



2016 STATE OF **Working West Virginia**

WHY IS WEST VIRGINIA
SO POOR?



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Overview

A persistent question for those who ponder West Virginia's fate is a simple: why, in a state rich in natural resources, are West Virginians so poor? For more than a century several explanations have been developed by natives and interested "outsiders."

This report, the ninth annual investigation of *The State of Working West Virginia*, comes at one of those times when national attention has been drawn to the state in the wake of the 2016 elections. In an even more unusual twist, much national discussion has focused around the conditions of our working class, an example of which is the surprise success of J.D. Vance's *Hillbilly Elegy: A Memoir of a Family and Culture in Crisis*. This analysis is an effort to cut through often-overheated rhetoric and look at the available data and historical trends.

The report begins with review of the long debate regarding the causes of West Virginia's poverty. These have ranged from cultural explanations to those that emphasize the colonial nature of the economy. It will then look at current data, including a rigorous statistical regression analysis of the factors that contribute to the region's poverty, concluding with recommendations on how to effectively address it.

These are difficult times for the state, with the decline of our dominant industry and the related crisis of the state budget. We hope this effort will support the work of citizens and decision makers as we try to move forward.

Key Findings

- West Virginia has historically been one of the poorest states in the country, with consistently low income and high levels of poverty, and this trend has continued to present day.
- In years since the Great Recession, West Virginia has experienced little job growth and elevated levels of unemployment.
- In recent years, West Virginia has replaced high-wage jobs with low-wage jobs, contributing to decades of stagnant wage growth.
- West Virginia's labor force participation rate fell to its lowest level since the late 1980s in 2015, and remains the lowest in the country.
- In order to increase incomes in the state, West Virginia will need to expand its stock of knowledge by increasing the amount of innovative research occurring here, and by substantially raising the educational levels of West Virginians.
- West Virginia has suffered from a resource curse, and studies show states with a heavier-than-average reliance on mining income are likely to have lower incomes.
- Improving the state's labor force participation rate would increase in the personal income of West Virginians.
- The trickle-down approach to state economic policy that emphasizes putting more money and power in the hands of the wealthy often fails to deliver stronger economic growth or a better quality of life.
- State policies focused on improving productivity and incomes for everyone can not only reduce negative outcomes for West Virginians but also boost economic growth over the long run by building a stronger middle class.
- State policymakers need to focus on improving health, workforce participation, education, and job skills while also building top-notch infrastructure and encouraging innovation and entrepreneurship. This will require investing in physical and human capital, improving the state's fiscal health with additional resources, rewarding hard work with higher pay and better benefits, diversifying the economy with clean-energy jobs, and supporting technology-based economic growth.

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Section 1:

A Brief Economic History of West Virginia

One of the best-known studies of West Virginia's past is John Alexander Williams' *West Virginia: A History*. The author, who grew up in Greenbrier County, initially wrote the book in conjunction with the nation's bicentennial in 1976, although it is still in print.

In that work, the author summarizes what many researchers and ordinary West Virginians have known for a long time: "Whether or not mountaineers were always free, they were almost always poor."ⁱ

It may be cold comfort in today's hard times to reflect that the latest troubles are only the most recent of many, but that realization may help give West Virginians the perspective needed to move ahead.

In this section, we will briefly examine some of the explanations of this persistent poverty, look at the data, and suggest ways of overcoming it. There has been little controversy about the facts then or now, although debates about their interpretation and, particularly, the causes of that poverty have raged for decades.

The Basics

There are certain obvious factors that have hindered West Virginia's economic growth. Several of these were highlighted by West Virginia University over 20 years ago. They include:

- An inadequate physical infrastructure
- Low educational achievement level of the general population
- Outdated job skills
- A rugged topography
- A low population density
- A lack of airport and port facilities
- A generally insular view of the state's economyⁱⁱ

For the most part, this list, however incomplete, could have been compiled today and would have generated little debate beyond what constituted an insular view of our current situation. Other approaches, some of which have been in the making for more than a century, are more contentious.

With some exceptions, explanations of West Virginia's—and Appalachia's—poverty fall into two main streams: culture and colonialism. Of these, the cultural models were the most persistent. Ironically, as we will see, they gained a national audience exactly when the economic colonization began.

The Making of the Appalachian Other

The earliest examples of the creation of the Appalachian Other can be found in the "local color" movement. According to the *Library of Southern Literature*,ⁱⁱⁱ the term is "often applied to a specific literary mode that flourished in the late 19th century..." in which the South, including, in this case, the liminal mountain regions, played a prominent role.

More or less benign portrayals of Appalachian mountaineers reached a large audience. Examples include the fairly respectful but unfortunately titled "Our Contemporary Ancestors,"^{iv} by Berea College President William Goodell Frost which appeared in *The Atlantic Monthly* in 1899, and such works as *Our Southern Highlanders* by Horace Kephart. In his 1913 book, Kephart argues that:

"It is not to be overlooked that the mountains were cursed with a considerable incubus of naturally weak or depraved characters, not lowland 'poor whites,' but a miscellaneous flotsam from all quarters, which after more or less circling round and round, was drawn into the stagnant eddy of highland society as derelicts drift into the Sargasso Sea. In the train of western immigration there were some feeble souls who never got across the mountains. They have been described tersely as the men who lost heart on account of a broken axle."^v

The Hatfield-McCoy feud and other less-well-known conflicts gained national attention and exerted a fascination that continues to this day, as the success of the television miniseries shows. At the time conflict raged during the second half of the 19th century, outside reports frequently portrayed Appalachians (and, let it be said, particularly West Virginia's Hatfields) as lawless barbarians.

As Altina Waller, author of *Feud: Hatfields, McCoys, and Social Change in Appalachia, 1860-1900*, this narrative concealed the economic hardships and dislocations that accompanied the early phases of industrialization and justified the exploitation of the region and its residents.

In her words, “The civilized capitalists who built railroads and coal mines were delighted to portray all mountaineers as ignorant, immoral, and violent, arguing that economic development—railroads and coal mines—would bring civilization to the region. What it did bring was more violence and more poverty.”^{vi}

The process of the early decades of the 'othering' of the region was eloquently described by the late John O'Brien, author of *At Home in the Heart of Appalachia*, in a *New York Times* op-ed:

“In the 1870's, there was no 'Appalachia.' At that time, this mountainous stretch of the country from West Virginia to northern Georgia was one of the most prosperous agricultural areas in America. The people here drew upon their English, German and Scotch-Irish roots to create a variety of vibrant, peaceful cultures.

They wanted raw materials for their factories, and the mountains had them. Our mountains were covered with the largest and oldest hardwood forest that people had ever seen. The coal deposits were the richest in the world. Industrialization came here like a cyclone roaring through the mountains. People like my ancestors were bullied, threatened and cheated out of their land. By 1920, timber companies had cut the entire forest. Most of the profits left the state along with the timber and coal.

As the mountains were denuded, the industrialists portrayed the families they were robbing as 'backward people' and themselves as prophets of progress. The missionaries who often accepted large donations from the industrialists exaggerated the 'otherness' of these strange people. 'Local color' writers made brief visits to the mountains, then wrote fanciful books about the queer, violent mountain folk.”^{vii}

A Culture of Poverty?

The periodic “rediscovery” by the nation-at-large of West Virginia is a recurring pattern in our history. National attention again turned to the state during the Mine War era, which raged in the early decades of the 20th century, as well as during the coal slumps of the 1920s and 1930s. During these periods, however, conditions such as un- and underemployment were so harsh that causation was attributed to objective conditions rather than cultural factors.

It was only during the national prosperity that followed World War II that cultural explanations once again rose to the forefront to explain the region's contrasting poverty. This time around such explanations involved a veneer of social science as well as a missionary zeal.

One explanation of poverty from the social sciences was the still-influential idea of a “culture of poverty,” understood as patterns of thought and behavior that tended to keep poor people poor. The concept was developed by sociologist Oscar Lewis, who wrote, “The subculture [of the poor] develops mechanisms that tend to perpetuate it, especially because of what happens to the worldview, aspirations, and character of the children who grow up in it.”^{viii}

To be fair, Lewis's views on this topic were nuanced and not developed with Appalachia in mind. He viewed the culture of poverty as “a culture in the traditional anthropological sense in that it provides human beings with a design for living, with a ready-made set of solutions for human problems, and so serves a significant adaptive function.”^{ix}

Such cultures transcended regional or national boundaries and could be found wherever social conditions such as wage labor, production for profit, low-paying jobs for low-skilled workers, and high un- and underemployment existed. The most likely candidates to develop such a culture “would be the people who come from the lower strata of a rapidly changing society and were already partially alienated from it.”^x

Further, in words that those familiar with West Virginia history and culture have heard before, “The individual who grows up in this culture has a strong feeling of fatalism, helplessness, dependence and inferiority.”^{xi}

The link between West Virginia and the rest of Appalachia with the culture-of-poverty theory was forged in Michael Harrington’s 1962 surprise bestseller *The Other America: Poverty in the United States*, a work that is widely regarded as one that helped spark the 1960s War on Poverty.

Harrington argued that poverty constituted “a separate culture, another nation, with its very own way of life”:

“...people who lack education and skill, who have bad health, poor housing, low levels of aspiration and high levels of mental distress.... Each disability is the more intense because it exists within a web of disabilities. And if one problem is solved, and the others are left constant, there is little gain.”^{xii}

Harrington’s survey included rural as well as urban areas and diverse cultures and ethnicities, of which Appalachia was one. He described the region as a place where “beauty can be a mask for ugliness” and “the people themselves are captivated by their mountain life. They cling to their patches of land and their way of living. Many of them refuse to act ‘reasonably’; they stay even though misery is their lot.”^{xiii}

Even today his conclusions about the region’s possibilities are jarring: “It seems likely the Appalachians will continue to house a culture of poverty and despair, and that it will become a reservation for the old, the apathetic, and the misfits.”^{xiv}

While Harrington intended to mobilize the nation to end poverty, the culture-of-poverty approach had unintended consequences the author would have opposed. As his biographer Maurice Isserman noted, although Harrington favored a federal jobs program, federal policymakers latched on to the word culture. “And if the problem was one of culture rather than simply lack of income, policymakers reasoned that federally financed jobs were not the appropriate solution.”^{xv}

Later, neoconservatives would further invert the theory. By viewing the culture of poverty as a cause rather than a symptom of poverty, they created the ideological conditions for an ongoing war not on poverty but on programs intended to alleviate it. As Isserman wrote elsewhere,

“In the 1970s, neoconservatives — former liberals disillusioned with the welfare state (Harrington himself popularized the term in a 1973 article) — neatly turned the argument of ‘The Other America’ on its head, arguing that welfare programs only strengthened the culture of poverty by encouraging single-parent families and discouraging work. The poor, in their view, would be better served by dismantling the welfare state and instituting tougher neighborhood policing than through further meddling by would-be social engineers.”^{xvi}

Yesterday's people?

Probably the classic example of the culture-of-poverty approach applied specifically to Appalachia was Jack Weller's influential 1965 work *Yesterday's People: Life in Contemporary Appalachia*.

Weller, a native of upstate New York, was a Presbyterian pastor who served for several years in that denomination's West Virginia Mountain Project, which was intended to serve and minister to low-income communities in the Mountain State.

His experience in the state formed the basis of the book, which consisted of an extended effort to contrast "Middle-Class American" with "Southern Appalachian" values. Among the attributes of the latter were individualism, fatalism, traditionalism, lack of interest in the future, fear of the outside world, and distrust of institutions and bureaucracy. Weller also found much to admire among the region's people, including a person-oriented life pattern, a leveling tendency, and a lack of status-seeking.^{xvii}

However well-intentioned, the work has more than its share of condescending comments about West Virginians, such as "let us begin to guide the mountain man toward wholeness."^{xviii} And, while the author over time came to recognize the limitations of his work, it undeniably contributed in a lasting way to a culture-driven view of West Virginia's poverty.

Ironically, even before the image of the impoverished 'Appalachia Other' as a victim of culture was created, other voices within the state warned of the threat to the well-being of West Virginia residents by objective and external economic forces. It is to these that we now turn.

Voices in the Wilderness

The year 1884 was not remarkable in American history, but it wasn't entirely without historical significance. It would see the launch of a campaign for the eight-hour work day by the Federation of Organized Trades and Labor Unions, the election of Grover Cleveland as president, the birth of Eleanor Roosevelt and Harry Truman, and the publication of Mark Twain's *The Adventures of Huckleberry Finn*.

In West Virginia, it saw the publication of an amazing and prophetic report by the state Tax Commission, which has charged "to collect and report whatever information will enable the Legislature to legislate intelligently and with safety upon the subjects calculated to advance the development of the State." Surprisingly, by today's standards, the report did not pander to the powerful. Rather, it chose "to make public a character of information which seems to have been assiduously suppressed and to scatter facts which, as we believe, many persons are anxious to conceal."^{xix}

The Commission argued that economic activity alone was not a measure of prosperity or progress unless the wealth generated remained in the state and benefited its residents. It warned that extractive industries owned by outside interests would, in the end, leave West Virginia "despoiled of her wealth and her resident population poor, helpless, and despondent."^{xx}

The report's conclusion is worth quoting in full:

"The wealth of this State is immense; the development of this wealth will earn vast private fortunes far beyond the dreams even of a modern Croesus; the question is, whether this vast wealth shall belong to persons who live here and who are permanently identified with the future of West Virginia, or whether it shall pass into the hands of persons who do not live here and who care nothing for our State except to pocket the treasures which lie buried in our hills?"

If the people of West Virginia can be roused to an appreciation of the situation we ourselves will gather this harvest now ripe on the lands inherited from our ancestors; on the other hand, if the people are not roused to an understanding of the situation in less than ten years this vast wealth will have passed from our present population into the hands of non-residents, and West Virginia will be almost like Ireland and her history will be like that of Poland.”^{xxi}

Alas, this warning went unheeded.

The First Wave: Trains and Timber

The first major wave of the industrial transformation of West Virginia—and its transition to a colonial economy—came with expansion of railroads, which, in turn, led to the growth of timbering, coal mining, and other forms of extraction.

John Alexander Williams summarizes these developments succinctly in *West Virginia and the Captains of Industry*:

In the last third of the nineteenth century the gods of war and commerce created a new American commonwealth in the heart of the Appalachian highlands...As the political institutions of the new state matured, it underwent another transition, an economic one. Beginning in late antebellum times, but at a much-quicken pace after the Civil War, there emerged in the new state and industrial economy based on extracting the timber and fossil fuel, resources of the Appalachian plateau. The conjunction of these trends was not a fortunate one. The creation of a new and unformed polity in a territory almost wholly subject to the social impact of extractive industry resulted in a phenomenon best described as a colonial political economy.”^{xxii}

The state’s old-growth, virgin forests were among the first casualties of its colonial economy. When settlers first arrived from Europe, nearly all of the future state’s 24,230 square miles were forested. By the time of the Tax Commission’s 1884 report, about two-thirds of the state remained forested. By 1920, nearly the entire state was denuded. While the state has been reforested, only tiny remnants of once magnificent untouched forest remain.^{xxiii}

The destruction of the forests disrupted the traditional subsistence farming and the local food economy as well as permanently altered the ecosystems, erosion patterns, and waterways.

The waste left by timbering created a fertile ground for forest fires. According to historian Ron Lewis, “The extent of the damaged caused by these fires is staggering. In 1908, for example, the number of fires reached 710, burning an area of 1,703,850 acres, more than one-tenth of the entire surface of the state, one-fifth of its forested area, and three percent of the state’s standing timber.” Of these, more than 70 percent was caused by locomotives and 20 percent by sawmills and logging operations.

In the end, Lewis concludes “Railroad and timber development did not stimulate the growth of a vibrant agricultural sector, but, rather, forced farmers to either abandon the countryside for a new life in the industrial towns or face a life of rural marginality at the periphery of the American, and now global, economy.”^{xxiv}

The Shadow of Coal

Explorer John Peter Salley made the first-recorded reference to coal in West Virginia in 1742 as he traveled through what is now Boone County, according to the West Virginia Geological and Economic Survey. Salley reported “an outcropping of coal along a tributary of the Kanawha River,” a stream he and his companions named the Coal River.^{xxv}

According to state records, coal was mined as early as 1810 near Wheeling. The growth of the salt industry led to the opening of mines to supply furnace fuel during the 1820s and 1830s, the survey reported. During that time, most coal was produced for domestic consumption and local businesses.

The year 1883, when production reached three million tons, is generally regarded as the time the state's commercial coal industry was born. Major rail lines were completed into West Virginia's northern coalfields, allowing shipment to distant locations. (West Virginia's coal producing areas are referred to as "fields" corresponding to geographical locations or regions. The ten traditional coal fields are the Kanawha, Fairmont, Elkins, New River, Flat Top-Pocahontas, Winding Gulf, Logan, Williamson, Greenbrier, and Northern Panhandle fields.)

The coming of the railroads resulted in extensive coal operations in Mineral, Monongalia, Marion, Fayette, Harrison, Ohio, Putnam, and Mason counties by the early 1880s.

The rich southern coalfields opened with the construction of the N&W Railroad. One of the largest fields – the Flat Top-Pocahontas, located primarily in Mercer and McDowell counties – first shipped coal in 1880. In 1900, McDowell produced more than four million tons of coal. Operations were consolidated into large companies, and Pocahontas Fuel Company, organized in 1907, came to dominate the other companies in McDowell County.

The expansion of the Chesapeake and Ohio Railway lines allowed other coalfields to open in the southern part of the state, including the Kanawha, New River, Winding Gulf, Logan, and Greenbrier fields. The Logan Field, straddling Logan and Wyoming counties, was developed in 1904, with the first load of coal hauled out of Logan County on Thanksgiving Day. Dominated by Island Creek Coal Company, Logan County, by 1925, was home to 50 coal companies that operated more than 100 mines, according to the *History of the Coal Industry in West Virginia*.

In *Life, Work and Rebellion in the Coal Fields*, David Alan Corbin wrote "a relatively isolated, under populated, agrarian region occupied by subsistence farmers" was transformed "economically, politically and socially into both an industrialized region and an economic colony."^{xxvi}

Almost overnight the populations doubled and tripled in sleepy Appalachian towns. The population of southern West Virginia quadrupled between 1890 and 1920, with growth especially high in coal counties such as Logan, Mingo, and McDowell. For example, in Logan County the 1900 Census reported 6,955 people. By 1940, the number of residents had ballooned to 67,768. In 1890, McDowell County's population was 7,300. By 1940, it had exploded to 94,354.

"The growth of the coal industry gave the coal operators a dominance in the state government over southern West Virginia until the New Deal," Corbin wrote. "It also broke down the traditional mountain culture, introduced new values, and brought in tens of thousands of southern blacks and Europeans to mix with the native population in the confines of the company town. By 1921 southern West Virginia was a heavily populated, industrial economy dependent upon coal production and linked to national and international markets."^{xxvii}

The transfer of vast mineral wealth to outside speculators and coal companies accompanied the rapid development of the coal industry. This combination of events altered the political, social, and cultural fabric of what came to be coal-dominated counties and wrote the history of the first half of the twentieth century in West Virginia.

The Great Land Grab

For generations, the question of who owns West Virginia has intrigued historians, sociologists, politicians, journalists, and residents. Attempts to find answers offer a roadmap for understanding the political, social, and economic development of the Mountain State.

Historians have generally concurred that, for centuries, control of West Virginia's land has been marked by inequality and absentee ownership.

Long before the first settlers crossed over the Appalachian Mountains, eastern land speculators held title to the majority of the land in what is now West Virginia. King Charles II rewarded many of his loyal friends with what would become West Virginia land, and Thomas, Lord Fairfax, was bequeathed much of today's Eastern Panhandle.^{xxviii} By the 1730s, three land companies – the Ohio Company, Greenbrier Company, and Loyal Company – owned some 800,000 acres of West Virginia land.^{xxix}

Among the first Anglo Americans who ventured into West Virginia were surveyors and land speculators, including George Washington, who eventually came into possession of some 32,000 acres.^{xxx} When asked if he would be interested in selling the land he owned in Kanawha County, Washington offered a response that echoes throughout the history of West Virginia: "I had never had it in contemplation because I well knew they would rise more in value than the purchase money at the present time would accumulate by interest."^{xxxi}

By 1810, as much as 93 percent of land in present day West Virginia was held by absentee owners, more than any other state in the region and likely any other state in the Union.^{xxxii}

Incorrect surveys, unclear titles and inconsistencies in state law led to overlapping claims that cost many residents their land, sometimes decades after the initial purchase.^{xxxiii} Furthermore, in what was already a cash-strapped and credit-poor state, political leaders courted out-of-state capital investment to help the state progress. In his 1897 inaugural address, Governor George W. Atkinson declared, "Instead of fewer corporations in West Virginia, we need more of them. Instead of crushing out those we already have, it is our duty to invite others to come among us to aid us in the development of our almost inexhaustible natural resources."^{xxxiv}

Not surprisingly, state officials and state laws more often favored outside investors' claims to land over those of native farmers. Some critics argued that the ratification of the constitution of 1872, known as the "lawyer's constitution," resulted in land laws and tax policies that facilitated the transfer of land to large companies with the resources to win lengthy court cases. In one case, a farmer evicted three tenants of the Elk River Coal and Lumber Company from what he said was his land. Elk River took him to court four times until a circuit court judge eventually ruled in the company's favor.^{xxxv}

During West Virginia's transformation from an agrarian economy to an industrial state beginning in the 1880s, agents for out-of-state land, railroads, and coal interests purchased acres of mineral and timber rights, leaving residents in possession of only the surface rights to the land.

Williams sums up the situation as the cash and colonial economy clamped down on ordinary West Virginians:

“Small proprietors found it very tempting to sell land during this period; the backcountry swarmed with small-time promoters and lawyers who collected titles and options to land that they would then try to sell to local or metropolitan capitalists...The tradition that nearly every rural West Virginia family seems to have about some ancestor who exchanged his land or its resources for a pittance has an abundant basis in fact.

However, a great many small landowners in West Virginia sold their mineral rights for little or no money because they had to, not because they wanted to. The reason lies in the tangled condition of land titles. West Virginia’s land policies were more intelligible and consistent than Virginia’s had been, but even though most small proprietors enjoyed a secure title by 1890, proving that title could be an expensive and time-consuming proposition.”^{xxxvi}

The high concentration of largely outside ownership shifted power from those who had owned and controlled the land and mineral wealth to the new owners, whose interest was extraction.

Doing the Math

In the 1970s, two separate studies examined land ownership patterns in West Virginia.

Tom D. Miller, an investigative reporter for the Huntington, West Virginia, *Herald-Dispatch*, was the first to approach the issue in a systematic manner. Over a six-month period in 1974, Miller visited more than a dozen courthouses across the state and plowed through thousands of pages of public records. His effort stands as the most complete attempt to document land ownership in the state.

Miller concluded that more than two-thirds of West Virginia’s non-public land was controlled by outside interests, predominantly giant coal, timber, and oil and gas companies. Specifically, he found that:

- Two-dozen out-of-state corporations and land companies – all tied directly or indirectly to mineral industries – owned a third of the state’s 12 million privately held acres.
- Thirteen large companies controlled leases on another four million acres of coal or oil and gas rights in 1971 and the figure grew by an estimated half million acres per year in the following three years.
- Out-of-state corporate interests owned at least half the land in almost 50 percent of West Virginia counties.
- None of the ten largest landholders was headquartered in the state.^{xxxvii}

In the fall of 1978, a coalition of citizen activists and academics formed the Appalachian Land Ownership Task Force with the intention of determining the extent of corporate and absentee ownership across the Appalachian region – and the effect of ownership patterns on residents. Their work was funded with a grant from the Appalachian Regional Commission.

In what has been described as one of the most extensive citizen participation research projects ever undertaken, Task Force members reviewed courthouse records and gathered anecdotal information in 80 counties across six Appalachian states. The findings were summarized in a seven-volume, 1,800-page report released in 1981, *Land Ownership Patterns and Their Impacts on Appalachian Communities*.

The Task Force found that 40 percent of the land surveyed – or some eight million acres – was owned by just 50 private owners and ten government agencies. Individuals and groups from outside the counties sampled owned nearly 75 percent of the surface acres and 80 percent of the mineral acres.

The Task Force conducted research in just 15 of West Virginia’s 55 counties (Braxton, Jefferson, Kanawha, Lincoln, Logan, McDowell, Marion, Marshall, Mineral, Mingo, Ohio, Raleigh, Randolph, Summers, and Wayne).

However, the findings mirrored Miller’s revealing that:

- Three-fourths of the surface land and four-fifths of the minerals were owned by individuals and groups from outside the counties surveyed.
- Large corporations owned 40 percent of the land and 70 percent of the minerals.
- More than 75 percent of the mineral owners paid less than 25 cents per acre in annual taxes and an average of 90 cents for surface holdings.^{xxxviii}

The information gathered by Tom Miller and the Appalachian Land Ownership Task Force has weathered the test of time. No one has presented contradictory data challenging the findings. Even an Appalachian Regional Commission review panel, that criticized some of the methodology used by the Task Force, concluded that while the study failed to prove that concentrated land ownership was “the root of all Appalachian evil,” the report demonstrated that ownership patterns were “probably a contributing cause of much of it.”^{xxxix}

And Now?

A 2013 study of land ownership in West Virginia found that while much of the state’s private land is still owned by large, mainly absentee corporations, the list of top owners – once dominated by energy, land-holding, and paper companies – now includes major timber management concerns, which are, in essence, money-managers for investors.

Researchers also found:

- The top 25 private owners own 17.6 percent of the state’s approximately 13 million private acres.
- In six counties, the top-ten landowners own at least 50 percent of private land. Of the six, five are located in the southern coalfields – Wyoming, McDowell, Logan, Mingo, and Boone. Wyoming County has the highest concentration of ownership of any county.
- Not one of the state’s top-ten private landowners is headquartered in West Virginia.
- Many of the counties - including Harrison, Barbour, Mineral, Lincoln, and Putnam - that had high concentrations of absentee corporate ownership in Miller’s 1974 study did not in this analysis.
- Only three corporations that were among the state’s top-ten landowners in 1974 remained on that list in 2011.
- Nationally, timber management concerns control about half of the nation’s forests that had been managed by industrial timber companies until the 1980s.

While much of the damage of economic colonialism was inflicted over the last century, the effects of new patterns of absentee ownership are still unknown.^{xi}

Boom and Bust

The patterns of absentee ownership, extractive industries, and a colonial economy set the tone for much of the state's history over more than a century. One feature which had a huge impact on poverty in the state was the pattern of boom and bust.

These frequently occur in areas dependent on extraction as production ebbs and flows, energy prices rise and fall due to market forces, and the resources themselves are depleted. Countries and regions that rely heavily on such industries often underperform regions not so dependent, a tendency known as the "resource curse."

In a 1995 study, economists Jeffrey D. Sachs and Andrew M. Warner compared economic growth rates in 95 countries. Its opening words of the study lay out a key finding:

"One of the surprising features of economic life is that resource-poor economies often vastly outperform resource-rich economies in economic growth...On average, countries which started the period with a high value of resource-based exports to GDP tended to experience slower growth during the following twenty years."^{xii} The negative relationship between resource abundance and growth remained present after controlling for a number of other variables introduced in previous growth studies.^{xiii}

West Virginia's mining communities boomed with soaring demand during World Wars I and II, only to be followed in both cases by steep declines in employment and income. A similar decline followed the short-lived energy boom of the late 1970s.

Further, West Virginia's busts did not necessarily coincide with national trends. In the 1950s, when the United States economy was booming, coal employment fell by more than half from 119,568 in 1950 to 52,352 in 1959 and continued to decline during the relatively prosperous 1960s.

A 2011 study of energy booms and busts by the West Virginia Center on Budget and Policy found that while wages and incomes in mining counties could increase in booms, these did not translate into long-term growth or prosperity. Mining counties had lower median household incomes, higher poverty rates, and worse health outcomes. Mining counties also were found to have less economic diversity, lower education levels, and higher levels of inequality.^{xiii}

The projected continuing decline of coal, especially in southern West Virginia, makes any future booms unlikely.

Automation

One of the nation's best-known folk songs, "The Ballad of John Henry," has West Virginia origins. According to folklore, this steel-driving man met his death in competition with a steam drill while working on a railroad tunnel near Talcott in Summers County in the 1870s. Human-versus-mechanical labor would prove to be a major theme of the new state's history, particularly in its coal mines.

In one form or another, mine mechanization has a century-long history. Prior to World War I, undercutting machines reduced coal production by pick and underground rails began to replace mules. Many innovations in machines and methods would follow as the decades proceeded, such as conveyors, continuous miners, and longwall mining machinery, in addition to surface and mountaintop removal mining.^{xiv}

The perhaps-inevitable mechanization of mining, which employed over 125,000 state miners in 1948, received a major impetus when a series of deals were struck between United Mine Workers' leader John L. Lewis and the coal operators' association. In return for withdrawing the union's opposition to

mechanization, Lewis hoped to build a health and welfare fund based on the tonnage of coal produced. Unfortunately, production declined as a result of recessions in the late 1950s and early 1960s, effectively ending Lewis's dream of a cradle to grave health care and pension system for miners and their families. Mechanization, however, proceeded apace, with devastating consequences for the coalfields.

Lewis apparently assumed that out-of-work miners would easily find work in other sectors of the economy. However, as historian Jerry Bruce Thompson has written,

"...Lewis's deal with the industry had devastating consequences for the miners, the union, and the region. A union with a shrinking work force had declining influence, both economically and politically, and with fewer workers and increasing numbers of retirees, pressure on the welfare and retirement fund became unsupportable over time. Moreover, the massive unemployment that resulted from the transformation of the coal industry contributed to the growing squalor of Appalachia, and neither the operators nor the union did anything to help the unemployed relocate or train for other work, nor did they seek government help for the workers abandoned by the industry."^{xiv}

In the days to come, it would not be unusual for coal production to remain steady or increase, even while coal employment sagged.

According to the West Virginia Office of Miners' Health, Safety and Education:

- In the 1960's there were 48,696 miners in the state. By decade's end there were less than 42,000, even though coal extraction increased by nearly 20 million tons.
- In the 1980s, mine employment decreased from 55,502 to 28,323 over a similar period despite a 30 million ton increase in coal extraction.
- Coal employment dropped by nearly half in the 1990s, going from 28,876 to 14,845 by 1999 despite high levels of production.^{xv}

Ironically, at times West Virginia's taxpayers actually subsidized coal companies that automated and laid off miners. In 1985, the legislature passed the Business Investment and Job Expansion Tax Credit Act, which created "super tax credits" as part of an effort to land a Saturn auto plant in the state.

As *The Charleston Gazette* reported, about 80 percent of the credits went to coal companies which further automated and "created 'new jobs' by laying off their current employees, then hiring them back for 'new jobs' created by contractors working for those coal companies."^{xvii}

Historian Ron Eller summarized the impact of extractive industries, and particularly coal mining's brief booms and protracted busts, this way: "...a peripheral area like Appalachia may experience short-term growth without development and suffer the long-term consequences of dependency, inadequate social services, absentee ownership and a colonial economy."^{xviii}

The warning of the 1884 State Tax Commission was prophetic. And unheeded.

Beyond Coal: from Weirton Steel to Wal-Mart

If poverty is a big part of West Virginia's story, it isn't the only part. When coal was in high demand—and when miners had the right to organize for better wages and conditions — there were temporary but real times of broadly shared prosperity even in the coalfields, where photographs of street scenes in Welch, Logan or Williamson could be mistaken for Manhattan.

Further, within the lifetimes of most West Virginians and within the living memory of many, state residents for a time even enjoyed wages and benefits above the national average. In fact, from the mid-1970s to the national recession in the early 1980s, West Virginia performed much better on a host of economic indicators and was much more aligned with the nation. Today, median wages in constant dollars are lower than they were then and are also significantly below the national average. From 1979 to 1981, 72.7 percent of West Virginia's private-sector workers received employer-provided health insurance, compared with 54.7 percent in 2013.^{xlix}

Further, 57 percent of private-sector workers had pension coverage. In recent years, it has fallen to less than half.ⁱ

Not coincidentally, union density, and the percentage of nonagricultural wage and salary employees who are union members was higher during that period. In 1979, nearly one-third of West Virginia workers belonged to unions, compared with the US average of 27.4 percent for the same period. By 2014-2015, that had dropped to 13.7 percent.ⁱⁱ

This time of shared prosperity did not last, and the 1980s proved to be catastrophic for the state's working families. Manufacturing in general and the steel industry in particular declined sharply in that decade, further contributing to coal's decline. In 1983, unemployment in the state reached an annual average of 17 percent and remained in the double digits for most of the decade.

Factors contributing to the erosion of shared prosperity were many. They included the anti-labor, anti-tax and anti-regulatory policies of the Reagan era, trade deals which undermined manufacturing, a shift to a service economy characterized by low wages and low or nonexistent benefits, tears in the social safety net, and the decline of coal employment. The recent Great Recession, from which the state has yet to fully recover, only added to the problems.ⁱⁱⁱ

Perhaps nothing better symbolizes the decline in manufacturing jobs outside of the extractive economy over this period than the fact that Wal-Mart replaced Weirton Steel as the state's largest employer, a position it held from 1998 until 2015.ⁱⁱⁱⁱ

In a word, the impacts of a colonial economy lingered, while other sectors were unable to offset its long and long-predicted decline. Subsequent misguided state policies, from irresponsible tax cuts to anti-labor policies such as "Right-to-Work" and the repeal of prevailing wage, are likely to only reinforce these unfortunate patterns.

Whether the state's history prefigures its destiny remains to be seen.

Section 2:

West Virginia's Economy in 2015

As we saw in the previous section, West Virginia has had a long, turbulent economic history characterized by the booms and busts of mineral extraction, the dominance of out-of-state interests, and persistent poverty. In contrast to this long view of the state's economy, this next section provides a snapshot from 2015, showing just where the past 150-plus years of economic history has led West Virginia.

Low Income, High Poverty

West Virginia has historically been one of the poorest states in the country, and in 2015 that was no different. West Virginia's per capita personal income of \$37,047 was higher than only one state, Mississippi, and was \$10,622 below the national average. In fact, West Virginia's per capita personal income has never ranked better than 32nd among the 50 states and D.C. since 1929, and since 1980 has not ranked better than 47th.

West Virginia's income levels are also low by another measure, median household income, which measures the income of the typical household – or the household in the middle of the income distribution – and serves as a good indicator for how the middle class is faring. West Virginia's median household income was an estimated \$42,019 in 2015, the third-lowest among the 50 states.

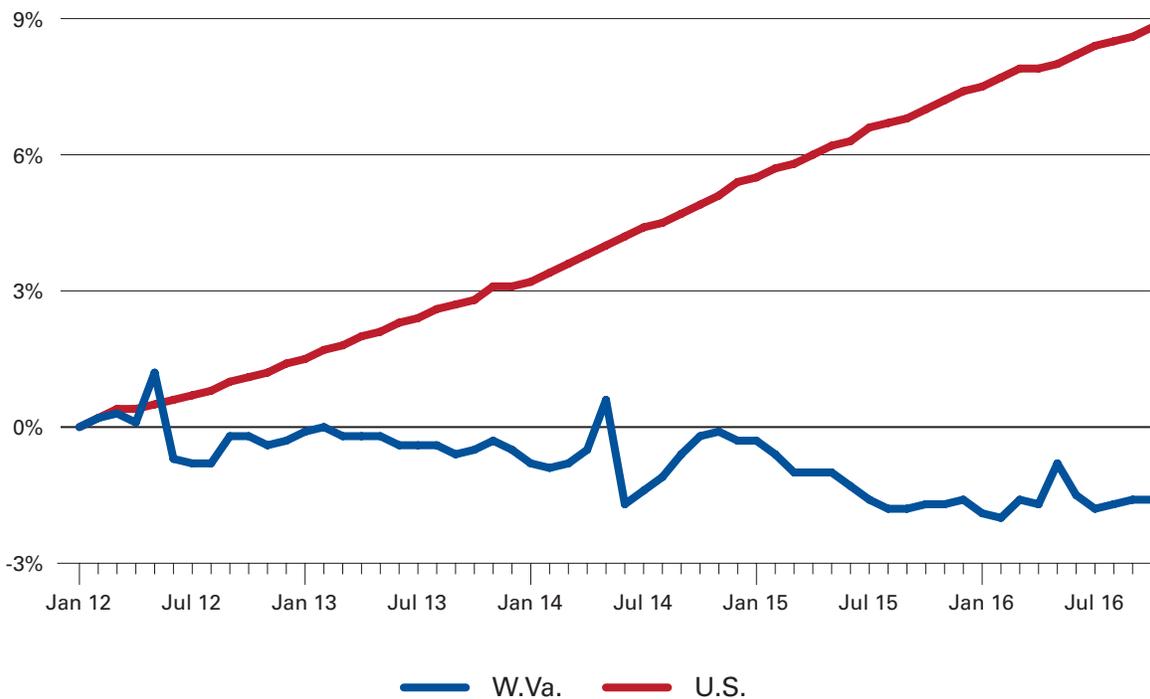
With low levels of income, it is unsurprising that thousands of West Virginians are struggling to make ends meet. In 2015, the state's poverty rate was 17.9 percent, the seventh-highest in the country, with more than 321,000 West Virginians living in poverty. Poverty is even more prevalent among the state's children, with nearly one in four living in poverty. African Americans and women in West Virginia also experienced elevated levels of poverty in 2015, with the poverty rate for African Americans at 28.4 percent, and 19.7 percent respectively.

West Virginia's Economy Weakened in 2015

West Virginia has seen little job growth in recent years, a trend that worsened in 2015 and continued into 2016. Coming out of the recession, West Virginia experienced moderate job growth, with total employment increasing by 2.7 percent from 2009 to 2012, the 16th-best rate in the country. But while the economies of most states continued to grow, West Virginia faltered. Total employment in West Virginia fell by 0.5 percent from 2012 to 2014, making it the only state to see a decline. Total employment fell by another 0.7 percent in 2015, with only North Dakota and Wyoming experiencing sharper drops. Total employment in West Virginia averaged 9,000 fewer jobs in 2015 than it did in 2012, while nationally the average increased by 7.7 million (**Figure 1**). West Virginia's weak economic performance since 2012 is primarily due to the collapse in natural gas prices, declining coal production, and continued deterioration in the manufacturing, construction, and utilities sectors.

Figure 1

Total Nonfarm Employment Growth, January 2012 – October 2016
U.S. and West Virginia, Seasonally Adjusted



Source: U.S. Bureau of Labor Statistics, Current Employment Statistics (October 2016).

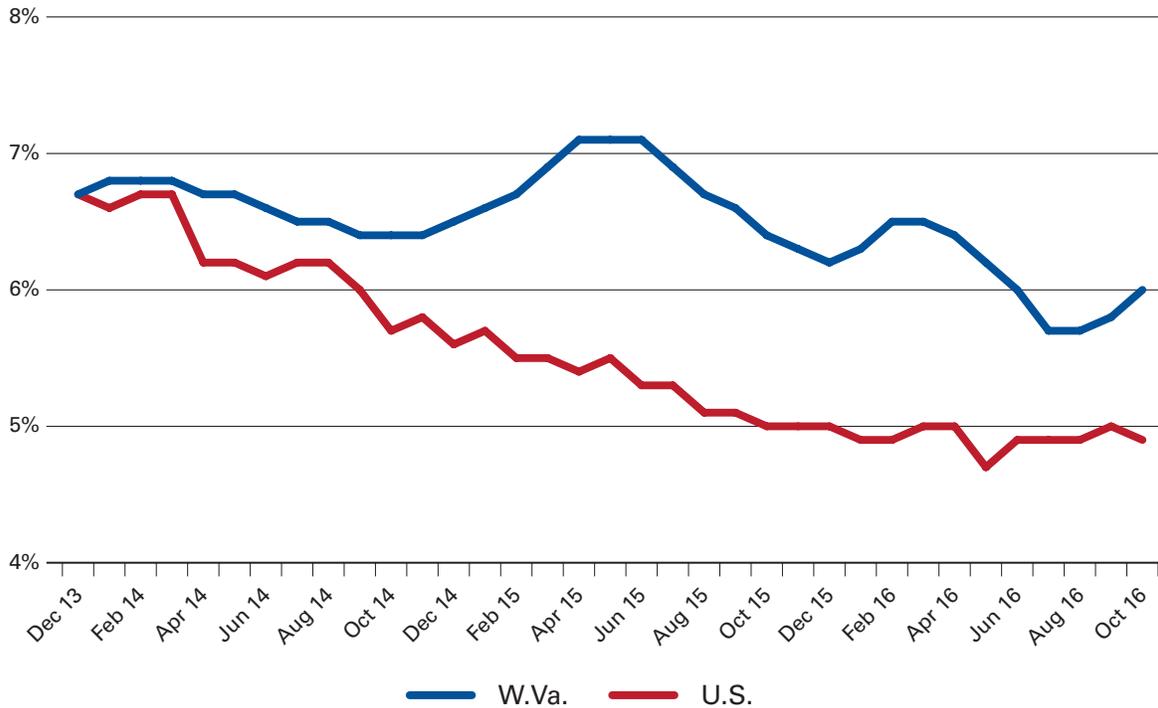
The lack of job growth resulted in rising unemployment in West Virginia, at a time when the national rate was falling. In December of 2013, West Virginia’s unemployment rate was the same as the national average of 6.7 percent. But while the national unemployment rate steadily declined through 2014 and 2015, West Virginia’s remained elevated, and jumped in 2015, reaching 7.1 percent. The state’s unemployment rate averaged 6.9 percent throughout 2015, tied for the highest rate in the country, with 52,903 West Virginians unemployed. As of October 2016, West Virginia’s unemployment rate was 6.0 percent, the fifth-highest rate among the 50 states, compared to the national average of 4.9 percent (Figure 2).

Working for Low Wages

With employment levels falling and unemployment rising in recent years, those who are working in West Virginia increasingly find themselves in low-wage jobs. Total private-sector employment in West Virginia fell by approximately 6,800 jobs between 2012 and 2015. While the overall employment loss is bad enough, the type of jobs lost paints an even darker picture. The jobs lost in recent years have been largely good-paying jobs in high-wage industries, leaving the shrinking number of those still finding work in West Virginia being hired for low wages.

While the state’s private-sector employment fell by 6,800 jobs since 2012, employment in high-wage industries fell by an even greater amount. West Virginia has lost 11,200 high-wage private-sector jobs since 2000. This includes 7,000 mining jobs and 1,500 heavy construction jobs lost. In contrast, the state has actually gained low-wage jobs. West Virginia has added 3,700 low-wage jobs since 2012, including 1,300 food service jobs (Figure 3).

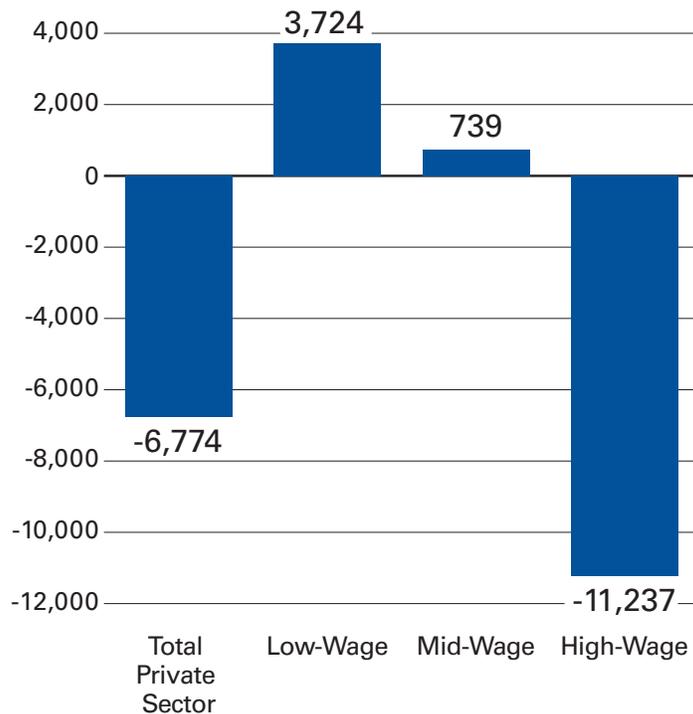
Figure 2
 Unemployment Rate, December 2013-October 2016
 U.S. and West Virginia, Seasonally Adjusted



Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics.

Figure 3
 West Virginia Losing
 High-Wage Jobs, Gaining
 Low-Wage Jobs
 Net Private Sector
 Employment Change,
 by Wage Category,
 2012-2015

Source: WVCPB analysis
 of Workforce WV data.



In 2015, Health Care and Social Assistance was West Virginia’s largest private-sector industry, accounting for more than one-in-five jobs in the state. While jobs in this industry paid above average wages, wages in the next two biggest industries, Retail Trade and Leisure and Hospitality, were among the lowest on average, accounting for 28.8 percent of total private employment in the state, with average weekly wages of \$492 and \$320 respectively (**Table 1**).

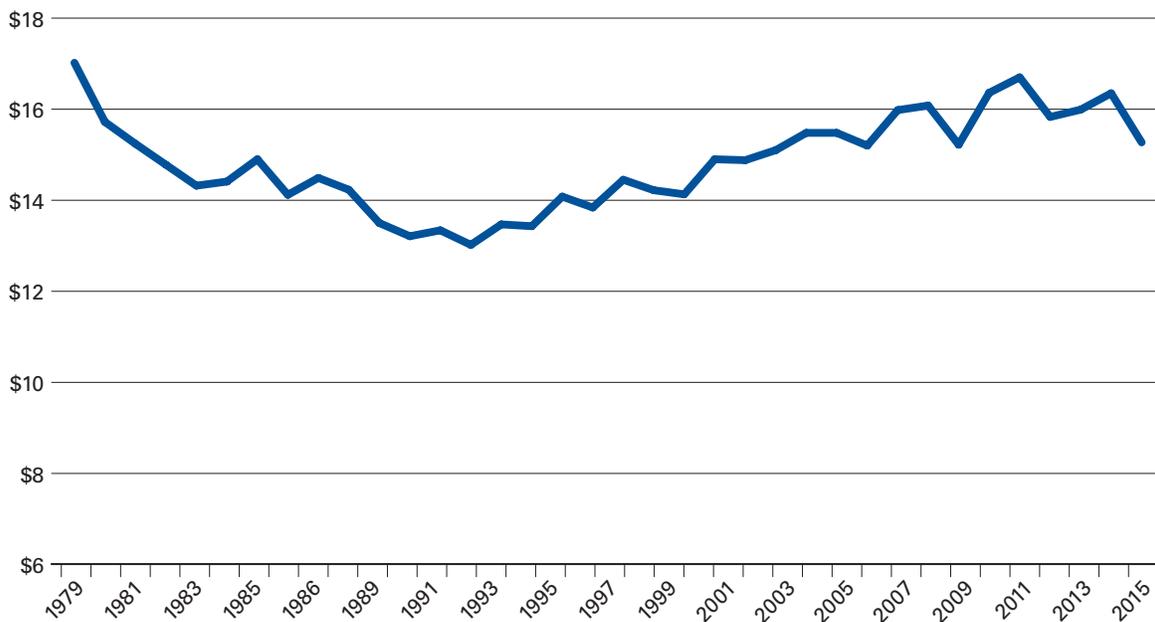
Table 1
Employment by Industry, 2015

Industry	Employment	Average Weekly Wage
Agriculture, Forestry, Fishing, and Hunting	1,845	\$574
Mining, Quarrying, and Oil and Gas Extraction	25,046	\$1,516
Construction	32,642	\$1,022
Manufacturing	47,724	\$1,072
Utilities	5,067	\$1,703
Wholesale Trade	22,316	\$1,072
Retail Trade	87,050	\$492
Transportation and Warehousing	18,734	\$881
Information	9,579	\$979
Financial Activities	25,034	\$902
Professional and Business Services	67,138	\$869
Educational Services	6,216	\$648
Health Care and Social Assistance	116,437	\$814
Leisure and Hospitality	74,670	\$320
Other Services	20,959	\$545
Total Private	560,457	\$785
Government	137,266	\$868

Source: Workforce West Virginia.

With the loss of high-wage jobs and the gains in low-wage employment, West Virginia has experienced nearly no wage growth in recent years. The state’s median wage is essentially unchanged since 2012, at \$16.01 in 2015, continuing a long-term trend of stagnant wage growth (**Figure 4**). A median-wage worker in West Virginia earned \$1.01 less per hour in 2015 than a median-wage worker in 1979, adjusting for inflation.

Figure 4
 Little Wage Growth for West Virginia
 Real Median Wage, 1979-2015 (2015\$)



Source: Economic Policy Institute analysis of Current Population Survey Data.

In 2015, West Virginia workers at all wage levels earned less than their counterparts nationally. The greatest difference was for earners at the top. Workers at the 90th percentile in West Virginia earned \$8.56 less per hour than the national 90th percentile, a difference of 25 percent (**Table 2**).

Table 2
 Wages by Deciles, West Virginia and U.S., 2015

	WV	U.S.	Wage Gap
10th percentile	\$8.39	\$8.91	\$0.52
20th percentile	\$9.99	\$10.21	\$0.22
30th percentile	\$11.98	\$12.33	\$0.35
40th percentile	\$14.11	\$14.79	\$0.68
50th percentile (Median)	\$16.01	\$17.19	\$1.18
60th percentile	\$18.51	\$20.17	\$1.66
70th percentile	\$21.48	\$24.80	\$3.32
80th percentile	\$25.93	\$30.87	\$4.94
90th percentile	\$33.88	\$42.44	\$8.56

In addition to good wages, jobs that provide pensions and health-care coverage are hard to come by in West Virginia, particularly in comparison to the past. In 1979 nearly 73 percent of West Virginians working in the private sector were covered by an employer-provided health-care plan, and 57 percent were covered by an employer-provided pension plan. By 2014 those figures had fallen to 52 percent and 42 percent respectively.

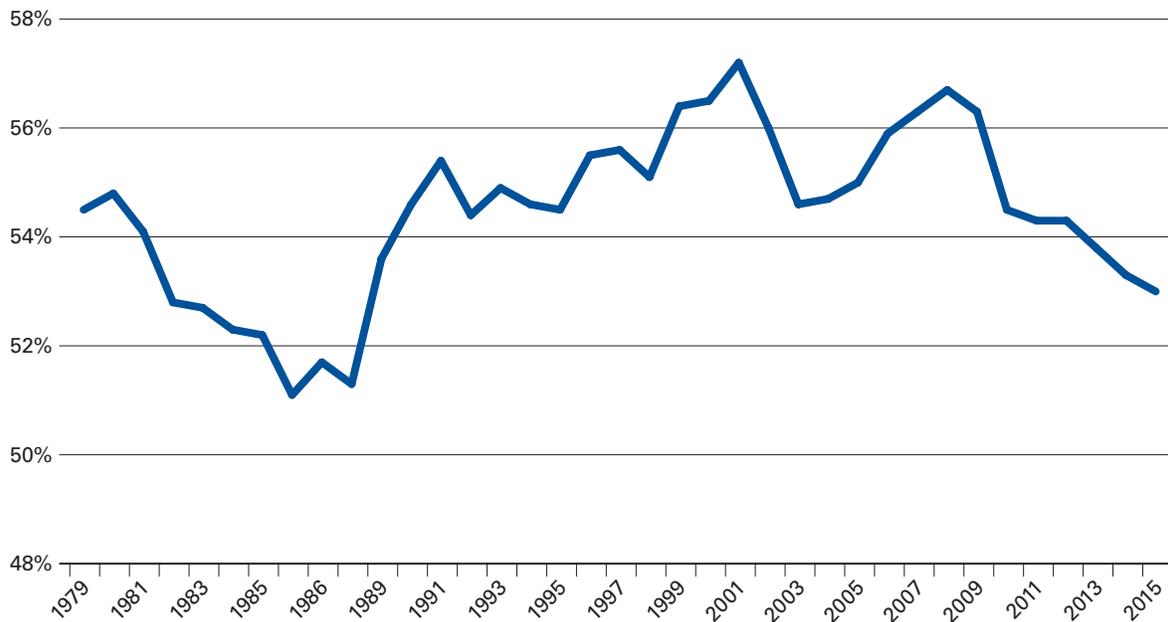
Source: Economic Policy Institute analysis of Current Population Survey Data.

Who's Not Working in West Virginia

As West Virginia's unemployment rate has risen, another measure of the health of its labor market has also worsened. West Virginia's labor force participation rate, or the measure of people 16 years or older who are either working or seeking work as a share of the adult population, fell to 53.0 percent in 2015, the measure's lowest level since the late 1980s (**Figure 5**). The labor force participation rate is a key component of long-term economic growth and is a good barometer for how well a state's economy provides employment for those who are able to work.

Figure 5

West Virginia Labor Force Participation Rate, 1979-2015



Source: Economic Policy Institute analysis of Current Population Survey data.

While labor force participation rates rise and fall with demographic and population shifts, changes in disability rates, and structural reasons, West Virginia has historically had the nation's lowest, and that was true again in 2015. West Virginia's rate of 53.0 percent was 9.7 percentage points lower than the national average of 62.7 percent.

West Virginia also has the nation's lowest labor force participation rate among prime-age adults; those aged 25 to 54 years. West Virginia's prime-age labor force participation rate is 72.0 percent, compared to the national average of 80.6 percent. This means that in 2015 there were over 193,000 adults between the ages of 25 and 54 in West Virginia who were neither working nor looking for work. In fact, across nearly all key demographic groups of age, race, and educational attainment, West Virginia has lower labor force participation levels than the national average (**Table 3**).

Table 3

Labor Force Participation Rate by Demographic, West Virginia and U.S., 2015

	West Virginia	United States
All	53.0%	62.7%
Gender		
Male	58.3%	69.1%
Female	48.0%	56.7%
Age		
16-24 yrs	54.7%	55.0%
25-54 yrs	73.0%	80.8%
55 yrs and older	30.7%	39.9%
Race/Ethnicity		
White	52.6%	62.2%
African-American	57.1%	61.2%
Hispanic	64.8%	65.9%
Education		
Less than high school	24.6%	39.9%
High school	49.4%	58.8%
Some college	61.7%	66.0%
Bachelor's or higher	74.5%	74.7%

Those prime-age adults not in the labor force in West Virginia generally are less educated than those who are in the labor force. Only 33.2 percent of those prime-age adults who are not in the state's labor force have more than a high school education, compared to 58.4 percent for those who are active in the labor force.

There is an even greater discrepancy with disability rates among those who are and are not participating in West Virginia's labor force. Of prime-age adults not in the labor force in West Virginia, 46.0 percent have some kind of disability, while only 3.5 percent of those who are in the labor force are disabled.

Those who are not in the labor force are also significantly more likely to live in poverty. The poverty rate among prime-age adults who are not in the labor force in West Virginia is 49.5 percent. In comparison, those prime-age adults who are participating in the labor force have a poverty rate of 10.3 percent.

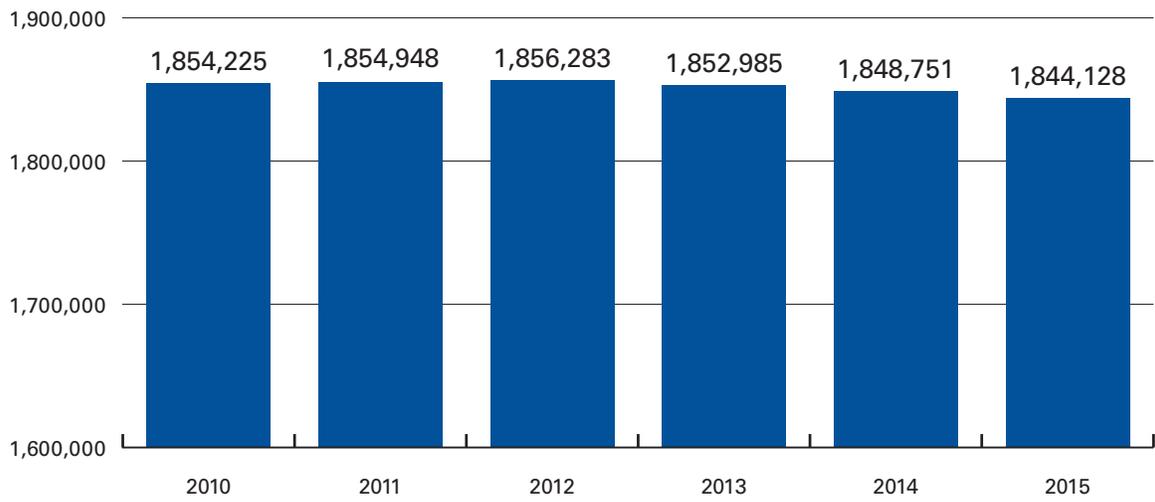
Source: Economic Policy Institute analysis of Current Population Survey data.

Shrinking Labor Force

In addition to having low levels of labor force participation, West Virginia's labor force itself shrank in 2015. West Virginia's labor force was made up of 785,049 employed workers and unemployed workers actively seeking employment in 2015, a decline of 4,800 from 2014. West Virginia has lost nearly 29,000 members of its labor force since 2009.

While West Virginia's labor force remains older and less educated than the rest of the country, the pool from which the state draws its labor force is also shrinking. West Virginia's population declined in 2015 for the third year in a row, and the state has lost over 12,000 residents since 2012 (**Figure 6**), making West Virginia one of the only states to lose population over this period. The Bureau of Business and Economic Research at West Virginia University projects that West Virginia's population will continue to decline over the next five years.

Figure 6
West Virginia is Losing Population



Source: U.S. Census Bureau.

Section 3:

Why is West Virginia Poor?

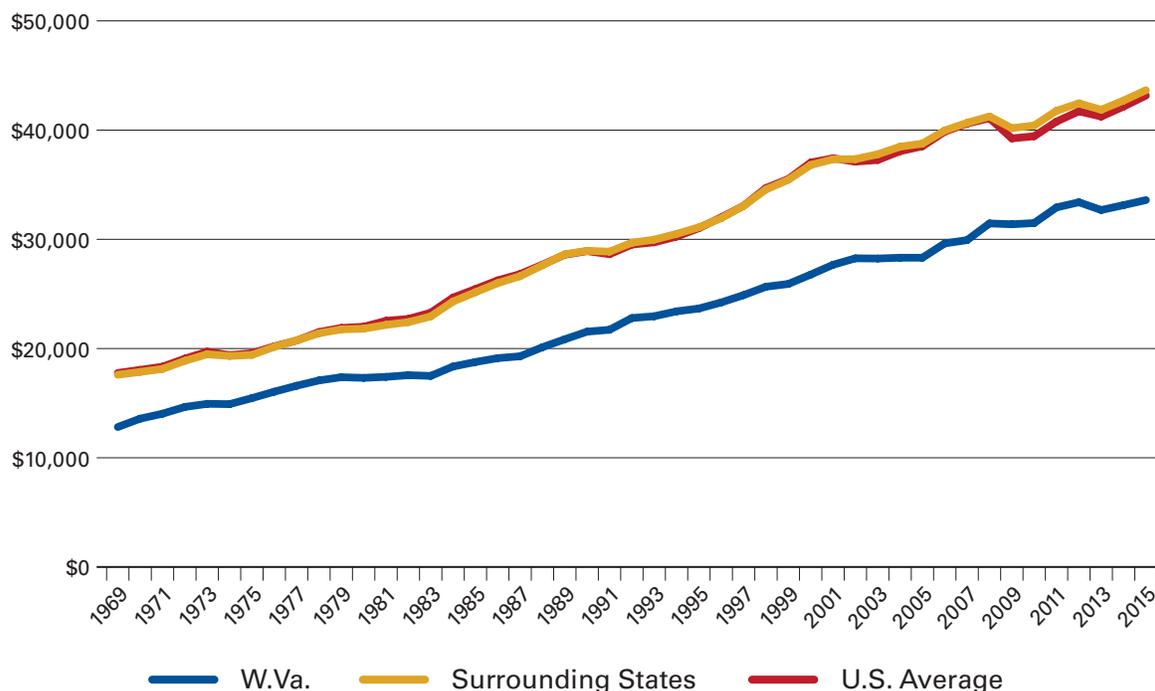
The previous sections looked both at the historical context of West Virginia's economy and what the data tell us about the state's current economic status. This next section seeks to uncover what factors can explain why some states, like West Virginia, are poorer than others.

West Virginia has historically been one of the poorest states, and has been particularly economically challenged in recent decades. The collapse of the steel industry in the 1980s and the subsequent decline in the coal industry dealt West Virginia an economic blow from which it has yet to recover. This led to sharp declines in wages and benefits, as good-paying mining and manufacturing jobs were replaced with low-paying service jobs. The rapid change in the economy led to a population exodus as the state's labor force shrank by 31,000 workers between 1983 and 1987, and the state's population never recovered. Today, West Virginia is losing population faster than any other state, and ranks among the highest-poverty and lowest-income states in the country.

Using the simple measure of personal income, West Virginia has not kept up with the rest of the nation for decades. West Virginia’s real per capita personal income has been lower than surrounding states (Ohio, Pennsylvania, Maryland, Virginia, and Kentucky) and the United States average for decades. (Figure 7). However, this trend was present long before 1969.^{lv}

Figure 7

Real per Capita Income, W.Va., Surrounding States, and U.S., 1969-2015



Source: U.S. Bureau of Economic Analysis, “SA1 Personal Income Summary: Personal Income, Population, Per Capita Personal Income,” http://www.bea.gov/iTable/index_regional.cfm (accessed 6/6/16).

A number of factors have been offered to explain why West Virginia is poor. Many have cited the prevalence of resource extraction, tax rates, education, and the state’s topography. Policy efforts to address West Virginia’s poor economic state have focused on the state’s perceived business climate, with multiple attempts at tax reform to make the state more “business friendly,” and the recent passage of a “Right-to-Work” law (see Section 4). However, before sound policies can be developed to address the problem of low income in the state, it is important to determine which factors are the most important in hindering West Virginia’s growth.

This section presents an analysis of what factors account for the largest share of differences in income across states. Its methodology was adapted from research by The Federal Reserve Bank of Cleveland and the Kentucky Bureau of Economic and Business Research^{lvi} and examine differences in stock of knowledge, public finance, industrial structure, and the labor market. We utilize data from a variety of sources covering 1969-2014 and then use the results from our analysis to see how changes in various aspects of the West Virginia economy are predicted to change the income of West Virginians. We find that increasing knowledge factors including educational attainment and improving the state’s labor force participation rate would significantly improve the personal income in West Virginia. In contrast, despite their focus from policy makers, factors such as corporate taxes and “Right-to-Work” status showed little effect on income levels. The results from our analysis will provide a guide to policy makers on what issues to focus on when addressing the persistent problem of low income in West Virginia.

Studies demonstrate that inadequate family income and economic uncertainty can negatively affect children physically, socially, emotionally, and academically. Low-income parents do not have the resources to provide their children with enriching materials and experiences that middle- and upper-income parents routinely do. Economic insecurity also increases parental stress, which in turn can cause depression and anxiety, and increase the risk of substance abuse and domestic violence.^{lvii} These risks can compromise parenting and are associated with behavioral problems among children.

Research also shows that increasing a family's economic resources can positively affect child development, especially for younger children. Increasing parental income has consistently shown improvements in school achievement among elementary school-age children; other studies have also shown links between increased income and improved school readiness in young children.^{lviii}

Poor adults are almost five times as likely to report being in fair or poor health as adults with family incomes at or above 400 percent of the federal poverty, and they are more than three times as likely to have activity limitations due to chronic illness.^{lix} Low-income American adults also have higher rates of heart disease, diabetes, stroke, and other chronic disorders than wealthier Americans.^{lx}

The Possible Factors Affecting Income

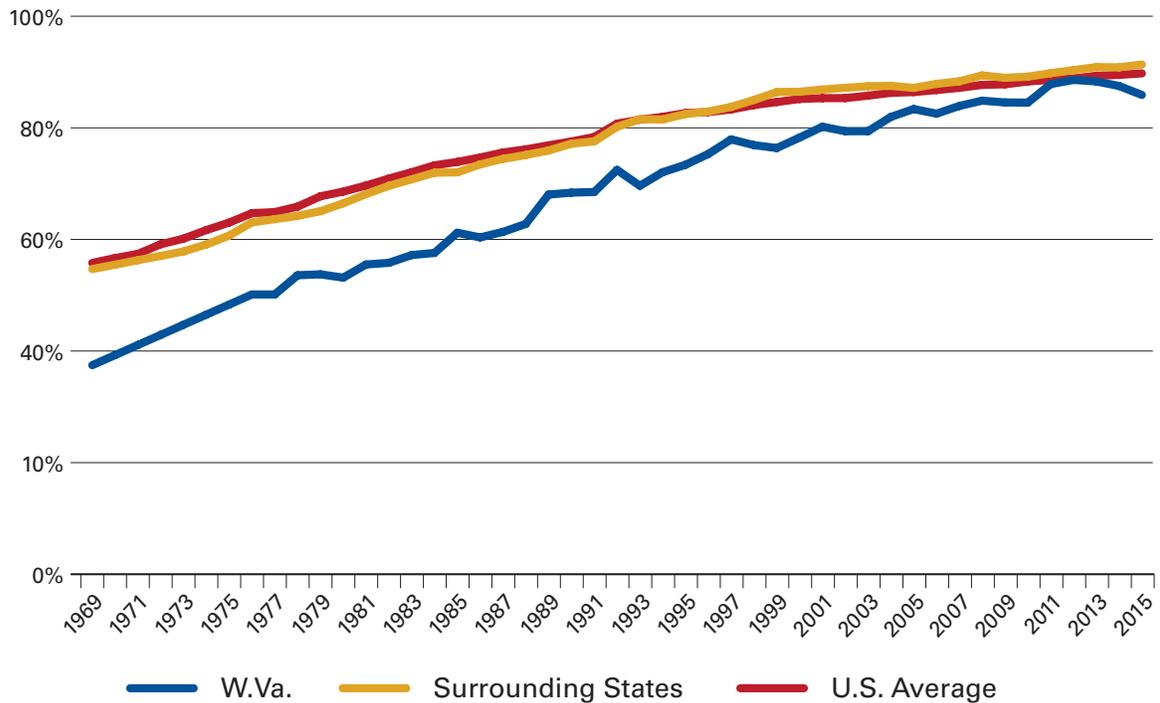
We consider four possible explanations for West Virginia's low income, the differences between West Virginia and other states in: the stock of knowledge, public finance, industrial structure, and the labor market. This list encapsulates the primary categories that economists have used to understand growth.^{lxi}

> Stock of Knowledge Variables

We utilize three different variables to measure the stock of knowledge: the percent of the population with a high school degree, the percent of the population with a college degree, and the stock of patents per capita. The stock of patents per capita is a proxy for technology or innovation. To construct the stock of patents, we take the number of utility patents issued in a year and add that to the stock of existing patents less depreciation. West Virginia has lagged behind the nation in all three of the stock of knowledge variables (**Figure 8, Figure 9, and Figure 10**). Only in percent of population with a high school degree is West Virginia converging with surrounding states and the rest of the nation as it gets closer to 100 percent. The measure of college graduates appears to be moving away from the U.S. and surrounding states' averages. The stock of patents in West Virginia has not followed the upward trend the U.S. and surrounding states have seen in the last decade and a half.

Figure 8

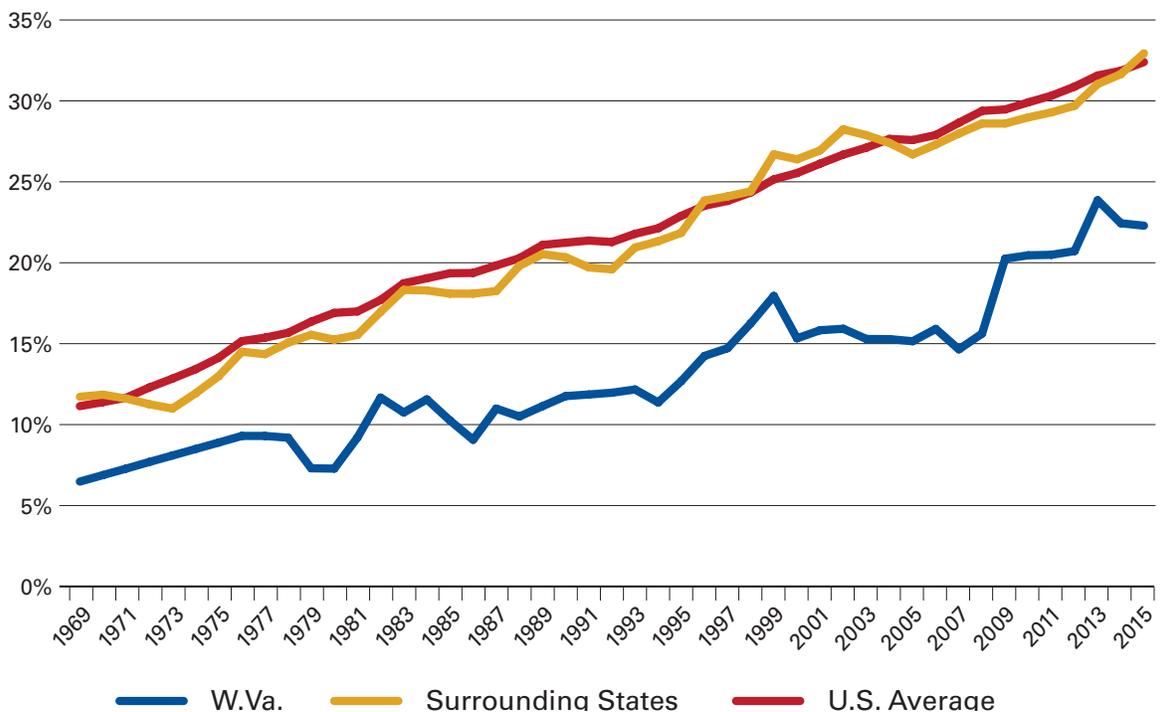
Percent of Population (age 25+) with a High School Degree
W. Va., Surrounding States, and U.S., 1969-2015



Source: IPUMS-CPS, University of Minnesota, www.ipums.org.

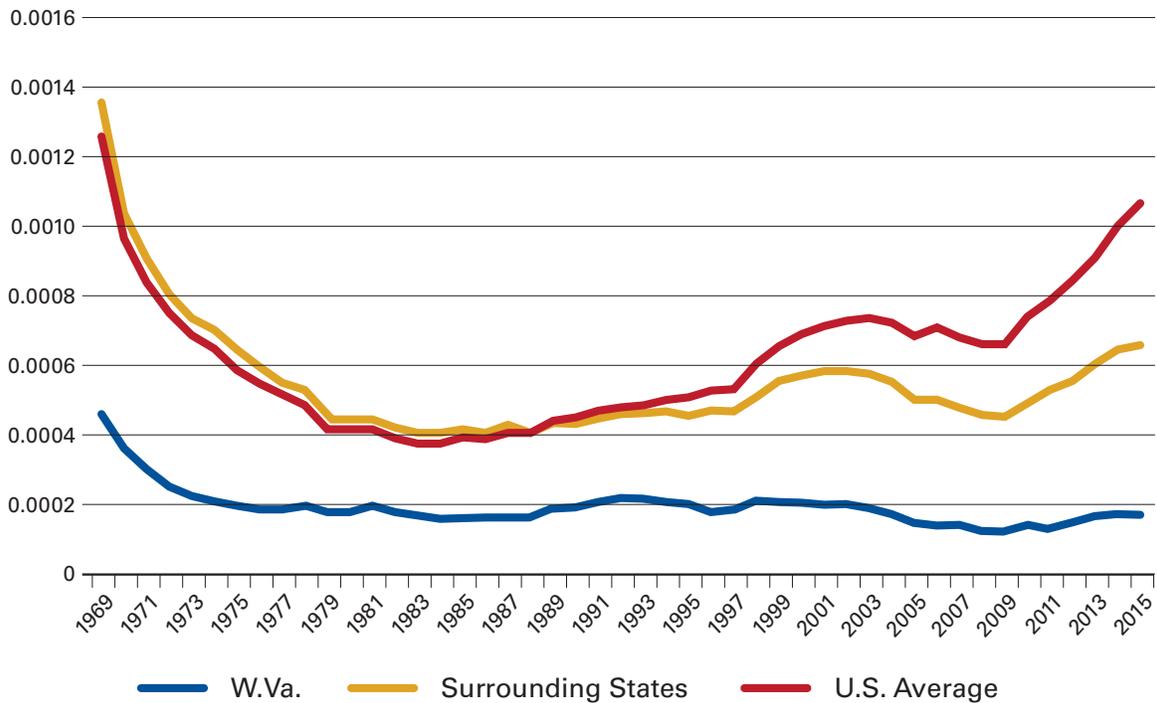
Figure 9

Percent of Population (age 25+) with a College Degree
W.Va., Surrounding States, and U.S., 1969-2015



Source: IPUMS-CPS, University of Minnesota, www.ipums.org.

Figure 10
 Patents Stock per Capita
 W.Va., Surrounding States, and U.S., 1969-2015

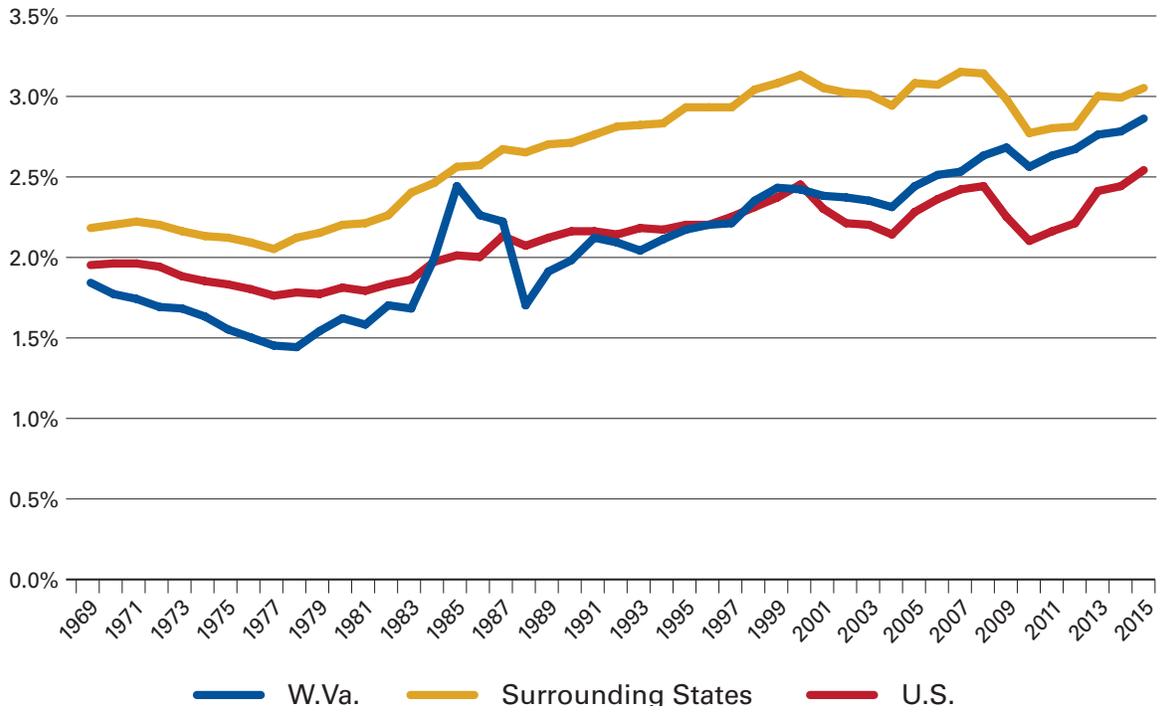


Source: U.S. PATENT AND TRADEMARK OFFICE Patent Technology Monitoring Team (PTMT) "Extended Year Set - Patent Counts by Country, State, and Year, All Patent Types Granted: 01/01/1977-12/31/2015" (accessed 6/6/16).

> Public Finance Variables

We utilize four public finance variables to assess the involvement of state and local governments in collecting tax revenue and building infrastructure. In Figure 11 and Figure 12, we examine the sources of income tax-based revenue. Figure 11 illustrates the effective income tax rate for West Virginia, surrounding states and the United States average. The effective tax rate is different than the published tax rate. The effective tax rate is calculated by dividing total income tax revenue by personal income. While this figure is certainly influenced by published tax rates, the effective rate captures not how much is due in taxes, but how much is actually collected. West Virginia’s individual income tax rate has remained below surrounding states, but near the United States average. However, West Virginia has remained on a steady path and not declined sharply during the Great Recession as the rates for other states did.

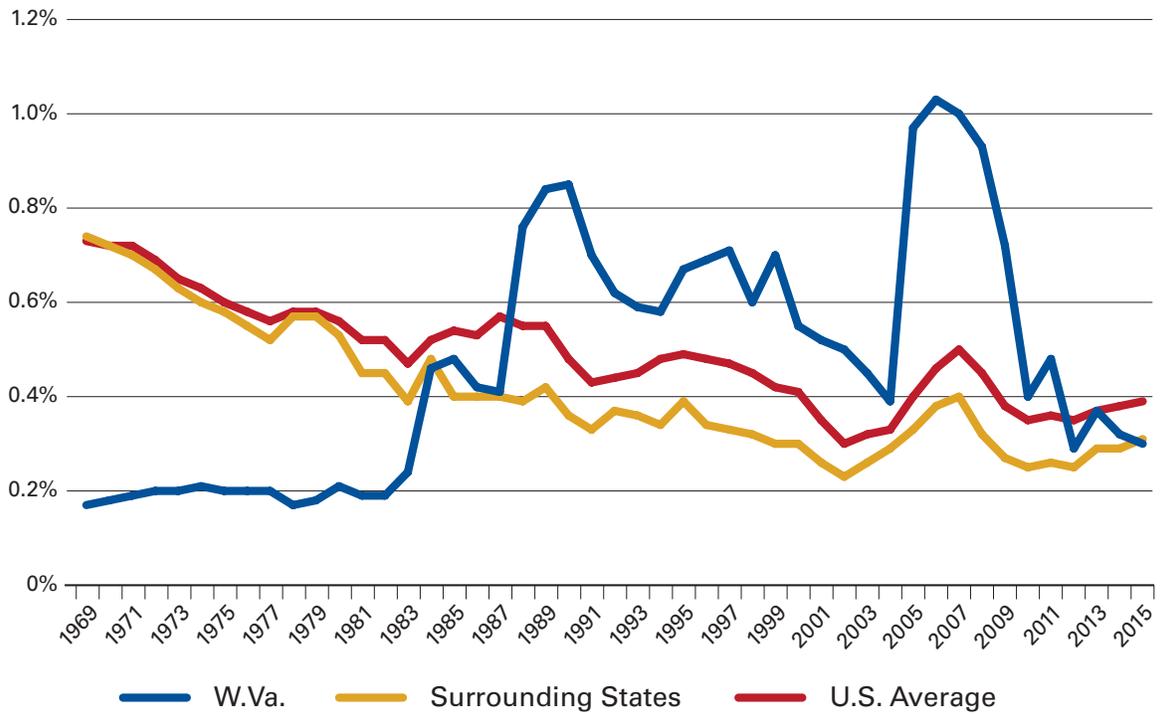
Figure 11
 Effective State and Local Income Tax Rate
 W.Va., Surrounding States, and U.S., 1969-2015



Source: Urban Institute and Brookings Institution, Tax Policy Center. Data Query System. <http://sldqs.taxpolicycenter.org> accessed (8/22/16).

West Virginia’s effective state and local corporate tax rate is much more volatile (**Figure 12**). Prior to the mid 1980’s it was lower than other states. After the mid 1980’s West Virginia’s rate was higher than surrounding states and the United States average.

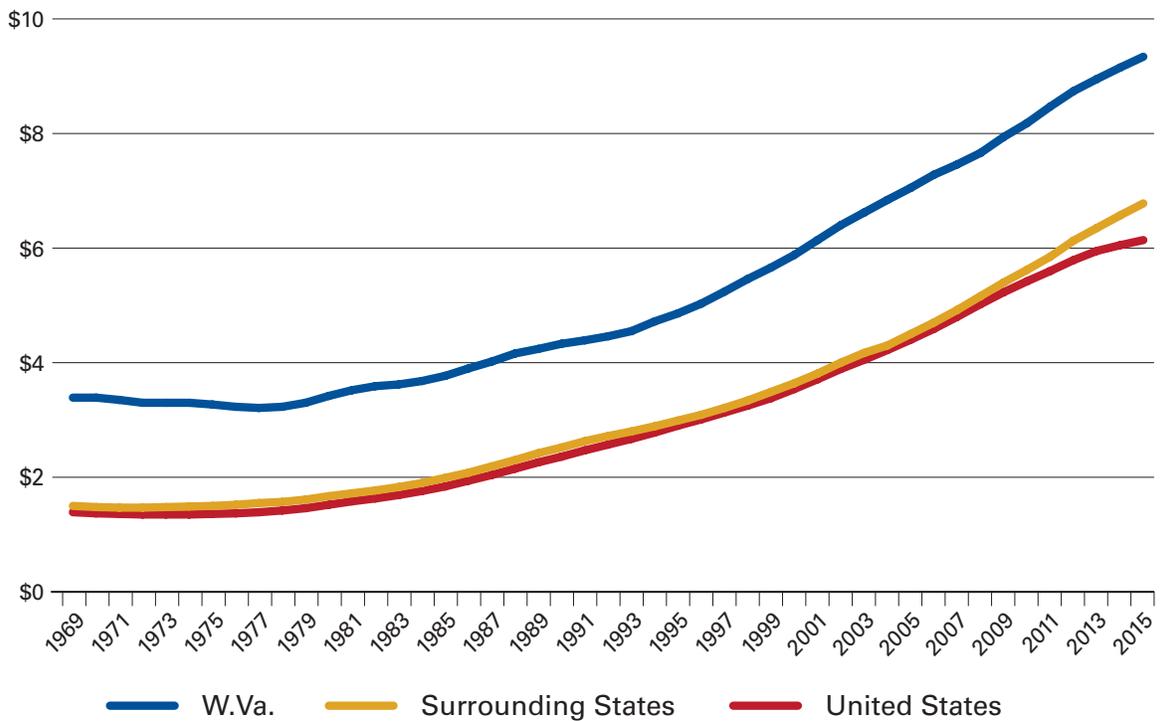
Figure 12
 Effective State and Local Corporate Tax Rate
 W.Va., Surrounding States, and U.S., 1969-2015



Source: Urban Institute and Brookings Institution, Tax Policy Center. Data Query System. <http://sldqs.taxpolicycenter.org> accessed (8/22/16).

West Virginia’s stock of highway capital is consistently higher than surrounding states and the U.S. average and the gap has been widening (**Figure 13**). Highway capital is constructed by adding current expenditures (both state and local) to the stock of existing highway capital less depreciation.

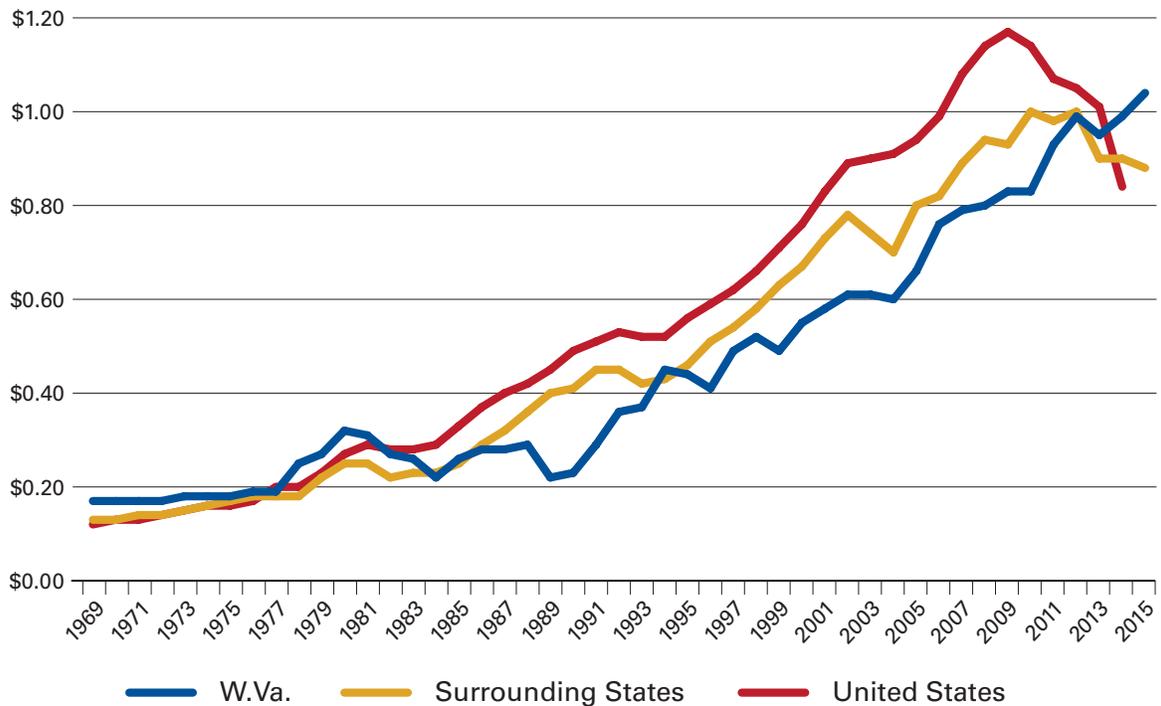
Figure 13
 Highway Stock per Capita, State and Local Funding
 W.Va., Surrounding States, and U.S., 1969-2015



Source: Urban Institute and Brookings Institution, Tax Policy Center. Data Query System. <http://slfdqs.taxpolicycenter.org> accessed (8/22/16).

Capital outlays per capita are the amount spent each fiscal year by state and local governments on capital investments (**Figure 14**). West Virginia’s outlays have typically been below the amounts for surrounding states and the United States average. However, West Virginia has not followed the declining trend in the last several years.

Figure 14
 Capital Outlays per Capita, State and Local Funding
 W.Va., Surrounding States, and U.S., 1969-2015

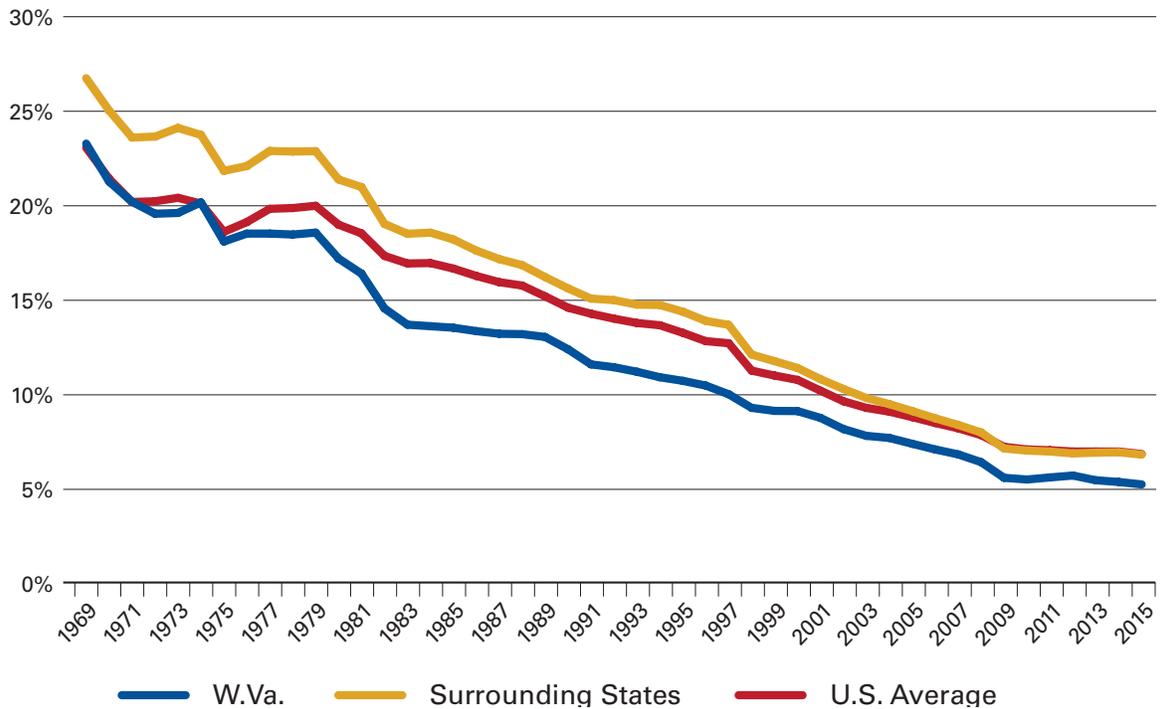


Source: Urban Institute and Brookings Institution, Tax Policy Center. Data Query System. <http://sldqs.taxpolicycenter.org> accessed (8/22/16).

> Industrial Structure Variables

To capture the industrial structure of a state, we measure the percent of personal income earned by employment in an industry. We focus on mining, manufacturing, and farming. A state with little income from these sectors will have a large service sector.^{lxiii} Figure 15 illustrates the steady decline in manufacturing across the nation. West Virginia has been historically slightly lower than the nation, unlike the surrounding states which have had higher percents of income from manufacturing. However, the percents of income from manufacturing have somewhat converged through the decline.

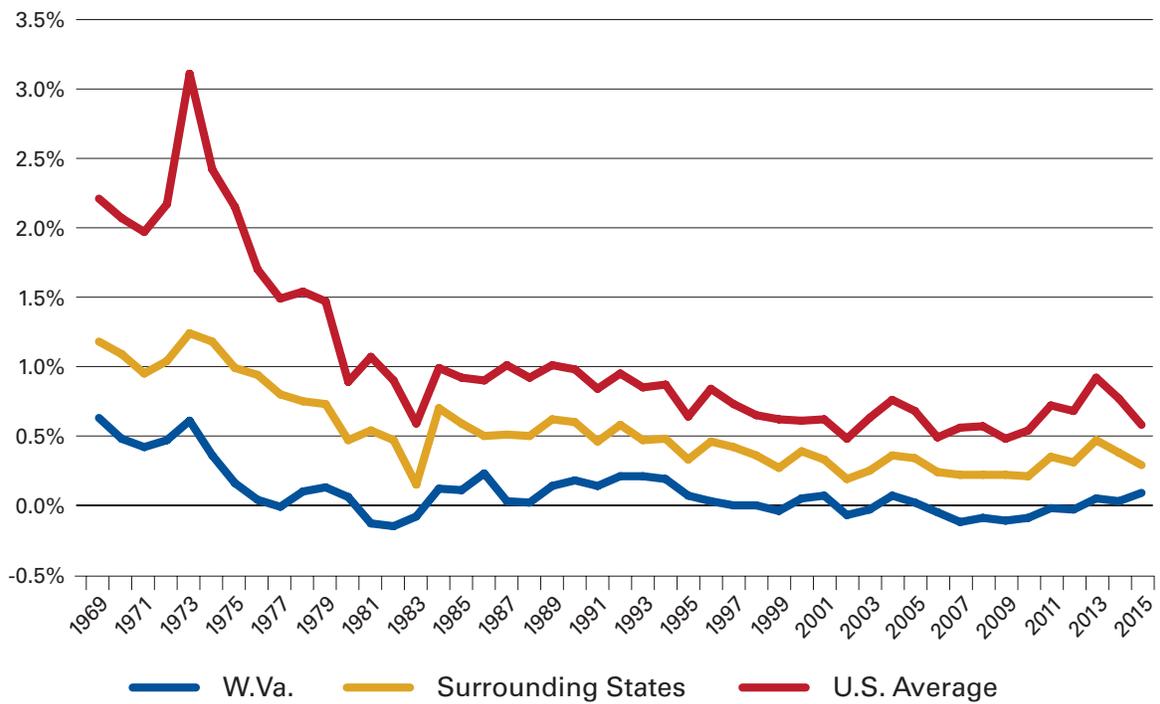
Figure 15
 Percent of Personal Income from Manufacturing
 W.Va., Surrounding States, and U.S., 1969-2015



Source: U.S. Bureau of Economic Analysis, "SA5 Personal Income by Major Component and Earnings by SIC Industry 1/" http://www.bea.gov/iTable/index_regional.cfm (accessed [date]). U.S. Bureau of Economic Analysis, "SA5N Personal Income by Major Component and Earnings by NAICS Industry 1/"

West Virginia has had much less of its income from farming than surrounding states or the nation, despite its agrarian beginnings (**Figure 16**).

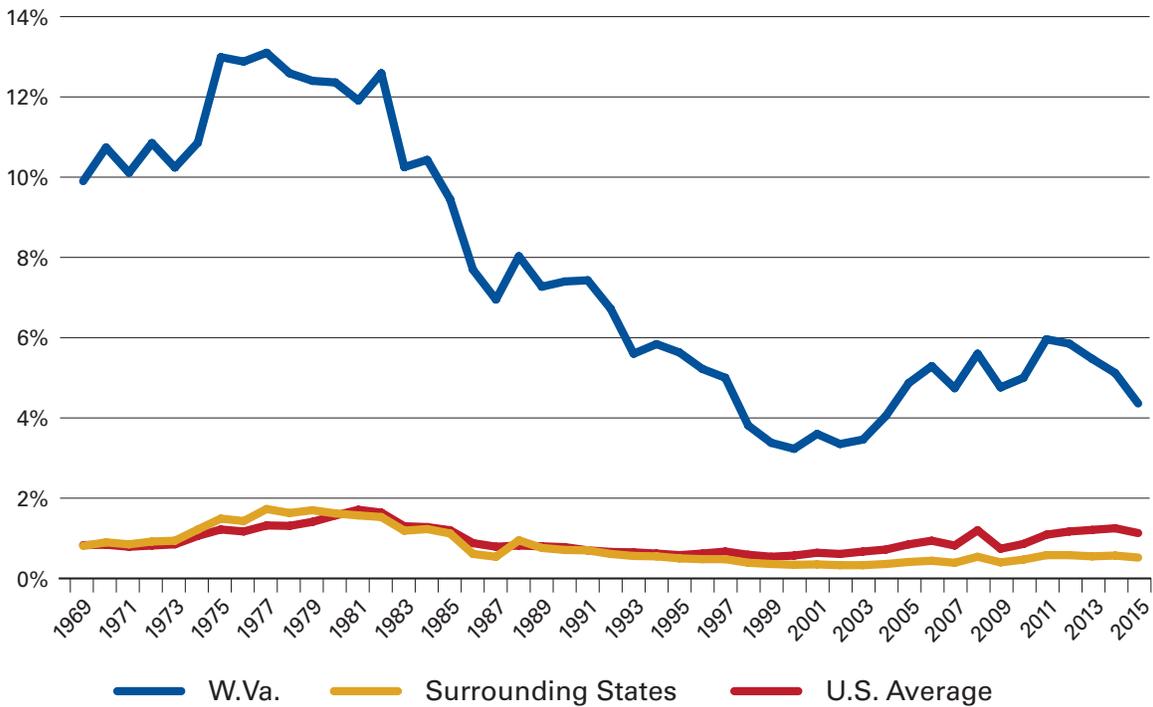
Figure 16
 Percent of Personal Income from Farming
 W.Va., Surrounding States, and U.S., 1969-2015



Source: see previous source.

Figure 17 illustrates the much larger role that mining has played in West Virginia’s economy than other states. And the decline in income from mining that West Virginia has faced. The decline in West Virginia has been steeper than the decline in the, albeit smaller, mining sectors in other states. This will come as no surprise to most West Virginians, but we will consider the role this dependence on and decline of mining plays on West Virginia’s income relative to other states.

Figure 17
 Percent of Personal Income from Mining
 W.Va., Surrounding States, and U.S., 1969-2015



Source: U.S. Bureau of Economic Analysis, "SA5 Personal Income by Major Component and Earnings by SIC Industry 1/" http://www.bea.gov/iTable/index_regional.cfm (accessed [date]). U.S. Bureau of Economic Analysis, "SA5N Personal Income by Major Component and Earnings by NAICS Industry 1/"

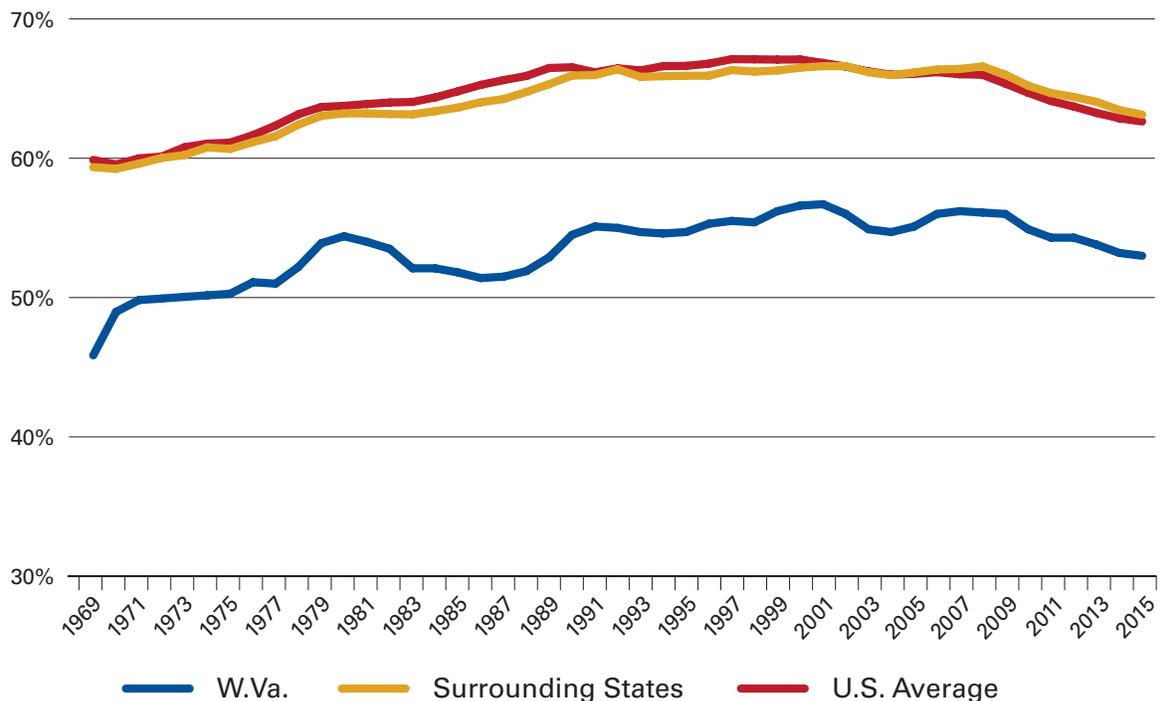
> Labor Market Variables

The structure of the labor market may have an impact on the income earned in a state. We use two measures to assess the condition of the labor market: labor force participation and whether the state is a "Right-to-Work" state.

Labor force participation would affect income in a state because if less of the population is participating in the labor force, less of the population is earning an income. West Virginia has consistently had a lower labor force participation rate than surrounding states and the United States average (**Figure 18**).

Figure 18

Labor Force Participation Rate, W.Va., Surrounding States, and U.S., 1969-2015



Source: U.S. Bureau of Labor Statistics, *Employment Status of the civilian noninstitutionalized population* accessed (6/29/16).

In a “Right-to-Work” state, the ability of workers to unionize is severely limited. The debate continues about whether this creates a burden or a boon to states’ incomes. West Virginia was not a “Right-to-Work” state until legislation passed in 2016 but the law has not been fully implemented as of this analysis. In 1969, 19 states were “right-to-work” states, compared to 25 in 2015. Virginia is West Virginia’s only neighbor that is not a “Right-to-Work” state.

Understanding Differences in Real Personal Income per Capita

We account for differences across states in per capita income. The regression model presented is based on mainstream economic growth theory.^{lxiii} The log of per capita real personal income is the dependent variable, and the set of independent variables includes measures of state differences in stock of knowledge, public finance, industrial structure, and the labor market. Following growth-theory standards we include a lag of the dependent variable in the regression. In order to capture unmeasured differences across states and over time, we include state and year fixed effects (see Appendix). The asterisks indicate that the coefficient is statistically different than zero (**Table 4**). It is highly unlikely for the coefficient to be zero given the data. More detail about the magnitude of the coefficients and the predicted impact of these variables on income can be found in the next section.

Table 4
Regression Results

	Coefficient	Standard Error
Knowledge Variables		
Percent of Population with High School Degree	0.0670124***	0.0179071
Percent of Population with College Degree	0.0089088***	0.00152
Patent Capital Per Capita	3.27E-06***	6.98E-07
Public Finance Variables		
Corporate Tax Rate	0.0000127***	3.58E-06
Effective Individual Tax Rate	0.000026***	7.18E-06
Highway Stock Per Capita	1.428203	0.8821894
State Capital Outlays Per Capita	-0.0267446	0.0249909
Industrial Structure Variables		
Manufacturing Income as a Percent of Total Personal Income	-0.0006643	0.0005312
Farming Income as a Percent of Total Personal Income	-0.0000605***	8.64E-06
Mining Income as a Percent of Total Personal Income	-0.0000703***	8.86E-06
Labor Market Variables		
Labor Force Participation	0.126095***	0.032784
Right-To-Work	0.007437	0.0102481
Constant	5.134715***	0.2564557
Prior Log Real Per Capita Personal Income	0.5214964***	0.0239803
Observations	1913	

All independent variables are lagged five years.

The first three variables listed in Table 4 represent the knowledge variables. The coefficients for all three variables are positive and statistically significant, indicating a correlation between states with high income and above-average education of its population and patents. These findings are consistent with the literature on state income.^{lxiv}

The next three variables represent public finance. Both corporate and individual income tax rates have a positive coefficient, indicating that higher taxes are correlated with higher incomes. Increased highway stock is associated with a decline in personal income, whereas capital outlays are correlated with an increase in income.

The coefficients on industrial structure variables varied. While states do not have complete control of their industrial structure, they can create an environment that allows certain industries to thrive. Both the farming and mining variables have negative coefficients indicating that a higher reliance on either industry is correlated with lower incomes for a state's residents. This provides additional evidence in the debate about whether the reliance on mining has served West Virginia's economy well. Our results would support the theory of a resource curse where a reliance on extraction of natural resources ultimately lowers overall economic well-being of a state.

Labor force participation was included because of West Virginia’s historically low rate. As expected, a higher labor force participation rate is correlated with a higher personal income. The coefficient on “Right-to-Work” was not significant. This result does not support the theory that a “Right-to-Work state” is more business friendly and therefore will result in higher incomes.

Impact on Per Capita Income by Changing Variables

Looking at the some of the variables that have a significant correlation with income, we can estimate the importance of that correlation. If we were to bring West Virginia up to the national average in the statistically significant variables, how much would personal income change? West Virginia’s real per capita personal income would be predicted to change based on the results of our regression by changing some of the significant variables (**Table 5**).

Table 5

Impact on Real Per Capita Personal Income by Changing Variables

	Real Per Capita Personal Income	Percent of U.S. Average
Actual Value in West Virginia in 2014	\$33,129	82%
Predicted Value in West Virginia if WV had the US average of:		
Percent of Population are High School Graduates	\$35,350	88%
Percent of Population are College Graduates	\$36,492	91%
Patent Stock per Capita	\$35,989	89%
All Knowledge Variables	\$37,901	94%
Individual Income Tax Rate	\$35,122	87%
Percent of Personal Income from Mining	\$34,429	86%
Labor Force Participation Rate	\$39,721	99%

The first row in Table 5 shows the actual value of West Virginia’s real per capita personal income (in 2009 dollars) in 2014, which was 82 percent of the national average. Our regression model predicts that West Virginia would have an average income of \$35,350 if the percent of the population that were high school graduates were equal to the national average.

If West Virginia had the national average of the percent of the population that were college graduates, we predict personal income would be \$36,492 or 91 percent of the national average.

Likewise an increase in the stock of patents would increase income to \$35,954 or 88 percent of the national average.

If all three knowledge variables were increased to the national average (percent of population that are high school graduates, percent of population that are college graduates, and stock of patents), we predict that income would increase to \$37,901 or 94 percent of the national average. Increasing state and local income taxes would also result in an increase of income to \$35,122 or 87 percent of the national average.

If West Virginia had the average amount of income from mining as in other states, our model predicts that income would change from 82 percent of the national average to 86 percent.

If the labor force participation rate were brought to the national average, West Virginia's personal income would be 99 percent of the national average. A contributing factor to the large jump in income is that the labor force participation rate in West Virginia is so far below the national average. While the policy path to increase the labor force participation rate is less obvious, this is an important factor in West Virginia's economic state.

Summary

Personal income in West Virginia has lagged behind the national average for decades.^{lxv} The results of this study indicate that increasing income in West Virginia will require dramatic policy changes. West Virginia will need to increase its stock of knowledge by increasing the amount of innovative research occurring and by substantially increasing the educational levels of West Virginians. In particular, increasing the number of college-educated people in the state would have a substantial effect. Increasing all the knowledge variables, however, would bring West Virginia closer to the national average.

In addition, our results support the diagnosis of West Virginia suffering from a resource curse. States with a heavier than-average reliance on mining income are likely to have lower incomes.

Finding ways to improve the labor force participation rate would make a big difference in the personal income of West Virginians.

These changes will only occur if West Virginians recognize the fundamental importance of education and research in increasing income and begin placing a much greater emphasis on these activities. West Virginians will need to take a hard look at the state's budget and consider the importance of investing in productive activities like education. If West Virginia ignores the needed changes, it will continue to be one of the poorest states in the nation.

Section 4:

Prosperity Grows From the Middle Out

With a better understanding of why West Virginia is consistently one of the poorest states in the nation, this next section explores how to build shared prosperity. For several decades, policymakers in West Virginia and other states have often pursued a trickle-down approach to boosting economic growth and development, embracing state policies that distribute more money to the wealthy and large corporations. Typically, these policies consist of: 1) tax cuts that disproportionately go to wealthy individuals, investors, and large corporations; 2) employment policies that lower wages, benefits, and workforce protections; 3) business-friendly regulations that can hurt consumers, small businesses, and allow corporations to externalize their costs onto citizens, and 4) the privatization of public goods that shifts money to the private sector. The trickle-down approach is also often referred to as a “race to the bottom” in taxes, spending, and regulations as opposed to a “race to the top” that aims to increase productivity, innovation, and entrepreneurship.

Instead of pursuing a trickle-down approach that gives even more money to those who already have the most, policymakers should take a middle-out approach that focuses on growing the economy by enacting policies that will boost productivity and expand the middle class. This includes policies that: 1) increase the supply of skilled labor through quality and affordable education at all levels, robust workforce training, and improved health outcomes; 2) boost bargaining power and stronger workplace protections to lift wages and secure better employee benefits; and 3) ensure that the state has an adequate and fair tax system that can supply the resources necessary to make investments in modern infrastructure, innovation, entrepreneurship, and public goods upon which citizens and businesses alike depend.

Over the last two decades, West Virginia's policymakers have pursued elements of both trickle-down and a middle-out approaches. In 2016, the state enacted several laws based on trickle-down economics. This included adopting a "right-to-work" law to curb unionization and repealing its prevailing wage law for public projects. Both of these policies aim to lower wages, benefits, and workplace protections in the hope of increasing profits. The state has also made major cuts to business taxes - including phasing out the business franchise tax and lowering the corporate net income tax rate - that mostly went to large out-of-state corporations. About 10 years ago, West Virginia privatized the state's workers' compensation system, which has meant fewer benefits for workers and lower costs for employers.

West Virginia has also enacted policies that fit into a middle-out approach framework for economic growth. For example, in 2014, the state passed legislation that increased the minimum hourly wage from \$7.25 per hour to \$8.75 by 2016, adopted the Pregnant Workers Fairness Act that provides job protections to expecting women, and expansion Medicaid health care coverage through the federal Affordable Care Act. In 2002, the state passed legislation that required universal pre-kindergarten for all four year-olds by 2013. West Virginia also invested more in higher education (as a share personal income and per capita) than all but a few states about 10 years ago, which made tuition comparably inexpensive.

While all policymakers are interested in building a stronger economy with good-paying jobs, it is important to recognize the limits of state action to achieving strong economic growth. For example, some of the factors that influence economic growth are difficult or impossible to change through state government policy, including climate, proximity to national markets, energy prices, the availability of raw materials and natural resources, and the composition of each state's economy.

The state is also largely at the mercy of national and global economic trends, such as economic recessions caused by housing and tech bubbles, or tight monetary policy through interest-rate hikes. That being said, it does not mean that state policy does not matter. Many other factors that state policymakers can control also influence state economic growth and business investments, including the supply of skilled labor, regulations, the quality of life, infrastructure, innovation, and available site locations. While it is difficult for state policymakers to stimulate economic growth in the short term, there is substantial evidence that, over the long run, state policy can play a crucial role in providing a foundation for stronger and broader economic growth.^{lxvi}

In this section, a comprehensive agenda is put forth to help West Virginia achieve not only long-term economic growth, but also to ensure that the benefits of growth and prosperity are widely shared and inclusive and that they improve outcomes and build a stronger middle class. Therefore, it is first important to examine why the trickle-down approach does a poor job of achieving broader economic growth and why a middle-out approach can not only boost long-term growth but also help address many of the state's chronic social and economic problems.

The Failure of Trickle-Down Economics

Perhaps nothing captures the embodiment of the trickle-down approach to state economic policy better than the annual report *Rich States, Poor States*, written by Arthur Laffer and others, and published by the conservative American Legislative Exchange Council (ALEC).^{lxvii} The report combines a range of trickle-down policies and economic-performance indicators into a single ranking and index that claim to predict a state's economic success. The report's Economic Outlook Ranking index includes 15 fiscal and regulatory policies that cover tax and spending levels (high = bad), worker protections (e.g. state minimum wage and "right-to-work" status = bad), and each state's lawsuit liability system (consumer protections = bad). In ALEC's most recent *Rich State, Poor States* published in April of 2016, West Virginia ranked 37th worst out of 50 states.

So, how well does ALEC's index of economic policies predict state economic performance? Not well at all. A recent study by economist Peter Fisher that tested the relationship between a state's Economic Outlook Ranking from 2007 to 2014 and its economic performance on five measures (per capita income, median family income, median annual wage, state GDP, and nonfarm employment) found no relationship between these trickle-down policies and economic growth even after controlling for each state's industry mix.^{lxviii} In other words, states that adhered closely to ALEC's policy prescriptions did not outperform other states that deviated from them. This means the trickle-down policy prescriptions that make up ALEC's Economic Outlook Ranking are not an approach that clearly boosts economic growth.

A 2010 study that examined the impact of "race to the top" versus "race to the bottom" policies on state economic development found that states that adhered closely with the trickle-down or "race to the bottom" approach - including lower tax levels, "right-to-work", and business friendly regulations - did not significantly influence their economic growth.^{lxix} Meanwhile, the study found positive growth effects for states that had more investments in education and highway infrastructure, a larger share of high school graduates, and more people covered by health insurance.

Studies that have examined the effects of specific trickle-down policy approaches have found similar results. A recent review of the effect of "right-to-work" laws and state economic performance have found no conclusive evidence that they boost jobs or state GDP or that having a state prevailing wage law inflates the costs of public construction projects and hurts economic growth.^{lxx} A 2005 study by the *Federal Reserve Bank of Kansas City* found that the level of workers' compensation costs does not have a sizable impact on employment or wages.^{lxxi} Most recently, a U.S. Department of Labor study found that as states have cut workers' compensation benefits, they have shifted those costs to public programs, such as Social Security Disability.^{lxxii}

Years of peer-reviewed studies that have examined the relationship of taxes and economic growth have produced unstable and often contradictory results. For example, a landmark 2015 study by the Tax Policy Institute, that replicated a previous study that appeared to find a clear connection between tax cuts and economic growth, found that by extending the analysis by another ten years the results disappeared.^{lxxiii} In fact, the study found higher taxes are just as likely to be associated with stronger economic growth than lower taxes.

A recent examination of 37 academic studies since 2000 concluded that most of the studies failed to find that state and local tax levels have a large impact on economic growth measures, such as employment levels, state GDP, and personal income growth.^{lxxiv} Of the 37 studies, 20 found no significant link between

state and local tax levels and economic growth, 11 found mixed or inconsistent results, and only six found a significant link between taxes and economic growth.

Real-world experience also shows that tax cuts may not help accelerate economic growth. Since 2012, five states (Ohio, Maine, Kansas, Wisconsin, and North Carolina) have sharply cut their personal income taxes to boost economic growth. Of the five, only North Carolina outperformed the nation in job and personal income growth.^{lxxxv} But despite its recent economic performance, North Carolina has made substantial budget cuts and is drastically underfunding schools, colleges, and other important public services businesses need to thrive.^{lxxxvi}

Kansas, after enacting the largest personal income tax cuts in recent history, performed especially poorly. Since enacting its tax cuts, it has lagged behind the nation in both job and personal income growth.^{lxxxvii} The tax cuts were promised to be a “shot of adrenaline,” into Kansas’s economy, providing a “natural experiment” for tax cuts to create economic growth. Instead, the tax cuts opened up a \$400 million hole in the state’s budget and led to the state’s bond rating being dropped twice. Conversely, both California and Minnesota have raised taxes since 2013 and both have seen their economy grow faster than the nation as a whole.

West Virginia has also undergone such an experiment. Since 2007, the state has reduced taxes by over \$425 million annually, including the elimination of the state’s business franchise and grocery tax and a significant cut to the state’s corporate net income tax rate. As a result, the state’s rank in the Tax Foundation’s State Business Climate Index improved from 37th in 2008 to 18th best in 2016.^{lxxxviii} But while West Virginia’s rank improved, its economy did not, with private-sector employment lower today than 10 years ago.^{lxxxix} Not only did the tax cuts not correspond with job growth, they hurt the state’s investment in its workforce, by causing years of budget cuts resulting in deep cuts to higher education and large increases in tuition.

While some targeted state-level tax cuts may be effective at boosting growth, most business tax cuts are ineffective because taxes are just too small of a share of the cost of doing business, usually between one-to-three percent.^{lxxx} The costs of labor, electricity, property (rent), equipment, raw materials, and transportation are often more substantial for businesses than taxes and can have a greater impact on profit margins – especially in different states. Since states have balanced budget requirements, tax cuts also usually come at the expense of cuts to public services that businesses and people need to be productive.

It is also important to recognize, especially in West Virginia’s case, that business taxes are highly exportable compared to other taxes.^{lxxxi} Because large out-of-state corporations are unlikely to spend their tax cut locally. Moreover, high-income earners tend to save more of their income while low-and middle-income earners tend to spend more of their money in the local economy. A recent study by economist Owen Zidar with the University of Chicago confirmed this finding.^{lxxxii} Zidar found that a tax cut of one percent of state Gross Domestic Product (this would be \$737 million in West Virginia for 2015) for the bottom 90 percent of households would increase state employment by 5.1 percent over two years, while a similar tax cut for households in the top 10 percent of would result in no change at all.

Another reason why West Virginia’s business tax cuts may have been ineffective is because they did not targeted toward export-based businesses that can bring new dollars into the state or they target new business investments that could create new jobs. Economist and state economic development expert Tim Bartik estimates that each \$1 reduction in across-the-board state and local business taxes only increases per capita earnings by 51 cents over the long run, assuming that there will be no corresponding loss in public spending or increase in other taxes to offset the tax cuts.^{lxxxiii} In contrast, Bartik finds that each \$1 invested in customized job-training services or manufacturing-extension services increases per capita earnings by at least \$10 over the long run.

Trickle-down policies of reducing business costs are not a sure-fire way to grow a state economy. In fact, they are more likely to be a recipe for stagnant wages and growing income inequality by stripping away resources communities need to invest in their workforce. The next section will explore how a middle-out approach to state economic policy can ensure a broadly shared prosperity, which includes investments in education, workforce training, infrastructure, health care, entrepreneurship, and innovation that are coupled with smart regulations and fiscal policy that incentives participation in the economy.

The Middle Class Grows the Economy

A middle-out approach to state economic policy not only emphasizes policies to improved productivity and incomes for everyone, but is also based on the idea that the middle class is the primary source of economic growth and prosperity. In other words, the middle class is the primary “job creators,” not the wealthy. This is because without customers, there are fewer businesses and fewer jobs. And when businesses have more customers, they hire more workers. Evidence also shows that when workers are better paid, they are more productive, stay in their jobs longer, gain more skills, and can serve customers better.^{lxxxiv}

A 2012 report by the Center for American Progress found that a stronger middle class is a key driver of growth because:

- A strong middle class better educates itself and demands better education for its children, and this process improves an economy’s human capital. For example, research shows that children in states where the middle class receives a higher share of overall income also have higher test scores. The same is true in international comparisons. **(Human Capital)**
- A strong middle class creates a stable source of demand for goods and services. This motivates businesses to innovate, invest, and hire. To boost demand, focus on boosting the middle class because it is the source of most of the consumption in the economy. **(Demand)**
- A strong middle class demands inclusive and trustworthy institutions, and that governments be more responsive and accountable. This drives governments to invest in the kinds of public goods that make an economy stronger. **(Institutions and Governance)**
- A strong middle class incubates entrepreneurs and innovators. The majority of entrepreneurs and inventors come from the middle class. Strong middle-class families have the skills and financial stability needed for successful risk-taking. **(Innovation)**

In sum, a strong middle class has a positive effect on economic growth and security, through the promotion of human and physical capital, by creating a stable source of demand for goods and services, by nurturing entrepreneurs, and encouraging participation in political and economic institutions that support economic growth. A large body of compelling research has found that investments in public education – from early childhood education to colleges and universities – have a strong positive effect on economic growth by increasing productivity.^{lxxxv}

Growing from the bottom-up and the middle out is better for economic growth. As recent research emphasizes, higher income polarization and economic inequality can be a drag on consumer spending and long-term economic growth. This is because it reduces the demand for goods and services, with those on the top saving more money while those on the bottom - who typically spend all of their earnings

- spend less. Lack of income gains at the bottom and middle can also encourage more debt, other negative impacts, including poor health outcomes, increases in crime, lower levels of educational attainment, lack of political participation, weaker state revenue growth, and lower economic mobility.^{lxxxvi}

A recent review of academic studies by the Washington Center for Equitable Growth finds that “less inequality is associated with long-term growth and is particularly associated with lower income growth for those at the top of the income ladder.”^{lxxxvii} According to a 2015 report from the Organization for Economic Cooperation and Development (OECD), “income inequality has a sizeable and statistically significant *negative* impact on growth.” The OECD concluded that had income inequality not increased since 1985, OECD countries (20 industrialized countries including the United States) would have grown five percent more from 1990 to 2010. The International Monetary Fund (IMF) also found similar results in a landmark 2014 study that concluded, “countries with more equal income distributions tend to have significantly longer growth spells.” More recently, the IMF has found that the impact of the decline in middle-class incomes in the United States from 1998 to 2013 has resulted in reduced consumer spending by more than three percent or \$400 billion annually. To put this in perspective, this is over six times bigger than total consumer spending in West Virginia in 2015 (\$62 billion).^{lxxxviii}

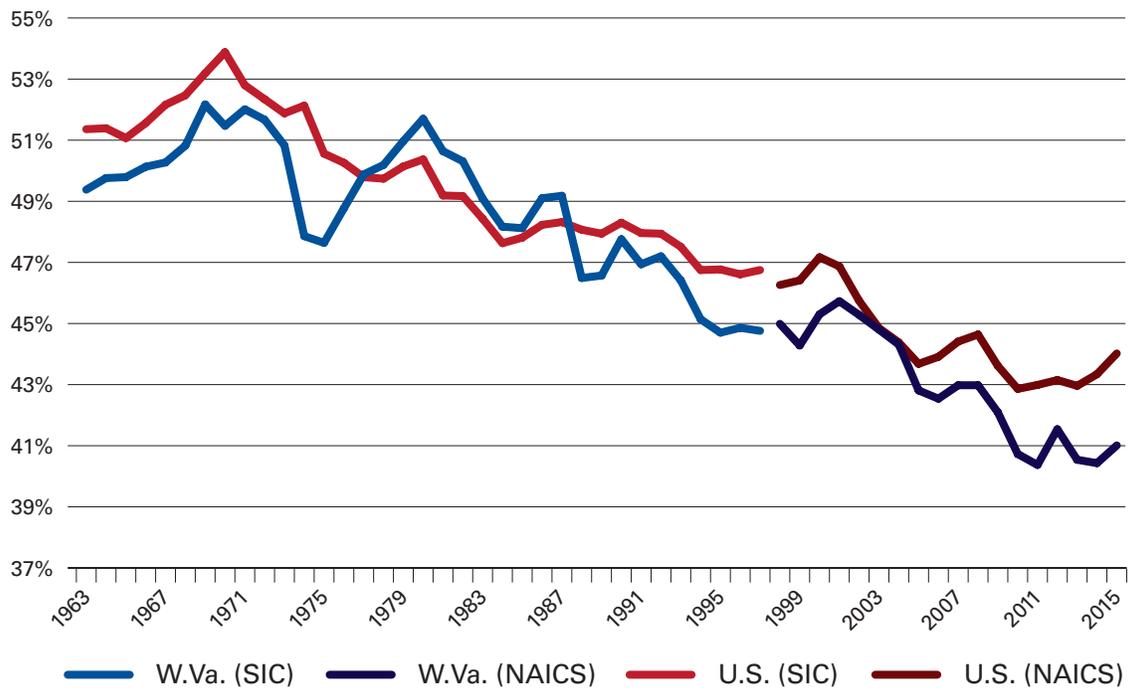
Similar to all states, West Virginia has also witnessed widening income inequality over the last several decades. Between 1979 and 2007, the top one percent saw its real incomes increase by 74.1 percent while the bottom 99 percent experienced growth of only 6.6 percent.^{lxxxix} Overall, over 53 percent of all real income growth over this period went to the top one percent. Another way of looking at income inequality is the Gini coefficient, which ranks states with a score of between “0”, which represents complete income equality, and “1” where one person has all of the income and others have none. The closer the score is to zero the less income inequality in a state. In 1979, West Virginia had a Gini coefficient of 0.446 compared to 0.634 in 2007 – showing a steep rise in income inequality that corresponds with the shift in income gains held by the top one percent.^{xc}

The rise in economic inequality in West Virginia and the United States can also be found in examining earnings (wages and salaries) as a share of GDP. In 1979, earnings as a share of state GDP (the economic output or value added by industries within the state) in West Virginia were 51 percent compared to just 41 percent in 2015. This means more money is flowing up to investors, usually in the form of higher profits, than it is to workers. It also means that while workers are producing more they are receiving less of the gains in their output.

Figure 19

Labor's Share of GDP is Declining in W.Va. and U.S.

Wages and Salaries as a Share of State Gross Domestic Product

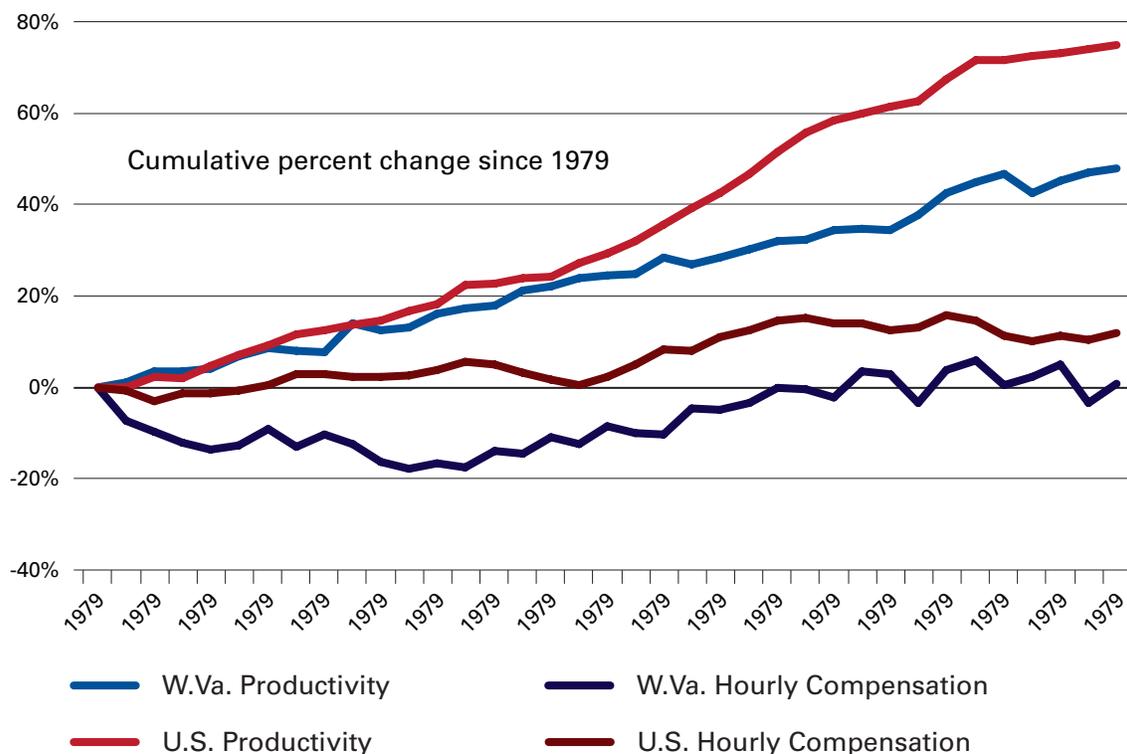


Source: Bureau of Economic Analysis.

Productivity has grown by 48 percent in West Virginia since 1979 while real hourly median compensation has grown by less than one percent. This is one of the central reasons for the rise in income inequality in West Virginia; workers are not reaping the benefits of what they produce (**Figure 20**).

Figure 20

Growth of Real Median Hourly Compensation for Production/Nonsupervisory Workers and Productivity, W.Va., 1979-2015



Source: EPI analysis of unpublished total economy data from Bureau of Labor Statistics, Labor Productivity and costs program; employment data from Bureau of Labor Statistics, Local Area Unemployment Statistics; wage data from the Current Population Survey and compensation data from The Bureau of Economic Analysis, State/National Income and Product Accounts public data series.

The hollowing out of the middle class and the growth in economic inequality in the United States and West Virginia over the last several decades did not happen by accident. They are directly tied to changes in federal tax policy, the erosion of collective bargaining power and union density, the declining power of the minimum wage, reregulation of the financial industry, monopolization, the abandonment of full employment, and unfair trade agreements. While state and local policies can not solve growing income inequality alone, policymakers can help lift wages for those at the bottom and the middle. As the evidence above makes clear, this will not only boost economic growth but lead to a better quality of life.

An Agenda for Shared Prosperity

If the goal is stronger and more broadly shared economic growth, state economic policy must improve the living standards of all people in West Virginia. This means increasing and rewarding productivity, putting more West Virginians to work, and investing in human and physical capital so the middle class grows. This will not happen by pushing more money up to those who have the most. Instead, state policymakers need to focus on improving health, workforce participation, education, and job skills while also building top-notch infrastructure and encouraging innovation and entrepreneurship. The policy ideas below aim to do just that.

> A Healthy Workforce, is a Productive Workforce

According to America's Health Rankings, West Virginia is the 47th unhealthiest state, with the highest rate of diabetes, drug deaths, smoking, heart disease, poor physical health, and heart disease in the nation.^{xcv} West Virginia also ranks poorly in infant mortality, obesity, low birth weight, preventable hospitalizations, premature deaths, and cardiovascular and cancer deaths. Poor health outcomes not only lead to premature deaths and increased medical costs, they also hurt the state's economy by lowering productivity and workforce participation.^{xcvii} For example, only 13 percent of West Virginians in poor health are employed compared to 65 percent who are in excellent or very good health.^{xcviii} Meanwhile, West Virginians with poor health also have much lower incomes and lower labor force participation rates.

A recent study by the Common Wealth Foundation found that the cost of poor worker health represents the loss of \$260 billion per year in economic output nationally.^{xciv} The good news is West Virginia can take policy action to not only improve health, but to also generate much-needed revenue to invest in better health outcomes. Boosting the health of workers is essential if West Virginia is going to increase productivity and grow its economy.

Incentivizing a healthier workforce through sin taxes: The excessive use of tobacco, soda, and alcohol is directly linked to many chronic diseases, which drastically lower worker productivity and increase medical costs.^{xcv} A recent report by the Milken Institute estimates that the annual loss in worker productivity in West Virginia from chronic diseases was \$8.1 billion in 2003, including an additional \$2.3 billion in treatment costs.^{xcvi} Placing higher taxes on unhealthy items can improve public health and raise substantial revenue to fund important public services and programs, such as Medicaid, and other programs and services aimed at improving health outcomes.

- **Increase tobacco taxes:** While West Virginia recently raised its cigarette tax to \$1.20 per pack in 2016, it remains well below the United States average of \$1.65 per pack. Raising this tax by an additional 50 cents, and increasing the wholesale tax on other tobacco products from 12 to 50 percent, would increase revenue by approximately \$60 million.^{xcvii}
- **Increase soda tax:** West Virginia levies an excise tax of one cent on each 16.9 fluid ounces of bottled soft drinks, 80 cents per gallon of soft drink syrup, and one cent per 28.35 grams of dry mixture for making soft drinks. If West Virginia levied an additional one-cent per ounce tax on sugary sweetened beverages, it would yield an estimated \$88 million in new state revenue.^{xcviii}
- **Increase alcohol taxes:** Increasing the beer barrel tax from \$5.50 to \$11.00 per barrel would increase revenue by an estimated \$7.1 million, and requiring the Alcohol Beverage Control Administration to set higher wholesale prices on liquor and wine could yield an additional \$6.5 million to the General Revenue Fund. Altogether this could increase revenues by \$13.6 million per year.^{xcix}

Protecting Medicaid: Medicaid is a federal-state partnership that provides health care to over 600,000 low-income people in West Virginia. Since the state expanded Medicaid as part of the Affordable Care Act, over 170,000 more West Virginians have gained health care coverage. Medicaid brings in about \$3 billion in federal matching dollars to the state's economy, which boosts demand for goods and services and improves workers' access to care that will help them live healthier and more productive lives – all of which help the state's long-term economic growth.^c

■ **Secure sustainable long-term funding for Medicaid:** Over the last several years, the state's match to Medicaid - which is roughly \$1 for every \$3 in federal funds – has grown with increased utilization and soaring drug and medical inflationary costs. For several years, the state has utilized one-time funding to help stabilize the program but those sources are running out. It is pivotal that policymakers consider reforming the state's dedicated revenue sources to Medicaid - to ensure its long-term fiscal health. This could include dedicating revenue from sin taxes and/or broadening the state's health care premium tax.

Establish a Paid Family and Medical Leave Program: Only 12 percent of United States private-sector workers have access to paid family leave through their employer.^{ci} While the United States is the only industrialized country to not offer a national paid family and medical leave (PFML) program, four states (California, New Jersey, Rhode Island, and New York) have enacted a PFLM program where workers can receive a partial wage replacement while on leave. Research has shown that paid leave policies help businesses increase productivity and morale, reduce turnover, and decrease medical and workers' compensation costs.^{cii} Paid maternity leave can also increase female labor force participation, lead to better outcomes for parents and children, and reduce dependence on public assistance. A West Virginia program that guaranteed six weeks of benefits at 50 percent of wage replacement could be financed through a small payroll tax (0.3 percent) at a cost of just \$2.35 per week for the average full-time worker.^{ciii}

Require Employers to Provide Paid Sick Time: Approximately 44 percent (260,000) of private-sector workers in West Virginia do not have access to paid sick time at work.^{civ} Research shows that providing workers with paid sick time can boost productivity and income stability, reduce unemployment, lower health care and business costs, and stop the spread of disease and illnesses that harm public health. Currently, more than 25 cities, states, and counties have enacted paid sick time laws. West Virginia could do the same.

Obesity Prevention and Promoting Health Lifestyles: Over 36 percent of adults in West Virginia are obese, the second highest rate in the nation.^{cv} In 2009, obesity cost West Virginia \$1.2 billion in medical costs alone.^{cvi} A recent study by the Urban Institute and the New York Academy of Medicine estimates that a \$10 per person investment in an evidence-based community intervention in West Virginia (at a cost of \$18.1 million per year) would bring an estimated \$124.5 million in savings for public and private health insurers over five years.^{cvi} This is a return of almost \$7 for every \$1 invested (2004 dollars). Policymakers should invest in model evidence-based community intervention programs that prevent and control obesity, reduce medical costs, and improve the health of the state's workforce.

> Boosting Workforce Participation

West Virginia's low level of labor force participation is one of the state's greatest economic challenges. The central factors that explain the state's low workforce participation compared to other states is its older population, the high share of people who are disabled or in poor health, and low educational attainment.^{cvi} While national economic trends, and fiscal and monetary policy, play a large role in determining the share of workers in the labor force, state policies can also incentivize more people to join the workforce. Improving the state's participation rate greatly depends on expanding economic opportunity and enacting "family-friendly policies" such as paid family leave. Below are more policies aimed at putting more West Virginians to work.

Enact a refundable West Virginia Earned Income Tax Credit: Twenty-six states and the District of Columbia have enacted Earned Income Tax Credits (EITC) for working people to help them offset the cost of the various state and local taxes they pay.^{cxix} The EITC is a proven tool to fight poverty, increase labor force participation, and help low-income working families afford necessities. The benefits are lasting, such as improving the health, educational achievement, and earnings of children who are EITC recipients. A state EITC at 15 percent of the federal credit would cost approximately \$47 million and could be paired with a tobacco tax increase or a sales tax increase to help offset the impact of other taxes that hit low and moderate income families the hardest. The state could also include childless adults.

Enhancing Child-Care Assistance: Research shows that child care assistance is crucial to helping low-income families maintain employment, stay off public assistance, and have higher earnings.^{cx} Studies have shown that affordable child care increases women’s labor force participation and education. The states with a higher share of women in the labor force also have a higher share of school-aged children in paid child care. In 2012, 36 states and the District of Columbia had higher income eligibility limits for child care assistance than West Virginia. Increasing child care assistance to eligible families from 150 percent to 200 percent of the federal poverty line could reduce the “cliff effect, which discourages parents from advancing in their jobs and careers” in West Virginia. The estimated cost for increasing the income eligibility from 150 to 200 percent would be \$5.4 million (2011 dollars).^{cxii} Policymakers could also explore establishing a child care tax credit or offer an income tax deduction for child care expenses. Over 25 states offer either credits or income tax deductions for child care expenses.^{cxiii}

Subsidized employment: One direct way to increase participation in the workforce is for the state to place people in private- or public-sector jobs. Policymakers could explore the feasibility of building on its existing subsidized employment programs or could look to models in other states. For example, in the 1980s the state of Minnesota ran a successful state-funded subsidized employment program called MEED (Minnesota Emergency Employment Development) that provided wage subsidies to about 19,000 unemployed workers (two-thirds of which were in the private sector) not receiving unemployment insurance.^{cxiiii} Other successful state models include Florida Back to Work, Mississippi STEPS, and Put Illinois to Work.^{cxv}

Criminal Justice Reform: The massive growth in West Virginia’s incarceration rate has reduced labor force participation.^{cxvi} While policymakers should explore evidence-based policies to reduce incarceration over the long term, there are several steps that could be adopted to boost labor force participation immediately. For example, “ban the box” or “fair-chance hiring” policies require employers to wait until after a tentative job offer has been made before checking the criminal histories of job applicants. Because a criminal record is one of the biggest hurdles to employment for people who have been released from prison, this policy has helped ex-offenders get hired.^{cxvii} Today, approximately 24 states and over 150 cities have a ban-the-box policy.

> Boosting Pay, Education, and Skills

In the late 1970s, West Virginia’s average wages were above the national average. At the same time, however, its economy was heavily concentrated in good-producing jobs like manufacturing and natural resource extraction that did not require a post-secondary degree.^{cxviii} Today, wages in West Virginia are far below most states as these good-paying blue-collar jobs have declined and the state has been unable to transition to a more knowledge-based, service-providing economy that requires a post-secondary education. At the same time, there has been a steep drop in the share of jobs covered by a union contract that provide above average wages and good benefits.^{cxix} In 1979, one-third of employed workers were covered by a collective bargaining agreement compared to just 13.7 percent in 2015. As discussed earlier, the link between productivity and pay over the last several decades was also severed. While the state’s

economy has grown, inflation-adjusted wages for most workers – especially men – have declined or stagnated. Getting more workers back on track will require policy action such as to help ensure that a rising tide lifts more boats.

Repeal “Right-to-Work”: In 2016, the state adopted a “right-to-work” policy to allow workers covered by a union contract to “free ride” by not paying a union representation fee as a condition of employment. The central goal of this policy is to reduce unionization - which, in turn, reduces wages and benefits, and minimizes workplace protections, in the hope of lowering business costs and maximizing profits.^{cxix} Repealing this law would help stop the further decline in unionization in West Virginia and give the middle class more leverage in bargaining for better wages and working conditions.

Reinstate Prevailing Wage: In 2016, West Virginia repealed its prevailing wage law that ensured that construction workers were paid a living wage for completing public projects.^{cxx} Prevailing wage laws help attract and retain highly skilled and experienced workers. States with prevailing wage laws have more apprenticeship programs for their workers and are associated with fewer workplace injuries and lower workers’ compensation costs. Prevailing wage laws can also strengthen the economy by helping ensure local workers earn a fair wage on public construction projects. This helps grow the economy, as local workers spend their wages in their community.^{cxxi} Reinstating the state’s prevailing wage law would increase the wages and benefits of all construction workers, while growing the local tax base.

Raise Public Teacher Pay: In 2014, West Virginia ranked sixth-lowest among 50 states and the District of Columbia with an average annual teacher salary of just \$45,647.^{cxvii} This was \$11,732 below the national average and lower than any surrounding state. A recent study shows that West Virginia teachers are paid just 75 percent of what other college graduates earn in the state.^{cxviii} Since an effective teacher is the most critical determinant of education outcomes, it is crucial that West Virginia provide adequate wages and benefits to attracting quality teachers.

Raise and Index the Minimum Wage: In 2014 West Virginia passed legislation to increase the state’s minimum wage to \$8.75 from the federally mandated \$7.25 an hour minimum wage. Since the state’s living wage is about \$10 an hour for a single adult and \$20 an hour for a single adult with one child, policymakers should raise the state’s minimum wage to at least \$12 an hour over the next several years and tie or index any further increases to the rate of inflation.^{cxv} According to the Economic Policy Institute, phasing in an hourly minimum wage of \$12 an hour by 2020 would directly and indirectly impact over 200,000 workers in the state and boost wages by \$437 million or \$2,000 annually.^{cxvi} Policymakers should also raise the tipped minimum hourly wage to at least 70 percent of the state minimum wage, which is set at just \$2.62 or 49 cents above the federal minimum tipped minimum wage.^{cxvii}

Invest in Customized Workforce Training: While the Governor’s Guaranteed Workforce Training Program provides business and workers with customized job training, the program is woefully underfunded at less than \$1 million per year. At its height in 2000, the state allocated \$3.4 million for this program – the equivalent of about \$4.8 million today.^{cxviii} Investments in customized workforce training are 17 times more effective at creating jobs than tax business tax incentives and can increase earnings by \$10 per \$1 invested.^{cxviiii}

Make Higher Education More Affordable: Over the last several years West Virginia has dramatically reduced funding to public colleges and universities, which has caused tuition to grow more rapidly. The state’s merit-based PROMISE scholarship was also capped at \$4,750 per year. Altogether, the state has reduced state higher education funding by over \$130 million since 2008 (inflation adjusted).^{cxvix} Meanwhile, from 2008 to 2016, per-student state funding at West Virginia’s four-year colleges and universities declined by \$2,060 and tuition has grown by over 42 percent or \$2,135 per student (inflation

adjusted).^{cxxx} Average loan debt for bachelor’s degree earners has increased by nearly 32 percent, from \$28,678 in 2008 to \$37,764 in 2014.^{cxxx} To make college more affordable and accessible, the state must restore adequate funding to its public higher education institutions. Policymakers could also make public colleges and universities tuition-free for in-state residents, which would cost about the same amount as the business tax cuts that were implemented between 2007 and 2015.^{cxxxii}

> Building Infrastructure

Investments in public infrastructure – including roads, bridges, transportation, public buildings, water treatment plants, airports, etc. – are vital to enhancing productivity and boosting economic growth. Top-notch infrastructure not only provides a foundation for which private business can thrive, it also improves the quality of life for everyone by providing safer streets, easier access to health care, cleaner water, and reduced travel time. Most importantly, public infrastructure investments can provide good-paying jobs that are essential to middle class growth and productivity. Investments in infrastructure generate a high rate of return. According to one recent study, for each dollar spent on public infrastructure, businesses and households benefit by as much as \$1.37.^{cxxxiii}

According to the American Society of Engineers, West Virginia has \$1.2 billion in estimated school infrastructure needs, \$4 billion in drinking water and wastewater infrastructure needs (over 20 years), \$55.9 million in unmet needs for state parks, and 12 percent of the state’s major roads are in poor condition.^{cxxxiv} According to the West Virginia Division of Highways, the state will need to invest an additional \$750 million annually to address the long-range needs on its existing highway and bridge system.^{cxxxv}

The state’s broadband infrastructure is also poor, especially compared to other states. According to the Federal Communications Commission, an estimated 30 percent of West Virginians lack access to high speed broadband (25 Mbps/3 Mbps service) or “fixed advanced telecommunications” compared to 10 percent nationally, ranking 48th lowest.^{cxxxvi} Nationally, 39 percent of people living in rural areas lack access to high-speed broadband while 48 percent of rural West Virginians lack access. While West Virginia has far less access to high-speed broadband than all but two states, its use of broadband services is higher than the national average, 46 percent in West Virginia compared to 37 percent nationally.

Fixing Roads and Bridges: With low gasoline prices, policymakers need to consider increasing the state’s motor fuel tax and other various taxes and fees to help pay for maintenance on the state’s highways and other roads. West Virginia’s current motor fuel tax is 33.2 cents per gallon (flat + variable rate). West Virginia could raise this rate by five cents per gallon and tie it to both construction-cost inflation and fuel-efficiency growth, which would increase revenues by an estimated \$129 million annually by 2020.^{cxxxvii} The state could also look at increasing toll rates on the West Virginia Turnpike or creating an additional toll road on I-81 in the state’s Eastern Panhandle. Raising the sales tax rate on motor vehicles from five percent to six percent to align it with the state’s sales and use tax would yield an additional \$37.2 million annually.^{cxxxviii}

Expanding High-Speed Broadband: To increase broadband access and deployment (especially in unserved and underserved communities), the state could pursue a number of options. These include creating a dedicated state-level office or agency, mandating that the West Virginia Public Service Commission regulate and promote affordable and reliable broadband access, directly funding

broadband development, supporting local broadband planning, and promoting local partnerships such as the Mid-Atlantic Broadband Cooperative in Virginia.^{cxvix}

> Enhancing Innovation and Entrepreneurialism

According to the 2014 State New Economy Index – which uses 25 indicators to measure the defining characteristics of an ideal New Economy in each state that includes knowledge jobs, globalization, economic dynamism, the digital economy, and innovation capacity – West Virginia ranks second to last in the nation.^{cxl} Of particular note is that West Virginia ranks at the bottom in entrepreneurial activity (50th), movement toward a clean-energy economy (43rd), and high-tech jobs (48th). While there are no surefire ways to develop a high-tech industrial base in West Virginia, state policymakers should explore ways to encourage entrepreneurial activity, which is instrumental to technological innovation, and look for creative ways to invest in research and development, high-tech manufacturing, and other features of the New Economy. Although some of the best ways to boost entrepreneurship are to improve educational attainment, reduce student debt, grow the middle class, and improve access to health care and other family-friendly policies, West Virginia should explore policies that provide support to businesses so they can survive past the start-up phase, and to other programs that provide entrepreneurship training.^{cxli} West Virginia could also look at its neighbor Ohio, which created an ambitious program called Third Frontier with over \$2 billion dollars to support technology-based economic growth.

> Building a Clean-Energy Economy

West Virginia's energy-based economy is at a crossroads. Coal, which historically has been a large part of the state's economy, is shrinking. Through a combination of geology, cheap and abundant natural gas, stiffer competition from coal basins in Wyoming and Illinois, erosion of international coal markets, and for cleaner energy demand, the state's coal production has declined to just 96 million tons in 2015 from over 160 million eight years earlier.^{cxlii} West Virginia University predicts that state's coal production will bottom out at around 66 million tons over the next few decades. Meanwhile, natural gas production has climbed to new heights with the development of shale gas, reaching over 1.3 trillion cubic feet in 2015 from just 250 billion cubic feet a decade ago. While coal production in northern West Virginia has remained relatively stable and most of the shale development has occurred there, southern West Virginia's economy is in a depression – with large drops in population, wages, and tax revenues.

While many states are moving toward cleaner energy sources, such as solar and wind, West Virginia has largely failed to diversify its energy mix and economy. Although many elected officials in West Virginia are fighting against federal clean energy regulations, such as the Obama Administration's Clean Power Plan, policymakers would be wise not to let the growing clean energy economy pass them by. As a recent report demonstrated, West Virginia can comply with the Clean Power Plan, while developing new jobs and tax revenues in renewable energy, natural gas, and energy efficiencies sectors.^{cxliii} While the Clean Power Plan may result in less coal production (about 15 percent or a drop from 66 million tons to 57 million tons by 2036, according to the Bureau of Business and Economic Research at West Virginia University), policies to advance cleaner energy in West Virginia could make up for much of this loss.

A recent report from the Center for Energy & Sustainable Development (WVU Law School) and Downstream Strategies recommended several policies that could not only help the state comply with the Clean Power Plan but also spur new clean energy jobs. For example, the report recommended that West Virginia adopt a renewable energy portfolio standard (RPS) - which requires a set percentage of retail or total electric generation be met with renewable energy sources – and adopt an Energy Efficiency Resource Standard (EERS)– which requires state agencies or utilities to develop programs to implement energy efficiency improvements. Twenty-nine states, including Ohio and Pennsylvania, have an RPS while 24 states have adopted an EERS. A 2012 study conducted by Synapse Energy Economic found that

increasing renewable energy to 12.5 percent of the state's energy portfolio and achieving about 10 percent savings through energy efficiency efforts would create a net of 28,000 jobs in Kentucky over 10 years.^{cxliiv}

> Tax Fairness and Long Term Fiscal Health

Over the past several years, West Virginia has had persistent budget gaps ranging from \$75 million in FY 2014 to over \$500 million in FY 2017. The state's General Revenue Fund budget was slashed across the board over the last five years, with deep cuts in higher education and other important programs. The state's budget woes are the result of several factors, including major tax cuts phased in from 2007 to 2015 that mostly benefit large corporations, low natural gas prices and demand for coal, and a sluggish economy that has not recovered from the Great Recession.^{cxliv} Despite the state's weak economy, however, General Revenue Fund collections as a share of the state's economy are at a three-decade low. Meanwhile, the state's credit or bond rating was downgraded twice in 2016 because of persistent budget problems.

Currently, the state is over \$87 million below revenue estimates in the first four months of the current fiscal year (FY 2017). The estimated budget gap for the next fiscal year (FY 2018) is expected to top \$400 million. If West Virginia is going to improve its long-term fiscal health and ability to invest in schools, health care, higher education, and other important programs and services, it will need to raise revenue. And this will have to include some tax increases that do not fall disproportionately on low- and moderate-income residents.

Scale back personal income tax exemptions: West Virginians are provided a \$2,000 personal exemption from their state income tax for each household member. Unlike the federal government, which phases out personal exemptions as income rises, West Virginia does not. Phasing out the personal exemption for joint filers earning between \$150,000 and \$200,000, and eliminating it for those earning over \$200,000, would increase revenue by an estimated \$9.9 million and would base the state's income tax more on the ability to pay.^{cxlvi}

Modernize Personal Income Tax Rates and Brackets: West Virginia's personal income tax schedule has not changed since 1987, when the state's top personal income rate was reduced from 13 to 6.5 percent. Adjusting brackets and rates would better reflect modern income levels. This could include adopting a new bracket for higher-income earners and perhaps even lower rates for low- and middle-income residents. For example, a new top bracket of 9.5 percent on taxable income above \$200,000 would increase revenue by an estimated \$96.3 million **and those with an average income of over \$700,000 would pay 94 percent of the tax increase.**^{cxlvii}

Apply the sales tax to digital downloads: West Virginia has not updated its sales tax to reflect today's economy. A good step is to tax various goods and services sold and delivered on the Internet – including books, music, movies, and other digital products downloaded electronically, identical items sold in stores. This change would also slightly reduce the extent to which the sales tax falls disproportionately on lower-income households, since most digital goods are more likely to be purchased by higher-income households that make more online purchases. According to the West Virginia Tax Department, the revenue forgone from this exclusion is \$10 million per year.

Apply the sales tax more widely to personal services: The sales tax now excludes money paid to barbershops, beauty and nail salons, massage and tattoo parlors, and private fitness centers. While West Virginia taxes more services than most states, these personal services remain exempt for no discernable reason and should be part of the state's sales tax base. According to the West Virginia Tax Department, the revenue forgone from this exclusion is \$2.0 million for personalized fitness and \$3.8 million for other personal services.

Apply the sales tax to telecommunications services: In 2016, Governor Tomblin proposed applying the state’s six-percent sales tax to telecommunications services (cellphone, telephone, and some ancillary services). This would raise approximately \$60 million per year in revenue. According to a 2016 report by the Tax Foundation, West Virginia has the seventh-lowest wireless state and local tax and fee rate on wireless communications in the nation.^{cxlviii} Applying the sales tax to telecommunication services achieves fairness and helps build the state’s sales tax base.

Modernize Excess Acreage Tax: In 2012, the top 25 private landowners in the state owned about 18 percent of the state’s private land and none of the top 10 largest landowners were headquartered in West Virginia. In Wyoming County, two out-of-state companies – Heartwood Forestland Fund and Norfolk Southern – owned over half of the county’s private land in 2012. Since 1905, a corporation purchasing 10,000 acres or more of property in the state is subject to a one-time five cents per acre tax on owning the property. In 1999, Governor Underwood’s Commission on Fair Taxation recommended increasing this tax to 50 cents per acre, making it an annual tax, lowering the threshold to 1,000 acres and allowing a credit against the state’s severance tax. This is a step in the right direction and long overdue. If the state created a graduated structure with \$1 per acre between 1,000 and 2,499 acres, and ended with a top rate of \$10 per acre over 250,000, it could yield \$21.2 million annually.^{cxlix}

Raise the severance tax on natural gas: The state’s severance tax is one of its most progressive taxes, and it is highly exportable to other states. Approximately 90 percent of the natural gas produced in West Virginia is exported out of state and many of the largest natural gas extraction companies doing business in the state are not located here.^{cl} According to the West Virginia Department of Revenue, the state is expected to collect \$93.9 million in natural gas severance taxes from its five-percent severance tax. Increasing the natural gas severance tax to 10 percent should yield close to double this amount. Policymakers could also explore creating a higher severance tax rate on natural gas liquids with a credit to related in-state industries, which may help incentivize, chemical manufacturing, ethane cracking and other companies.

Close Tax Haven Loopholes: While West Virginia has closed several corporate tax loopholes by enacting combined reporting, requiring corporations to report profits generated in and out of West Virginia, it did not include offshore tax havens. West Virginia should replace its “water’s edge” with “world-wide” combined reporting to include offshore tax havens. According to the U.S. Public Interest Research Group, this could generate an estimated \$9.6 million in additional revenue from the Corporate Net Income Tax.^{cli}

Reinstate the Estate Tax: First enacted in 1904, West Virginia’s estate tax effectively ended in 2005 when the state did not decouple it from the federal estate tax changes. Today, 21 states collect over \$4.5 billion per year from their estate tax while West Virginia collects next to nothing. Reinstating this tax could raise an average of \$15 to \$20 million per year.^{clii}

Reinstate Business Franchise and Corporate Net Income Tax Rates: One of the largest contributing factors to West Virginia’s budget crisis was the elimination of the business franchise tax and the reduction in the corporate net income tax rate to 6.5 percent from nine percent. Altogether, these two taxes brought in about \$300 million on average (compared to just \$144 million in FY 2016). Policymakers should consider reinstating all or part of these tax cuts to their 2006 levels.

Methodology Appendix

This paper investigates explanations for differences in economic performance at the state level. Research has offered explanations that include differences in tax policy, investment in public infrastructure, past industrial structure, climate, knowledge, and technology. It looks at the changes in real per capita personal income for states from 1969-2014. By including variables that account for a wide range of alternative explanations, it evaluates the certain policy decisions relative to other options.

Model

We used ordinary least squares technique to identify which factors account for large differences in the growth of personal income across states. The data is organized as panel data with an observation containing data for a particular state and year. We utilize a fixed effects estimator to control for unobserved state and year effects.^{cliii} The fixed effects estimates essentially create dummy variables for each year and state. Thus if there are unobserved characteristics (we do not have a variable to measure them) that cause a state's income to be lower than other states, this will be captured in the model and the difference for the given state will not be assigned (inaccurately) to the observed variables. We also utilized a fixed effects estimator for year, to control for national trends that could influence income that should not be ascribed to any of the observed variables. Using a five-year lag in the explanatory variables, we have limited the problems caused by endogeneity.^{cliv} We have also only included the 48 contiguous states.

Our goal was to extend the sample as far back in time as possible to evaluate the long-run changes in personal income. Many of the variables were not available prior to 1969, so we used that as a cutoff. Following Bauer, et al., we included explanatory variables that had been found significant in other research.^{clv}

Variables

Independent variables are constructed as the natural log of the state's value at a given time, divided by the population-weighted average for all of the states in the sample. Financial variables are translated into 2010 dollars by the GDP deflator.^{clvi}

> Economic performance – dependent variable

- The natural log of per capita real personal income

> Knowledge variables

- Percent of population that has a high school degree
- Percent of population that has a college degree
- Stock of utility patents was created using a depreciation rate of 20%.^{clvii} A given year's stock is calculated by the previous year's stock multiplied by one minus the depreciation rate, plus the number of patents issued in that year. Initial stock of patents for 1969 was created by taking the average of the recent three year's new patents and dividing by the depreciation rate.^{clviii}

> Public Finance/Investments

- Highway stock was created similarly to patents but using a five percent depreciation rate.^{clix} The annual investment in highways was added to previous stock less depreciation.
- Effective corporate tax rate calculated from corporate income tax revenue divided by personal income.
- Effective individual income tax rate calculated from individual income revenue divided by personal income.
- Capital outlays by state government per capita.

> Industrial Structure

- The percent of personal income derived from mining.
- The percent of personal income derived from manufacturing.
- The percent of personal income derived from farming.

> Labor Market

- Labor Force Participation
- Right to Work

> Controls

- The five-year lag of the dependent variable.
- Constant.

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