

# West Virginia Business & Economic

# REVIEW

Volume 11 • February 2005

West Virginia University College of Business and Economics

## West Virginia Internationally From the West Virginia Economic Outlook 2005

by Claudia Williamson, Graduate Research Assistant  
with George W. Hammond, Ph.D.

### CONTENTS

W. Va. Internationally .....	1
The Future of W. Va.'s Highway System .....	14
Economic Indicators .....	20



### FAMILY BUSINESS SUCCESSION: LESSONS LEARNED

Offered free of charge by the  
Center for Family Business  
WVU College of Business & Economics

April 5, 2005 Embassy Suites Hotel, Charleston  
April 6, 2005 Radisson Hotel, Morgantown

Download registration form at:  
[www.bber.wvu.edu](http://www.bber.wvu.edu)  
or call  
304-293-7835

### NOTE TO OUR READERS:

The West Virginia Business and Economic Review is published by the WVU Bureau of Business and Economic Research. Subscribers are notified by email when a new issue is posted on the Bureau website. To be added to our list of subscribers, go to:

[www.bber.wvu.edu/econ\\_review\\_mail\\_list.html](http://www.bber.wvu.edu/econ_review_mail_list.html)

We hope you find our format easy to access and read. Please let us know if you see ways to improve it. You can email our editor at:  
[connie.banta@mail.wvu.edu](mailto:connie.banta@mail.wvu.edu)

### State Commodity Export Data Has Just Been Updated: Value of W.Va. Commodity Exports Surge in 2004

The value of West Virginia's commodity exports rose by \$882 million in 2004, up from \$2.380 billion in 2003 to \$3.262 billion. This translates into a growth rate of 37 percent, which is far above the national growth rate in 2004 of 13 percent. Keep in mind that this dataset measures the origin of movement of exports, not necessarily their state of manufacture.

- Canada remains the largest destination for commodity exports for West Virginia (and the U.S.), accounting for 30 percent state exports in 2004. West Virginia exports to Canada grew to \$980 million in 2004 from \$759 million in 2003.
- The biggest story was Mexico, which became West Virginia's second largest export destination after posting a five fold increase from 2003. Exports to Mexico accounted for 13 percent of all West Virginia exports and totaled \$435.5 million in 2004, up from \$80.6 million in 2003.
- Chemicals continue to be the largest export industry for West Virginia with \$1.3 billion in commodity exports originating in the state.
- The value of West Virginia's exports of transportation equipment grew 92 percent in 2004, to become the second largest export sector. At \$459 million, this sector now accounts for 14 percent of state exports. Canada was the most important export destination for transportation equipment in 2004, accounting for 81 percent of state exports in this sector.

- West Virginia exports of minerals and ores grew 61 percent last year, to \$397 million.
- The value of state exports of computer and electronic products grew from \$59 million in 2003 to \$357 million in 2004. Mexico was the major destination for West Virginia exports of computer and electronic products in 2004.

The article to follow is an excerpt from the West Virginia Economic Outlook 2005, which was released in November 2004. It does not include the 2004 estimates, but explains longer term trends, as well as basic international trade and exchange rate concepts.

### *West Virginia Internationally*

West Virginia's economy, like the nation, experiences fluctuations that have an impact on our daily lives. Some of these fluctuations are caused by local economic events and some are the result of events outside the state. External events are often transmitted to the state economy through our trading relationships. While there is no good data on imports by state, we do have access to detailed, time-series data on U.S. commodity exports. These data can tell us a great deal about the extent to which West Virginia depends on international trading partners and about how emerging world trends are affecting the state economy.

In 2003, the value of West Virginia commodity exports totaled \$2.380 billion dollars, which translates into \$3,277 per nonfarm payroll job (and ranks West Virginia 32<sup>nd</sup> in the nation). Since 2000, West Virginia commodity exports, on an origin-of-movement basis, have been stable due to a number of factors. Real GDP growth has been slow for many of our major trading partners, restraining foreign demand for U.S. products, including those produced in West Virginia. Further, the value of the U.S. dollar skyrocketed beginning in 1995 and has only recently begun to descend. A rising U.S. dollar tends to reduce exports by raising the foreign price of U.S. goods and reducing the dollar price of foreign goods. These trends have recently begun to reverse, with faster income growth observed for many of our trading partners and a falling value of the U.S. dollar. These changes suggest that faster commodity export growth may be on the horizon.

While West Virginia's sales of commodities to foreigners are one important economic connection between the state and the world, it is not the only one. Foreign purchases of productive assets are another important way in which the international economy affects the state. Indeed, foreign affiliates accounted for 3.8 percent of West Virginia jobs in 2001.

### *Commodity Export Performance*

International markets are becoming increasingly important as economies across the globe continue to integrate. The United States relies on exports to other countries, but the amount varies by state, with some states exporting more than others. In 2003, U.S. commodity exports constituted 6.6 percent of Gross Domestic Product. Texas, exporting \$98.846 billion, was the largest exporter in 2003, and ranked fourth in the value of exports per employee, as **Table 1** shows. Montana was the smallest exporting state by volume, with \$361 million. Washington ranked first in exports per employee with \$12,850, while Arkansas had the lowest value of \$206. West Virginia fit in between the two, ranking thirty-second with \$3,277 exports per employee, and exporting \$2.380 billion.

### *Commodity Exports by Country*

Exporting West Virginia goods to other countries is one way that the state plays a role in the international scene. Canada was West Virginia's leading export destination in 2003 with 31.91 percent of the state's exports, as **Table 2** shows. Receiving 9.91 percent of West Virginia exports, Belgium came in a distant second. Japan was West Virginia's third ranking export destination with 9.81 percent. China is becoming more important to the West Virginia economy as 5.57 percent of the state's exports were shipped there in 2003. Mexico is also starting to demand more West Virginia commodities, with 3.39 percent of West Virginia exports.

**Table 1**  
**U.S. Commodity Exports by State 2000-2003**

State	Thousands of Dollars				Annual Growth Rate 2000-2003	Exports per Employee	
	2000	2001	2002	2003		Dollars 2003	Rank 2003
Alabama	7,317,040	7,570,360	8,266,884	8,340,387	4.5	4,449	20
Alaska	2,464,139	2,418,284	2,516,220	2,738,558	3.6	9,138	5
Arizona	14,333,689	12,513,510	11,871,004	13,323,392	-2.4	11,649	2
Arkansas	2,599,268	2,911,181	2,803,645	2,962,153	4.5	206	51
California	119,640,424	106,776,963	92,214,292	93,994,882	-7.7	6,523	9
Colorado	6,592,984	6,125,494	5,521,685	6,109,121	-2.5	2,841	38
Connecticut	8,046,838	8,610,434	8,313,390	8,136,443	0.4	4,952	15
Delaware	2,197,396	1,984,813	2,003,814	1,886,118	-5.0	4,560	18
District of Columbia	1,003,177	1,033,602	1,065,873	809,220	-6.9	1,218	48
Florida	26,542,976	27,184,581	24,544,204	24,953,414	-2.0	3,425	30
Georgia	14,925,063	14,643,686	14,412,700	16,286,235	3.0	4,219	24
Hawaii	386,813	369,866	513,651	368,227	-1.6	649	50
Idaho	3,558,623	2,122,100	1,966,982	2,095,799	-16.2	3,665	27
Illinois	31,437,607	30,434,398	25,686,414	26,472,902	-5.6	4,550	19
Indiana	15,385,774	14,365,375	14,923,049	16,402,279	2.2	5,662	13
Iowa	4,465,486	4,659,584	4,754,600	5,236,296	5.5	3,636	28
Kansas	5,145,445	5,004,547	4,988,410	4,553,334	-4.0	3,419	31
Kentucky	9,612,209	9,047,966	10,606,720	10,733,781	3.7	6,020	11
Louisiana	16,814,289	16,588,957	17,566,658	18,390,130	3.0	9,649	4
Maine	1,778,695	1,812,455	1,973,061	2,188,413	7.2	3,611	29
Maryland	4,592,885	4,974,873	4,473,576	4,940,631	2.5	1,990	44
Massachusetts	20,514,409	17,490,110	16,707,593	18,662,575	-3.1	5,857	12
Michigan	33,845,301	32,365,840	33,775,232	32,941,109	-0.9	7,467	7
Minnesota	10,302,502	10,524,370	10,402,162	11,265,660	3.0	4,249	22
Mississippi	2,725,551	3,557,419	3,058,008	2,558,259	-2.1	2,291	43
Missouri	6,497,147	6,173,043	6,790,778	7,233,937	3.6	2,703	39
Montana	540,642	488,522	385,735	361,416	-12.6	903	49
Nebraska	2,511,183	2,701,795	2,527,632	2,723,670	2.7	3,014	35
Nevada	1,481,897	1,423,225	1,176,999	2,032,599	11.1	1,869	45
New Hampshire	2,373,327	2,401,032	1,863,288	1,931,412	-6.6	3,132	33
New Jersey	18,637,554	18,945,751	17,001,514	16,817,673	-3.4	4,225	23
New Mexico	2,390,543	1,404,620	1,196,144	2,325,609	-0.9	2,999	36
New York	42,845,957	42,172,062	36,976,801	39,180,708	-2.9	4,662	17
North Carolina	17,945,940	16,798,898	14,718,505	16,198,733	-3.4	4,259	21
North Dakota	625,917	806,110	859,383	854,072	10.9	2,568	40
Ohio	26,322,241	27,094,734	27,723,273	29,764,418	4.2	5,521	14
Oklahoma	3,072,177	2,661,344	2,443,578	2,659,603	-4.7	1,833	46
Oregon	11,441,272	8,900,414	10,086,397	10,357,199	-3.3	6,631	8
Pennsylvania	18,792,448	17,433,129	15,767,794	16,299,212	-4.6	2,909	37
Rhode Island	1,185,571	1,268,612	1,121,005	1,177,475	-0.2	2,434	41
South Carolina	8,565,126	9,956,333	9,656,247	11,772,894	11.2	6,495	10
South Dakota	679,366	594,874	596,785	672,268	-0.3	1,778	47
Tennessee	11,591,574	11,320,177	11,621,339	12,611,793	2.9	4,728	16
Texas	103,865,689	94,995,266	95,396,197	98,846,083	-1.6	10,546	3
Unknown State <sup>1</sup>	58,453,978	41,505,557	34,467,615	35,167,868	-15.6	NA	NA
Utah	3,220,823	3,506,386	4,542,725	4,114,540	8.5	3,832	26
Vermont	4,097,073	2,830,360	2,520,955	2,626,922	-13.8	8,797	6
Virginia	11,698,059	11,630,943	10,795,528	10,852,981	-2.5	3,101	34
Washington	32,214,701	34,928,533	34,626,549	34,172,826	2.0	12,850	1
West Virginia	2,219,278	2,241,005	2,237,154	2,379,808	2.4	3,277	32
Wisconsin	10,508,413	10,488,671	10,684,271	11,509,835	3.1	4,142	25
Wyoming	502,453	503,269	553,361	581,636	5.0	2,327	42
<b>United States <sup>2</sup></b>	<b>780,418,628</b>	<b>731,025,906</b>	<b>693,257,300</b>	<b>723,743,177</b>	<b>-2.5</b>		

Source: Bureau of the Census, Trade Division and University of Massachusetts, MISER

<sup>1</sup>Unknown State includes exports where the state of origin was left blank, had multiple states listed, or was illegible, and the value of the Census estimate for shipments valued under \$2500 for which filing is not required.

<sup>2</sup>The United States total includes Puerto Rico and the U.S. Virgin Islands

**Table 2**  
**W. Va. Commodity Export Totals by Country**

Rank 2003	Country	Thousands of Dollars				Annual	Percent	W.Va. Percent
		2000	2001	2002	2003	Growth Rate 2000-2003	Distribution 2003	of the U.S. 2003
1	Canada	648,872	776,128	738,616	759,463	5.4	31.91	0.45
2	Belgium	246,236	227,363	204,986	235,914	-1.4	9.91	1.55
3	Japan	243,642	213,594	241,627	233,491	-1.4	9.81	0.45
4	China (Mainland)	35,617	120,436	144,898	132,576	55.0	5.57	0.47
5	Mexico	28,821	44,391	75,770	80,579	40.9	3.39	0.08
6	Netherlands	77,622	67,806	69,645	79,933	1.0	3.36	0.39
7	Korea, Republic Of	114,811	68,689	77,724	75,027	-13.2	3.15	0.31
8	United Kingdom	70,478	66,426	65,443	74,305	1.8	3.12	0.22
9	Hong Kong	56,178	49,673	68,684	70,814	8.0	2.98	0.52
10	Brazil	80,131	66,710	63,842	70,287	-4.3	2.95	0.63
11	Italy	72,148	73,557	51,912	65,491	-3.2	2.75	0.62
12	Germany	39,154	53,261	48,716	55,974	12.7	2.35	0.19
13	France	68,058	80,139	54,143	52,179	-8.5	2.19	0.31
14	China (Taiwan)	69,046	39,296	46,821	46,305	-12.5	1.95	0.26
15	Australia	32,769	29,796	30,405	37,504	4.6	1.58	0.29
16	Singapore	49,020	32,828	33,358	35,471	-10.2	1.49	0.21
17	Turkey	23,607	13,721	9,363	24,501	1.2	1.03	0.84
18	Egypt	1,334	1,483	6,335	23,932	161.8	1.01	0.90
19	India	11,937	9,760	18,443	17,387	13.4	0.73	0.35
20	Thailand	13,003	13,428	14,212	16,546	8.4	0.70	0.28
21	Russia	242	2,776	4,538	15,343	298.7	0.64	0.63
22	Colombia	11,893	12,854	13,540	12,820	2.5	0.54	0.34
23	Spain	15,531	15,511	15,238	10,730	-11.6	0.45	0.18
24	Bulgaria	23,040	13,540	4,700	10,500	-23.0	0.44	6.74
25	Morocco	0	0	0	10,465	NA	0.44	2.25
26	Argentina	14,643	10,819	6,087	9,771	-12.6	0.41	0.40
27	Republic of South Africa	30,959	13,368	9,855	9,632	-32.2	0.40	0.34
28	Israel	10,388	7,360	6,900	8,598	-6.1	0.36	0.12
29	Finland	11,313	7,340	4,217	8,475	-9.2	0.36	0.49
30	Malaysia	5,298	22,362	16,788	6,775	8.5	0.28	0.06
31	Kuwait	484	911	4,396	6,560	138.4	0.28	0.43
32	Indonesia	7,502	7,788	8,844	5,920	-7.6	0.25	0.23
33	New Zealand	4,237	3,346	4,768	5,677	10.2	0.24	0.31
34	Czech Republic	140	172	571	5,388	237.6	0.23	0.80
35	Venezuela	6,053	6,534	4,835	5,296	-4.4	0.22	0.19
36	Chile	3,577	4,810	5,435	4,962	11.5	0.21	0.18
37	Saudi Arabia	3,259	2,940	6,187	4,833	14.0	0.20	0.11
38	Philippines	2,462	2,955	3,197	4,356	20.9	0.18	0.05
39	Sweden	6,740	7,855	7,801	3,762	-17.7	0.16	0.12
40	Slovakia	0	5,311	15	3,432	NA	0.14	2.98
41	Peru	1,817	6,132	4,658	3,030	18.6	0.13	0.18
42	Ireland	5,229	4,700	4,664	2,830	-18.5	0.12	0.04
43	Vietnam	119	1,194	1,699	2,637	180.9	0.11	0.20
44	Portugal	8,509	4,435	1,720	2,314	-35.2	0.10	0.27
45	Qatar	78	53	216	2,286	208.3	0.10	0.56
46	Norway	2,974	2,118	1,749	2,219	-9.3	0.09	0.15
47	Pakistan	408	575	1,259	2,077	72.0	0.09	0.25
48	Costa Rica	1,138	885	993	1,957	19.8	0.08	0.06
49	Poland	2,351	1,175	322	1,861	-7.5	0.08	0.25
50	Lithuania	27	454	401	1,609	290.6	0.07	0.99
	<b>All Countries</b>	<b>2,219,278</b>	<b>2,241,005</b>	<b>2,237,154</b>	<b>2,379,808</b>	<b>2.4</b>	<b>100.00</b>	<b>0.33</b>

Source: Bureau of the Census, Trade Division and University of Massachusetts, MISER

As **Table 3** shows, the destinations of United States exports are similar to the state's exports. Four out of the top six export destinations are the same for West Virginia and the U.S. Canada was also the United States' number one export location and received most of the United States' exports with 23.42 percent. The United States' second largest export destination, Mexico, demanded 13.17 percent of U.S. commodities. Japan ranked third for U.S. export destinations, with 7.19 percent distribution. China is also becoming more important to the United States economy, ranking sixth with 3.93 percent of U.S. commodities as of 2003.

**Table 3**  
**U.S. Commodity Export Totals by Country**

Rank 2003	Country	Thousands of Dollars				Annual Growth Rate 2000-2003	Percent Distribution 2003
		2000	2001	2002	2003		
1	Canada	176,429,632	163,724,462	160,799,214	169,480,937	-1.3	23.42
2	Mexico	111,720,878	101,509,075	97,530,613	97,457,420	-4.5	13.47
3	Japan	65,254,366	57,639,072	51,439,625	52,063,765	-7.3	7.19
4	United Kingdom	41,579,356	40,797,923	33,253,090	33,895,379	-6.6	4.68
5	Germany	29,243,960	30,113,948	26,628,438	28,847,948	-0.5	3.99
6	China (Mainland)	16,253,029	19,234,827	22,052,679	28,418,493	20.5	3.93
7	Korea, Republic Of	27,901,881	22,196,592	22,595,871	24,098,587	-4.8	3.33
8	Netherlands	21,973,675	19,524,685	18,334,472	20,702,905	-2.0	2.86
9	China (Taiwan)	24,380,278	18,151,574	18,394,301	17,487,899	-10.5	2.42
10	France	20,252,812	19,895,664	19,018,869	17,068,157	-5.5	2.36
11	Singapore	17,816,421	17,691,569	16,221,169	16,575,698	-2.4	2.29
12	Belgium	13,960,096	13,523,634	13,342,553	15,217,945	2.9	2.10
13	Hong Kong	14,625,161	14,072,352	12,611,555	13,542,088	-2.5	1.87
14	Australia	12,459,740	10,944,827	13,083,949	13,103,840	1.7	1.81
15	Brazil	15,359,612	15,928,557	12,408,781	11,218,254	-9.9	1.55
16	Malaysia	10,995,683	9,380,157	10,348,148	10,920,575	-0.2	1.51
17	Italy	10,999,800	9,916,102	10,088,982	10,570,070	-1.3	1.46
18	Switzerland	9,942,468	9,835,084	7,781,909	8,660,100	-4.5	1.20
19	Philippines	8,790,234	7,664,534	7,270,172	7,992,188	-3.1	1.10
20	Ireland	7,726,543	7,149,584	6,748,973	7,698,516	-0.1	1.06
21	Israel	7,750,345	7,482,324	7,039,342	6,878,432	-3.9	0.95
22	Spain	6,322,859	5,810,909	5,225,696	5,935,255	-2.1	0.82
23	Thailand	6,642,509	5,995,120	4,859,500	5,841,663	-4.2	0.81
24	India	3,662,817	3,764,199	4,097,912	4,986,294	10.8	0.69
25	Saudi Arabia	6,230,289	5,970,504	4,778,472	4,595,968	-9.6	0.64
26	Dominican Republic	4,443,418	4,435,715	4,261,556	4,213,555	-1.8	0.58
27	Colombia	3,688,639	3,605,590	3,588,760	3,754,726	0.6	0.52
28	United Arab Emirates	2,291,434	2,639,513	3,598,451	3,510,388	15.3	0.49
29	Costa Rica	2,445,428	2,496,242	3,131,602	3,414,223	11.8	0.47
30	Sweden	4,556,880	3,547,839	3,154,154	3,225,451	-10.9	0.45
31	Turkey	3,731,337	3,106,761	3,106,642	2,904,305	-8.0	0.40
32	Honduras	2,574,554	2,436,975	2,564,589	2,844,902	3.4	0.39
33	Venezuela	5,552,087	5,684,156	4,446,856	2,839,505	-20.0	0.39
34	Republic Of South Africa	3,084,711	2,961,810	2,525,185	2,821,198	-2.9	0.39
35	Chile	3,455,100	3,130,882	2,611,930	2,719,326	-7.7	0.38
36	Egypt	3,329,264	3,777,989	2,866,155	2,660,207	-7.2	0.37
37	Indonesia	2,546,807	2,499,346	2,580,926	2,520,100	-0.4	0.35
38	Russia	2,318,294	2,724,084	2,398,543	2,450,199	1.9	0.34
39	Argentina	4,700,074	3,928,391	1,590,791	2,435,355	-19.7	0.34
40	Guatemala	1,895,309	1,876,832	2,041,860	2,273,572	6.3	0.31
41	New Zealand	1,973,951	2,134,367	1,814,421	1,848,820	-2.2	0.26
42	Panama	1,608,757	1,333,174	1,407,691	1,848,013	4.7	0.26
43	El Salvador	1,774,865	1,771,118	1,664,893	1,823,771	0.9	0.25
44	Austria	2,553,950	2,625,540	2,423,602	1,792,545	-11.1	0.25
45	Finland	1,570,604	1,553,787	1,536,803	1,713,772	3.0	0.24
46	Peru	1,661,881	1,566,860	1,556,471	1,706,810	0.9	0.24
47	Denmark	1,512,759	1,610,801	1,496,173	1,548,392	0.8	0.21
48	Kuwait	791,243	905,599	1,014,661	1,509,073	24.0	0.21
49	Jamaica	1,377,566	1,407,480	1,419,947	1,469,583	2.2	0.20
50	Norway	1,543,789	1,838,386	1,407,040	1,467,503	-1.7	0.20
<b>All Countries</b>		<b>780,418,628</b>	<b>731,025,906</b>	<b>693,257,300</b>	<b>723,743,177</b>	<b>-2.5</b>	<b>100.00</b>

Source: Bureau of the Census, Trade Division and University of Massachusetts, MISER

## Commodity Exports by Industry

**Table 4** analyzes West Virginia exports by industry during 2000 to 2003, based on NAICS classifications. West Virginia's largest exporting industry, chemicals, held 46.87 percent of the market in 2003. Second, with only 10.34 percent of exports, was minerals and ores. Transportation equipment came in a close third with 10.04 percent of exports from the state. Machinery (except electrical) and primary metal manufacturing held almost the same distribution, with 8.59 percent and 8.38 percent of exports.

**Table 4**  
**W. Va. Commodity Export Totals by Industry**

NAICS Code	Industry	Thousands of Dollars				Annual Growth Rate 2000-2003	Percent Distribution 2003
		2000	2001	2002	2003		
111	Agricultural Products	115	299	28	243	28.3	0.01
112	Livestock And Livestock Products	7,172	6,872	6,183	5,067	-10.9	0.21
113	Forestry Products, Nesoi	6,836	10,618	12,136	9,983	13.5	0.42
114	Fish, Fresh, Chilled, Or Frozen And Other Marine P	0	28	161	211	NA	0.01
211	Oil And Gas	6	291	502	18	44.2	0.00
212	Minerals And Ores	403,928	408,470	199,638	246,101	-15.2	10.34
311	Food And Kindred Products	9,970	6,200	2,981	6,710	-12.4	0.28
312	Beverages And Tobacco Products	0	0	0	10	NA	0.00
313	Textiles And Fabrics	2,494	5,310	6,276	6,661	38.7	0.28
314	Textile Mill Products	480	512	361	321	-12.6	0.01
315	Apparel And Accessories	1,211	658	569	461	-27.5	0.02
316	Leather And Allied Products	91	126	1,164	235	37.2	0.01
321	Wood Products	98,584	88,180	94,797	95,990	-0.9	4.03
322	Paper	7,790	12,074	15,855	11,081	12.5	0.47
323	Printing, Publishing And Similar Products	1,762	1,780	1,628	12,632	92.8	0.53
324	Petroleum And Coal Products	17,772	33,070	22,433	23,911	10.4	1.00
325	Chemicals	1,064,591	934,458	1,050,938	1,115,503	1.6	46.87
326	Plastics And Rubber Products	26,248	32,752	40,705	40,562	15.6	1.70
327	Nonmetallic Mineral Products	39,265	49,092	44,390	43,420	3.4	1.82
331	Primary Metal Manufacturing	205,559	229,185	217,145	199,531	-1.0	8.38
332	Fabricated Metal Products, Nesoi	21,468	13,973	15,493	18,504	-4.8	0.78
333	Machinery, Except Electrical	169,152	165,703	197,596	204,353	6.5	8.59
334	Computer And Electronic Products	17,293	33,566	46,354	59,494	51.0	2.50
335	Electrical Equipment, Appliances, And Component	5,247	8,232	4,643	4,140	-7.6	0.17
336	Transportation Equipment	78,314	178,310	229,750	238,856	45.0	10.04
337	Furniture And Fixtures	855	993	549	543	-14.0	0.02
339	Miscellaneous Manufactured Commodities	9,901	10,291	12,726	14,400	13.3	0.61
910	Waste And Scrap	10,457	5,537	5,832	7,429	-10.8	0.31
920	Used Or Second-Hand Merchandise	198	92	1,087	2,071	118.7	0.09
980	Goods Returned To Canada (Exports Only); U.S. Good	3,607	2,478	2,644	2,465	-11.9	0.10
990	Special Classification Provisions, Nesoi	8,910	1,852	2,589	8,902	0.0	0.37
<b>All Industries</b>		<b>2,219,278</b>	<b>2,241,005</b>	<b>2,237,154</b>	<b>2,379,808</b>	<b>2.4</b>	<b>100.00</b>

Source: Bureau of the Census, Trade Division and University of Massachusetts, MISER

The leading exporting industries in the United States differ from the top exporting industries in West Virginia, as shown in **Table 5**. While West Virginia exports were dominated by one industry, the United States had a more even distribution among industries from 2000 to 2003. However, three out of the top five leading export industries were the same for both West Virginia and the United States. Computer and electronic products held the largest market share with 20.7 percent in 2003. The second largest exporting industry for the United States was transportation equipment, holding 17.8 percent of the market. The third largest exporting industry, chemicals, captured 12.6 percent of the market, while machinery (except electrical) came in fourth with 10.4 percent of exports.

## Commodity Export Growth

West Virginia exports increased annually by 2.4 percent from 2000 to 2003, well above the U.S. average of -2.5 percent annual growth for the same time period (see **Table 1**.) In comparison to other states, South Carolina had the highest annual growth rate of 11.2 percent. Trailing South Carolina, with 11.1 and 10.9 percent annual growth respectively, Nevada and North Dakota came in a close second and third. However, at

**Table 5**  
**U.S. Commodity Exports by Industry**

NAICS Code	Industry	Thousands of Dollars				Annual Growth Rate 2000-2003	Percent Distribution 2003
		2000	2001	2002	2003		
111	Agricultural Products	24,449,108	24,861,287	25,796,876	30,358,839	7.5	4.2
112	Livestock And Livestock Products	1,266,137	1,325,070	1,031,877	1,193,767	-1.9	0.2
113	Forestry Products, Nesoi	1,673,276	1,472,380	1,449,679	1,514,647	-3.3	0.2
114	Fish, Fresh, Chilled, Or Frozen And Other Marine P	2,810,431	2,969,401	2,940,828	3,056,153	2.8	0.4
211	Oil And Gas	1,746,930	1,339,371	1,727,015	2,177,138	7.6	0.3
212	Minerals And Ores	4,537,115	4,239,566	3,910,847	4,020,330	-4.0	0.6
311	Food And Kindred Products	25,745,200	27,088,914	25,855,504	27,495,604	2.2	3.8
312	Beverages And Tobacco Products	5,679,771	4,434,860	3,659,181	3,796,808	-12.6	0.5
313	Textiles And Fabrics	7,284,162	7,365,202	7,642,419	7,805,386	2.3	1.1
314	Textile Mill Products	2,332,861	2,082,822	1,981,581	2,004,488	-4.9	0.3
315	Apparel And Accessories	8,557,864	6,956,292	5,994,072	5,469,699	-13.9	0.8
316	Leather And Allied Products	2,687,939	2,709,178	2,593,195	2,717,174	0.4	0.4
321	Wood Products	5,021,876	4,099,436	3,948,152	4,036,281	-7.0	0.6
322	Paper	15,978,499	14,495,880	14,107,299	14,504,183	-3.2	2.0
323	Printing, Publishing And Similar Products	5,097,474	5,124,510	4,773,594	4,983,734	-0.7	0.7
324	Petroleum And Coal Products	9,028,720	8,416,444	8,048,568	9,659,012	2.3	1.3
325	Chemicals	80,259,298	79,034,377	80,504,166	91,017,178	4.3	12.6
326	Plastics And Rubber Products	17,714,657	16,508,439	16,169,000	16,509,875	-2.3	2.3
327	Nonmetallic Mineral Products	8,173,210	7,744,594	6,325,736	6,405,335	-7.8	0.9
331	Primary Metal Manufacturing	21,498,372	19,311,952	16,688,674	19,125,021	-3.8	2.6
332	Fabricated Metal Products, Nesoi	22,913,143	20,699,353	20,186,682	20,364,725	-3.9	2.8
333	Machinery, Except Electrical	89,842,641	81,512,646	74,945,292	74,925,132	-5.9	10.4
334	Computer And Electronic Products	196,234,424	165,345,224	145,847,735	149,993,323	-8.6	20.7
335	Electrical Equipment, Appliances, And Component	27,477,686	24,922,654	22,848,273	23,291,636	-5.4	3.2
336	Transportation Equipment	128,180,756	130,232,777	130,897,141	128,854,240	0.2	17.8
337	Furniture And Fixtures	3,024,477	2,588,022	2,323,374	2,546,044	-5.6	0.4
339	Miscellaneous Manufactured Commodities	24,452,449	25,779,005	26,660,596	29,401,371	6.3	4.1
511	Prepackaged Software	0	0	0	335,898	NA	0.0
910	Waste And Scrap	5,128,585	4,823,753	5,165,295	6,564,409	8.6	0.9
920	Used Or Second-Hand Merchandise	4,021,163	4,644,451	3,179,322	3,440,634	-5.1	0.5
980	Goods Returned To Canada (Exports Only); U.S. Good	1,905,211	1,879,521	1,339,477	1,173,075	-14.9	0.2
990	Special Classification Provisions, Nesoi	25,695,195	27,018,528	24,715,851	25,002,037	-0.9	3.5
<b>All Industries</b>		<b>780,418,628</b>	<b>731,025,906</b>	<b>693,257,300</b>	<b>723,743,177</b>	<b>-2.5</b>	<b>100.0</b>

Source: Bureau of the Census, Trade Division and University of Massachusetts, MISER

the other end of the spectrum were Idaho and Vermont with negative annual growth rates of -16.2 percent and -13.8 percent, respectively. West Virginia ranked twenty-third based on the 2000 to 2003 growth rates.

### Growth by Country

Demand for West Virginia exports varied by country during the 2000-2003 period (see **Table 2**). Canada posted an annual growth rate of 5.4 percent, but Belgium and Japan's demand has been falling by -1.4 percent annually. Also posting negative growth was the Republic of Korea with -13.2 percent. However, China and Mexico are becoming increasingly more important, with 55 percent and 40.9 percent annual growth, respectively.

As **Table 3** shows, while three of the top five export destinations for West Virginia experienced growth during the 2000-2003 period, the top five export destinations for U.S. commodities all experienced declines. Canada demanded less annually from the U.S. (-1.3 percent per year), as did Mexico (-4.5 percent), Japan (-7.3 percent), and the United Kingdom (-6.6 percent). China posted one of the largest growth rates for the United States, at 20.5 percent annually.

### Growth by Industry

Growth rates for exports have varied by industry. For West Virginia, the largest exporting industry, chemicals, posted a slow growth rate of 1.6 annually from 2000 to 2003. The second largest industry, minerals and ores, saw negative growth of -15.2 percent annually. However, transportation equipment grew annually by 45 percent, and machinery (except electrical) grew 6.5 percent annually (see **Table 4**).

For the United States, growth of exports from an industry perspective looks a little bit different, as shown in **Table 5**. The largest growth rate of any industry from 2000 to 2003 was waste and scrap, with 8.6 percent annual growth, but this arises in part from the fact

that it is a relatively small export industry (accounting for 0.9 percent of commodity exports). The largest industry, computer and electronic products, experienced an annual decline of -8.6 percent. Transportation equipment only grew by 0.2 percent annually, significantly smaller than the 45 percent annual growth that West Virginia experienced for the same industry. The annual growth rate for machinery (except electrical) was -5.9 percent for the U.S. Growing faster than West Virginia was the chemicals industry, posting 4.3 percent annual growth for the U.S. Agricultural products posted one of the highest growth rates of 7.5 percent annually from 2000 to 2003.

### *What Determines Demand for Exports?*

One important driver of West Virginia exports is the real value of the U.S. dollar relative to other currencies. In general, as the U.S. dollar appreciates, or strengthens, U.S. commodities become more expensive in foreign markets. This leads to a decrease in exports. The reverse is also true: as the U.S. dollar depreciates, or weakens, U.S. goods become cheaper. Since most changes in the real value of the U.S. dollar are driven by nominal changes, we will focus our discussion on nominal exchange rates.

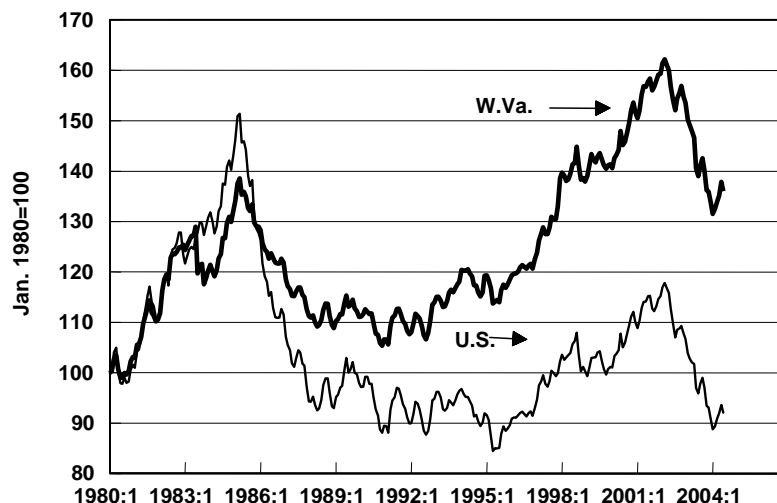
In order to give a summary picture of how the nominal exchange value of the dollar is changing (from the perspective of West Virginia), we have computed a trade-weighted exchange rate of the U.S. dollar using West Virginia commodity export weights. Individual country weights were calculated based on the share of the value of state commodity exports to that country during the 1997-2003 period. We then use these weights to compute a weighted average of changes in individual country bilateral exchange rates. The resulting summary measure of the value of the U.S. dollar will reflect state trading patterns.

### **Value of the United States Dollar**

The West Virginia trade-weighted exchange rate and the United States trade-weighted exchange rate peaked in February of 2002 and have been on a steady decline ever since, as shown in **Figure 1**. This trend makes U.S. goods cheaper, thus making West Virginia goods cheaper. As the West Virginia trade-weighted exchange rate started to fall in 2002, West Virginia exports began to rise. From 2002 to 2003, West Virginia exports increased from \$2.237 billion to \$2.379 billion, a 6.38 percent annual growth rate. Also, U.S. exports increased by 4.4 percent from 2002 to 2003 as the U.S. trade-weighted exchange rate decreased. From 2000 to 2003, the West Virginia trade-weighted exchange rate declined -2.2 percent annually, and the overall annual growth rate for West Virginia exports from 2000 to 2003 was 2.4 percent.

**Figure 1**

**U.S. and W. Va. Trade-Weighted Value of the U.S. Dollar**





Looking at the data before the peak in 2002 shows a different picture. From 2000 to 2002, the West Virginia trade-weighted exchange rate increased by 3.3 percent annually, making U.S. and West Virginia goods more expensive. West Virginia commodity exports only grew by 0.4 percent annually, while U.S. commodity exports decreased by -5.75 percent annually. This tells us that as the U.S. and West Virginia trade-weighted exchange rates rise, exports from the U.S. and West Virginia fall because these goods have become more expensive.

### Bilateral Exchange Rates

From 2000 to 2004, the bilateral exchange rates between the dollar and the currencies of West Virginia's top three trading partners increased. Relative to the currencies of Canada, Belgium, and Japan, the dollar became more expensive, which meant that our goods and services also became more expensive. This effect was apparent in commodity exports from the United States, including West Virginia, to these countries. With the exception of West Virginia exports to Canada, all annual export growth rates from West Virginia and the United States to Belgium, Canada, and Japan decreased during the 2000 to 2003 period.

### Gross Domestic Product

A country's real gross domestic product, or income, also plays a role in determining demand for West Virginia exports. If a country's income increases, it will demand more goods and services and more imports, and the demand for West Virginia exports may increase accordingly. However, if a country's income falls, or that country goes into a recession, its demand for goods and services will fall, taking West Virginia exports with it.

*International Economic Trends August 2004*, a publication by the St. Louis Federal Reserve, monitors real GDP growth for several countries, as shown in **Table 6**. Canada has continued to have a positive real GDP growth rate for the last several years, partly explaining why Canada has continued to demand exports from West Virginia. However, Canada's rate of real GDP increase has been slowing down, which may hurt demand for West Virginia goods. Growth from the first quarter of 2003 was 3.15 percent when compared to the first quarter of 2002, but the first quarter of 2004 posted 1.57 percent growth from the first quarter of 2003. This is still positive growth, but at a slower rate. As shown, Japan, West Virginia's third largest export destination, experienced negative real GDP growth rates from 2000 to 2001. Exports to Japan from West Virginia also fell during this same period. However, exports from 2001 to 2002 from West Virginia to Japan increased as did real GDP in the second and third quarters of 2002 from 2001.

**Table 6**  
**Real Gross Domestic Product: Percent Change from a Year Ago**  
**Quarterly Data**

	Year.Quarter											
	2001.2	2001.3	2001.4	2002.1	2002.2	2002.3	2002.4	2003.1	2003.2	2003.3	2003.4	2004.1
Canada	2.10	0.69	1.41	2.41	3.16	4.37	3.83	3.15	2.00	1.31	1.66	1.57
Euro Area	1.65	1.52	0.73	0.51	0.92	0.91	1.15	0.72	0.14	0.35	0.69	1.32
France	2.22	2.47	0.46	0.75	1.36	0.86	1.39	0.77	-0.09	0.37	1.08	1.71
Germany	0.83	0.71	0.51	-0.18	0.12	0.42	0.52	0.08	-0.34	-0.26	0.06	0.74
Italy	1.98	1.18	0.78	0.00	0.39	0.39	0.78	0.78	0.00	0.77	0.38	0.77
Japan	1.13	-0.35	-2.24	-3.14	-0.87	0.97	1.81	2.46	2.20	1.83	3.48	4.97
United Kingdom	2.35	2.13	2.15	1.67	1.52	1.95	1.94	1.81	2.13	2.16	2.87	3.42
United States	0.19	-0.02	-0.04	1.17	1.81	2.99	2.80	2.13	2.42	3.60	4.32	4.82

Source: International Economic Trends, 2004

## *Global Forecast*

To plan for future events that may impact West Virginia's exports and economy, it is important to look to future forecasts of the global economy. In the September 2004 edition of *World Economic Outlook*, the IMF staff forecast significant global GDP growth of 5.0 percent in 2004 and 4.3 percent in 2005. A recovery seems to be underway in most regions, but the rate of recovery differs from one area to another. Global recovery is extremely important for West Virginia exports. West Virginians should be concerned about how well their top trading partners are rebounding.

Canada, West Virginia's number one trading partner with 31.91 percent of state commodity exports, has projected real GDP growth of 2.9 percent in 2004 and 3.1 percent in 2005. In 2003, Canada's growth slowed to 2.0 percent due to appreciation of the Canadian dollar, the SARS outbreak, and the case of mad cow disease. Growth is expected to accelerate in 2004 and 2005 due to the strengthening U.S. economy and higher commodity prices, as well as consumption and investment gains due to low interest rates and tax cuts.

The Euro Area is another region West Virginia should be concerned with, particularly Belgium and the Netherlands. Recovery here has finally gained momentum. Projected growth for the Euro Area is 2.2 percent in both 2004 and 2005. However, the recovery remains moderate (and dependent on exports), with improving production and business confidence balanced by weak consumer confidence and retail sales. The IMF forecasts accelerating growth for the Netherlands (1.1 percent in 2004 and 1.8 percent in 2005) and Belgium (2.5 percent in 2004 and 2.3 percent in 2005).

Japan, West Virginia's third largest export destination, has continued to exceed expectations. Real GDP growth for Japan is projected to be 4.4 percent in 2004 and 2.3 percent in 2005. Recovery from 2003 to 2004 has been driven by exports and a rebound from private investment spending (plant and equipment). Continued but moderate growth is expected as corporate sector performance has improved, banking system health is improving, and deflation comes under control. Japan's continued growth faces risks from the adverse impact of rising oil prices and the possibility of a hard landing in China.

Mexico is also an important trading partner for West Virginia, and the IMF projects real GDP growth for 2004 and 2005 to be 4.0 percent and 3.2 percent, respectively. The growth rate is expected to increase from 1.3 percent in 2003, as a rise in exports and lower interest rates support consumer consumption and investment spending.

China is becoming increasingly important to the West Virginia economy, as annual growth of state exports to this destination grew 55 percent annually from 2000 to 2003. Indeed, China is West Virginia's fourth largest export destination in terms of value of exported commodities. In 2003, China's real GDP growth was 9.1 percent, but the forecast calls for slightly less--9.0 percent for 2004 and 7.5 percent for 2005. Growth is still expected to be high based on strong domestic demand and the strong recovery of the global economy. With accelerating growth, there are hints of overheating, and tighter macroeconomic policies may be needed. China has been growing at an extraordinary pace and is becoming less dependent on the rest of the world. As a result, China is becoming an important source of demand for the world economy, with particularly strong impacts on commodities prices (like coal and steel). However, China (as is the case for most Asian economies) is more dependent on oil, and its strong growth is thus at risk as oil prices surge.

## *Foreign Affiliates*

Another way of analyzing the impact of the international scene on the West Virginia economy is to examine foreign affiliates in the state, or international investments from other countries. A foreign affiliate is a firm located in the United States with at least 10 percent foreign ownership. Foreign affiliates play a role in West Virginia's economy, providing employment, commodities, and assets.

## By State

California had the most foreign affiliates as of 2001, with 2,994, as shown in **Table 7**. New York ranked second with 2,173 foreign affiliates and West Virginia had 366. Also, California had more foreign affiliate-owned gross property, plant, and equipment than any other state (worth \$120 billion), while West Virginia only had \$7 billion worth. In total, the United States had 8,706 foreign affiliates as of 2001, which constituted 4.8 percent of total United States' employment. When ranked by **share of foreign affiliate employment**, Hawaii and South Carolina ranked first and second, with roughly 7.5 percent of employment coming from foreign affiliates, Connecticut came in third with 7.4 percent, and New Hampshire came in fourth with 7.2 percent as of 2001. West Virginia was at the other end, ranking 33rd with 3.8 percent. Alaska had the highest gross property, plant, and equipment per state employee with \$102 billion. Wyoming was a distant second with \$41 billion, and West Virginia was barely above of United States average, which was around \$9 billion as of 2001.

## By Country

Foreign investments in the state of West Virginia have been increasing by 1.6 percent annually from 1997 to 2001, above the United States average of -0.6 percent. **Table 8** gives a breakdown of these investments by country of ownership. As shown, the European countries have the largest amount of foreign affiliates in the state with 71.3 percent distribution. In this group, the United Kingdom had the largest distribution with 17.2 percent. Behind the European countries was the Asia and Pacific region with 16.4 percent distribution, with Japan having 14.5 percent of that amount. However, the Asia and Pacific region posted negative growth of -3.4 percent. Growth in the number of affiliates coming to West Virginia from Latin American was the highest, at an annual rate of 6.8 from 1997 to 2001. Europe was second at a rate of 4.0. Within Europe, France had 7.2 percent annual growth and 11.2 percent distribution, and the Netherlands had 13.6 percent annual growth and 9.6 percent distribution. The United States only had 0.8 percent growth from France and 1.6 percent growth from the Netherlands.

**Table 8**  
**Number of Foreign Affiliates in**  
**West Virginia by Country of Ownership**

Country	Number of Affiliates					Annual Growth 1997 to 2001		2001 Percent Distribution		W.Va. Percent of the US 2001
	1997	1998	1999	2000	2001	W.Va.	U.S.	W.Va.	U.S.	
Canada	31	26	31	27	25	-5.2	-0.5	6.8	9.9	2.9
Europe	223	240	238	254	261	4.0	0.6	71.3	45.6	6.6
France	31	31	39	41	41	7.2	0.8	11.2	5.9	8.0
Germany	52	51	44	47	45	-3.5	0.8	12.3	11.5	4.5
Netherlands	21	24	29	33	35	13.6	1.6	9.6	3.6	11.2
Switzerland	22	22	21	22	22	0.0	-1.0	6.0	4.3	5.8
United Kingdom	57	68	58	62	63	2.5	-0.2	17.2	9.9	7.3
Latin America	10	6	7	10	13	6.8	0.0	3.6	6.6	2.3
Africa	2	2	1	0	0	-100.0	3.4	0.0	0.5	0.0
Middle East	5	7	4	5	5	0.0	-0.3	1.4	3.2	1.8
Asia & Pacific	69	67	70	61	60	-3.4	-2.4	16.4	33.0	2.1
Australia	5	6	3	3	3	-12.0	-1.9	0.8	1.3	2.6
Japan	57	59	64	55	53	-1.8	-2.8	14.5	25.0	2.4
United States <sup>1</sup>	4	5	4	2	2	-15.9	0.3	0.5	1.1	2.0
<b>All Countries</b>	<b>344</b>	<b>353</b>	<b>355</b>	<b>359</b>	<b>366</b>	<b>1.6</b>	<b>-0.6</b>	<b>100.0</b>	<b>100.0</b>	<b>4.2</b>

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States, 1997-2000 Revised Estimates and 2001 Preliminary Estimates.

<sup>1</sup> The Ultimate Beneficial Owner is located in the U.S.; the foreign affiliate is owned by a foreign parent, which is a U.S. person.

**Table 7**  
**Foreign Affiliates by State 2001**

State	Number of Affiliates 2001	Employment in Foreign Affiliates			Gross Property, Plant and Equipment of Foreign Affiliates		
		Thousands 2001	Share of Jobs Percent	Rank	Dollars (Mil.) 2001	Per State Employee Dollars	Rank
Alabama	641	92.2	4.8	20	17,379	9,105	14
Alaska	203	12.1	4.2	27	29,591	102,285	1
Arizona	802	72.3	3.2	38	10,241	4,521	47
Arkansas	456	41.0	3.6	34	5,891	5,106	42
California	2,994	713.5	4.9	18	120,009	8,219	23
Colorado	865	93.4	4.2	26	12,915	5,803	36
Connecticut	813	123.9	7.4	3	14,417	8,576	19
Delaware	415	29.8	7.1	5	8,229	19,621	3
District of Columbia	361	18.0	2.8	45	5,620	8,597	18
Florida	1,563	303.3	4.2	25	35,839	4,998	44
Georgia	1,430	243.8	6.2	8	31,115	7,891	26
Hawaii	516	41.8	7.5	1	9,950	17,928	4
Idaho	297	13.9	2.4	47	2,740	4,826	46
Illinois	1,590	320.9	5.4	16	49,553	8,265	21
Indiana	884	163.0	5.6	14	29,331	9,999	11
Iowa	459	47.0	3.2	37	7,400	5,049	43
Kansas	575	39.6	2.9	42	5,343	3,965	49
Kentucky	724	101.5	5.6	11	22,911	12,700	7
Louisiana	608	59.5	3.1	40	32,990	17,205	5
Maine	372	34.2	5.6	12	5,352	8,801	15
Maryland	836	112.3	4.6	22	13,017	5,276	40
Massachusetts	1,132	220.8	6.6	7	25,725	7,727	28
Michigan	1,108	244.2	5.4	15	53,826	11,815	9
Minnesota	796	108.4	4.0	29	13,224	4,934	45
Mississippi	433	27.6	2.4	48	4,885	4,323	48
Missouri	765	114.0	4.2	28	15,120	5,546	39
Montana	252	7.5	1.9	50	3,099	7,912	25
Nebraska	376	23.6	2.6	46	2,467	2,701	51
Nevada	515	32.5	3.1	41	8,281	7,876	27
New Hampshire	492	45.2	7.2	4	5,442	8,677	16
New Jersey	1,384	270.8	6.8	6	38,626	9,664	13
New Mexico	358	14.8	2.0	49	5,625	7,429	30
New York	2,173	480.8	5.6	13	71,225	8,290	20
North Carolina	1,105	237.7	6.1	9	23,062	5,915	35
North Dakota	216	9.4	2.9	43	1,845	5,596	38
Ohio	1,211	242.2	4.4	24	35,303	6,369	32
Oklahoma	524	41.6	2.8	44	7,940	5,269	41
Oregon	693	56.4	3.5	35	12,018	7,541	29
Pennsylvania	1,170	267.1	4.7	21	34,188	6,016	34
Rhode Island	375	24.1	5.0	17	3,945	8,246	22
South Carolina	774	136.7	7.5	2	23,238	12,744	6
South Dakota	211	6.7	1.8	51	1,051	2,777	50
Tennessee	852	157.0	5.8	10	21,330	7,934	24
Texas	1,892	428.1	4.5	23	112,106	11,778	10
Utah	509	37.6	3.5	36	13,666	12,638	8
Vermont	266	11.6	3.8	32	2,618	8,666	17
Virginia	963	171.3	4.9	19	21,445	6,098	33
Washington	1,050	103.9	3.9	31	19,244	7,135	31
West Virginia	366	27.7	3.8	33	7,128	9,695	12
Wisconsin	720	110.1	3.9	30	15,844	5,631	37
Wyoming	201	7.7	3.1	39	10,118	41,231	2
Total <sup>1</sup>	8,706	6371.9	4.8	--	1,200,064	9,103	--

Source: U. S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States, 2001 Preliminary Estimates

<sup>1</sup> A given affiliate is counted once in the all-U.S. total. It is also counted once in each State in which it has property, plant, and equipment or employment. Because an affiliate may have property, plant, and equipment or employment in more than one State, the sum across states exceeds the all-U.S. total.

## Employment by Country

Not only is it important to see what countries are investing in West Virginia, but it is also valuable to see what countries are employing West Virginians through foreign affiliates. From **Table 9**, shown below, the state foreign affiliate employment growth rate from 1997 to 2001 was only 0.1 percent, which was well below the U.S. annual growth rate of 5.2 percent. Canada experienced a loss of -19.5 percent annually from the state and a loss of -2.3 percent annually from the U.S. However, Latin America grew by 65.5 percent annually in West Virginia and 28.2 percent for the United States. As of 2001, Europe had 76.9 percent distribution of employment in the state, with France and Germany both having 19.1 percent. West Virginia only had 0.4 percent of employment in foreign affiliates of total United States' foreign affiliate employment in 2001.

**Table 9**  
**Employment in Foreign Affiliates in**  
**West Virginia by Country of Ownership**

Country	Number of Employees Thousands					Annual Growth 1997 to 2001		2001 Percent Distribution		W.Va. Percent of the US 2001
	1997	1998	1999	2000	2001	W.Va.	U.S.	W.Va.	U.S.	
Canada	5.0	4.1	3.1	3.2	2.1	-19.5	-2.3	7.6	8.8	0.4
Europe	19.9	21.8	21.1	21.8	21.3	1.7	7.1	76.9	66.7	0.5
France	2.2	2.2	5.0	5.4	5.3	24.6	8.6	19.1	9.1	0.9
Germany	5.8	5.9	4.8	5.0	5.3	-2.2	2.5	19.1	11.5	0.7
Netherlands	1.9	1.9	2.2	2.1	2.1	2.5	9.8	7.6	9.0	0.4
Switzerland	3.5	3.5	2.2	2.4	2.5	-8.1	11.6	9.0	8.6	0.5
United Kingdom	4.3	5.7	3.9	3.6	3.0	-8.6	3.4	10.8	17.6	0.3
Latin America	0.2	0.2	0.2	0.2	1.5	65.5	28.2	5.4	7.2	0.3
Africa	*	*	*	0.0	0.0	NA	-16.5	0.0	0.2	0.0
Middle East	0.3	0.3	0.2	0.2	0.1	-24.0	-15.6	0.4	0.8	0.2
Asia & Pacific	2.1	2.7	2.6	2.6	2.5	4.5	-1.2	9.0	15.1	0.3
Australia	0.2	0.4	*	*	*	NA	-0.2	NA	1.3	NA
Japan	1.8	2.3	2.6	2.6	2.5	8.6	-0.8	9.0	12.3	0.3
United States <sup>1</sup>	0.1	0.1	0.4	*	0.1	0.0	11.1	0.4	1.2	0.1
<b>All Countries</b>	<b>27.6</b>	<b>29.1</b>	<b>27.6</b>	<b>28.1</b>	<b>27.7</b>	<b>0.1</b>	<b>5.2</b>	<b>100.0</b>	<b>100.0</b>	<b>0.4</b>

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States, 1997-2000 Revised Estimates, and 2001 Preliminary Estimates.

\* less than 50 employees

<sup>1</sup> The Ultimate Beneficial Owner is located in the U.S.; the foreign affiliate is owned by a foreign parent, which is a U.S. person.

## Employment by Industry

Another way of looking at investments from other countries is to watch what industries are gaining or losing employment. **Table 10** details employment in West Virginia's foreign affiliates by industry from 1997 to 2001, using NAICS classifications. Manufacturing had 46.6 percent of West Virginia's total foreign affiliate employment as of 2001. The United States percent distribution for the same industry was slightly lower at 40.3 percent. All other industries had 25.3 percent employment for the state and 24.1 percent for the United States in 2001. The industry with the largest annual growth rate for the state was professional, scientific, and technical services with 73.2 percent. This was much higher than the United States' annual growth of 24.2 percent for the same industry. Professional, scientific, and technical services had 6.5 percent distribution of employment for the state in 2001. Information experienced the largest loss for West Virginia at -33.1 percent.

**Table 10**  
**Employment in Foreign Affiliates in**  
**West Virginia by Industry**

Industry	Number of Employees Thousands					Annual Growth 1997 to 2001		2001 Percent Distribution		W.Va. Percent of the US 2001
	1997	1998	1999	2000	2001	W.Va.	U.S.	W.Va.	U.S.	
Manufacturing	11.8	14.5	13.9	14.2	12.9	2.3	3.3	46.6	40.3	0.5
Wholesale Trade	3.3	1.0	2.4	2.1	2.7	-4.9	4.0	9.7	9.4	0.5
Retail Trade	2.3	2.3	2.9	2.8	2.7	4.1	3.2	9.7	12.2	0.3
Information	0.5	0.8	0.4	0.1	0.1	-33.1	1.3	0.4	4.8	0.0
Finance (except depository institutions) and Insurance	0.4	0.4	0.3	0.2	0.3	-6.9	10.6	1.1	5.3	0.1
Real Estate, Rental, and Leasing	0.1	0.1	0.1	0.1	0.1	0.0	2.9	0.4	0.7	0.2
Professional, Scientific, and Technical Services	0.2	0.4	0.6	1.2	1.8	73.2	24.2	6.5	3.2	0.9
All Other Industries	9.0	9.7	7.0	7.4	7.0	-6.1	8.5	25.3	24.1	0.5
<b>All Industries</b>	<b>27.6</b>	<b>29.1</b>	<b>27.6</b>	<b>28.1</b>	<b>27.7</b>	<b>0.1</b>	<b>5.2</b>	<b>100.0</b>	<b>100.0</b>	<b>0.4</b>

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Foreign Direct Investment in the United States, 1997-2000 Revised Estimates, and 2001 Preliminary Estimates

## *The Future of West Virginia's Highway System: A Comprehensive Analysis of the West Virginia State Road Fund and Policy Options<sup>1</sup>*

*by Patrick C. Mann, Professor of Economics and BBER Research Associate  
Mehmet S. Tosun, BBER Research Assistant Professor and  
Tom S. Witt, Professor of Economics and BBER Director*

In 1984, the West Virginia Tax Study Commission issued a report, (*Issue #6: The Adequacy of the Road Fund*), which examined the fiscal status and future financing of the

West Virginia State Road Fund. This present report is an update of the 1984 study as well as a comprehensive examination of past, present, and future West Virginia State Road Fund financing. Where relevant, the report compares West Virginia with other states. The comparison states are Kentucky, Maryland, Ohio, Pennsylvania, and Virginia, which surround West Virginia and Delaware and North Carolina, which represent similarities to West Virginia such as dependence upon state money and geographical terrains.

West Virginia leads the United States in percentage of highway miles that are state-maintained, that is, the state is responsible for 92 percent (nearly 37,000 miles) of the total highway miles in West Virginia. Although West Virginia has relatively high fuel taxes (25.35 cents per gallon), the demographics of the state result in relatively low travel miles and relatively low vehicle registrations. This constraint on highway funding is aggravated by the relatively high construction and maintenance costs per highway mile due to the geographical terrain and rural nature of West Virginia.

In comparing the West Virginia highway system in 1984 with that of the present highway system, several characteristics have remained unchanged. These include ranking first in the percentage of highways under state jurisdiction, last in vehicle miles driven per

<sup>1</sup> The contents of this report reflect the views of the authors who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of West Virginia or the Federal Highway Administration. This report does not constitute a stand, specification or regulation. Trade or manufacturers' names, which may appear herein, are cited only because they are considered essential to the objectives of this report. The United States Government and the State of West Virginia do not endorse products or manufacturers. This report was prepared for the West Virginia Department of Transportation, Division of Highways.

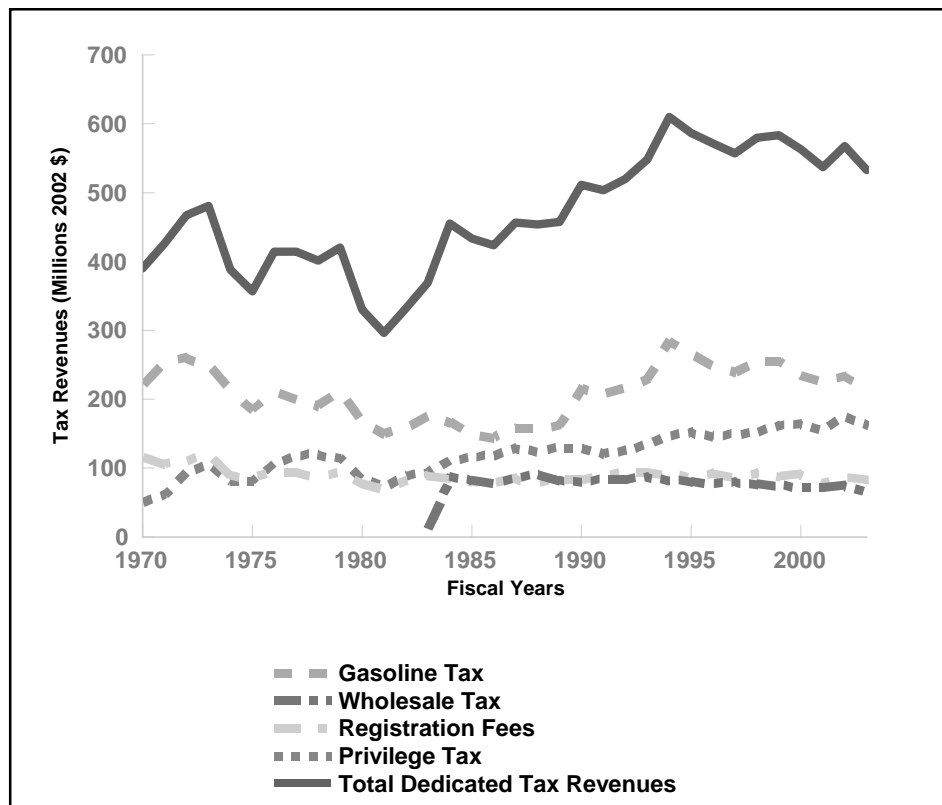
capita and per licensed driver, and first in total highway miles per capita. One characteristic that has changed is the reliance on annual appropriations from the state General Revenue Fund. In 1982, West Virginia was ranked first of the fifty states in the percentage of annual appropriations from the General Revenue Fund. At present, the West Virginia State Road Fund receives no appropriations from the General Revenue Fund; the last annual appropriation from the General Revenue Fund occurred in 1983.

### *A Historical Review of the West Virginia State Road Fund Revenues*

When analyzing the revenue sources for the West Virginia State Road Fund in nominal terms for the period of FY 1970 through FY 2003, the financial picture looks fairly positive. During the 34 years examined the major revenue sources of the State Road Fund increased by 524 percent (an average of 16 percent per year). One observes that although the Gasoline Tax, the Wholesale Tax, and Registration Fees have increased on an annual basis during this period, the increases have been relatively small in comparison to the dramatic revenue increases experienced by the Privilege Tax during the same period. While still increasing overall in nominal terms, revenue growth has slowed since the State's last increase in the Gasoline Tax was fully implemented in FY 1994. The constraint on highway funding is exemplified by total West Virginia State Road Fund revenues increasing only 18 percent since FY 1994, an increase of less than 2 percent per year.

After adjusting the West Virginia State Road Fund revenues to account for inflation, the financial picture is far less positive. **Figure 1** below shows the changes in the major West Virginia State Road Fund tax revenue sources.

**Figure 1**  
**West Virginia State Road Fund Tax Revenue Sources**  
**FY 1970 - FY 2003 Inflation Adjusted**



The real or inflation-adjusted value of the State Road Fund increased 36 percent (an average of 1.1 percent per year) from FY 1970 to FY 2003. Since peaking in FY 1994, however, the real value of the State Road Fund has decreased over the last decade. During that time, the real values of the Gasoline Tax revenues, Wholesale Tax revenues and Registration Fees declined, while the real values of the Privilege Tax revenues increased. The net result of these changes, in real dollars, has been a decrease of \$76.7 million (13 percent) in State Road Fund revenue since FY 1994. Although the real values of the West Virginia State Road Fund increased modestly by an average of 1.1 percent per year over the period FY 1970-2003, the demands on and use of the fund have greatly increased.

### *Comparative Analysis of West Virginia Highway Financing*

As of January 1, 2005, West Virginia has the eleventh highest total state and local gasoline tax rate in the nation (see Table 1, next page). Its 27 cents per gallon rate is still lower than Pennsylvania's 30 cents and Ohio's 28 cents rate but significantly higher than Maryland's 23.5 cents, Kentucky's 18.4 cents and Virginia's 17.5 cents rates.

A comparison of West Virginia highway financing with that of surrounding states as well as Delaware and North Carolina shows that West Virginia had the highest per capita highway user tax revenue among these states in FY 2000. West Virginia does not receive any contributions from local governments and had the highest mileage under state control in 2000. Regarding fees, the annualized driver's license fee for West Virginia is below the average for the seven comparison states. The title fee is also below the average for the seven comparison states. In contrast, its annual vehicle registration fee is above the average for the seven comparison states. As for demographics, West Virginia has the highest share of licensed drivers in total state population with the highest share of drivers aged 65 and over in total licensed drivers.

### *Expenditures from the West Virginia State Road Fund*

The construction of highways can be a stimulant to positive economic development in West Virginia if the highway construction meets certain conditions. These conditions include the improvement of reliability for supplying goods to and distributing goods from industrial and commercial firms, reduction in the transportation costs for transportation-intensive industries, lowering accident costs, and improving the quality of life and attractiveness of an area. However, there can be cases where highway investment fails as a development tool. If the region has relatively low levels of human capital and little land-use planning, new highways may only shift the level of economic activity and not increase the overall economy.

As the result of ongoing changes in the quantity and complexity of the infrastructure constructed and maintained by the Division of Highways, expenditures have changed significantly over time. Increased travel, pavement improvements, continued expansion of the State's highway network and reconstruction needs on aging highways, each create unique funding challenges that must be addressed by the DOH. Since FY 1988, annual debt service costs have fallen dramatically both in absolute terms and as a proportion of total DOH expenditures. Administrative support costs, while increasing in nominal terms, have been reduced 9% in real or inflation-adjusted dollars since FY 1988. In contrast to the decreases in debt service and administrative expenditures, annual highway construction and maintenance costs have increased both in absolute terms and as a proportion of total DOH expenditures. Annual construction expenditures have grown \$124 million (34 percent) and maintenance expenditures have increased by \$100 million (46 percent) in real terms since FY 1988.

Annual expenditure by the Division of Motor Vehicles (DMV) has seen a huge increase since FY 1990. The DMV expenditure in FY 1990 for internal operations was slightly over \$6 million. By FY 2002, the DMV expenditure for internal operations was over \$25.9 million. During this period, annual personal services costs for the DMV increased over 407 percent, while fringe benefits costs increased 486 percent. At the same



**Table 1**  
**State and Local Gasoline Tax Rates as of January 1, 2005**  
**(cents per gallon)**

Rank	State	Excise Tax Rate	Additional Tax	Sales Tax Rate	Minimum Local Tax	Total Tax Rate
1	NEW YORK	8.0	15.2	11.7		34.9
2	WISCONSIN	29.1	3.0			32.1
3	CALIFORNIA	18.0		13.5		31.5
4	RHODE ISLAND	30.0	1.0			31.0
5	HAWAII	16.0		6.0	8.8	30.8
6	PENNSYLVANIA	12.0	18.0			30.0
6	MICHIGAN	19.0		11.0		30.0
8	NEVADA	24.0			5.0	29.0
9	WASHINGTON	28.0				28.0
9	OHIO	26.0	2.0			28.0
11	MONTANA	27.0				27.0
11	WEST VIRGINIA	20.5	6.5			27.0
13	ILLINOIS	19.0		7.9		26.9
14	NEBRASKA	24.8	0.9			25.7
15	INDIANA	18.0		7.6		25.6
16	CONNECTICUT	25.0				25.0
16	IDAHO	25.0				25.0
18	NORTH CAROLINA	24.6	0.3			24.9
19	MAINE	24.6				24.6
20	UTAH	24.5				24.5
21	KANSAS	24.0				24.0
21	OREGON	24.0				24.0
21	FLORIDA	4.0	10.3		9.7	24.0
24	MARYLAND	23.5				23.5
25	DELAWARE	23.0				23.0
26	COLORADO	22.0				22.0
26	SOUTH DAKOTA	22.0				22.0
28	ARKANSAS	21.5				21.5
29	TENNESSEE	20.0	1.4			21.4
30	MASSACHUSETTS	21.0				21.0
30	NORTH DAKOTA	21.0				21.0
32	IOWA	20.5				20.5
33	LOUISIANA	20.0				20.0
33	MINNESOTA	20.0				20.0
33	TEXAS	20.0				20.0
33	VERMONT	19.0	1.0			20.0
37	NEW HAMPSHIRE	18.0	1.5			19.5
38	ALABAMA	16.0	2.0		1.0	19.0
39	NEW MEXICO	17.0	1.9			18.9
40	MISSISSIPPI	18.0	0.4			18.4
40	KENTUCKY	16.0	2.4			18.4
42	ARIZONA	18.0				18.0
43	VIRGINIA	17.5				17.5
44	MISSOURI	17.0	0.0			17.0
45	OKLAHOMA	16.0	1.0			17.0
46	SOUTH CAROLINA	16.0				16.0
47	NEW JERSEY	10.5	4.0			14.5
48	GEORGIA	7.5	6.8			14.3
49	WYOMING	13.0	1.0			14.0
50	ALASKA	8.0				8.0
	AVERAGE OF STATES					22.8

Source: FTA data and review of State web sites. Compiled by the West Virginia State Tax Department.

time, DMV employee productivity (measured by vehicle registration per employee) declined by 50 percent.

Despite the fact that both revenues and expenditures of the State Road Fund are increasing in real terms, the ability of the DOH to undertake new construction initiatives and to maintain existing facilities has been limited by several factors.

First, beginning in the 1990's, the DOH was required to begin transferring funds out of the State Road Fund to other agencies, (i.e. PEIA, Tax Department, and Public Safety) to pay for various "highway related" activities. Since they began, over \$97 million has been transferred to other agencies, of which \$74 million has gone to the Department of Public Safety.

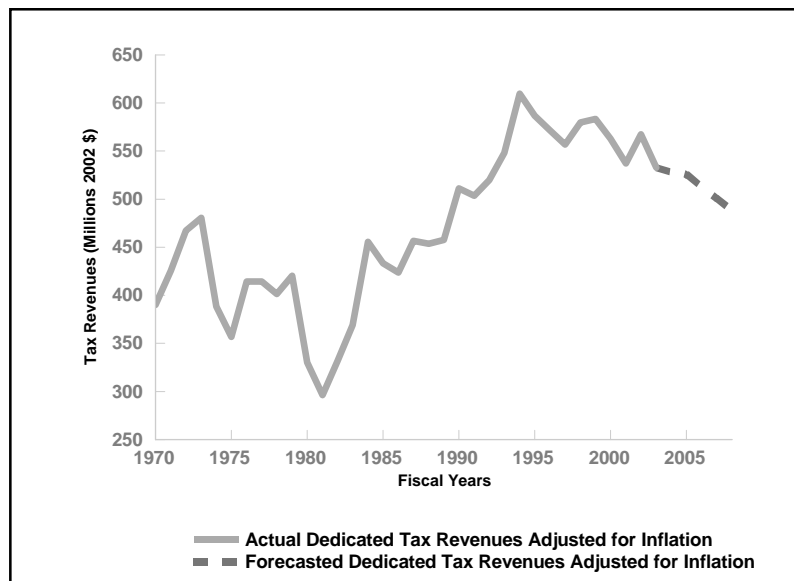
Second, the DOH routinely receives requests from various governmental entities to construct Specialized Infrastructure Projects, most of which are to provide access to newly developed facilities. Although these projects are beneficial, they reduce the State Road Fund dollars available for general highway and bridge construction and maintenance activities. Furthermore, due to their nature, they are generally not eligible for federal aid and must be constructed with 100 percent state dollars. Since 1982, projects of this nature have equaled nearly \$254 million.

Third, recent initiatives, such as the WV Courtesy Patrol, Home Access Road Program, creation of highway authorities, and creation of the Industrial Access Road Fund, while having merit, have each placed additional burdens on the resources of the State Road Fund.

### *The Future of the West Virginia State Road Fund*

Revenue projections were made for the major revenue sources of the West Virginia State Road Fund under the current tax rates. This assumes that the 5-cent increase in the Gasoline Tax is re-authorized when it expires in FY 2007. The chart below provides an overview of the historic and forecasted values of the inflation-adjusted (2002\$) West Virginia State Road Fund. This forecast shows that the real value of the West Virginia State Road Fund will continue to deteriorate in the near future, implying that significant reductions in construction and maintenance lie ahead.

**Figure 2**  
**West Virginia State Road Fund Tax Revenue Sources**  
**FY 1971 - FY 2008 Inflation Adjusted**



Various policy options were analyzed for increasing the flow of revenues into the West Virginia State Road Fund. These options included increases in rates or fees associated with the Gasoline Tax, Registration Fees, and Privilege Tax as well as elimination of the courtesy patrol program, curtailment or elimination of the expansion in the DMV budget, and other alternatives such as increasing the state long-term debt, use of local option taxes, tax increment financing, and highway tolls.

### *Conclusions*

There are several important conclusions that emerge from this report. One obvious conclusion is that an increase in one or more West Virginia State Road Fund revenue sources is necessary for West Virginia to maintain its present highway system properly. The increases are necessary both in the context of the substantial revenue diversions that are caused by the demand for specialized infrastructure projects and transfers to other programs and in the context of real revenue erosion due to inflation.

A second conclusion is that if increases in the Gasoline Tax, Wholesale Tax, Privilege Tax and Registration Fees are implemented, these increases can be made more politically palatable (satisfy the practicality criteria) if the increases are phased-in (as recently done in Ohio) rather than increased in one large increment.

A third conclusion is that to insure that the Gasoline Tax revenues increase sufficiently over time to keep pace with inflation, the two components of this tax (the Gasoline and Special Fuel Excise Tax and the Motor Carrier Road Tax) should be linked to a price index, such as the Federal-aid Highway Construction Price Index, to insure the generation of adequate income to maintain highway and bridge construction and maintenance.

The final conclusion is that serious attention must be given to the rapidly increasing cost of DMV operations. That is, consideration needs to be given to the options of either reducing the growth in the DMV expenditures or substantially increasing the various license and registration fees.

# West Virginia and United States Economic Indicators

	03 Q4	04 Q1	04 Q2	04 Q3	04 Q4	2002	2003	2004
<b>United States</b>								
Real GDP (Bil. \$2000 Chain-Wtd.)	10,580.7	10,697.5	10,784.7	10,891.0	10,975.7	10,074.8	10,381.3	10,837.2
% Change	4.2	4.5	3.3	4.0	3.1	1.9	3.0	4.4
Consumer Price Index (CPI-U) (1982-84=100)*	184.6	186.3	188.9	189.6	190.7	179.9	184.0	188.9
% Change	0.1	3.7	5.9	1.4	2.4	1.6	2.3	2.7
Total Nonfarm Payroll Employment (Mil.)	130.0	130.4	131.1	131.5	132.1	130.3	129.9	131.3
% Change	0.6	1.1	2.3	1.2	1.8	-1.1	-0.3	1.0
Unemployment Rate (%)	5.9	5.7	5.6	5.4	5.4	5.8	6.0	5.5
Initial Claims for Unemployment Ins. (Thous.)	373	351	343	341	337	404	402	343
Industrial Production (1997=100)	112.4	113.9	115.1	115.9	117.1	111.0	110.9	115.5
% Change	5.7	5.6	4.3	2.7	4.1	-0.3	0.0	4.1
Capacity Utilization Rate	76.5	77.3	77.9	78.2	78.8	75.3	75.5	78.1
Housing Starts (Mil.)	2,035	1,943	1,920	1,969	1,959	1,710	1,853	1,948
Retail & Food Service Sales (Bil.\$)	3,842	3,939	4,002	4,058	4,159	3,564	3,755	4,040
% Change	3.2	10.4	6.6	5.7	10.3	2.5	5.3	7.6
Federal Funds Rate*	1.00	1.00	1.01	1.43	1.95	1.67	1.13	1.35
Bank Prime Loan Rate*	4.00	4.00	4.00	4.42	4.94	4.68	4.12	4.34
30-Year Conventional Mortgage Rate*	5.92	5.61	6.13	5.89	5.73	6.54	5.82	5.84
<b>West Virginia</b>								
Total Nonfarm Payroll Employment (Thous.)**	722.2	722.9	727.1	736.4	733.4	733.1	726.3	730.0
% Change	-2.5	0.4	2.4	5.2	-1.7	-0.3	-0.9	0.5
Natural Resources and Mining	20.8	20.9	22.6	23.1	23.0	23.1	21.7	22.4
% Change	-16.1	1.9	36.8	10.4	-2.9	-1.7	-6.1	3.1
Construction	32.9	33.1	32.9	33.9	35.0	33.4	32.5	33.7
% Change	4.6	2.9	-2.8	13.2	13.2	-4.0	-2.7	3.7
Manufacturing	63.9	64.4	63.9	63.4	63.4	68.7	64.7	63.8
% Change	-2.7	3.0	-2.9	-3.5	0.0	-4.8	-5.8	-1.4
Trade, Transportation, and Utilities	135.3	134.4	135.6	137.7	137.0	136.9	135.4	136.2
% Change	-1.3	-2.6	3.7	6.3	-2.0	-2.2	-1.1	0.6
Information	12.6	12.6	12.6	12.4	11.9	13.3	12.8	12.4
% Change	-7.5	2.7	-2.7	-5.7	-13.6	-5.0	-3.8	-3.3
Financial Activities	31.1	30.8	31.3	31.5	31.6	31.2	31.0	31.3
% Change	1.3	-3.5	6.4	3.0	0.9	2.0	-0.6	0.9
Professional and Business Services	56.3	56.8	56.9	57.0	56.5	56.7	56.4	56.8
% Change	1.9	3.6	0.7	0.7	-3.7	-1.0	-0.5	0.8
Educational and Health Services	107.2	106.9	107.7	108.6	108.8	107.2	108.1	108.0
% Change	-4.8	-0.9	3.0	3.4	0.5	3.9	0.8	-0.1
Leisure and Hospitality	66.0	65.9	67.2	69.0	68.2	64.4	66.2	67.6
% Change	-2.2	-0.8	7.9	11.4	-4.4	2.4	2.8	2.1
Other Services***	55.4	55.0	55.6	55.7	55.8	55.3	55.2	55.5
% Change	-1.4	-2.7	4.5	0.6	0.5	0.2	-0.2	0.6
Government	140.8	142.0	140.9	144.1	142.3	142.8	142.3	142.3
% Change	-3.9	3.5	-3.2	9.4	-4.9	1.3	-0.4	0.0
Unemployment Rate (%)	5.7	5.4	5.2	5.3	5.0	6.1	6.1	5.2
Initial Claims for Unemployment Ins. (Thous.)	1,786	1,386	1,507	1,316	1,448	1,824	1,709	1,414
Avg. Weekly Hours Nat'l Resources and Mining**	47.0	46.3	45.6	47.1	47.5	45.7	46.4	46.6
Avg. Weekly Hours Manufacturing**	41.7	41.1	40.9	41.2	41.4	40.8	41.3	41.2
Avg. Hrlly. Earnings Nat'l Rsrcs. and Mining (\$)**	17.93	18.06	17.90	18.42	18.99	18.22	18.08	18.34
% Change	-5.5	2.9	-3.4	12.0	12.9	0.6	-0.8	1.5
Average Hourly Earnings Manufacturing (\$)**	16.06	16.01	16.34	16.84	17.19	15.40	16.05	16.60
% Change	0.3	-1.1	8.4	12.9	8.5	4.1	4.2	3.4
Real Personal Income (Mil. 2000\$)	42,723	43,003	43,531	43,824	n/a	41,522	42,331	n/a
% Change	3.5	2.6	5.0	2.7	n/a	1.9	1.9	n/a
Wage and Salary, Nonfarm Civilian	19,765	19,916	20,219	20,531	n/a	19,799	19,725	n/a
% Change	1.8	3.1	6.2	6.3	n/a	0.5	-0.4	n/a
Other Labor	5,669	5,804	5,898	5,989	n/a	5,371	5,619	n/a
% Change	3.3	9.9	6.6	6.3	n/a	2.6	4.6	n/a
Proprietors	2,901	2,826	2,894	2,888	n/a	2,780	2,798	n/a
% Change	7.1	-9.9	9.9	-0.7	n/a	3.2	0.6	n/a
Dividends, Interest, and Rent	6,109	6,120	6,111	6,000	n/a	6,518	6,054	n/a
% Change	8.4	0.7	-0.6	-7.1	n/a	-0.9	-7.1	n/a
Transfer Payments	11,412	11,577	11,720	11,782	n/a	10,362	11,296	n/a
% Change	1.5	5.9	5.0	2.1	n/a	5.8	9.0	n/a
Value of Total Housing Permits (Mil.\$)	721	768	660	642	740	439	561	703
W. Va. Export-Weighted U.S. \$ (1980=100)*	135.3	132.7	136.3	134.0	127.2	156.9	141.9	132.5
% Change	-15.8	-7.6	11.5	-6.8	-18.7	0.3	-9.5	-6.6

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.

\*\*Data source now based upon the North American Industry Classification System (NAICS). Previously, this data was based upon the Standard Industrial Classification (SIC) Code.

\*\*\*Consists of the following sub-sectors: Repair and Maintenance, Personal and Laundry Services, and Religious, Grantmaking, Civic, Professional, and Similar Organizations.

*The West Virginia Business & Economic Review* is published by the Bureau of Business and Economic Research, College of Business and Economics, West Virginia University, P.O. Box 6025, Morgantown, WV 26506-6025

PHONE (304)293-7831 • FAX (304)293-7061

EMAIL: [connie.banta@mail.wvu.edu](mailto:connie.banta@mail.wvu.edu)

WEBSITE: [www.bber.wvu.edu](http://www.bber.wvu.edu)

Dean ..... Jay H. Coats

Associate Dean for Research and Outreach and

BBER Director ..... Tom S. Witt

Editor ..... Connie Banta

***BBER Research Staff***

**Christian Brooks**, undergraduate research assistant

**Randy Childs**, economist

**Christiadi**, economist

**Mark Fletcher**, undergraduate research assistant

**George Hammond**, research assistant professor

**Patrick Mann**, research associate and professor of economics

**Kwasi Osei-Yeboah**, graduate research assistant

**Justin Ross**, graduate research assistant

**Kevin Speaker**, undergraduate research assistant

**Mehmet S. Tosun**, research assistant professor

**Claudia Williamson**, graduate research assistant

**Pavel A. Yakovlev**, graduate research assistant

---

**West Virginia University** is governed by the WVU Board of Advisors and the West Virginia Higher Education Policy Commission.

West Virginia University is an Equal Opportunity/Affirmative Action Institution.

**©2005 West Virginia University Research Corporation**