

# West Virginia Business & Economic

# REVIEW

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West Virginia University College of Business and Economics

## West Virginia Economic Outlook: Recession Watch, First Quarter 2002

### The Situation

During the last year, West Virginia has recorded net job and population losses, produced a falling unemployment rate (which is now well below the national rate), and generated moderate real personal income growth (see Table 1). Overall, the state economy is roughly mirroring the national downturn. However, as with any story, there is good news and bad news, combined with a few surprises and some indications of what is to come in the near future.

### The Good News

Or, at least the not-so-bad news. As Figure 1 shows (next page), the state economy lost jobs at a slightly slower rate than did the nation from December 2000 to December 2001. Overall, the state has lost 4,600 jobs, which translates into a drop of 0.6 percent. That's a slightly slower rate of decline than registered nationally (-0.8 percent) during the same period.

The state services sector generated job gains during the last year and grew faster than the national rate. Health care and social services posted solid net job gains

during the last year, to pace overall gains in the sector. The only other major sector to add jobs during the last year was mining. This was driven by surprising strength in the coal-mining sector, as coal prices bounced up strongly during the year. While state manufacturing jobs declined during the last 12 months, the national economy dropped manufacturing jobs at a faster rate.

**Table 1**  
**West Virginia Economic Monitor**

Indicator	W.Va.			U.S.	
	Latest	Year Ago	Change	Percent Change	Percent Change
Jobs (Thous.)	733.4	738.0	-4.6	-0.6	-0.8
Unemployment Rate (%)	4.6	5.5	-0.9	-16.4	45.0
Real Personal Income (\$96, Mil.)	37,845	36,587	1,258.4	3.4	2.9
Population (Thous.)	1,802	1,807	-5.2	-0.3	0.9

Latest job and unemployment rate data are for December 2001. Real personal income data are current through the third quarter of 2001.

The most recent population data are for July, 2001.

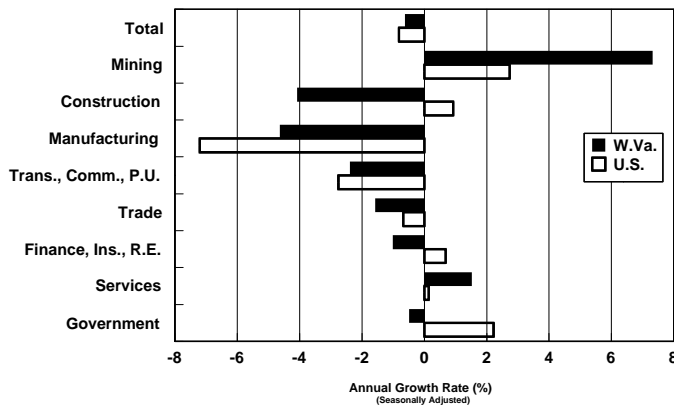
Job, unemployment rate, and real personal income data are seasonally adjusted.

**Sources:** Job and unemployment rate data are from the W.Va. Bureau of Employment Programs and the Bureau of Labor Statistics. Personal income data are from the Bureau of Economic Analysis and population estimates come from the Census Bureau.

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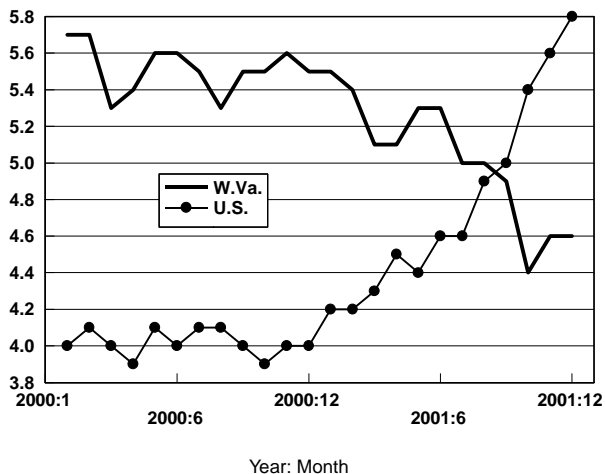
**Figure 1**  
**West Virginia and U.S. Job Growth**  
 December 2000 to December 2001



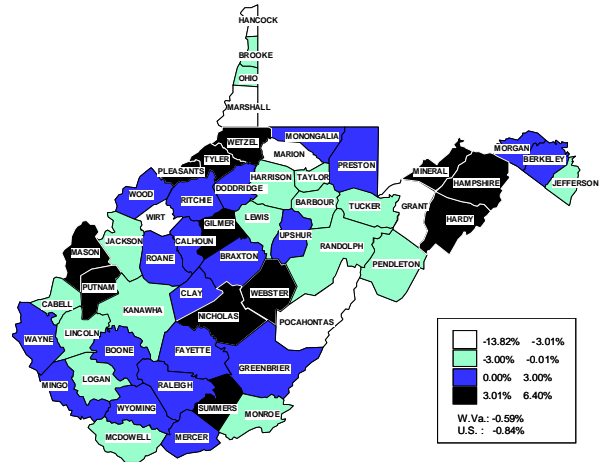
Even though the state lost jobs last year overall, not all regions of the state performed equally (see Figure 2). Counties in the Eastern Panhandle and Potomac Highlands posted job growth last year, as did many of the smaller, more rural, and coal-mining-related counties.

West Virginia's seasonally adjusted rate of unemployment fell strongly during the last year, from 5.5 percent in December 2000 to 4.6 percent in December 2001, as Figure 3 shows. The state unemployment rate is as low as it has been since at least the 1970s. The drop in the state rate contrasts strongly with the national rate, which rose from 4.0 percent to 5.8 percent

**Figure 3**  
**W. Va. Unemployment Rate Falls below U.S. for First Time since 1970s**



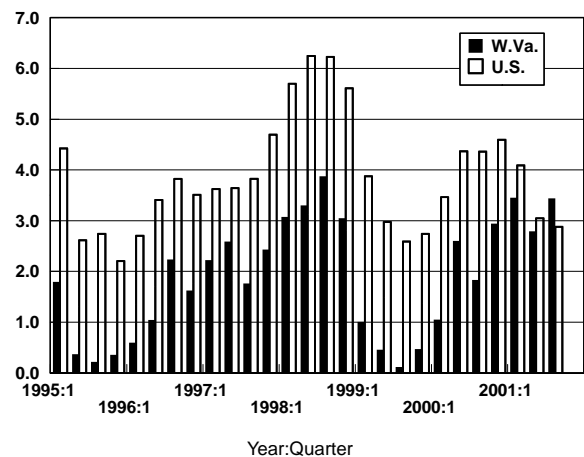
**Figure 2**  
**Nonfarm Job Growth**  
 December 2000 to December 2001



during the same period. West Virginia now has a smaller share of its workforce unemployed (and actively seeking work) than does the national economy.

As Figure 4 shows, West Virginia has continued to generate positive year-over-year real personal income growth through the third quarter of 2001 (which is the most recent quarter for which we have data). Supporting real personal income growth were solid gains in net earnings from work (with mining and services contributing significantly) and transfer income. During 2001, West Virginia's income growth has been close to the national rate.

**Figure 4**  
**W. Va. Sustains Real Personal Income Growth in 2001**  
 (Year-to-Year Growth Rates)



## The Bad News

Both West Virginia and the nation began losing jobs early last year. According to the National Bureau of Economic Research (NBER), the U.S. economy slipped into recession in March of 2001. For both the state and the nation, this is the first period of sustained job decline since the early 1990s (see Figure 5).

Manufacturing job losses accelerated during the last year, as nearly all two-digit SIC industries recorded job losses from December 2000 to December 2001. Food products and other durables were the only sectors to maintain or slightly increase employment. Hardest hit during the last year were primary metals, chemical products, and glass products as competitive pressures, both domestic and foreign, increased. Part of the increase in competitive pressure comes from an appreciating U.S. dollar. Weighted by West Virginia commodity exports, the U.S. dollar appreciated by 4.4 percent during the last year.

Job losses hit several metropolitan regions last year, as manufacturing jobs (especially in primary metals, chemical, and glass products) declined. Hard hit were metropolitan counties in the Northern Panhandle, as well as Kanawha County.

As Figure 1 shows, construction employment fell strongly during the last year, but that was driven in part by particularly weak performance in one month (December 2001).

According to the latest estimates from the Census Bureau (see Table 2 on next page), West Virginia lost just over 5,000 residents from July 2000 to July 2001, which translates into a 0.3 percent rate of loss. This was far below the national rate of population growth (0.9 percent), and only North Dakota lost residents at a faster rate last year.

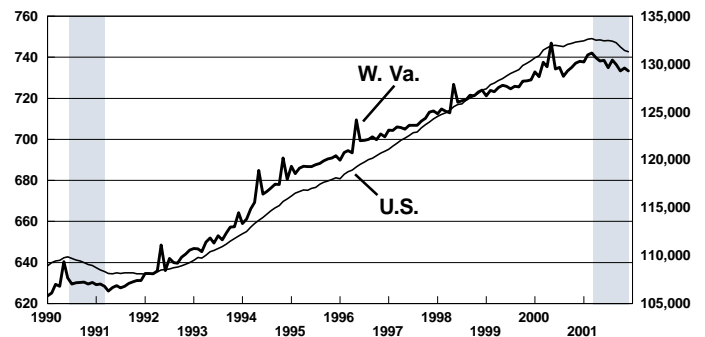
State income from dividends, interest, and rent (after adjustment for inflation) was lower in the third quarter of 2001 than it was a year ago, reflecting falling interest rates.

## The Unusual

The goods-producing sector (mining, construction, manufacturing) lost jobs as usual last year, but for completely different reasons than we are used to seeing. For most of the last half of the 1990s, coal mining dropped jobs while manufacturing jobs were roughly stable. Last year the tables turned, with coal mining actually adding jobs on a year-over-year basis, while manufacturing employment fell.

Business services, which typically shows strong employment growth, dropped 900 jobs from December

**Figure 5**  
**W. Va. and U.S. Total Nonfarm Jobs: 1990-2001**  
(Seasonally-adjusted, U.S. Recession-shaded)



Note: Large increases in W. Va. employment in May of even-numbered years are due to temporary hiring for primary elections.

2000 to December 2001. This sector depends in part on overall macroeconomic conditions. When the national economy slowed last year, this sector was affected.

The state unemployment rate fell strongly during 2001, at the same time that the state lost jobs. These two facts can be reconciled if we remember that residents who lose their jobs often leave the state or become so discouraged they stop actively seeking work (and thus drop out of the labor force). The data are probably reflecting both of these. We do not have good empirical estimates of the number of discouraged workers in the state last year, but we do know that the Census Bureau estimates that the state experienced net out-migration of residents during the July 2000 to July 2001 period.

West Virginia was the only state in the nation to register negative natural increase during the July 2000 to July 2001 period. This makes state population change entirely dependent on net migration. Since net migration was negative last year (more residents moved out than moved in), West Virginia posted a net population decline.

## The Outlook

There are signs that the U.S. economy may be slowing its descent and preparing to grow again. Consumer confidence has stabilized, inventory accumulation is

down, and the manufacturing sector is showing some signs of eventually coming to life. DRI-WEFA expects the U.S. economy to begin to expand again in the second quarter of 2002. The Federal Reserve seems to share the view that the economy is set to grow again, as it held the federal funds rate steady at 1.75 percent at the January Federal Open Market Committee meeting.

This sets the stage for a rebound in the West Virginia economy during the year as well. If the national economy recovers during 2002, West Virginia will likely respond with renewed job gains, solid income growth, a stabilized unemployment rate, and continued weak (or negative) population growth.

While sunnier national economic growth is the most likely scenario, it is possible that the current positive signs are just a pause before the storm intensifies. This is a possibility if business and consumer sentiment fail to rebound as expected, thus generating little incentive for renewed investment in productive capacity. Slow

private sector spending, combined with slow implementation of fiscal stimulus, could leave the U.S. economy mired in negative real GDP growth through the first half of 2002.

These risks translate into a longer downturn for the state as well. For one thing, a national downturn would intensify pressure on steel and chemical products manufacturing in the state. Large employment losses in either (or both) of these sectors would have broad implications for the growth of the state economy. Further, while coal mining job growth has rebounded lately, the industry in the state still faces strong competitive pressures and regulatory risk. Perhaps balancing these risks is the possibility of a national energy plan which emphasizes energy independence.

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Director, West Virginia Economic Outlook

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### *Venture Capitalist and Former WV Treasurer to Head New WVU Entrepreneurship Center*

Thomas E. Loehr, one of West Virginia's leaders in business and government, has been chosen through a nationwide search to be the director of West Virginia University's new Entrepreneurship Center in the College of Business and Economics. Established to foster the growth of entrepreneurial enterprises that will contribute to West Virginia's economic development, the center is a partnership among the College of Business and Economics; the Davis College of Agriculture, Forestry and Consumer Sciences; the WVU Extension Service; and the Office of Technology Transfer.

Loehr has been involved in venture capital in West Virginia and the Mid-Atlantic region for the past 10 years. He was instrumental in forming WestVen Limited Partnership, West Virginia's first licensed Small Business Investment Company, and led it through a variety of investments in many diverse businesses in the technology, manufacturing, Internet and healthcare sectors. He was formerly chairman of the West Virginia Jobs Investment Trust, a venture capital fund established by the state, and a member of the Board of Governors of the National Association of Small Business Investment Companies. Loehr is also president of Fourth Venture Investment Group Inc., an investment firm specializing in strategic planning, venture capital investment bank-

ing and business collaborations. His experience in government includes serving as West Virginia state senator (1982-89) and state treasurer under Gov. Gaston Caperton (1989-91).

Loehr will lead the Entrepreneurship Center in its efforts to provide entrepreneurial education, research, and technical assistance to entrepreneurs and family businesses across the state and region. Initial projects will focus on fostering enterprises in forestry and high-technology products, developing a variety of ways to teach the principles of entrepreneurial success, engaging WVU students in entrepreneurial activities, and exploring policy strategies to improve the state's entrepreneurial climate. Plans for the center also include establishing a Family Business Institute, a student business plan competition, and a program for commercializing ideas and technology emerging from WVU research.

"My intention is for the Entrepreneurship Center to foster the kinds of programs that will empower entrepreneurs to grow their businesses here in West Virginia," Loehr said. "I am a strong believer in the power of collaboration, and when the center pulls together the expertise and resources of WVU with other state business organizations, agencies, and institutions, I expect us to become a national leader in fostering entrepreneurship."

**Table 2**  
**U.S. State Population Estimates and Selected Components of Change**

Selected Components of Change: July 2000 to July 2001

State	Population				Selected Components of Change: July 2000 to July 2001				Net International Migration				Natural Increase Rate*	
	July 2001	July 2000	Change	% Change	% Change Rank	Migrants	Rate per Thousand*	Rank	Migrants	Rate per Thousand*	Rank	Number		Rate*
Alabama	4,464,356	4,451,493	12,863	0.3	37	-7,966	-1.8	27	3,079	0.7	47	18,407	4.1	
Alabama	4,464,356	4,451,493	12,863	0.3	37	-7,966	-1.8	27	3,079	0.7	47	18,407	4.1	
Alaska	634,892	627,601	7,291	1.2	17	-1,091	-1.7	26	1,330	2.1	26	7,179	11.4	
Arizona	5,307,331	5,165,274	142,057	2.8	2	75,633	14.6	2	22,794	4.4	9	43,078	8.3	
Arkansas	2,692,090	2,678,030	14,060	0.5	27	964	0.4	22	2,879	1.1	39	10,343	3.9	
California	34,501,130	34,000,446	500,684	1.5	9	-69,499	-2.0	30	271,841	8.0	1	298,656	8.8	
Colorado	4,417,714	4,323,410	94,304	2.2	3	41,164	9.5	5	15,791	3.7	13	36,688	8.5	
Connecticut	3,425,074	3,410,079	14,995	0.4	30	-8,102	-2.4	31	11,974	3.5	14	12,078	3.5	
Delaware	796,165	786,234	9,931	1.3	13	4,294	5.5	10	1,691	2.2	24	4,157	5.3	
District of Columbia	571,822	571,066	756	0.1	41	-4,444	-7.8	48	3,275	5.7	5	2,038	3.6	
Florida	16,396,515	16,054,328	342,187	2.1	4	205,303	12.8	3	94,449	5.9	4	39,606	2.5	
Georgia	8,383,915	8,229,823	154,092	1.9	5	59,260	7.2	6	22,742	2.8	20	70,453	8.6	
Hawaii	1,224,398	1,212,281	12,117	1.0	18	-3,060	-2.5	33	5,295	4.4	10	10,485	8.6	
Idaho	1,321,006	1,299,258	21,748	1.7	7	8,457	6.5	8	2,954	2.3	23	10,121	7.8	
Illinois	12,482,301	12,435,970	46,331	0.4	34	-90,810	-7.3	47	59,384	4.8	8	76,766	6.2	
Indiana	6,114,745	6,089,950	24,795	0.4	32	-12,197	-2.0	29	7,515	1.2	32	29,863	4.9	
Iowa	2,923,179	2,927,509	-4,330	-0.1	49	-16,609	-5.7	43	3,539	1.2	33	9,146	3.1	
Kansas	2,694,641	2,691,750	2,891	0.1	44	-17,146	-6.4	45	6,144	2.3	22	13,983	5.2	
Kentucky	4,065,556	4,047,424	18,132	0.4	29	616	0.2	23	3,037	0.8	43	15,202	3.8	
Louisiana	4,465,430	4,469,970	-4,540	-0.1	48	-35,655	-8.0	49	3,113	0.7	46	28,221	6.3	
Maine	1,286,670	1,276,961	9,709	0.8	22	8,513	6.7	7	742	0.6	48	674	0.5	
Maryland	5,375,156	5,310,908	64,248	1.2	15	-11,719	-2.2	18	21,620	4.1	11	31,536	5.9	
Massachusetts	6,379,304	6,357,072	22,232	0.3	35	-20,751	-3.3	37	20,697	3.3	16	23,599	3.7	
Michigan	9,990,817	9,952,006	38,811	0.4	33	-26,995	-2.7	34	19,332	1.9	28	47,439	4.8	
Minnesota	4,972,294	4,931,093	41,201	0.8	20	3,252	0.7	20	9,755	2.0	27	28,166	5.7	
Mississippi	2,858,029	2,849,100	8,929	0.3	36	-8,902	-3.1	35	1,495	0.5	49	16,511	5.8	
Missouri	5,629,707	5,603,553	26,154	0.5	28	-142	-0.2	24	6,368	1.1	35	20,381	3.1	
Montana	904,433	903,157	1,276	0.1	40	-1,568	-1.7	25	368	0.4	50	2,495	2.8	
Nebraska	1,713,235	1,712,577	658	0.0	46	-11,235	-6.6	46	3,066	1.8	29	9,048	5.3	
Nevada	2,106,074	2,018,723	87,351	4.3	1	57,600	28.5	1	13,584	6.7	3	14,854	7.4	
New Hampshire	1,259,181	1,239,881	19,300	1.6	8	13,605	11.0	4	1,353	1.1	38	4,403	3.6	
New Jersey	8,484,431	8,429,007	55,424	0.7	24	-30,863	-3.7	39	48,191	5.7	6	38,608	4.6	
New Mexico	1,829,146	1,821,282	7,864	0.4	31	-10,004	-5.5	42	4,774	2.6	21	13,351	7.3	
New York	19,011,378	18,989,332	22,046	0.1	43	-204,875	-10.8	50	128,286	6.8	2	99,610	5.2	
North Carolina	8,186,268	8,077,367	108,901	1.3	10	44,420	5.5	9	17,141	2.1	25	48,304	6.0	
North Dakota	634,448	640,919	-6,471	-1.0	51	-8,554	-13.3	51	456	0.7	44	1,648	2.6	
Ohio	11,373,541	11,359,955	13,586	0.1	42	-41,973	-3.7	40	10,143	0.9	41	46,881	4.1	
Oklahoma	3,460,097	3,453,250	6,847	0.2	38	-11,120	-3.2	36	5,209	1.5	30	13,162	3.8	
Oregon	3,472,867	3,429,293	43,574	1.3	12	17,913	5.2	11	11,044	3.2	17	14,986	4.4	
Pennsylvania	12,287,150	12,282,591	4,559	0.0	47	-23,602	-1.9	28	18,314	1.5	31	12,052	1.0	
Rhode Island	1,058,920	1,050,236	8,684	0.8	21	3,870	3.7	14	2,957	2.8	19	2,152	2.0	
South Carolina	4,063,011	4,023,438	39,573	1.0	19	16,325	4.1	12	4,470	1.1	37	19,653	4.9	
South Dakota	756,600	755,509	1,091	0.1	39	-2,601	-3.4	38	534	0.7	45	3,166	4.2	
Tennessee	5,740,021	5,702,027	37,994	0.7	23	8,634	1.5	19	6,090	1.1	40	23,627	4.1	
Texas	21,325,018	20,946,503	378,515	1.8	6	62,736	3.0	15	106,403	5.1	7	208,769	10.0	
Utah	2,269,789	2,241,555	28,234	1.3	14	-13,004	-5.8	44	7,424	3.3	15	33,789	15.1	
Vermont	613,090	609,709	3,381	0.6	25	1,705	2.8	16	700	1.1	34	1,101	1.8	
Virginia	7,187,734	7,104,016	83,718	1.2	16	18,299	2.6	17	22,619	3.2	18	42,851	6.0	
Washington	5,987,973	5,908,372	79,601	1.3	11	21,995	3.7	13	22,052	3.7	12	35,658	6.0	
West Virginia	1,801,916	1,807,099	-5,183	-0.3	50	-4,442	-2.5	32	491	0.3	51	-999	-0.6	
Wisconsin	5,401,906	5,372,243	29,663	0.6	26	2,974	0.6	21	6,056	1.1	36	21,355	4.0	
Wyoming	494,423	494,001	422	0.1	45	-2,041	-4.1	41	390	0.8	42	2,150	4.4	
<b>United States</b>	<b>284,796,887</b>	<b>282,124,631</b>	<b>2,672,256</b>	<b>0.9</b>	<b>—</b>	<b>0</b>	<b>0.0</b>	<b>—</b>	<b>1,065,000</b>	<b>3.8</b>	<b>—</b>	<b>1,617,450</b>	<b>5.7</b>	

\*Rate per thousand residents in July 2000. Source: U.S. Census Bureau and Author's calculations.



# West Virginia State Taxes: A Comparison

In an earlier issue of the *Review*,<sup>1</sup> we described the general structure of the West Virginia state tax system. That article made the following general observations: (1) there has been a dramatic decline in the share of business taxes since 1988, especially the business and occupation tax, the telecommunications tax, and the corporate net income tax; (2) the state tax system now relies more on consumer sales and use taxes and personal income taxes than it did a decade ago; (3) in the last three years, the share held by personal income taxes in the total tax revenue surpassed the share held by sales and use taxes. While these changes may reflect changes in the state economy, one cannot rule out as explanations the impact from other U.S. states in general and neighboring states in particular.

Taxes can change both the prices of goods and services and also the returns to inputs used in the production process such as capital and labor. In turn, taxes can affect net-of-tax earnings of workers and profits of firms. Thus, the tax considerations are important to a wide variety of business decisions, from a firm's decisions about location, investment, and hiring to a worker's decisions about where to work and how to negotiate compensation and benefits. This being so, and given that tax structures vary considerably from state to state, it can be very useful to compare West Virginia's tax structures with those of other U.S. states. This article will make these comparisons with two groups of states: West Virginia's neighboring states and states that share some important characteristic(s) with West Virginia.

## Selection of States

The first group (W. Va.'s neighbors) consists of Kentucky, Maryland, Ohio, Pennsylvania, and Virginia. It is particularly important to compare West Virginia to these states because the relative ease with which economic resources can be moved between nearby states makes it relatively easy for businesses to relocate to or from West Virginia. Besides, West Virginia competes with these states for economic development projects.

The second group of states for comparison consists of states chosen for their similarity to West Virginia in

terms of either their reliance on natural resources or their similar demography or general economic structure. Since a state's level of severance tax collections is usually a good indicator of reliance on natural resources, we first picked states with a significant level of severance tax collections—Alaska, Louisiana, New Mexico, Montana, North Dakota, Oklahoma, Texas, and Wyoming. We then added Idaho for being, like West Virginia, a rural state with no metropolitan cities; North Carolina for being a successful case of economic development; and Florida for having a relatively old population like West Virginia's. In total, we compiled a sample of 17 states, including West Virginia.

## A General Comparison of State Taxes

For this comparison, we used two measures of overall tax burden across states. The first one, total tax collection per capita, is used to measure the tax burden per person in each state. The second one, state personal income's percentage share of total tax collections, measures the tax burden per dollar of personal income in each state.

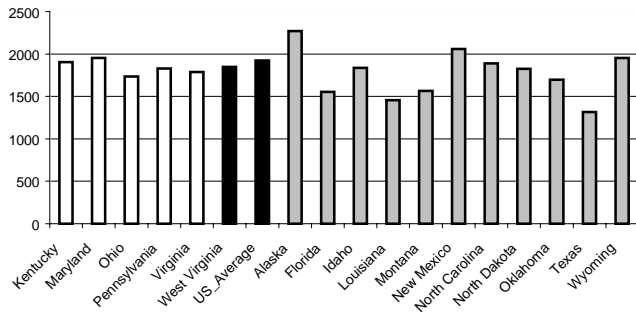
As we can see in Figure 1, per capita tax collections in 2000 vary widely across the compared states. When we look at the left hand side of Figure 1, we see that West Virginia and its neighbors have quite similar tax burdens. West Virginia has a total tax collection per capita of \$1,843, the third highest among the five neighboring states. This is very close to the neighbors' average of \$1,820 and to the U.S. average of \$1,921. However, it is somewhat higher than the entire sample average of \$1,664.<sup>2</sup> West Virginia has the seventh highest total tax collection per capita, when all comparison states are taken together. We should note, however, that there is a considerable degree of dispersion in the tax burden among states other than West Virginia and its neighbors. The two extremes are Alaska, with a total tax collection per capita of \$2,270, and Texas, with a total tax collection per capita of \$1,315. Nonetheless, according to this first measure of tax burden, West Virginia is not a high-tax-burden state.

On the other hand, the second measure of tax burden, state personal income's percentage share of total tax

<sup>1</sup> "West Virginia State Taxes: A Review," *West Virginia Business and Economic Review*, Winter 2002 8(1), pp. 9-12.

<sup>2</sup> The sample average is found by dividing the sum of total tax collections of 17 states used in our comparison by the sum of these states' populations.

**Figure 1**  
**Total State Tax Collections per Capita (2000)**



Source: U.S. Bureau of the Census and authors' calculations.

**Note:** Following the calculation method used by the U.S. Bureau of the Census, the U.S. average is found by dividing the sum of total tax collections across all 50 states by the sum of state populations.

collections, gives a considerably different picture of tax burden across states. Figure 2 shows that West Virginia has a higher personal income tax burden than all of the compared states except New Mexico. West Virginia's tax share of 8.5 percent is significantly greater than the average tax shares of 6.8 percent, 5.7 percent and 6.7 percent for the 6 neighbor states, 17 compared states, and all U.S. states, respectively. While this may seem surprising, it is due solely to West Virginia's low personal income per capita—in 2000, West Virginia ranked 49th in the nation in personal income per capita. Since West Virginia's total tax collections per capita is close to the U.S. average and its personal income per capita is far below the average of all U.S. states, the percentage share of total tax collections held by personal income is well above the U.S. average. Thus, while West Virginia's tax burden per capita is modest relative to its neighbors and other compared states, its tax burden per dollar of personal income is considerably high.

### Composition of State Taxes

Total tax collection per capita and share of total tax collection in state personal income are only general measures of state tax burden. As such, they do not show the composition of the tax burden by different tax groups. States impose taxes based primarily on personal income, business income, sales of goods and services, and property.

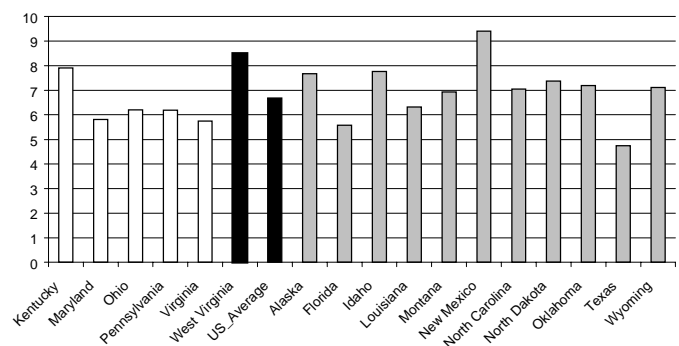
Table 1 displays the composition of tax burdens in each state. According to U.S. Census Bureau classifica-

tions, "selective taxes" comprise sales taxes for alcoholic beverages, amusements, insurance premiums, motor fuels, pari-mutuels, public utilities, tobacco products, and other selective sales and gross receipts taxes. "Business taxes" includes general corporation licenses, public utilities licenses, occupation and business licenses, corporation net income tax, and severance taxes. "Personal income taxes" includes individual income taxes, and death and gift taxes. "Other taxes" includes licenses applied to alcoholic beverages, amusements, hunting and fishing, motor vehicles, motor vehicle operators, and documentary and stock transfer taxes.

The shares of general sales and other taxes in total state taxes in West Virginia are significantly less than the average shares for its 6 neighbors, all 17 sample states, and all U.S. states. (While the same is also true for the property tax, this tax, being largely a local tax, has a very small weight in state taxes. Hence, we do not put emphasis on this tax in this report.) The fact that West Virginia relies less heavily on these taxes indicates that the tax burden generated by these taxes is relatively low. However, the shares held by selective taxes and business taxes in the state's total taxes are considerably higher than the average shares of these taxes for the 6 neighbors, all 17 sample states, and all U.S. states. West Virginia has the highest share of selective taxes and the second highest share of business taxes among the neighboring states. In business taxes, West Virginia is only surpassed by Pennsylvania, which has the highest corporate income tax rate among the neighboring states.

On the other hand, West Virginia has the lowest personal income tax share of total state taxes among the neighboring states. While the share of personal income

**Figure 2**  
**Percentage Share of Total State Tax Collections in State Personal Income (2000)**



Source: U.S. Bureau of the Census and authors' calculations.

**Table 1**  
**Composition of State Taxes as Percent of Total State Tax Collections**  
**(2000)**

State	Property Tax	General Sales Tax	Selective Taxes	Business Taxes	Personal Income Tax	Other Taxes
Kentucky	5.05	28.22	17.42	10.19	36.08	3.04
Maryland	2.47	24.13	18.00	5.79	46.07	3.54
Ohio	0.11	31.83	14.21	7.59	42.67	3.59
Pennsylvania	0.52	31.41	15.15	13.54	33.70	5.67
Virginia	0.27	19.54	14.87	5.62	55.18	4.53
<b>West Virginia</b>	<b>0.11</b>	<b>27.43</b>	<b>26.41</b>	<b>12.82</b>	<b>29.52</b>	<b>3.71</b>
<b>Average of 6 Neighbors<sup>*</sup></b>	<b>1.10</b>	<b>28.10</b>	<b>16.00</b>	<b>9.30</b>	<b>41.30</b>	<b>4.30</b>
Alaska	3.13	0.00	9.68	83.08	0.17	3.93
Florida	3.07	60.49	16.60	6.62	2.98	10.24
Idaho	0.00	31.43	12.95	8.41	41.08	6.13
Louisiana	0.38	31.64	25.46	14.61	25.76	2.14
Montana	15.52	0.00	24.38	14.98	37.94	7.18
New Mexico	0.93	40.13	13.48	16.85	23.96	4.64
North Carolina	0.00	22.09	17.52	8.89	47.88	3.62
North Dakota	0.21	28.17	27.70	22.07	17.46	4.39
Oklahoma	0.00	24.64	12.63	12.74	37.97	12.03
Texas	0.00	51.09	29.91	13.71	1.02	4.27
Wyoming	10.52	38.27	11.19	26.55	5.27	8.20
<b>Average of 17 Sample States<sup>*</sup></b>	<b>1.20</b>	<b>36.04</b>	<b>18.72</b>	<b>10.92</b>	<b>27.74</b>	<b>5.38</b>
<b>Average of all U.S. States<sup>*</sup></b>	<b>2.04</b>	<b>32.33</b>	<b>14.42</b>	<b>9.42</b>	<b>37.52</b>	<b>4.28</b>

Source: U.S. Bureau of the Census and authors' calculations.

**Note:** Averages are calculated by dividing the sum of collections of each tax by the sum of total tax collections.

tax in West Virginia is also lower than the average share for all U.S. states, it is slightly higher than the average share for the 17 sample states. (The fact that the personal income tax is virtually nonexistent for Alaska, Florida and Texas pushes down the average share for the 17 sample states.)

### *Tax Rate Comparison with Neighboring States*

In order to complement this analysis of the level and composition of state tax burden, we now turn our attention to a detailed comparison of West Virginia's various tax rates to the corresponding ones in neighboring states. Our comparison involves rates and income brackets for personal income and corporate net income taxes, and rates and exemptions for general sales taxes.

### **Personal Income Tax Rates**

A comparison with its neighbors shows that West Virginia's lowest marginal tax rate (3 percent) is the highest in the group and its top marginal tax rate (6.5 percent) is the second highest among its neighbors.

A further examination of the personal income tax systems of West Virginia's 6 neighbor states reveals varying degrees of progressivity.<sup>3</sup> Table 2 shows that the only state lacking a progressive personal income tax structure is Pennsylvania.<sup>4</sup> West Virginia has the second highest top income bracket threshold (\$60,000) after Ohio's top income bracket of \$200,000. While this, together with a high top marginal rate, may make West Virginia's personal income tax system appear more progressive than the majority of the neighboring states,

<sup>3</sup> Progressivity refers to the case where the ratio of taxes to income (average tax rate) increases with the income level. Average tax rate is widely used as a measure of tax progressivity instead of the marginal tax rate. Thus, the marginal tax rates presented in Table 2 should be interpreted with caution. We use marginal tax rates only as a measure of relative progressivity across states. For a discussion on marginal versus average tax rates, see Rosen (2002).

<sup>4</sup> This assertion is based exclusively on Pennsylvania's constant marginal personal income tax rate. We should note that average tax rate might be increasing with income levels due to various subsidies, credits and exemptions in the personal income tax system. Thus, Pennsylvania's personal income tax system may still exhibit some progressivity.



its considerably high minimum marginal rate makes its tax system appear less progressive than the other states.

### Corporate Net Income Tax Rates and Apportionment

West Virginia has the second highest corporate net income tax rate (9 percent) after Pennsylvania's 9.99 percent rate. Among the neighboring states, four states including West Virginia have flat rates. Only Kentucky and Ohio apply different tax rates to different income brackets. This makes the corporate net income tax structures of these states somewhat progressive (with the caveat that the exact tax progressivity will depend on the tax credit and subsidy structure as well).

Another important feature of the corporate net income tax system is how income is apportioned to determine the taxable portion of corporate income for a given state when the business operates across state lines. Since it is a fairly complex task to determine the income of multi-state businesses, this income is apportioned

among states using a formula based on the business' portion of sales, payroll, and property in each state. The weights given to sales, property, and payroll factors in a state's formula for apportioning corporate net income may affect the location, investment and hiring decisions of corporations in a particular state.

For instance, consider two states, State A and State B, where State A has a double-weighted sales factor formula with 50 percent on sales and 25 percent each on both payroll and property while State B has a triple-weighted sales factor formula with 60 percent weight on sales and 20 percent weight on both payroll and property. All else being equal, a business deciding between the two states as a base of operation would benefit from locating in State B since it would be taxed less heavily on physical presence through the ownership of property and payroll in that state. In this two-state example, we would then expect that business to sell its products in State A since the income from those sales would be

**Table 2**  
Various State Tax Rates in West Virginia and its Neighbors

	Minimum Marginal Rate	Top Marginal Rate	Bottom Income Bracket	Top Income Bracket	Number of Brackets	Personal Exemption <sup>1</sup>
<b>Personal Income Tax</b>						
Kentucky	2%	6%	\$3,000	\$8,000	5	✓
Maryland	2	4.8	\$1,000	\$3,000	4	✓
Ohio	0.691	6.98	\$5,000	\$200,000	9	✓
Pennsylvania	2.8	Flat rate			1	
Virginia	2	5.75	\$3,000	\$17,000	4	✓
<b>West Virginia</b>	<b>3</b>	<b>6.5</b>	<b>\$10,000</b>	<b>\$60,000</b>	<b>5</b>	<b>✓</b>
<b>Corporate Net Income Tax</b>						
						<b>Income Apportionment Formula<sup>2</sup></b>
Kentucky	4%	8.25%	\$25,000	>\$250,000	5	DWSF
Maryland	7	Flat rate			1	DWSF <sup>3</sup>
Ohio	5.1	8.5	\$50,000	>\$50,000	2	TWSF
Pennsylvania	9.99	Flat rate			1	TWSF
Virginia	6	Flat rate			1	DWSF
<b>West Virginia</b>	<b>9</b>	<b>Flat rate</b>			<b>1</b>	<b>DWSF</b>
<b>State and Local Sales Tax and Food and Drug Exemptions</b>						
	State Tax Rate	Maximum Local Rate	Combined State and Local Rate	Exemption		
				Food	Prescription drugs	Non-prescription
Kentucky	6%		6%	✓	✓	
Maryland	5		5	✓	✓	✓
Ohio	5	2%	7	✓	✓	
Pennsylvania	6	1	7	✓	✓	✓
Virginia	3.5	1	4.5 <sup>4</sup>		✓	✓
<b>West Virginia</b>	<b>6</b>		<b>6</b>		<b>✓</b>	

Source: Federation of Tax Administrators web site: [http://www.taxadmin.org/fta/rate/tax\\_stru.html](http://www.taxadmin.org/fta/rate/tax_stru.html)

<sup>1</sup> This includes exemptions allowed for singles, married couples and dependents.

<sup>2</sup> DWSF and TWSF refer to double-weighted sales factor (50% sales) and triple-weighted sales factor (60% sales), respectively.

<sup>3</sup> Maryland uses a single-factor sales formula for businesses in manufacturing industry.

<sup>4</sup> Virginia's combined sales tax rate on food is 4%.

taxed less heavily there than in State B.

From a state's perspective, changing the apportionment weights may affect both tax revenues and the degree to which that state's corporate income tax gets exported. Increasing the weight of sales to encourage economic development while shifting the burden of corporate income tax from resident to nonresident corporations comes at a cost of lower revenues from corporate net income tax for the state. It has been observed that the possible erosion of the corporate income tax base through such formula changes may result in states racing each other to the bottom. There is indeed a historical trend among states to increase the weight of the sales factor in their apportionment formulae. This trend has recently evolved into a relatively widespread adoption of a single factor sales formula.<sup>5</sup>

We see in Table 2 that all states except Ohio and Pennsylvania use a double-weighted sales factor formula, which has a weight of 50 percent on the sales factor. Ohio and Pennsylvania use a triple-weighted sales factor formula that puts a higher weight (60 percent) on the sales factor. As illustrated in the simple example above, this puts Ohio and Pennsylvania in a competitive position to attract new businesses and investment. While West Virginia is not at an immediate competitive disadvantage compared to a majority of its neighbors, Ohio and Pennsylvania's aggressive stance may trigger formula changes in other states. Maryland has already adopted a special provision for the manufacturing industry by allowing manufacturing businesses to use a single-factor sales formula. The current provisions and possible new developments in these northern states may drag West Virginia and other southern neighbor states to this race to the bottom as well.

### Sales Tax Rates

West Virginia has a relatively low sales tax rate, especially after comparing its rate with the combined state and local rates for other states. In fact, West Virginia's 6 percent sales tax is very close to the average of the combined rates of its 6 neighbor states. Maryland and Virginia are the only states with a lower sales tax rate than West Virginia. On the other hand, West Virginia and Virginia are the only states that do not allow a food exemption. However, Virginia applies a lower-than-normal rate on food, leaving West Virginia as the only state without any special provision for food purchases. While all states provide exemptions for prescription drugs, they are equally split in terms of non-

prescription drug exemption.

### *What Have We Learned from This Comparison?*

In this article, we explored the similarities and differences between the tax structures of West Virginia and a selection of other comparable states, focusing on the level and composition of West Virginia state taxes. Particular attention was paid to the comparison of various state tax rates for the region that includes West Virginia and its neighbors. Tax burden per capita appears to be quite similar to other states in our comparison. However, West Virginia's tax burden *as a share of its personal income* is found to be considerably high. Additionally, compared to other states, this tax burden comes more from business taxes and selective sales taxes in West Virginia than elsewhere. A similar picture emerges for the business tax rates. West Virginia has the second highest corporate income tax rate among its neighboring states. Moreover, Ohio and Pennsylvania use greater weights on the sales factor in their corporate income apportionment formulas. This enhances the competitive position of these states in terms of attracting new investment. After Maryland's recent adoption of a single-factor sales formula for its manufacturing industry, we may expect similar changes in southern neighbor states, including West Virginia, in the future. It is important to note that these formula changes contain the risk of eroding the corporate income tax base. For West Virginia, this may further undermine the weight of business taxes in the state tax system. Finally, personal income tax rates were also found to be high compared to other states in the region. All these may put West Virginia at a competitive disadvantage at a time when attracting investment is so crucial for the state's urgently needed economic development.

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<sup>5</sup> Single-factor sales formula weighs only the sales factor in corporate income apportionment. Thus, businesses are taxed based only on their level of sales in a given state. See Tosun (2001) for a discussion on the adoption and revenue impacts of single-factor sales formula.

## West Virginia and United States Economic Indicators

	00 Q4	01 Q1	01 Q2	01 Q3	01 Q4	1999	2000	2001
<b>United States</b>								
Real GDP (Bil. \$1996 Chain-Wtd.)	9,303.9	9,334.5	9,341.7	9,310.4	9,315.6	8,856.5	9,224.0	9,325.5
% Change	1.9	1.3	0.3	-1.3	0.2	4.1	4.1	1.1
Consumer Price Index (CPI-U) (1982-84=100)*	174.0	175.7	177.5	177.8	177.3	166.6	172.2	177.1
% Change	2.2	3.9	4.2	0.5	-1.1	2.2	3.4	2.8
Total Nonfarm Payroll Employment (Mil.)	132.3	132.6	132.5	132.4	131.5	128.9	131.8	132.2
% Change	1.0	0.9	-0.2	-0.4	-2.6	2.4	2.2	0.4
Unemployment Rate (%)	4.0	4.2	4.5	4.8	5.6	4.2	4.0	4.8
Initial Claims for Unemployment Ins. (Thous.)	337	353	410	417	456	296	302	409
Industrial Production (1992=100)	145.7	143.5	141.3	139.6	137.0	139.4	145.7	140.4
% Change	-2.6	-6.1	-5.9	-4.7	-7.2	3.7	4.5	-3.7
Capacity Utilization Rate	80.7	78.9	77.4	76.2	74.6	81.4	81.8	76.8
Housing Starts (Mil.)	1,539	1,627	1,623	1,601	1,571	1,647	1,575	1,606
Retail Sales (Bil.\$)	3,099.5	3,136.8	3,178.1	3,164.6	3,256.0	2,860	3,080	3,184
% Change	-0.2	4.9	5.4	-1.7	12.1	8.6	7.7	3.4
Federal Funds Rate*	6.47	5.59	4.33	3.50	2.13	4.97	6.24	3.89
Ten-Year Treasury Note Rate*	5.57	5.05	5.27	4.98	4.77	5.64	6.03	5.02
<b>West Virginia</b>								
Total Nonfarm Payroll Employment (Thous.)	736.7	740.3	738.8	736.7	733.8	726.0	735.6	737.4
% Change	2.0	1.9	-0.8	-1.2	-1.5	0.9	1.3	0.
Mining	20.5	21.1	21.2	21.7	22.0	21.3	20.5	21.5
% Change	0.0	10.8	1.9	10.5	6.3	-10.1	-3.8	4.9
Construction	34.3	35.9	34.7	33.5	33.3	33.6	33.8	34.4
% Change	17.2	20.9	-13.0	-13.5	-2.0	-1.8	0.6	1.8
Manufacturing	79.9	79.2	78.3	76.9	76.1	81.6	80.7	77.6
% Change	-1.8	-3.1	-4.8	-6.6	-4.1	-1.0	-1.1	-3.8
Trans., Comm. and Public Utilities	37.6	37.0	37.3	37.2	36.8	38.1	37.4	37.1
% Change	8.2	-5.9	2.9	-0.7	-4.2	-0.8	-1.8	-0.8
Trade	165.0	165.3	164.2	164.0	162.3	163.3	164.2	163.9
% Change	1.9	0.8	-2.6	-0.6	-4.0	0.4	0.6	-0.2
Finance, Ins. and Real Estate	29.5	29.6	29.9	29.8	29.6	29.8	29.5	29.7
% Change	1.8	1.4	3.2	-0.4	-3.1	3.8	-1.0	0.7
Services	228.9	230.6	230.6	232.5	233.1	217.5	226.2	231.7
% Change	4.7	3.0	-0.1	3.5	1.0	4.4	4.0	2.4
Government	141.1	141.5	142.8	141.0	140.5	140.9	143.3	141.5
% Change	-4.1	1.1	3.6	-4.8	-1.4	0.1	1.7	-1.3
Unemployment Rate (%)	5.5	5.3	5.2	5.0	4.5	6.6	5.5	4.9
Initial Claims for Unemployment Ins. (Thous.)	1,772	1,388	1,602	1,469	1,649	1,579	1,561	1,527
Average Weekly Hours Coal Mining	46.5	45.3	47.3	45.7	46.3	43.2	45.1	46.1
Average Weekly Hours Manufacturing	40.7	40.9	40.8	40.3	40.5	41.6	41.3	40.6
Average Hourly Earnings Coal Mining (\$)	19.52	19.32	19.94	20.94	21.44	19.34	19.50	20.41
% Change	-4.9	-3.9	13.5	21.4	10.0	-2.0	0.8	4.7
Average Hourly Earnings Manufacturing (\$)	14.75	14.78	14.92	15.07	15.16	14.09	14.61	14.98
% Change	1.3	0.7	3.8	4.2	2.4	2.7	3.7	2.6
Real Personal Income (Mil. 1996\$)	37,087	37,334	37,722	37,845	n/a	35,859	36,615	n/a
% Change	5.6	2.7	4.2	1.3	n/a	0.5	2.1	n/a
Wage and Salary	18,175	18,317	18,653	18,660	n/a	17,662	17,929	n/a
% Change	8.2	3.2	7.5	0.1	n/a	1.6	1.5	n/a
Other Labor	2,412	2,400	2,428	2,434	n/a	2,362	2,382	n/a
% Change	6.1	-1.9	4.7	0.9	n/a	0.1	0.9	n/a
Proprietors	2,352	2,396	2,413	2,423	n/a	2,302	2,345	n/a
% Change	3.3	7.6	2.8	1.7	n/a	3.3	1.9	n/a
Dividends, Interest, and Rent	6,554	6,495	6,446	6,424	n/a	6,234	6,470	n/a
% Change	3.3	-3.5	-3.0	-1.4	n/a	-2.1	3.8	n/a
Transfer Payments	8,431	8,572	8,629	8,733	n/a	8,218	8,346	n/a
% Change	2.7	6.8	2.7	4.9	n/a	-0.8	1.6	n/a
Value of Total Housing Permits (Mil.\$)	371	432	346	340	418	382	329	384
W. Va. Export-Weighted U.S. Dollar (1980=100)*	144.0	143.6	148.0	147.8	149.0	133.2	139.1	147.1
% Change	12.4	-1.1	12.9	-0.7	3.3	1.7	4.4	5.8

Notes: West Virginia average weekly hours, average hourly earnings, and initial claims for unemployment insurance data are obtained from the West Virginia Bureau of Employment Programs and seasonally adjusted using seasonal factors derived by the Bureau of Business and Economic Research. West Virginia employment and the state unemployment rate are seasonally adjusted by the West Virginia Bureau of Employment Programs. Personal income data are seasonally adjusted by the Bureau of Economic Analysis, U.S. Dept. of Commerce. Components may not sum to totals due to rounding. All percent changes are measured from the previous period and expressed as annual rates. Value of total housing permits data are from the Bureau of the Census, U.S. Dept. of Commerce.

\* Not Seasonally Adjusted.

n/a=Not Available.



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