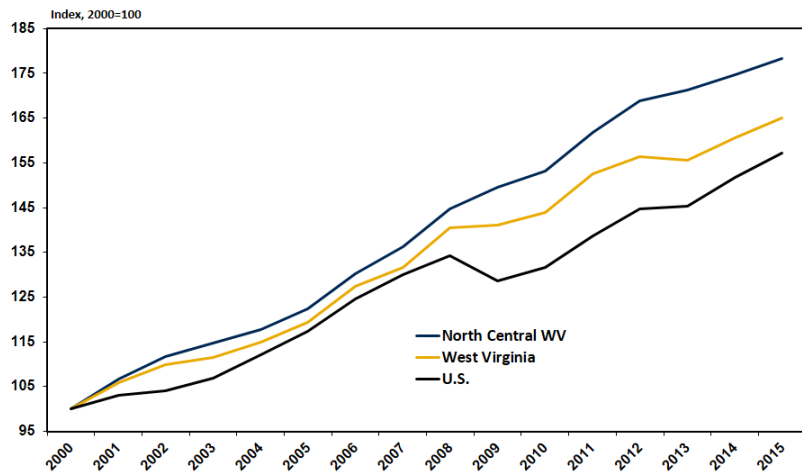
Workforce participation is also above the statewide average throughout the North Central West Virginia Region. Overall, the four-county region’s labor force has expanded by nearly 3,100 since mid-2011 and has held

Figure 5: Unemployment and Labor Force Participation by County



Source: Bureau of Labor Statistics; US Census Bureau
 Note: Unemployment rate represents 2016Q2; Labor force participation rate is from 2014.

Figure 6: Per Capita Personal Income



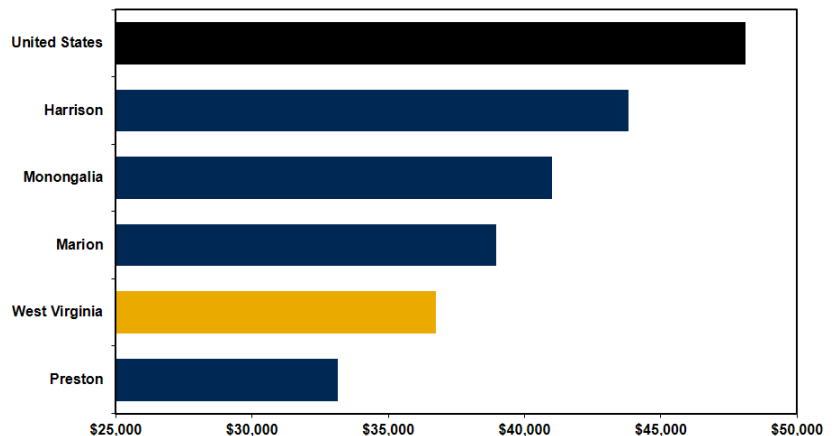
Source: US Bureau of Economic Analysis
 *Note: The 2015 figure for Greater Morgantown Area is an estimate.

steady for the most part since 2013 whereas the balance of the state has seen its adult-aged workforce contract by more than 17,000 people over this same time period. In terms of the share of residents aged 16 and older that actively participate in the workforce, Monongalia County has the highest at nearly 60 percent either holding a job or actively seeking employment. Each of the region’s four counties are above the statewide average labor force participation rate of 53 percent, but still trail the national average by at least several percentage points.

INCOME Per capita personal income in the North Central West Virginia Region was estimated at nearly \$40,100 during calendar year 2015. This marked a 2.0 percent rate of growth over the previous year, not accounting for inflation, and the region has actually trailed both the state and national average growth rates in each of the last two years. From a longer term perspective, however, North Central West Virginia has enjoyed a stronger and much more stable rate of per capita income growth, averaging 3.0 percent annually since 2008 versus 2.3 percent growth for the state and nation overall during that time frame.

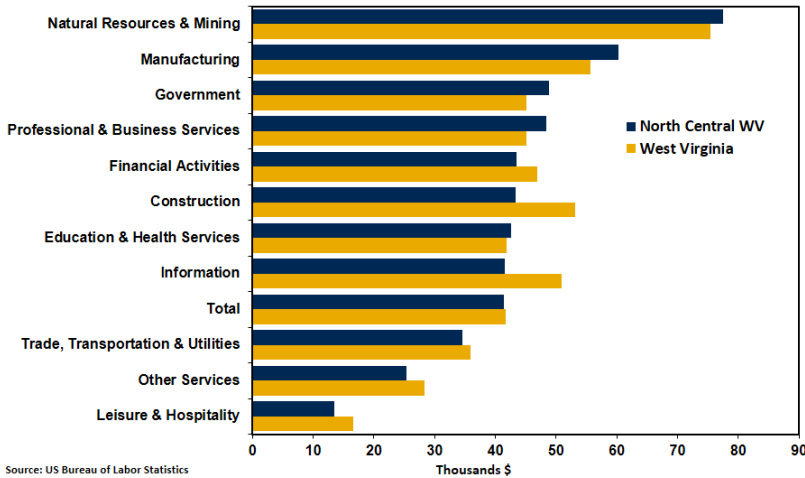
Harrison County has the highest per capita income of all four counties in the region at approximately \$43,800 in 2015, followed by Monongalia and Marion counties, where residents earned around \$40,000 on average. While per capita income levels in the region still continue to lag the national average by an appreciable amount, the area’s four counties have largely managed to hold on to a narrowing income gap in comparison to the US average thanks to a relatively diverse industrial mix that includes a large share of public employees at colleges, universities and federal installations as well as private sector workers employed at energy, engineering, consulting and manufacturing firms.

Figure 7: Per Capita Personal Income by Area (2015)



Source: US Bureau of Economic Analysis. Note: 2015 income figures for counties are preliminary.

Figure 8: North Central WV Average Annual Salary by Major Sector (2015)



DEMOGRAPHICS Many of the underlying demographic trends and characteristics for the North Central Region as a whole stand in fairly noticeable contrast when compared to statewide averages. To some extent, however, these differences are driven in large part by Monongalia County, as the other three counties in the region tend to resemble the state by most demographic measures. For example, while the region’s overall median age is 37.5 years, the presence of West Virginia University helps to place nearly 40 percent of Mon County’s population under the age of 25 and make the area’s overall age distribution appear much younger despite the fact that the region’s other 3 counties are generally in line with the rest of the state.

POPULATION While many regions in West Virginia have experienced outright declines in population for sustained periods of time, North Central West Virginia has enjoyed steady gains in the number of residents, adding roughly 1,900 people per year since 2000. Monongalia County is the most populous within the region, and third largest statewide at more than 104 thousand residents, but has also accounted for much of the region’s population growth over the past decade or so. Harrison County is the only part of the region to lose residents on net since 2010, as the county’s population has slipped by just over 100 residents per year.

Finally, the region contains a larger share of college educated residents aged 25 and older (26 percent) compared to the state as a whole (18.8 percent). Unsurprisingly, Monongalia County contains the state’s highest concentration of college graduates, wherein nearly 39 percent of residents over the age of 25 hold at least a bachelor’s degree.

Figure 9: Summary Population Profiles

	North Central WV	West Virginia	United States
Total Population (2015)	263,815	1,844,128	321,418,820
% Population Under 18 (2015)	18.9%	20.6%	22.9%
% Population 65 Years + (2015)	15.4%	18.2%	14.9%
Population with Less than High School Diploma (2014, 25 yrs. +)	11.8%	15.5%	13.6%
Population with High School Diploma, No College (2014, 25 yrs. +)	38.2%	40.9%	28.0%
Population with Some College (2014, 25 yrs. +)	24.3%	24.8%	29.1%
Population with Bachelor's Degree or Higher (2014, 25 yrs.+)	25.7%	18.8%	29.3%
Median Age (2015)	37.5	42.1	37.8
Mean Household Income (2014)	\$59,642	\$55,976	\$74,596
Average Household Size (2014)	2.49	2.43	2.63

Source: US Census Bureau

Economic Outlook

Expectations for the US and West Virginia economies during the forecast horizon will have a significant impact on the North Central Region's economic performance. Our forecast calls for the region to continue expanding over the next five years. Anticipated improvements in economic conditions for the rest of the state and continued growth for the national economy, though slower when compared to recent years, provide a solid backdrop that should enable what is already one of the state's stronger economic regions to register growth that surpasses the statewide average during the outlook period.

EMPLOYMENT OUTLOOK We anticipate total employment in the four-county region will increase at an average annual rate of 0.7 percent. Although this pace of growth slightly trails the average pace of growth posted over the past 10 years, these gains will cause the North Central Region to account for an increasingly larger proportion of the state's overall economic activity. Regional-level growth will remain weak for the next year or so as the area's natural gas industry grapples with limited hiring (or additional layoffs) caused by weak exploration and drilling activity and the coal industry struggles to stabilize amid rising natural gas utilization in electricity generation.

Monongalia County is expected to enjoy the strongest rate of job growth (0.9 percent per year) among any county in the region during the 2016 to 2021 outlook period, which is roughly in line with expected growth at the national level. While the baseline forecast calls for employment in Marion County to expand at an average annual rate of 0.7 percent, this represents a modest recovery in the county's labor market given that area employers shed roughly 12 percent of their payrolls over the past four years. Harrison and Preston counties will trail statewide growth over the next five years, averaging roughly 0.5 percent per year through 2021.

SECTOR OUTLOOK Our forecast calls for the professional and business services sector to pace overall growth in the region during the

outlook period, with payrolls growing at an expected average annual gain of 2.3 percent through 2020. A continued national economic expansion should lead to increased demand for a range of business support activity, including legal, accounting and IT services. The presence of WVU and the numerous federal and private research facilities along the I-79 High-Tech Corridor will continue to facilitate technology transfer and innovation in the area that should provide for spillover effects and spur additional job growth. In addition, the temporary services segment will account for a large portion of this sector's gains, particularly in 2017-2019 period, as an expected

Figure 10: Employment Growth Forecast

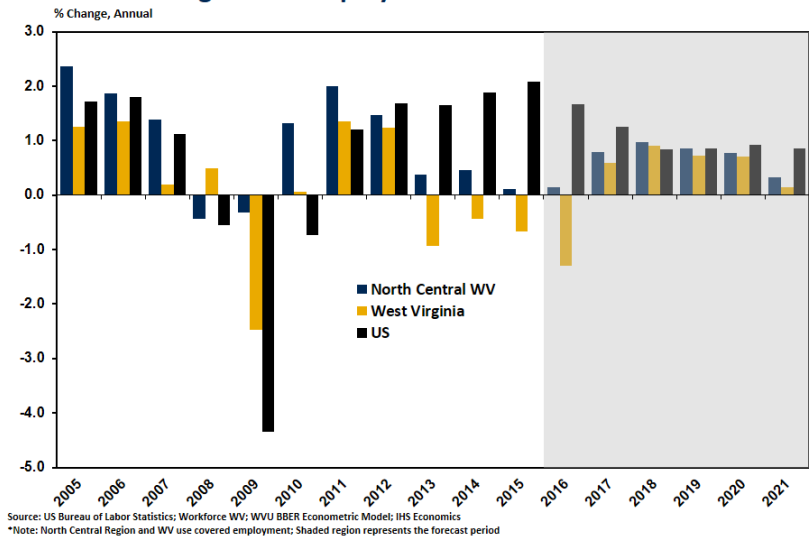
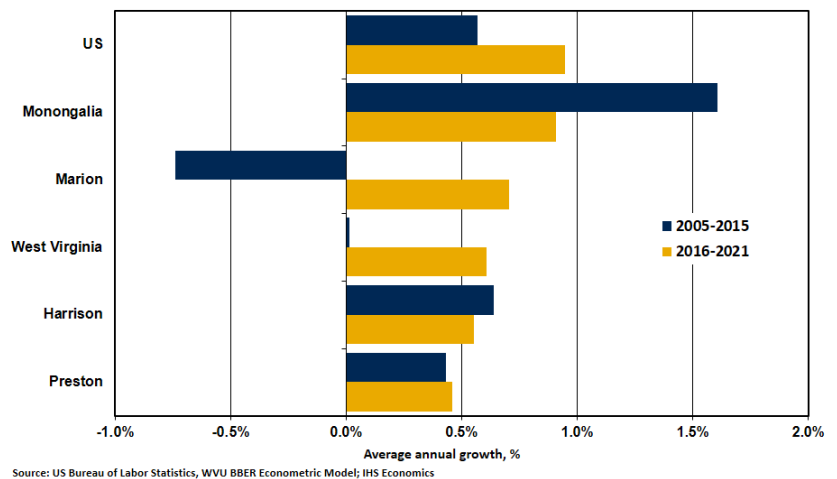


Figure 11: Employment Growth Forecast by Area



ramping-up in natural gas production leads the region’s drilling, exploration and field services firms to ramp up hiring of short-term contract labor workers. Of course, the sector faces downside risks during the outlook period, notably the political climate in Washington and the potential for changing federal spending priorities as, absent any budget reforms, mandatory spending on social programs could effectively crowd out funding for the type of federally-funded defense and non-defense activity performed in the area.

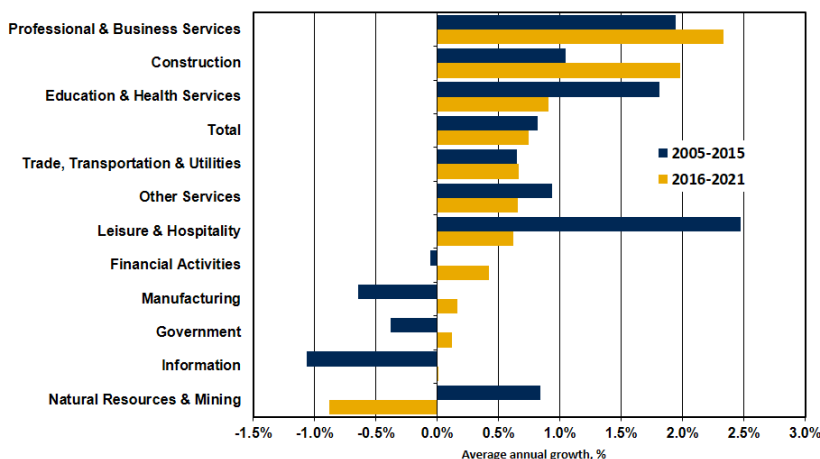
After growing at a rate of 1.8 percent annually in the past decade, the education and healthcare services sector is expected to see job gains come in at roughly half that pace over the five-year outlook period. Most of these gains will come during the earlier part of the forecast horizon, coinciding with increased hiring to staff the facilities expansion at J.W. Ruby Memorial Hospital. Other projects in the region backed by WVU Medicine will bolster hiring activity over the next few years, particularly new outpatient facilities in Morgantown and Fairmont. From a longer term perspective, the region has become a hub for healthcare services for residents across West Virginia. This status will only be reinforced over the longer term as an aging population bids up demand for healthcare services statewide and some specialized services could be shifted entirely to the North Central Region as cost issues cause parts of West Virginia facing declining and/or highly-rural populations to focus on providing basic care.

Construction activity is expected to remain strong during the outlook period, particularly over the next two to three years. Overall, the construction sector is expected to add jobs at nearly 2 percent per year. Ongoing and planned projects, such as the \$30 million aquatic and track recreational center at Mylan Park, associated with WVU and its affiliate organizations will continue to drive activity. Moreover, development along the I-79 corridor will be a driver of construction activity as Charles Pointe and White Oaks in Harrison County and the University Town Centre TIF district in Monongalia County continue to get built out. In particular, the additional infrastructure, including the new interstate Exit 153 and connector road to Westover, have created access to an area with significant potential for development and could spur significant growth of numerous industries in a previously undeveloped part of the region. Finally, the planned \$30 million, 1,400-foot extension of the Morgantown Regional Airport’s runway will largely be used to support use by the Air Force Reserve, but could provide for increased access to business travel flights and potentially allow for additional business travel flight access to the area, serve as major infrastructure developments that could bolster prospects even further.

The North Central Region’s consumer-driven sectors, namely leisure and hospitality and the retail portion of trade, transportation and utilities, are projected to see steady job gains over the next five years. Population growth and the anticipated gains in several high-wage industries in the region will drive most of these gains going forward. In addition, the build-out of major developments such as University Town Centre, Suncrest Towne Centre and Fort Pierpont in Monongalia County, as well as the Charles Pointe and White Oaks developments in Harrison County, will drive growth in new retail, dining, lodging and entertainment businesses.

Public sector employment in the four-county area is expected to grow just over 0.1 percent annually between 2016 and 2021. State government payrolls are not expected to increase measurably over the next five years, reflecting the cyclical and structural problems that are anticipated to continue for several

Figure 12: North Central WV Employment Growth Forecast by Sector



Source: US Bureau of Labor Statistics, WVU BBER Econometric Model

major sources of tax revenue collected by the state. Local government employment should see more potential for growth as increased revenue streams (local sales taxes and fees, natural gas, etc) allow the area's city and county governments meet the needs of a growing population that demands more local government services.

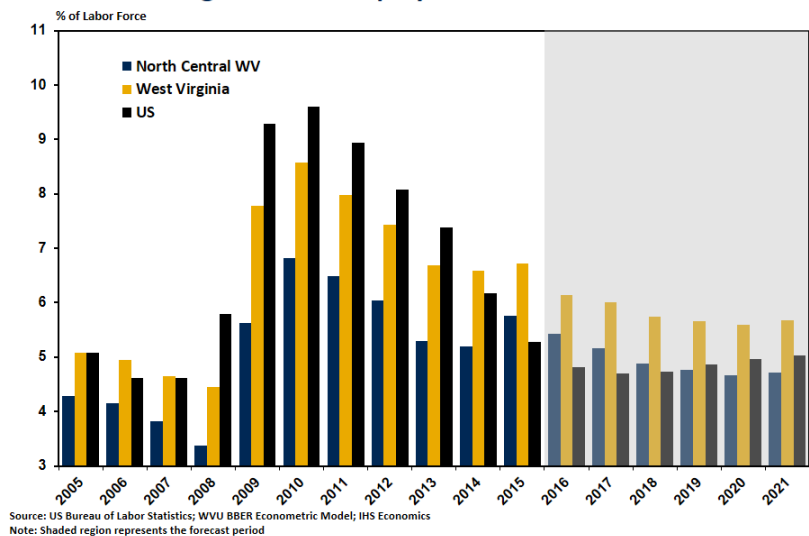
Expanded federal mandates for criminal background checks will result in the addition of roughly 250 over the next two years at the FBI Criminal Justice Information Services Division in Bridgeport. Beyond that facility, we do not anticipate any major changes (positive or negative) for the region's other federal employers; however, job losses of some degree are a non-zero risk going forward given concerns with the public debt and future strains that could be caused by spending on Medicare, Social Security and other programs.

The forecast calls for North Central Region's natural resources and mining sector to see employment contract roughly 0.9 percent per year through 2021. Most of the sector's weakness will be driven by the coal industry, which will likely see output soon begin to stabilize and edge higher during the outlook period, but not to an extent large enough to bring future payrolls above 2016 levels. Indeed, domestic demand for the region's high-sulfur coal is stronger and cheaper-to-produce relative to the low- to medium-sulfur coal from Southern WV mines. However, natural gas is expected to remain a strong competitor for baseload generation and the proposed construction of gas-fired plants throughout the Mid-Atlantic (including one in Harrison County) leaves an opening for even greater displacement. In addition, the regulatory environment remains unfavorable for the region's coal mines due to the finalization of several new rules from the Environment Protection Agency (EPA) and Office of Surface Mining Reclamation & Enforcement (OSMRE) that will directly or indirectly affect coal production. These rules are years away from being enforced and implementing these rules could be greatly affected (or even abandoned) based upon the outcomes of legal challenges and the 2016 election cycle, but regardless of these outcomes the region's coal production will be hurt by continued market- and regulation-based factors.

The natural gas portion of the sector will remain sluggish at least through mid-2017 as prices remain too low to yield measurable growth in new drilling and exploration activity. Production will remain stable to slightly down for most of the region's producers over the next year or so, as many companies must maintain production levels in order to service debts. The rapid productivity growth of the past two years has allowed producers to pull this off in a low price environment, but the result has been a dearth of new drilling and exploration, which will keep production growth limited at best for the next several quarters. As a result, job growth in the industry will be limited at best through the end of 2017. As infrastructure bottlenecks are eased with the anticipated arrival of new pipeline capacity and LNG export facilities, prices will adjust higher and lead to much stronger volumes of natural gas production. This in turn will lead to solid growth in oil and gas employment within four-county area between 2018 and 2021. The extent to which these new jobs are added as official hires by the drilling or field support service companies, rather than contract labor utilization, could cause the industry's actual rate of employment growth during the outlook period to come in much higher than expected.

UNEMPLOYMENT OUTLOOK Projected job growth during the outlook period is expected to further easing in the North Central Region's unemployment rate. After averaging nearly 5.5 percent for all of calendar year 2016, our forecast calls for the jobless rate to trend lower over

Figure 13: Unemployment Rate Forecast



the next few years before settling to roughly 4.7 percent over the latter half of the forecast horizon. Monongalia County will maintain the lowest jobless rate among the region's four counties, settling in at around 3.7 percent. Preston County's unemployment rate will remain below the statewide average and eventually decline by late-2019. Harrison and Marion counties will see their unemployment rates track the overall West Virginia average, with both stabilizing around the mid-5 percent range by the end of the forecast.

INCOME OUTLOOK Inflation-adjusted per capita income growth in North Central West Virginia is projected to increase at an average annual rate of 2.2 percent through 2021, surpassing both state and national averages. Job growth in relatively high-wage sectors will translate into strong increases in real wages and salaries earned by workers and continued improvements in equity markets should bolster local households' investment income. Finally, growth in transfer payments will accelerate during the latter half of the outlook period as more people in the area enter retirement, particularly in Harrison, Marion and Preston counties.

POPULATION OUTLOOK The region's resident population is expected to increase 0.4 percent per year during the outlook period, which will lag the rate of growth observed in the most recent decade. Monongalia County will account for virtually all of the area's population growth over the next five years, adding residents at nearly 1.0 percent per year. Preston County is also expected to see its population rise in number through 2021, but gains will average less than 0.2 percent annually. By comparison, the number of residents in Marion County is expected to remain stable while Harrison County will see its population shrink more over the next few years before continue to lose residents on net for the next couple of years before stabilizing at around 68,400 people.

Figure 14: Population Forecast

