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Deskins' academic research has focused on economic development, small business economics and government tax and expenditure policy, primarily at the U.S. state level. His work has appeared in outlets such as Contemporary **Economic Policy, Public Finance** Review, Economic Development Quarterly, Small Business Economics, Public Budgeting and Finance, Regional Studies, Annals of Regional Science, Tax Notes, and State Tax Notes, as well as in books published by Cambridge University Press and the Lincoln Institute of Land Policy.

He has delivered more than 100 speeches to business, government and community groups, and his quotes have appeared in numerous media outlets such as *The New York Times, The Washington Post,* Bloomberg, CNBC, National Public Radio, and PBS. He has served as principal investigator or co-principal investigator on more than \$1 million in funded research.

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Navigating Our Economy: West Virginia's Challenges and Opportunities

John Deskins, Director of the Bureau of Business and Economic Research West Virginia University

After several years of mostly bad news, West Virginia has turned the corner, and much is looking up. Employment,

income and output are all growing, and numerous new investments have been announced. However, the state still has many challenges that will impede economic prosperity. As such, as West Virginians we should remain vigilant and work to overcome our challenges through promoting industrial diversification, fostering more of a pro-smallbusiness culture and investing in human capital by improving education and health outcomes and fighting our drug abuse crisis.

During the recent Economic Outlook Conference series, hosted by the West Virginia University College of Business & Economics' Bureau of Business and Economic Research, key information in understanding West Virginia's economy was provided, along with in-depth information about the state's opportunities and challenges. There are seven key areas of which to make note in trying to understand what drives West Virginia's success as well as what stands

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in the way. By understanding these key points, we will all be better prepared to help push the Mountain State toward a future of prosperity.

The State is Adding Jobs

The state economy suffered tremendously between early 2012 and mid-2016, losing roughly 26,000 jobs over that period. Fortunately, West Virginia has finally turned the corner and added back around 4,500 jobs over the past year or so. Barring any unexpected shocks to the economy, we can expect to continue to see growth for the foreseeable future.

However, the job growth the state can expect to see is probably going to happen more slowly than we would hope. We will likely not reach our 2012 peak level of employment until around 2021. Because of this, we should use this weakness as inspiration to make the positive investments and changes we need to really ensure economic prosperity in West Virginia over the long run.

Natural Resources & Mining Construction Professional & Business Services Manufacturing Total Leisure & Hospitality Education & Health Services Other Services Trade, Transportation & Utilities Financial Activities Government Information -2% 2% 3% -1% 0% 1% -3% Average Annual Growth. % 2006-2016 Source: U.S. Small Bureau of Labor Statistics and WVU BBER Econometric Model 2017-2022

West Virginia Employment Growth Forecast by Sector

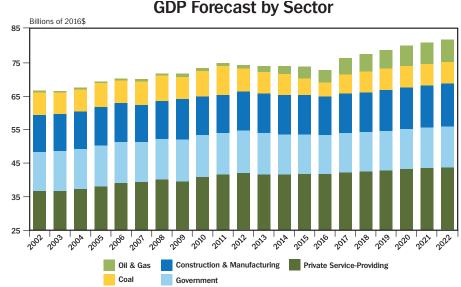
Output in the Energy Sector is Growing

Not surprisingly, losses in coal were the biggest driver of West Virginia's recession from 2012-2016. Coal output in the Mountain State fell from nearly 160 million tons in 2008 to the low 80-million-ton range for 2016. However, coal output began to rebound during the fall of 2016, and we can expect production of around 90 million tons for 2017. We can also expect production to stabilize around the 90 million mark at least for the next few years.

Natural gas output has also begun to improve, increasing employment and incomes. The lack of growth that was observed during that period was driven by limitations on natural gas infrastructure combined with a tremendous increase in productive capacity, which led to extremely low prices. However, infrastructure improvements that are underway are working to open the gas to wider markets, domestically and abroad, effectively increasing demand for the gas, driving prices back up and incentivizing new drilling.

Industrial Diversification is Sorely Needed

While the most obvious cause of our state's recent struggles is the losses in coal, the real culprit is the fact that other industries in West Virginia were not growing very rapidly to offset these losses. In fact, GDP in West Virginia – our broadest measure of economic output – did not grow at all over the period of 2012-2016. To make matters worse, GDP for all industrial



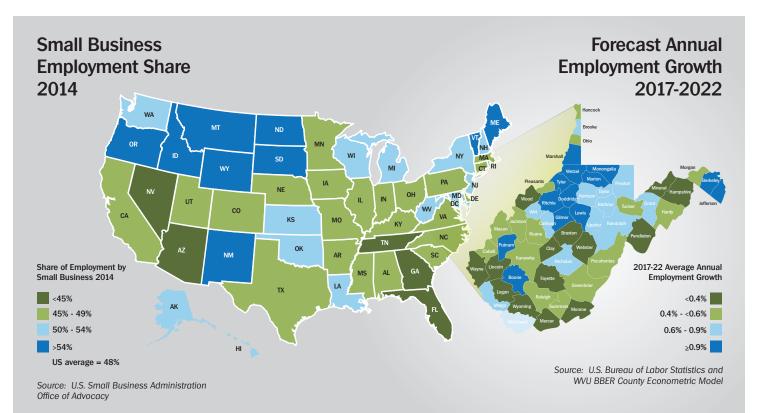
Source: U.S. Bureau of Economic Analysis and WVU BBER Econometric Model

super sectors outside of energy did not grow over this period either. This lack of growth in output outside of energy is really a red flag that West Virginians must make diversifying the state's economic base a top priority. While we do very much need a strong energy sector, we also need much stronger growth in industries such as manufacturing and tourism. On a positive note, GDP performed much stronger in 2017.

Health, Education and Drug Abuse are Critical

Perhaps the biggest dark cloud that hangs over the Mountain State in terms of long-term economic prosperity is the fact that we have the lowest rate of labor force participation among the 50 states. In West Virginia, only 53 percent of the adult population is either working or actively looking for work compared to 63 percent nationally.

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OP Forecast by Secto



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This labor force participation deficit is driven by three factors, all related to human capital. First, we have people who would like to work in an ideal world, but they don't bother to look for work because they know their education and training is not up to par from the perspective of potential employers. Second, the same applies to health – people would work in an ideal world, but they do not bother to look for work because of poor health. The third piece of the puzzle is drug abuse, particularly opioid abuse, which has skyrocketed in the state in recent years.

West Virginia will never be able to reach a level of income that is on par with the national average if the state has a full 10 percent of its adult population sitting on the sidelines compared to the nation. Thus, the right kind of investment in human capital is imperative to make our state – and our workforce – attractive to potential businesses.

Economic Outcomes and Opportunities Vary Dramatically Across Regions

While it is important to be aware of statewide statistics, the fact of the matter is that West Virginia exhibits tremendous variation across its regions in terms of economic strengths and weaknesses. For instance, it is likely that what we need in our southwestern region is quite different from what we need in the Eastern Panhandle. We must understand and embrace these differences and tailor economic development strategies to each region's opportunities and challenges.

Focus Must Be Put on the Manufacturing Activity Associated with the Natural Gas Boom

How much manufacturing activity associated with the natural gas boom comes to West Virginia? This is the single biggest question we have in our state right now regarding economic development.

The natural gas boom has created benefits for the Mountain State in terms of jobs, income and tax revenue, but thus far the additional jobs are somewhat limited because gas is so capital intensive. The industry uses relatively few workers in relation to the size of its output, compared to other industries.

The real potential for widespread economic transformation associated with the natural gas boom lies in bringing

downstream activity into the state. This refers to the numerous businesses that could locate in our state that rely on an affordable and reliable supply of natural gas. If West Virginia is able to attract this activity, it has the potential to create thousands of jobs in the coming one or two decades.

While the West Virginia Department of Commerce is aggressively targeting development in this arena, it is up to all of us to push to make our state attractive to these industries by ensuring our men and women are ready for these jobs, our infrastructure is sound and our policy environment is structured appropriately.

Entrepreneurship is Vital to Developing Our Potential

While we have a strong need for industrial diversification in our state, there is no doubt that diversifying an economic system is much easier said than done. In reality, the only way to achieve the right industrial mix for our economic circumstances is through entrepreneurship. We certainly do not want a centrally planned economic system where government officials choose winning industries. Rather, we want a system where entrepreneurs experiment and discover which industries work for our state. Entrepreneurship is messy, but that is the only true way to fundamentally change an economy.

Today, the number of new businesses created in West Virginia each year is noticeably lower compared to a couple of decades ago, but the number has been increasing at least since a low point after the national recession, around 2010. We should push to better understand why this measure of entrepreneurship has changed in the way it has and what mechanisms we can use to better promote entrepreneurship.

Ultimately, a central element of any discussion around economic development in our state should be finding ways to foster and promote a more entrepreneurial culture. \mathbb{V}

Every year, the West Virginia University Bureau of Business and Economic Research hosts the Economic Outlook Conference series, during which experts provide an overview on the state's economy and what West Virginians can expect in the coming years. To view the report in full, visit https://business.wvu.edu/centers/bureauofbusinessand-economic-research.

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