WEST VIRGINIA ECONOMIC OUTLOOK 2009

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West Virginia Economic Outlook 2009

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Executive Summary

The West Virginia economy continued to add jobs during the past year, although job growth was slow. According to the latest seasonally-adjusted employment data, the state added 32,600 jobs from mid-2003 to mid-2008, which translates into an average annual growth rate of 0.9 percent per year. However, during the past four quarters (second quarter of 2007 to second quarter of 2008) the state has added just 3,100 jobs, which translates into a growth rate of 0.4 percent. This slow growth puts West Virginia in the danger zone of recession.

Nationally, job growth has decelerated even more dramatically and the nation is likely in a recession now. The national economy has experienced a job growth deceleration from 1.2 percent per year from mid-2003 to mid-2008 to just 0.2 percent during the past four quarters. In addition, national employment has declined during both the first and second quarters of this year.

Overall, state job growth began to decelerate significantly in 2006, with slower employment gains in both the goods-producing and service-providing sectors. The goods-producing sector of the state economy (natural resources and mining, construction, and manufacturing) has seen job gains during mid-2004 to mid-2006 (up 6,700) turn to net job losses during the last two years (down 4,100). In contrast, service-providing sectors have continued to add jobs, but at a reduced rate.

While the slowdown in goods-producing job growth is evident in all three sectors, it has been most concentrated in construction and manufacturing. Indeed, the natural resources and mining sector has continued to add jobs during the last year, but at a slower pace than during the mid-2004 to mid-2006 period. In contrast, both construction and manufacturing have experienced job losses.

Overall, weakness in construction employment reflects the impact of the national housing correction on West Virginia. Indeed, single-family house price appreciation in West Virginia decelerated from 9.3 percent from mid-2004 to mid-2005 to just 3.4 percent during the past year. However, that's much better performance than the nation and most of our surrounding states. So far, the impact of the housing correction is concentrated in the metropolitan areas including the Eastern Panhandle.

Finally, West Virginia manufacturing continues to shed jobs at an alarming pace. This sector has lost 7,300 jobs from mid-2003 to mid-2008, with a loss of 1,800 jobs in the last year alone. Job losses during the past year have been widespread, but concentrated in durable manufacturing. Sectors losing large numbers of jobs include wood products, transportation equipment, plastic products, other nondurables, and chemicals. Manufacturing continues to struggle with intense international competitive pressure, as well as rising input costs (energy and natural gas). In addition, the housing correction is putting pressure on the wood products sector, as well as other manufacturers.

While the goods-producing sector has posted net job losses during the last year, the service-providing sector has continued to grow, although at a relatively slow rate. Within the service-providing sector trade, transportation, and utilities; other services; and finance and real estate have posted net job losses during the past four quarters. The strongest job growth during the past year was posted by health care; leisure and hospitality; professional and business services; and government. Employment in information was flat.

West Virginia's unemployment rate was 4.6 percent in 2007, equal to the national rate. So far in 2008 both the state and national rates have trended up as job growth has slowed. The state's seasonally-adjusted unemployment rate has risen to 5.2 percent in the second quarter, up from 4.5 percent a year ago. Nationally, the unemployment rate has risen from 4.5 percent in the second quarter of 2007 to 5.3 percent in the second quarter of this year.

West Virginia added 3,300 residents last year, according to the latest estimates from the Census Bureau. Since 2000, the state has added 5,000 residents according to these estimates, which translates into rough population stability. It is important to note also that West Virginia's population growth has been remarkably concentrated in the Eastern Panhandle. In fact, Berkeley County alone added 23,000 residents so far this decade. That means that without Berkeley County, the state would have seen population drop by 18,000 residents.

West Virginia's real personal income rose by 2.2 percent during the last four quarters (second quarter of 2007 to second quarter of 2008). That outpaced the national rate of 1.5 percent. State income from work rose by 1.1 percent, far faster than the national rate of 0.2 percent. That reflects faster-than-average job growth in the state during the last year. West Virginia real income from dividends, interest, and rent was stable during the last four quarters. Finally, transfer income rose by 6.0 percent in West Virginia and by 9.4 percent nationally.

West Virginia is forecast to follow the national economy into the downturn, with little growth in 2008 and job losses in 2009. However, in percentage terms, West Virginia's job losses are not as large as those expected for the U.S. This stems from relatively robust performance in natural resources and mining in 2008 and the fact that West Virginia is likely to be somewhat less impacted by the housing correction and financial meltdown than is the nation. Like the nation, job growth in the state rebounds in 2010 and continues through 2013.

On average during the next five years, West Virginia is forecast to add 4,500 jobs per year. This translates into an average annual rate of growth of 0.6 percent per year, as Table 1 shows. That falls short of job growth expected for the nation and is close to the average growth rate during the previous five years. This is fitting, since both five-year intervals include a period of job losses.

TABLE 1
W.VA. AND U.S. ECONOMIC GROWTH

	West Virginia				Average Annual Growth Rates			
	Actual		Forecast		2002-2007		2008-2013	
	2002	2007	2008	2013	W.Va.	U.S.	W.Va.	U.S.
Jobs (000s)*	682.4	707.9	708.5	731.1	0.7	1.1	0.6	1.0
Real Per Capita Income ($2000)	23,238	24,896	25,140	27,284	1.4	2.0	1.6	1.6
Population (000s)	1,800	1,812	1,815	1,829	0.1	0.9	0.2	1.0
Unemployment Rate** (Percent)	5.9	4.6	4.9	5.0	-0.3	-0.2	0.0	0.1

*Covered by unemployment insurance for West Virginia. Nonfarm payroll for U.S.
**Growth rate is average annual change.

The forecast calls for job growth in natural resources and mining during the next five years. This reflects expansion in coal mining employment and production in 2008, in response to strong demand and high spot coal prices. Both production and employment are expected to soften in 2009, as the national recession plays out. Activity stabilizes during the 2010-2013 period, as national growth rebounds. Job growth in the oil and natural gas sector is forecast to continue during the forecast, as exploration and production continue to expand in the state.

Construction employment is forecast to decline through 2009, as the state copes with the direct effects of the housing correction. These impacts are likely to be most keenly felt in the Eastern Panhandle region. Continued investment in nonresidential structures and nonbuilding activity (roads, water, sewer, and power plant construction) are expected to contribute to construction job gains during the next five years.

Manufacturing employment plummets during the 2008-2009 period, as declining demand both domestically and abroad drives production down. Indeed, this sector is forecast to lose 2,500 jobs from 2008 to 2009, with those job losses spread across all sectors, but concentrated in durable goods production.

In contrast to job losses in the goods-producing sectors, service-providing employment expands, although slowly. The majority of service-producing job gains are expected in three sectors: health care; leisure and hospitality; and professional and business services. Trade, transportation, and utilities and government employment continues to expand on average during the next five years, although at a slower pace than during the 2002-2007 period. Job losses are expected to continue in information, financial activities, and other services. Continued job losses in financial services reflect the impact of the housing correction in West Virginia.

Job growth on average during the forecast generates gains in income as well. Overall, inflation-adjusted per capita personal income is forecast to equal to the national average during the forecast period. West Virginia makes a little progress in driving the per capita personal income gap down during the forecast, from 24.0 percent in 2007 to 22.8 percent by 2013. This reflects the expectation that the state will weather the national downturn with fewer job losses and similar income growth.

West Virginia is forecast to add residents, but just 2,900 per year, which translates into a 0.2 percent per year growth rate. That is far below the expected national rate of 1.0 percent per year. West Virginia's slow population growth reflects in part the state's relatively slow economic growth, which results in little net migration into the state. It also reflects the fact that West Virginia remains the only state in the nation to record more deaths than births so far this decade.

Rough population stability, however, masks the big changes coming in the state's demographic mix. The state is forecast to experience population gains during the next five years in only one major age group: the 65-and-older age group. Note that the population in the 45-64 age group begins to decline in 2011, which is about the time that growth accelerates in the 65-and-older age group. Thus, gains in the 65-and-older age group reflect the aging of the baby boom generation.

The forecast for the state's unemployment rate calls for it to rise from 4.6 percent in 2007 to 4.9 percent in 2008 and again to 6.0 percent in 2009. As state job growth rebounds in 2010, the unemployment rate gradually trends back down to 5.0 percent by 2013.

Risks to the forecast include the possibility of a more severe national downturn than envisioned under baseline assumptions. This would reduce growth in West Virginia as well, hitting most sectors of the state economy. Further, the state remains more reliant on mining activity than the nation as a whole. This can translate into a risk to growth, as the mining sector faces regulatory uncertainty related to clean water and air concerns. In addition, as economic growth slows and our neighboring states experience slower revenue growth, they may be more willing to pursue additional gaming revenue. This will put additional competitive pressure on the leisure and hospitality sector in the state, possibly reducing growth.

West Virginia Outlook

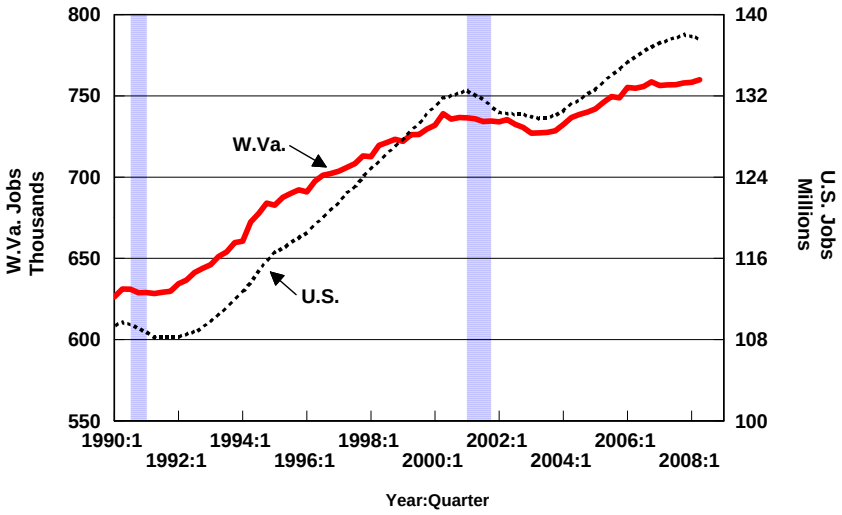
Recent Developments

West Virginia Job Growth Decelerates, U.S. Jobs Decline

The West Virginia economy continued to add jobs during the past year, although job growth was slow, as Figure 1 shows. According to the latest seasonally-adjusted employment data, the state added 32,600 jobs from mid-2003 to mid-2008, which translates into an average annual growth rate of 0.9 percent per year. However, during the past four quarters (second quarter of 2007 to second quarter of 2008) the state has added just 3,100 jobs, which translates into a growth rate of 0.4 percent (or less than ½ the average growth rate since 2003). Even with slower gains, the state economy has seen employment rise during the first two quarters of 2008.

Nationally, job growth has decelerated even more dramatically, as Figure 1 also shows. The national economy has experienced a job growth deceleration from 1.2 percent per year from mid-2003 to mid-2008 to just 0.2 percent during the past four quarters. In addition, while national employment remains above year-ago levels, it has declined during both the first and second quarters of this year.

FIGURE 1
W.VA. AND U.S. PAYROLL EMPLOYMENT
QUARTERLY, SEASONALLY ADJUSTED
NATIONAL RECESSIONS SHADED



Source: Workforce WV and BLS

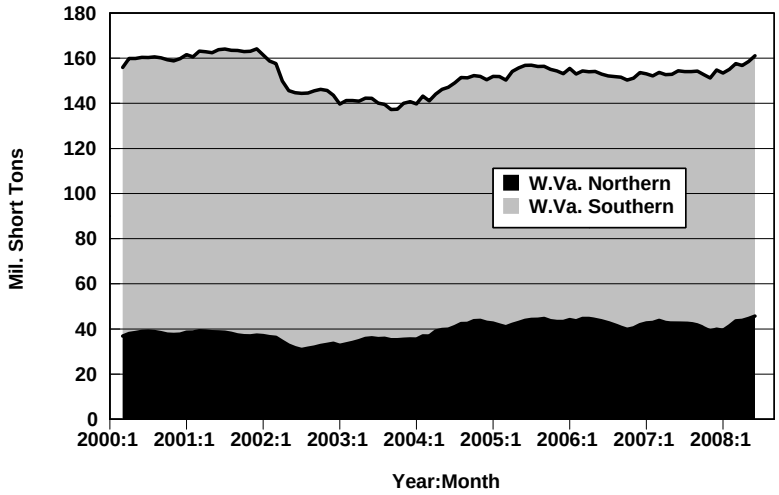
Overall, state job growth began to decelerate significantly in 2006, with slower employment gains in both the goods-producing and service-providing sectors. The goods-producing sector of the state economy (natural resources and mining, construction, and manufacturing) has seen job gains during mid-2004 to mid-2006 (up 6,700) turn to net job losses during the last two years (down 4,100). In contrast, service-providing sectors has continued to add jobs, but at a reduced rate.

While the slowdown in goods-producing job growth is evident in all three sectors, it has been most concentrated in construction and manufacturing. Indeed, the natural resources and mining sector has continued to add jobs during the last year, but at a slower pace than during the mid-2004 to mid-2006 period. Natural resources and mining added 900 jobs during the past four quarters, and almost 1,400 during the last eight quarters, but that is much slower than the job growth of 4,100 jobs from mid-2004 to mid-2006. Job gains in the natural resources and mining sector have come in both the coal mining and oil and gas extraction sectors, but the job growth slowdown has been most evident in coal mining.

Slower coal mining employment growth during the last two years has been accompanied by stable production levels, in the neighborhood of 154 million tons per year. Production growth has been restrained so far this decade as regulatory uncertainty related to clean air and water concerns continues to be an issue. In addition, the industry appears to be encountering increasingly challenging geologic conditions, particularly in the southern part of the state. Finally, rising input prices, including scarce labor resources, have made it difficult for the industry to quickly ramp up production.

West Virginia coal production has risen during the first half of 2008, as Figure 2 shows, partly in response to sky-rocketing spot coal prices. Indeed, spot prices for Central and Northern Appalachian coals have risen from the $45 per ton range during the third quarter of 2007 to the $145 per ton range during the third quarter of 2008. Rising spot coal prices are likely related to a declining value of the U.S. dollar, which makes U.S. goods more competitive internationally, and to production interruptions experienced by some foreign producers (Australia, among others).

FIGURE 2
W.VA. COAL PRODUCTION GROWTH ACCELERATES IN 2008
FIVE-MONTH MOVING AVERAGE
SEASONALLY ADJUSTED, ANNUAL RATE



Source: Energy Information Administration

The oil and gas extraction sector (including support services) has generated consistent job gains so far this decade, adding almost 1,200 jobs from 2001 to 2007. That translates into a 31.2

percent increase in employment during the period, which reflects relatively high natural gas prices nationwide. This has spurred production and exploration activity in West Virginia, with natural gas dry production up 20.3 percent from 2001 to 2006.

While natural resources and mining has continued to generate job growth during the last year, both construction and manufacturing have experienced job losses. Construction has lost 1,700 jobs since mid-2006, after adding 4,700 jobs during the previous two years. Overall, weakness in construction employment reflects the impact of the national housing correction on West Virginia. According to data from FW Dodge, which tracks the value of new construction contracts, total construction activity through the first eight months of 2008 has fallen significantly from 2006 and 2007 levels. This reflects declining values for nonresidential, and residential starts, because nonbuilding starts (roads, water, sewer, and power plant construction) rose during the first eight months of 2007 and 2008 (after removing the power plant activity in Monongalia County).

FIGURE 3
VALUE OF W.VA. RESIDENTIAL CONSTRUCTION STARTS
FALLS DURING THE FIRST EIGHT MONTHS OF 2008
FW DODGE

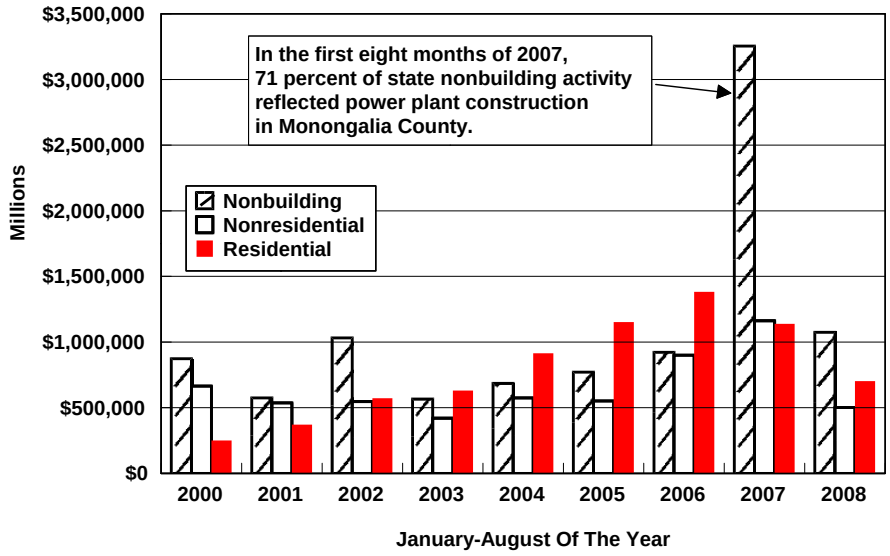


Figure 3 shows that West Virginia experienced a rapid increase in residential construction activity during the first six years of the decade, which mirrors the national trend. Indeed, the value of residential starts rose by 451 percent from first eight months of 2000 to the same period in 2006. However, that increase in activity was concentrated in the Eastern Panhandle counties (Berkeley, Jefferson, Morgan), which accounted for 59.1 percent of the value of residential starts in West Virginia during the first eight months of 2006. The decline of residential activity in West Virginia since 2006 is striking, with the value dropping from $1.382 billion at an annual rate during the first eight months of 2006 to $702 million during the same period in 2008. That is a decline of 49.2 percent over two years. The decline was concentrated in the Eastern Panhandle, which accounted for 53.8 percent of the decline in residential starts since 2006.

The national housing correction also continues to be reflected in West Virginia house price appreciation, measured by data from the Office of Federal Housing Enterprise Oversight. As Table 2 shows, single-family house price appreciation in West Virginia decelerated from 9.3 percent from mid-2004 to mid-2005 to just 3.4 percent during the past year. However, that's much better performance than the nation (down 1.7 percent) and most of our surrounding states. Indeed, Maryland, Virginia, and Ohio have all experienced house price declines during the past year. In addition, most of the metropolitan statistical areas (MSAs) with component counties in the state have continued to post rising house prices, although several have seen significant slowdowns lately. The metropolitan areas including West Virginia's Eastern Panhandle have experienced outright house price declines during the past year, with the Winchester MSA (including Hampshire County) posting a decline of 9.8 percent, the Washington MSA (including Jefferson County) posting a drop of 9.1 percent, and the Hagerstown-Martinsburg MSA (with Morgan and Berkeley counties) posting a drop of 4.8 percent.

Overall, the national housing correction is impacting the state as a whole. However, the worst of the slowdown in residential construction and house price declines is so far confined to the Eastern Panhandle counties, which experienced the strongest gains during the housing boom.

TABLE 2
HOUSE PRICE APPRECIATION IN WEST VIRGINIA AND SURROUNDING STATES
OFFICE OF FEDERAL HOUSING ENTERPRISE OVERSIGHT

	Annual Percent Change			
	2004Q2-2005Q2	2005Q2-2006Q2	2006Q2-2007Q2	2007Q2-2008Q2
W.Va. MSAs*				
Charleston MSA	4.3	4.1	3.5	6.0
Cumberland MSA	10.9	17.3	11.8	0.8
Hagerstown-Martinsburg MSA	24.6	15.3	2.8	-4.8
Huntington-Ashland MSA	6.0	4.3	5.1	3.5
Morgantown MSA	13.1	8.8	4.9	3.7
Parkersburg-Marietta MSA	7.4	3.0	1.8	2.2
Wash.-Arl.-Alex. MSA	26.3	14.8	0.9	-9.1
Weirton-Steubenville MSA	3.9	0.7	4.4	7.0
Wheeling MSA	1.7	5.4	2.1	12.3
Winchester MSA	27.0	16.2	-2.5	-9.8
W.Va. Non-MSA	6.2	7.8	7.2	4.3
Kentucky	5.6	3.9	3.6	3.1
Maryland	23.0	15.7	4.3	-4.0
Ohio	4.3	1.1	0.7	-0.3
Pennsylvania	12.8	9.8	4.7	1.4
Virginia	21.0	13.4	3.5	-2.6
W.Va.	9.3	7.0	4.3	3.4
U.S.	12.2	8.7	3.4	-1.7

*MSAs with at least one West Virginia county. These data cover repeat transactions on single-family detached properties for which at least two mortgages were originated and subsequently purchased by either Freddie Mac or Fannie Mae. The use of repeat transactions on the same physical property helps to control for differences in the quality of the houses comprising the sample used for statistical estimation. http://www.ofheo.gov/

Finally, West Virginia manufacturing continues to shed jobs at an alarming pace. This sector has lost 7,300 jobs from mid-2003 to mid-2008, with a loss of 1,800 jobs in the last year alone. Job losses during the past year appear to be widespread across sectors, but concentrated in durable

manufacturing. Sectors losing large numbers of jobs include wood products, transportation equipment, plastic products, other nondurables, and chemicals. Manufacturing continues to struggle with intense international competitive pressure, as well as rising input costs (energy and natural gas). In addition, the housing correction is putting pressure on the wood products sector, as well as other manufacturers.

While the goods-producing sector has posted net job losses during the last year, the service-providing sector has continued to grow, although at a relatively slow rate. Within the service-providing sector trade, transportation, and utilities; other services; and finance and real estate have posted net job losses during the past four quarters. Job losses were most severe in trade, transportation, and utilities, which lost 1,100 jobs. Within this sector, retail trade lost 600 jobs, followed by transportation and utilities (down 500 jobs), while employment was stable in wholesale trade. Weakness in these sectors is likely reflects an overall slowdown in state economic growth. Job losses in finance and real estate reflect the housing correction (fewer jobs connected to real estate and construction) and also the developing problems in the financial sector.

The strongest job growth during the past year was posted by health care (up 2,700); leisure and hospitality (up 1,500); professional and business services (up 1,200); and government (up 600). Employment in information was flat. Job growth in health care reflects additional infrastructure investment in the state, as well as the aging of the state's residents. Rising employment in leisure and hospitality is related to the growth of the recreation and tourism sector of the state economy, including gaming attractions. Growth in professional and business services was driven both by the professional and technical sector (high tech, as well as lawyers and accountants, among other professions), as well as by gains in the administrative sector, which includes call center jobs. Finally, government job growth during the past year was fairly evenly spread across the federal, state, and local sectors.

West Virginia's Labor Force Participation Remains Below U.S. Level

West Virginia's labor force participation rate in 2007 was 56.1 percent, according to data from the Census Bureau's American Community Survey. That was well below the national average of 66.2 percent. The data suggests that a relatively low share of West Virginia's population participates in formal labor market activities (like working or actively looking for work). This can reflect the demographic mix of the state's residents, because older residents tend to participate in the labor market less and West Virginia's population is older than the national average. It can also reflect the lack of employment opportunities for the state's residents, because residents that are not employed or actively seeking work (so called discouraged workers) are not counted in the labor force. Finally, a low labor force participation rate can arise when large numbers of residents have dropped out of the labor force because of disability.

West Virginia's unemployment rate was 4.6 percent in 2007, equal to the national rate. So far in 2008 both the state and national rates have trended up as job growth has slowed. The state's seasonally-adjusted unemployment rate has risen to 5.2 percent in the second quarter, up from 4.5 percent a year ago. Nationally, the unemployment rate has risen from 4.5 percent in the second quarter of 2007 to 5.3 percent in the second quarter of this year. Overall, we see unused labor resources for both the state and the nation, as economic growth decelerates.

Slow Population Growth, Demographic Challenges

West Virginia added 3,300 residents last year, according to the latest estimates from the Census Bureau. Since 2000, the state has added 5,000 residents according to these estimates, which translates into an annual rate of growth of 0.04 percent per year (or rough population stability). That ranks the state 49th in the nation in percent population growth so far this decade, ahead of Louisiana and North Dakota.

West Virginia's slow population growth is related to the state's demographic mix. According to Census data from the American Community Survey, the state's median age in 2007 was 40.4 years, compared to the national average of 36.7 years. This matters for population growth because an older population tends to have lower natural increase, which is the difference between births and deaths. West Virginia remains the only state in the nation that has recorded more deaths than births so far this decade (941 more deaths than births). That means that population growth in the state is dependent on net migration. Since West Virginia's job growth so far this decade has been below the national average, it has been difficult for the state to attract enough residents to the state to generate strong population growth.

It is important to note also that West Virginia's population growth so far this decade has been remarkably unevenly distributed across counties. Indeed, the Eastern Panhandle (Berkeley, Jefferson, and Morgan counties) has dominated population gains in the state, adding 33,000 residents from 2000 to 2007. In fact, Berkeley County accounted for most of that growth, adding 23,000 residents so far this decade. That means that without Berkeley County, the state would have seen population drop by 18,000 residents so far this decade.

Personal Income Growth Outpaces The Nation

West Virginia's real personal income rose by 2.2 percent during the last four quarters (second quarter of 2007 to second quarter of 2008). That outpaced the national rate of 1.5 percent. State income from work (includes wages, fringe benefits, and proprietor's income, less contributions for social insurance) rose by 1.1 percent, far faster than the national rate of 0.2 percent. That reflects faster-than-average job growth in the state during the last year. West Virginia real income from dividends, interest, and rent was stable during the last four quarters, compared to a 0.2 percent loss nationally. Finally, transfer income (includes social security, Medicare, Medicaid, and welfare) rose by 6.0 percent in West Virginia and by 9.4 percent nationally.

However, real personal income growth decelerated during the past year for both the state and nation. West Virginia real income growth fell from 2.5 percent during the mid-2006 to mid-2007 period to 2.2 percent last year, while national real income growth fell from 3.5 percent from 2006 to 2007 to 1.5 percent last year. Slower gains in earnings from work and asset income drove the deceleration for both the state and nation.

West Virginia's per capita personal income rose to $29,293 in 2007, before adjusting for inflation, but remained well below the national level of $38,564. The percentage gap between the state and the nation was -24.0 percent in 2007, similar to the levels in 2005 and 2006. However, the state income gap has risen from -21.9 in 2002.

W.Va. Gross Domestic Product Growth Stops

Real gross domestic product (GDP) in West Virginia grew by just 0.1 percent in 2007 over the previous year. That growth rate was far slower than the national rate of 2.0 percent and well below the state's average growth rate so far this decade (1.2 percent per year). Slower growth last year in West Virginia real GDP was driven by the goods-producing sector, especially natural resources and mining, construction, and manufacturing, although wholesale trade, finance and insurance, other services, and government contributed to slower growth as well.

W.Va. Commodity Exports Explode In 2007And 2008

The value of West Virginia commodity exports rose by 23.1 percent in 2007, from $3.225 billion in 2006 to $3.972 billion in 2007. Of the $747 million dollar increase in 2007, 86.6 percent was accounted for by minerals and ores, transportation equipment (for example, auto parts and aircraft), machinery, and chemical products. Exports of minerals and ores surged in 2007, rising by 51.4 percent last year alone. Exports of plastic products fell last year, as did exports of wood products and furniture. Of the increase in West Virginia commodity exports in 2007, 78.8 percent was accounted for by rising exports to Canada, Brazil, China, Netherlands, Egypt, and France.

In addition, West Virginia commodity exports are poised to explode again in 2008. Indeed, through the first half of 2008, state commodity exports are already up by $829 million over the first half of 2007 (an increase of 44.4 percent). Minerals and ores accounted for 65.6 percent of the increase so far this year and machinery accounted for an additional 15.5 percent. On a country basis, increased exports Japan, France, Canada, Romania, Turkey, and China combined to account for roughly two-thirds of the rise in West Virginia commodity exports.

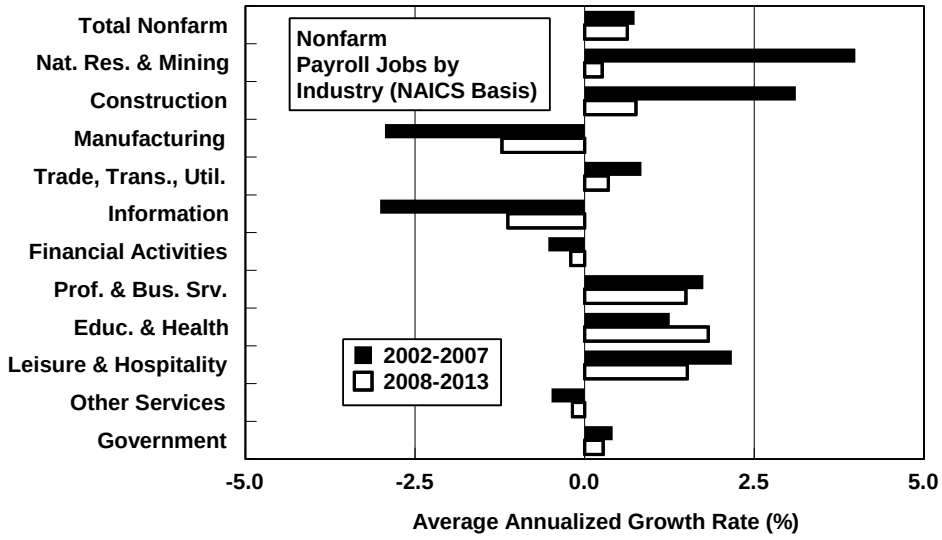
Overall, the huge increase in West Virginia commodity exports in 2007 reflects the massive depreciation in the U.S. dollar since 2002. Indeed, the West Virginia export weighted value of the U.S. dollar fell by 32.1 percent from the first quarter of 2002 to the second quarter of 2008. Also contributing to the surge in exports of minerals and ores lately have been market opportunities opened up by supply disruptions in some coal-producing countries, such as Australia.

West Virginia Forecast

The outlook for West Virginia depends on the economic performance of the national and international economies. As the *National Outlook* section of this publication makes clear, the U.S. economy is expected to fall into recession in 2008-2009. National growth rebounds during the 2010-2013 period. West Virginia is forecast to follow the national economy into the downturn, with little growth in 2008 and job losses in 2009. However, in percentage terms, West Virginia's job losses are not as large as those expected for the U.S. This stems from robust performance in natural resources and mining in 2008 and the fact that West Virginia is likely to be somewhat less impacted by the housing correction and financial meltdown than is the nation. Like the nation, job growth in the state rebounds in 2010 and continues through 2013. The West Virginia outlook is summarized in Tables 3 and 4.

On average during the next five years, West Virginia is forecast to add 4,500 jobs per year. This translates into an average annual rate of growth of 0.6 percent per year. That falls short of job growth expected for the nation (1.0 percent per year). As Figure 4 shows, job growth during the next five years is expected to come at about the same rate as it did during the previous five years. This is fitting, since both five-year intervals include a period of job losses.

FIGURE 4
W.VA. JOB GROWTH IS MODEST
DURING THE FORECAST



The forecast calls for job growth in natural resources and mining during the next five years. This reflects expansion in coal mining employment and production in 2008, in response to strong demand and high spot coal prices. Both production and employment are expected to soften in 2009, as the national recession plays out. Activity stabilizes during the 2010-2013 period, as national growth rebounds. Job growth in the oil and natural gas sector is forecast to continue during the forecast, as exploration and production continue to expand in the state.

Construction employment in West Virginia is forecast to decline through 2009, as the state copes with the direct effects of the housing correction. These impacts are likely to be most keenly felt in the Eastern Panhandle region, which experienced some of the largest increases in activity during the boom. Continued investment in nonresidential structures and nonbuilding activity (roads, water, sewer, and power plant construction) are expected to contribute to construction job gains during the next five years.

Manufacturing employment plummets during the 2008-2009 period, as declining demand both domestically and abroad drives production down. Indeed, this sector is forecast to lose 2,500 jobs from 2008 to 2009, with all sectors losing jobs. Job losses are severe in the durable goods sector, especially in wood products and primary metals. Within the nondurable goods sector, job losses are concentrated in chemicals and other nondurables. Job losses in manufacturing continue over the longer run, although at a slower pace, as the sector continues to cope with intense competitive pressure and a stablizing U.S. dollar exchange rate.

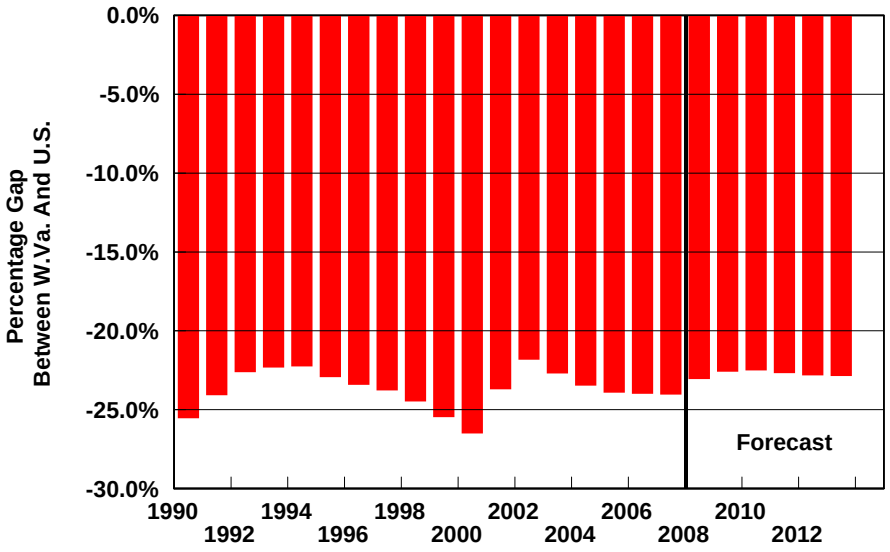
In contrast to job losses in the goods-producing sectors, service-providing employment expands, although slowly. The majority of service-producing job gains are expected in three sectors: health care; leisure and hospitality; and professional and business services. Continued job gains in health

care are related to the demographic mix in the state as well as continued demographic aging. Leisure and hospitality adds jobs on average during the next five years, although growth slows considerably through 2009, as the state and national economies work through the expected recession. In addition, professional and business services experiences net job losses in 2009, as the business cycle takes its toll. However, growth rebounds strongly in 2010. Trade, transportation, and utilities and government employment continues to expand on average during the next five years, although at a slower pace than during the 2002-2007 period.

Job losses are expected to continue in information, financial activities, and other services (personal services, like barbershops and laundry services, as well as membership organizations). Continued job losses in financial services reflect the impact of the housing correction in West Virginia.

Job growth on average during the forecast generates gains in income as well. Overall, inflation-adjusted per capita personal income is forecast to rise by 1.6 percent per year, equal to the national average during the forecast period. West Virginia makes a little progress in driving the per capita personal income gap down during the forecast, from -24.0 percent in 2007 to -22.8 percent by 2013, as Figure 5 shows. This reflects the expectation that the state will weather the national downturn with fewer job losses and similar income growth.

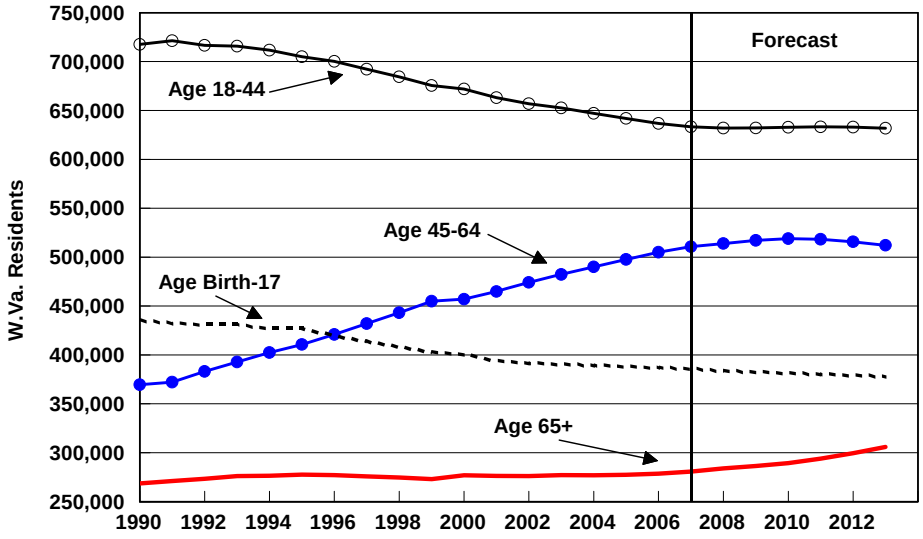
FIGURE 5
W.VA. STABILIZES THE PER CAPITA
PERSONAL INCOME GAP



Job and real income growth, on average during the forecast, contribute to rough population stability during the forecast. West Virginia is forecast to add residents, but just 2,900 per year, which translates into a 0.2 percent per year growth rate. That is far below the expected national rate of 1.0 percent per year. West Virginia's slow population growth reflects in part the state's relatively slow economic growth, which results in little net migration into the state. It also reflects the fact that West Virginia remains the only state in the nation to record more deaths than births so far this decade.

Rough population stability, however, masks the big changes coming in the state's demographic mix. As Figure 6 shows, the state is forecast to experience population gains during the next five years in only one major age group: the 65-and-older age group. Note that the population in the 45-64 age group begins to decline in 2011, which is about the time that growth accelerates in the 65-and-older age group. Thus, gains in the 65-and-older age group reflect the aging of the baby boom generation.

FIGURE 6
POPULATION GROWTH CONCENTRATES IN THE 65-AND-OLDER AGE GROUP DURING THE FORECAST



The aging of the baby-boom generation will eventually have large impacts on the state's labor force growth. The baby boomers will eventually retire, but it is not clear when that will happen. Indeed, recent financial market turmoil and stock market declines are likely to delay retirement for some. In addition, changes to Social Security to encourage work, the increasing use of defined contribution retirement plans, and the baby boomers own responses to surveys, suggest that they will not retire as early as their parents did.

The forecast for the state's unemployment rate calls for it to rise from 4.6 percent in 2007 to 4.9 percent in 2008 and again to 6.0 percent in 2009. As state job growth rebounds in 2010, the unemployment rate gradually trends back down to 5.0 percent by 2013.

Table 3
West Virginia Employment, Labor Force, and Unemployment Rate Forecasts
(Thousands)

Indicator	Quarters* Actual	Quarters* Forecast				Annual Growth Actual	Annual Growth Forecast						Annual Growth W.Va.	Annual Growth W.Va. (%)	Annual Growth U.S. (%)
	2008:1	2008:2	2008:3	2008:4	2009:1	2007	2008	2009	2010	2011	2012	2013	2008-2013**	2008-2013**	2008-2013**
Covered Employment By Industry* **															
Total Jobs	708.9	710.4	708.6	706.1	704.5	707.9	708.5	703.7	708.7	715.4	724.2	731.1	4.5	0.6	1.0
Goods Producing	126.1	126.2	126.7	125.8	124.2	127.7	126.2	122.9	122.3	123.5	124.7	124.7	-0.3	-0.2	-0.3
Natural Res. & Mining	30.1	30.5	31.4	31.2	31.0	29.6	30.8	30.8	30.8	30.8	31.0	31.2	0.1	0.3	-1.1
Mining	28.0	28.5	29.4	29.3	29.1	27.5	28.8	29.0	28.8	28.8	29.1	29.3	0.1	0.3	-1.1
Coal Mining	18.9	19.4	20.3	20.1	19.8	18.5	19.7	19.6	19.3	19.2	19.3	19.2	-0.1	-0.5	n/a
Other Mining	9.1	9.1	9.1	9.2	9.2	9.0	9.1	9.3	9.5	9.7	9.8	10.0	0.2	1.9	n/a
Natural Resources	2.1	2.0	2.0	1.9	1.9	2.1	2.0	1.9	1.9	1.9	1.9	1.9	-0.0	-0.5	-0.6
Construction	38.8	38.8	38.8	38.6	38.2	39.0	38.8	37.9	38.4	39.0	39.8	40.2	0.3	0.8	0.4
Manufacturing	57.3	56.8	56.5	55.9	55.0	59.1	56.6	54.1	53.2	53.7	53.8	53.3	-0.7	-1.2	-0.6
Durable Mfg.	36.0	35.6	35.4	35.1	34.4	37.3	35.5	33.8	33.2	34.0	34.4	34.1	-0.3	-0.8	-0.4
Wood Products	9.2	9.0	9.0	8.9	8.7	9.8	9.0	8.5	8.4	8.7	9.0	9.0	-0.0	-0.0	0.9
Nonmetallic Minerals	3.6	3.5	3.5	3.6	3.6	3.8	3.6	3.6	3.5	3.5	3.4	3.4	-0.0	-1.3	-0.7
Primary Metals	6.1	5.9	5.9	5.7	5.2	6.2	5.9	5.1	4.9	5.0	5.0	4.9	-0.2	-3.6	-2.7
Fabricated Metals	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.4	6.2	6.2	6.3	6.3	-0.0	-0.5	-0.9
Trans. Equip.	4.7	4.7	4.6	4.6	4.5	5.0	4.6	4.5	4.6	4.8	5.0	5.0	0.1	1.7	1.1
Other Dur.	5.9	5.9	5.9	5.9	5.8	6.0	5.9	5.7	5.7	5.8	5.7	5.4	-0.1	-1.7	-0.9
Non-Durable Mfg.	21.3	21.2	21.0	20.9	20.6	21.9	21.1	20.4	19.9	19.7	19.4	19.2	-0.4	-1.9	-1.1
Food Products	3.7	3.7	3.7	3.7	3.7	3.8	3.7	3.8	3.8	3.9	3.9	3.9	0.0	1.2	0.8
Chemicals	9.9	9.9	9.7	9.6	9.5	10.0	9.8	9.3	8.8	8.6	8.5	8.5	-0.3	-2.9	-0.6
Plastics & Rubber	3.8	3.8	3.8	3.8	3.7	4.0	3.8	3.7	3.8	3.9	3.9	3.8	0.0	0.4	-1.6
Other Non-Dur.	4.0	3.9	3.8	3.7	3.7	4.1	3.8	3.6	3.4	3.3	3.1	3.0	-0.2	-5.1	-2.7
Service Producing	582.8	584.2	581.9	580.3	580.3	580.2	582.3	580.7	586.4	591.9	599.5	606.4	4.8	0.8	1.2
Trade, Trans., & Utilities	140.4	139.6	138.6	137.8	137.2	139.9	139.1	137.2	138.7	139.2	140.3	141.5	0.5	0.3	0.7
Wholesale Trade	24.7	24.7	24.6	24.4	24.1	25.1	24.6	23.9	24.0	24.4	24.6	24.8	0.0	0.2	0.6
Retail Trade	91.9	91.2	90.3	89.7	89.5	91.4	90.8	89.7	90.9	91.0	91.8	92.7	0.4	0.4	0.4
Utilities	6.3	6.3	6.4	6.4	6.4	6.2	6.3	6.4	6.4	6.4	6.4	6.5	0.0	0.4	-0.6
Transportation & Warehousing	17.5	17.5	17.3	17.2	17.2	17.1	17.4	17.2	17.4	17.4	17.5	17.5	0.0	0.2	2.1
Information	11.4	11.3	11.3	11.2	11.1	11.4	11.3	10.9	10.7	10.7	10.6	10.6	-0.1	-1.1	-0.3
Financial Activities	28.7	28.8	28.7	28.6	28.3	28.6	28.7	28.1	28.0	28.2	28.3	28.4	-0.1	-0.2	1.2
Profess. & Business Services	61.2	61.9	61.3	60.6	60.5	60.9	61.3	59.9	60.3	62.4	64.4	66.0	0.9	1.5	2.8
Educational & Health Services	109.7	110.5	110.5	110.8	111.7	107.7	110.4	113.0	115.7	117.4	119.1	120.8	2.1	1.8	2.1
Educational Services	5.0	5.1	5.2	5.2	5.3	4.9	5.1	5.3	5.4	5.4	5.4	5.3	0.0	0.7	0.2
Health Care & Social Assist.	104.8	105.5	105.3	105.5	106.5	102.7	105.3	107.7	110.3	112.0	113.8	115.5	2.0	1.9	2.4
Leisure & Hospitality	72.9	73.1	72.8	72.8	72.8	71.7	72.9	72.8	73.3	74.5	76.7	78.6	1.1	1.5	0.8
Other Services	21.5	21.1	21.1	21.1	21.0	21.5	21.2	21.0	21.0	21.0	21.0	21.0	-0.0	-0.2	-0.3
Government	136.8	137.8	137.7	137.7	137.8	138.5	137.5	137.7	138.7	138.6	139.1	139.4	0.4	0.3	0.3
Federal Civilian	22.7	22.9	22.8	22.7	22.7	22.5	22.8	22.5	23.1	22.5	22.7	22.8	0.0	0.1	-0.1
State & Local	114.1	114.9	114.9	115.0	115.1	116.0	114.8	115.2	115.6	116.0	116.4	116.6	0.4	0.3	0.4

Indicator	Actual	Forecast				Actual	Forecast						W.Va.	W.Va. (%)	U.S. (%)
	2008:2	2008:3	2008:4	2009:1	2009:2	2007	2008	2009	2010	2011	2012	2013	2008-2013**	2008-2013**	2008-2013**
Resident Labor Force, Employment, and Unemployment Rate															
Labor Force	816.0	807.3	812.4	816.9	815.9	808.8	812.1	815.0	815.0	817.9	820.9	823.5	2.3	0.3	0.8
Employed	773.6	770.9	769.7	768.2	766.6	771.8	772.5	765.9	767.0	772.0	777.5	782.5	2.0	0.3	0.8
Unemployment Rate(%)	5.2	4.5	5.3	6.0	6.0	4.6	4.9	6.0	5.9	5.6	5.3	5.0	0.0	0.4	1.1

* Quarterly data are seasonally adjusted.
**These columns contain the average yearly change during the 2008-2013 period
***Beginning with the West Virginia Economic Outlook 2008, employment is measured by covered employment (ES-202).

Table 4
West Virginia Population and Income Forecasts

Indicator	Quarters* Actual	Quarters* Forecast				Annual Actual	Annual Forecast						Annual Growth W.Va.	Annual Growth W.Va. (%)	Annual Growth U.S. (%)
	2007:4	2008:1	2008:2	2008:3	2008:4	2007	2008	2009	2010	2011	2012	2013	2008-2013**	2008-2013**	2008-2013**
Population (Thousands)															
Total Population	1,813	1,814	1,814	1,815	1,816	1,812	1,815	1,819	1,823	1,827	1,829	1,829	2.9	0.2	1.0
Age 0-17	387	386	385	385	384	387	385	383	382	381	380	380	-1.1	-0.3	n/a
Age 18-44	632	632	632	632	632	633	632	632	633	633	633	632	-0.0	-0.0	n/a
Age 45-64	512	513	513	514	515	511	514	517	519	518	516	512	-0.4	-0.1	n/a
Age 65 and up	282	283	284	284	285	281	284	286	289	294	300	306	4.4	1.5	n/a

Indicator	Quarters* Actual	Quarters* Forecast				Annual Actual	Annual Forecast						Annual Growth W.Va.	Annual Growth W.Va. (%)	Annual Growth U.S. (%)
	2008:2	2008:3	2008:4	2009:1	2009:2	2007	2008	2009	2010	2011	2012	2013	2008-2013**	2008-2013**	2008-2013**
Real Personal Income (Millions of 2000 Dollars)															
Total Real Income	45,943	45,559	45,660	45,880	45,963	45,113	45,624	45,958	46,691	47,680	48,807	49,914	857.9	1.8	2.6
Wage and Salary	21,791	21,850	21,840	21,818	21,798	21,559	21,818	21,780	22,221	22,652	23,044	23,406	317.6	1.4	2.2
Other Labor Income	6,277	6,261	6,289	6,302	6,310	6,179	6,274	6,322	6,370	6,429	6,531	6,632	71.6	1.1	2.7
Proprietors' Income	3,061	3,027	3,004	3,024	3,042	3,097	3,039	3,044	3,079	3,098	3,150	3,209	33.9	1.1	2.4
Div., Int., Rent	5,840	5,840	5,838	5,782	5,704	5,855	5,845	5,680	5,636	5,805	5,999	6,173	65.5	1.1	2.8
Transfer Income	12,221	11,813	11,928	12,192	12,341	11,558	11,891	12,365	12,608	12,913	13,305	13,724	366.5	2.9	3.5
Real Per Capita Personal Income (2000 Dollars)															
Real Per Capita Income	25,322	25,100	25,144	25,251	25,280	24,896	25,140	25,269	25,609	26,104	26,692	27,284	428.7	1.6	1.6
Wage and Salary	12,010	12,038	12,027	12,008	11,989	11,897	12,022	11,975	12,188	12,401	12,603	12,794	154.4	1.3	1.3
Other Labor Income	3,459	3,449	3,463	3,468	3,471	3,410	3,457	3,476	3,494	3,520	3,572	3,625	33.6	1.0	1.7
Proprietors' Income	1,687	1,668	1,654	1,665	1,673	1,709	1,675	1,674	1,689	1,696	1,723	1,754	15.9	0.9	1.4
Div., Int., Rent	3,219	3,217	3,215	3,182	3,137	3,231	3,221	3,123	3,091	3,178	3,281	3,374	30.6	0.9	1.8
Transfer Income	6,736	6,508	6,568	6,710	6,788	6,378	6,552	6,799	6,915	7,070	7,276	7,502	189.8	2.7	2.5

Indicator	Quarters* Actual	Quarters* Forecast				Annual Actual	Annual Forecast						Annual Growth W.Va.	Annual Growth W.Va. (%)	Annual Growth U.S. (%)
	2008:2	2008:3	2008:4	2009:1	2009:2	2007	2008	2009	2010	2011	2012	2013	2008-2013**	2008-2013**	2008-2013**
Coal Production (Mil. Tons)	158	160	159	157	156	154	158	156	156	154	153	153	-1.0	-0.6	1.4

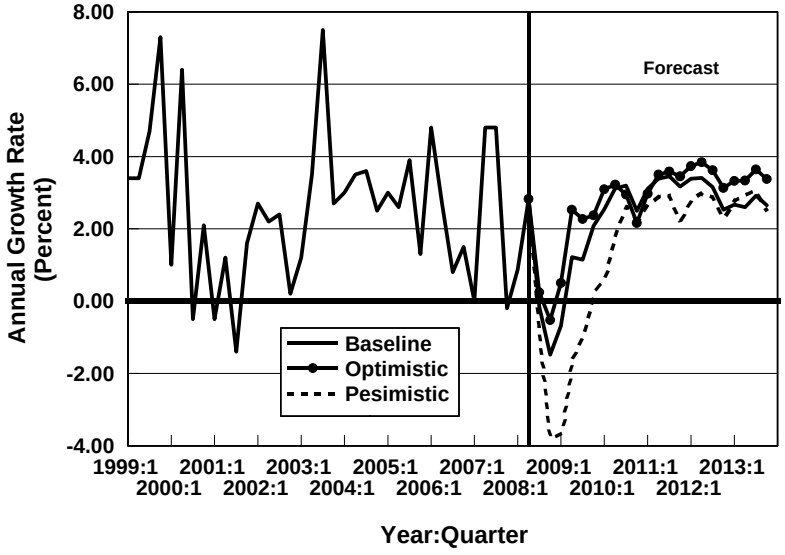
* Quarterly data are seasonally adjusted.
**These columns contain the average yearly change during the 2008-2013 period.

Risks

The baseline U.S. forecast from Global Insight calls for a national recession during late 2008 and into 2009. As Figure 7 shows, the expected national downturn involves real GDP falling for three consecutive quarters. The severity of this downturn would exceed the recession during 2001, with real GDP falling by 0.6 percent from the second quarter of 2008 to the first quarter of 2009. The expected recession in the baseline outlook is driven by the impact of the housing correction and the financial meltdown, combined with relatively high energy prices. As Figure 8 shows, housing starts are expected to fall from the 2.0 million unit per year rate in 2005 all the way down to the 740,000 unit range in mid-2009. However, U.S. economic growth is expected to rebound gradually by the end of 2009 and into 2010, as the federal fiscal stimulus and Federal Reserve action to reduce interest rates spur activity.

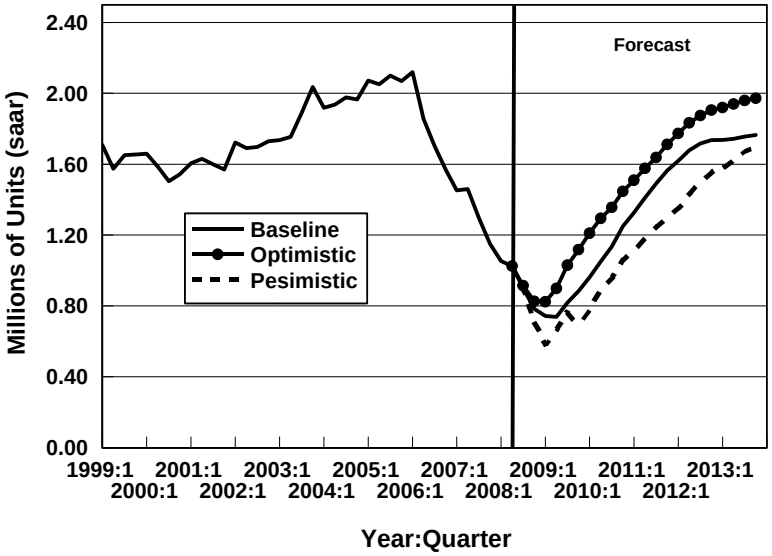
The pessimistic alternative forecast for the U.S. incorporates a more severe housing correction, with housing starts falling all the way down to the 617,000 units. In addition, the pessimistic alternative includes an additional spike in oil prices, with spot prices for West Texas Intermediate oil rising $15 per barrel above the baseline forecast (and thus average $128 per barrel during the 2009-2013 period). Finally, the pessimistic scenario assumes that financial crisis gets much worse than envisioned under baseline assumptions. This sends the U.S. economy into a deep and extended recession, which lasts through the third quarter of 2009, and is more severe than either the recession of 1990-1991 or the recession of 2001 and instead is similar to the severe recessions of the mid-1970s and early 1980s. Recent federal fiscal stimulus and action by the Federal Reserve to reduce interest rates in the near term are insufficient to ward off the downturn. Even worse, stimulative monetary policy, combined with higher oil prices generates inflationary pressures that force the Federal Reserve to restrain growth through 2013.

FIGURE 7
U.S. REAL GDP GROWTH
BASELINE AND ALTERNATIVES
FORECASTS FROM IHS GLOBAL INSIGHT OCTOBER 2008



The optimistic scenario for the national economy assumes a less severe housing correction and financial crisis, combined with stronger business investment spending and stronger productivity growth. Under this scenario, the housing correction does not get much worse and recovers faster than in the baseline forecast. Rebounding business investment spending further pushes growth up, as does the lingering impact of the federal fiscal stimulus package. Stronger productivity growth alleviates inflationary pressure from increasing oil prices, generating a lower inflation profile and more expansionary monetary policy. Under these assumptions, the U.S. economy experiences only a recession during late 2008 and early 2009.

FIGURE 8
U.S. HOUSING STARTS
BASELINE AND ALTERNATIVES
FORECASTS FROM IHS GLOBAL INSIGHT OCTOBER 2008



West Virginia is not an economic island. The state's future economic growth depends on the growth of our trading partners, whether they are located across the U.S. or across the world. The national baseline forecast predicts a U.S. recession and slow growth (or recessions) for many of our trading partners. Thus, the baseline West Virginia forecast includes job losses in the near term. Likewise, the pessimistic scenario for the U.S. and world economies means a worse downturn for West Virginia as well. On the other hand, the optimistic scenario means few, if any, net job losses for the state.

West Virginia depends on the mining sector much more than does the nation on average. Indeed, in 2007, mining accounted for 7.4 percent of the state's GDP. In contrast, mining accounted for just 2.0 percent of U.S. GDP. Thus, the fortunes of the mining sector have a much bigger impact on West Virginia than the U.S.

The baseline forecast calls for mining to buffer the state somewhat from the national downturn, as mining production and jobs rise in 2008. Production and employment retrench in 2009 as national and world growth fall. However, if the national and world downturn becomes severe enough, that

has the potential to depress demand for energy and steel enough to push coal employment and production further down in West Virginia. In addition, the mining sector faces regulatory uncertainty related to clean water and air concerns. If this uncertainty becomes magnified, it can also contribute to diminished employment and production growth.

The national housing correction will affect West Virginia's growth during the forecast. The biggest impacts of the correction are being felt in the Eastern Panhandle (Berkeley, Jefferson, andMorgan counties). If the national housing correction turns out to be worse than expected under baseline assumptions then that will likely mean less job growth in the Eastern Panhandle. Further, the Eastern Panhandle accounts for a large share of West Virginia job growth (likely somewhere between 18 percent and 30 percent of net state job growth so far this decade). Thus, slower job growth in the Eastern Panhandle will have important implications for the state.

Manufacturing also faces significant downside risks from a deeper than expected national downturn. Risks here fall on all manufacturers, but the wood products and furniture sector is particularly vulnerable to the housing correction. Further, as a more severe world slowdown diffuses through the economy, all manufacturers will feel the impact.

Service-providing sectors would also feel the impact of a more severe national recession. More severe problems in the financial services sector would likely have less impact on the state than nationally, but the state would experience job losses as well. The professional and business services sector tends to be sensitive to the business cycle, particularly the call center sector, so a severe world slowdown would hit this sector relatively hard. Further, the leisure and hospitality sector can come under pressure in a severe downturn as income growth slows and gasoline prices remain well above the levels experienced in the 1990s. In addition, as neighboring state's face increasing budget pressure, they may be more willing to pursue gaming revenue. This would increase the competitive pressure on the industry in West Virginia and reduce growth.

Focus On…

Highlights Of From Higher Education To Work In West Virginia 2006

George W. Hammond, Associate Director, BBER
J. Sebastian Leguizamon, Graduate Research Assistant

Human capital is an important determinant of economic competitiveness and growth. Universities and colleges are a crucial component of the system by which nations, states, and local areas generate human capital. A critical consideration is then the degree to which graduates from state higher education institutions remain in the state to work and the wages they earn.

This section summarizes West Virginia labor market experiences of graduates from West Virginia public institutions of higher education during the past decade. We present highlights of an initial report (*From Higher Education To Work In West Virginia 2006*) that focuses on trends in the number of graduates on the payrolls of establishments located in the state, as well as their wages. Also included are analyses of the work participation and wages of graduates by selected degrees and by residency. The full report was funded by the West Virginia Higher Education Policy Commission.

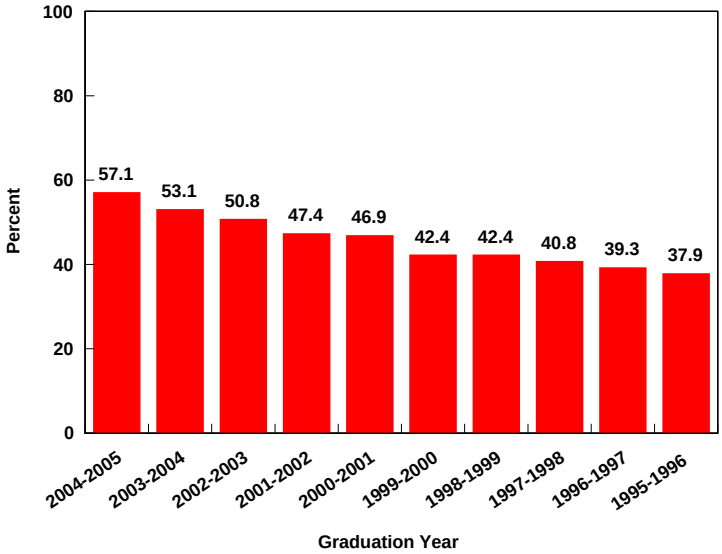
The data analyzed in this report were provided by the West Virginia Higher Education Policy Commission and cover graduates from state public institutions of higher education during the academic years from 1995-1996 to 2004-2005. Data on graduates is matched, by Workforce West Virginia, with data on employment and wages covered under the state unemployment compensation system. The employment data is well known to be of high quality, but it does not include all individuals working in a state at a given time. For instance, the dataset excludes the self-employed and other workers not covered by state unemployment compensation (railroad workers and federal government employees).

West Virginia Work Participation Of State Higher Education Graduates

In 2006, 46.4 percent of West Virginia public higher education graduates during the 1995-1996 to 2004-2005 period were on the payrolls of establishments located in the state for at least one quarter of the year. Thus, of the 106,583 state higher education graduates during the last decade, 49,436 earned wages in West Virginia last year. In addition, state graduates accounted for 7.0 percent of state covered payroll jobs in 2006.

As Figure 9 shows, work participation falls as the time from graduation increases, which implies that more recent graduates are more likely to work in West Virginia than graduates in the more distant past. Indeed, in 2006, 57.1 percent of graduates in the 2004-2005 academic year worked at establishments located in West Virginia. This share gradually decreases over time, reaching 37.9 percent of 1995-1996 graduates working in the state in 2006. The declining share of graduates working in the state over time reflects the normal churning of the labor market, as individuals find opportunities to apply their skills in other states or in occupations/industries not captured by the dataset (such as self-employment, railroad workers, federal government workers).

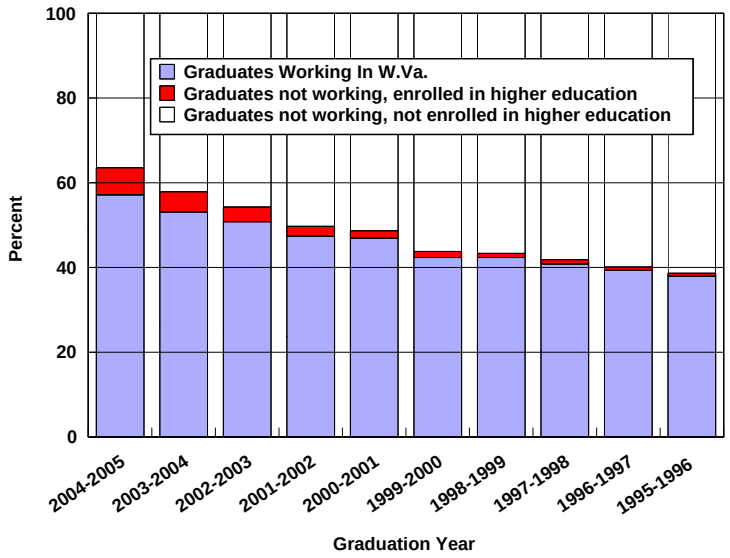
FIGURE 9
PERCENT OF GRADUATES FROM W.VA. HIGHER EDUCATION INSTITUTIONS WORKING IN THE STATE IN 2006



As noted above, graduates from West Virginia institutions of higher education may be counted as not participating in the state labor market for a number of reasons. They may not be working at all, they may be self-employed, they may be working in an industry not covered by the unemployment compensation system, or they may be continuing their education (and thus not working for that reason).

Figure 10 shows the shares of state graduates that were working in the state in 2006, not working in the state in 2006 but enrolled in higher education, and not working in the state and not enrolled in West Virginia higher education.

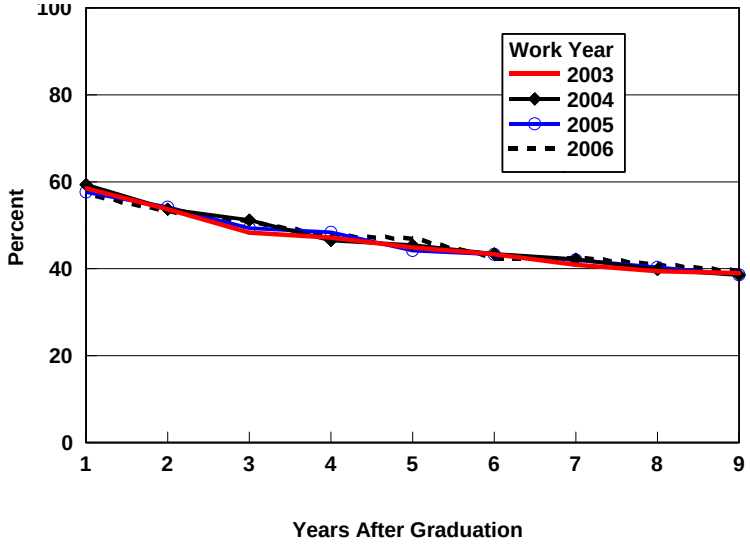
FIGURE 10
SHARES OF GRADUATES WORKING IN THE STATE IN 2006 BY ENROLLMENT



In 2006, 2.5 percent of West Virginia higher education graduates (during the 1995-1996 to 2004-2005 period) were enrolled in higher education after graduation. This share also declines as the number of years after graduation increase, as Figure 10 shows. Overall, the share of graduates that were not working in the state, but enrolled in higher education, falls from 6.4 percent for the most recent graduates to 0.7 percent for graduates during the 1995-1996 academic year.

The data for 2006 shows that 46.4 percent of West Virginia higher education graduates during the last 10 years are working in the state. We find similar rates of work participation using data for 2003-2005. Figure 11 shows work participation trends have been fairly similar during the 2003-2006 period, with more recent graduates posting higher rates of work participation than later graduates.

FIGURE 11
PERCENT OF GRADUATES FROM W.VA. HIGHER EDUCATION INSTITUTIONS WORKING IN THE STATE 2003-2006

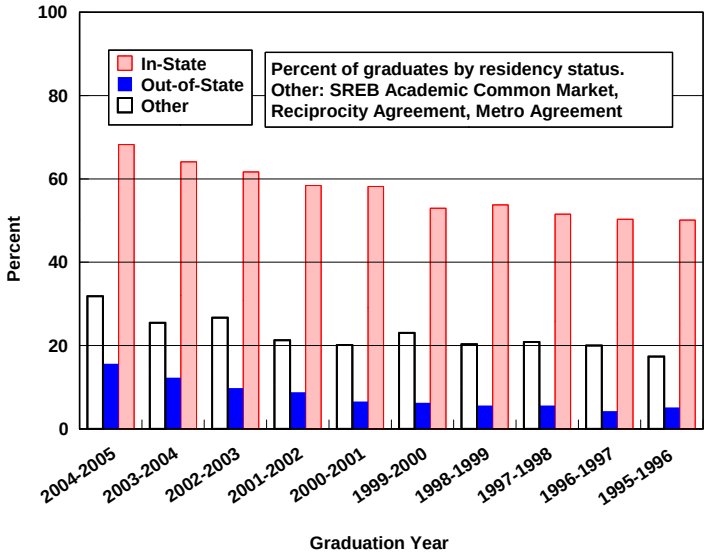


One factor which influences the work participation of state higher education graduates is their native state. It is likely that graduates originally from West Virginia will be more likely to stay in the state after graduation. While data on state of origin for graduation is not available, data on residency for fee purposes is included in the database. This data will give an indication of the degree to which origin influences work participation in the state.

Overall, most state higher education graduates during the last decade that were working in the state in 2006 were classified as in-state for fee purposes. Indeed, in-state graduates accounted for 94.3 percent of graduates (for which we have residency status) that were on the payrolls of state establishments. Those classified as out-of-state accounted for 4.0 percent of graduates on the payrolls in 2006. Thus, in-state graduates are more likely to work in West Virginia. Overall, for those graduates classified as in-state for fee purposes, 57.6 percent worked in the state in 2006. This is far higher than the 8.3 percent of out-of-state graduates still working in the state in 2006.

Figure 12 shows the percent of graduates during the 1995-1996 to 2004-2005 period working in the state in 2006 by residency for fee purposes. This data shows the familiar trend of declining work participation as the number of years since graduation increases. For in-state graduates, work participation drops from 68.3 percent for the 2004-2005 academic year to 50.1 percent in the 1995-1996 academic year. For out-of-state graduates, work participation drop from 15.6 percent in 2004-2005 to 5.1 percent in 1995-1996.

FIGURE 12
PERCENT OF STATE HIGHER EDUCATION GRADUATES
WORKING IN W.VA. IN 2006
BY RESIDENCY FOR FEE PURPOSES

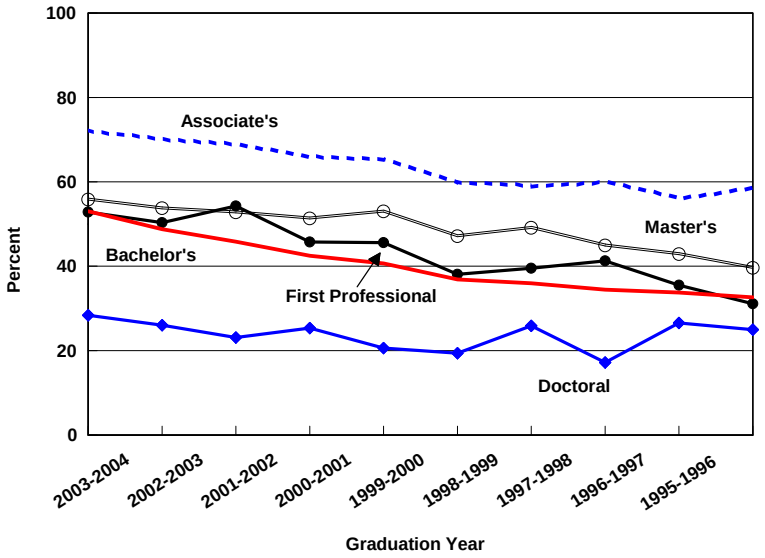


Work participation also tends to vary by degree, measured by the highest degree earned. In 2006, 64.2 percent of state higher education graduates during the past decade with an Associate's degree as the highest degree were on the payrolls of establishments located in the state. Graduates with a Master's degree had the next highest rate of retention in 2006, with 49.2 percent, followed by graduates with a First Professional degree (44.0 percent), Bachelor's degree (41.1 percent), and Doctoral degree (23.8 percent).

As Figure 13 shows, we see the familiar pattern of declining participation as the time from graduation increases. Graduates with an Associate's degree always have the highest participation rates, ranging from 72.0 percent for the latest graduates to 58.7 percent for graduates during the 1995-1996 academic year. Work participation rates are similar for Master's, First Professional, and Bachelor's degrees, with initial participation rates in the 53-56 percent range for the latest graduates to the 31-40 percent range for graduates during the 1995-1996 academic year. Graduates with Doctoral degrees have the lowest participations rates, which range from 28.4 percent for recent graduates to 25.0 percent for graduates during the 1995-1996 academic year.

Overall, the largest declines in work participation occur in graduates with Bachelor's and First Professional degrees, which experienced declines of 20 percentage points from the latest graduates compared to graduates during the 1995-1996 academic year. Graduates with Master's degrees experienced declines in work participation of 16.2 percentage points, while graduates with Associate's degrees experienced declines of 13.3 percentage points. Doctoral graduates experienced the smallest declines with work participation for the latest graduates just 3.4 percentage points above the participation of graduates during the 1995-1996 academic year.

FIGURE 13
SHARES OF STATE HIGHER EDUCATION GRADUATES
WORKING IN THE STATE IN 2006 BY DEGREE



West Virginia Wages Of State Higher Education Graduates

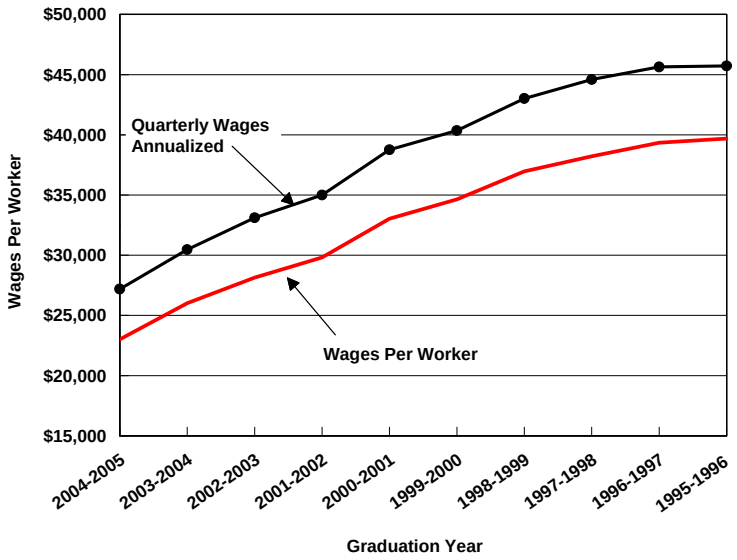
Graduates from state institutions of higher education earned $1.56 billion in wages at establishments located in West Virginia in 2006. That accounts for 6.8 percent of the $23.1 billion in wages paid to all workers on the payrolls of state firms covered by unemployment compensation. Averaged across the 49,436 graduates on the payrolls of state firms, that translates into average wages per higher education graduate of $31,618 in 2006.

Figure 14 shows how average wages change as the time from graduation increases for the 2006 wage data. As the figure shows, average wages increase as the number of years since graduation rises, with the most recent graduates earning $23,016 in 2006. This average wage rises to $39,699 for graduates during the 1995-1996 academic year.

Figure 14 also shows average annualized wages, which include an adjustment for part-year work. This adjustment puts those that worked one, two, or three quarters during the year on the same footing as those that worked four quarters during the year.[1] Annualized wages for state higher education graduates averaged $36,954 in 2006. Anualized wages rise as workers gain experience, with recent graduates earning an average annualized wage of $27,190. Graduates during the 1995-1996 academic year earned an annualized wage of $45,726 in 2006.

[1] The adjustment is to divide a worker's total wages for the year by the number of quarters worked. The resulting quarterly wage is then 'annualized' by multiplying by four. Thus, a worker with total wages of $33,000 for the year, with three quarters worked, will have an average annualized wage of $44,000 (=($33,000/3)*4).

FIGURE 14
WAGES OF GRADUATES FROM W.VA. HIGHER EDUCATION INSTITUTIONS IN 2006



On average, annualized wages for out-of-state graduates start out lower than those with in-state residency upon graduation. However, as Figure 15 shows, as the number of years from graduation increases, wages for graduates with out-of-state residency start climbing up and even exceed the wages of in-state graduates. In 2006, out-of-state graduates from 1995-1996 to 2000-2001 academic years averaged annualized wages of $44,923, while those with in-state residency earned an average of $43,128.

FIGURE 15
ANNUALIZED WAGES OF GRADUATES FROM W.VA. HIGHER EDUCATION INSTITUTIONS IN 2006 BY RESIDENCY

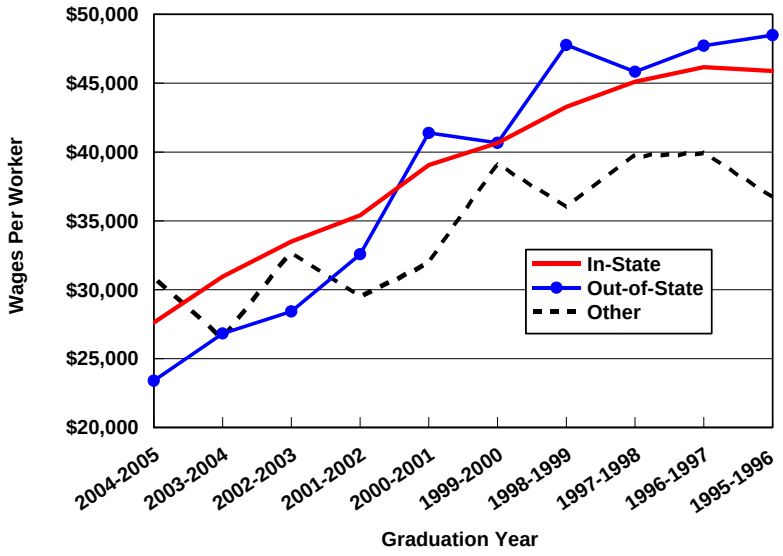


Table 5 breaks the state's average annualized wages down by the level of degree earned by graduates of a West Virginia higher education institution. As expected, the higher the degree, the higher the average annual wage. For graduates during the last decade, annualized wages in 2006 were highest for those with First Professional degrees ($88,947), followed by those with doctoral degrees ($59,824), Master's degrees ($45,648), Bachelor's degrees ($32,477), and Associate's degrees ($30,494).

TABLE 5
ANNUALIZED WAGES OF W.VA. GRADUATES BY SELECT DEGREE

	Associate's	Bachelor's	Master's	First Prof.	Doctoral
2003	$27,898	$30,042	$41,837	$80,918	$53,133
2004	$28,621	$30,252	$42,300	$81,215	$54,463
2005	$29,587	$31,160	$43,120	$83,675	$55,247
2006	$30,494	$32,477	$45,648	$88,947	$59,824
Annual Growth Rate 2003-2006	3.0	2.6	2.9	3.2	4.0

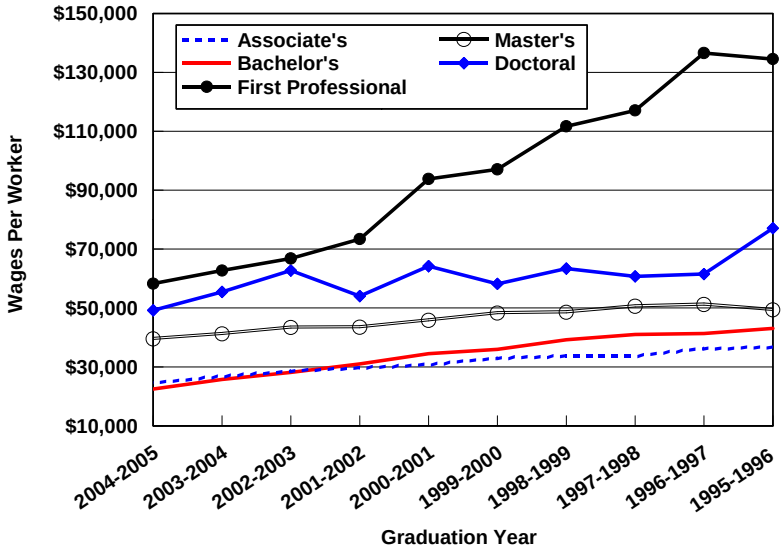
Source: author calculations

Annualized wage growth during the last four years was fastest for graduates with Doctoral degrees (4.0 percent per year), followed by graduates with First Professional degrees (3.2 percent), Associate's (3.0 percent), Master's (2.9 percent), and Bachelor's (2.6 percent).

Figure 16 shows that as the time after graduation rises, First Professional degree earners increase their annual incomes more rapidly than those with other type of degree, with annualized wages rising from $58,260 for recent graduates to $134,529 for graduates during the 1995-1996 academic year. In 2006, the most recent doctoral graduates earned an annualized wage of $49,197, while graduates during the 1995-1996 academic year earned $77,103.

Figure 16 also shows that during the first six years after graduation, West Virginia Associate's and Bachelor's degree graduates earn approximately the same average annualized wages (ranging from the mid-$20,000 to the mid-$30,000). However, after the sixth year since graduation, graduates with Bachelor's degrees do significantly better, with Bachelor's degree graduates during the 1995-1996 academic year earning an average of $6,330 more than Associate's degree graduates.

FIGURE 16
ANNUALIZED WAGES OF W.VA. HIGHER EDUCATION
GRADUATES BY DEGREE IN 2006



Focus On…

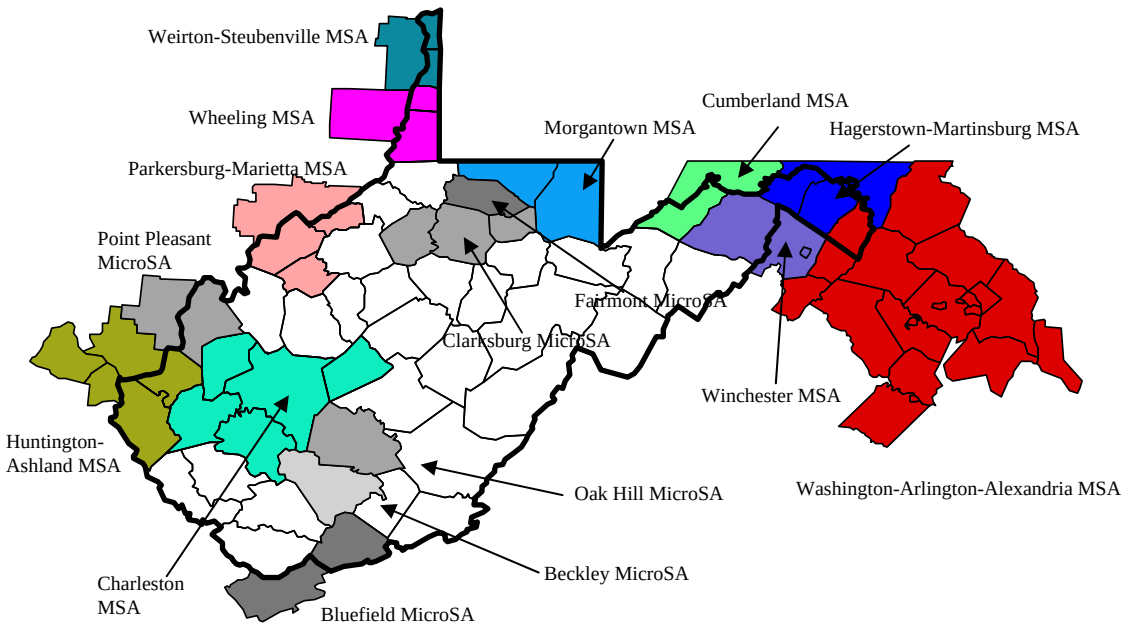
West Virginia County Performance

Peter Shirley, Undergraduate Research Assistant
With George W. Hammond, Associate Director, BBER

West Virginia is composed of many small, diverse economies. There are large differences in industrial mix across West Virginia's regional economies and thus there is much variation in economic performance. These differences are clearly evident in the major indicators of economic performance, including employment, population, educational attainment, housing prices, and personal income. We begin by comparing the growth in metropolitan statistical areas (MSAs), which are designated by the United States Office of Management and Budget. An MSA is defined by a densely populated city (or urban agglomeration) with more than 50,000 residents. Once the urbanized area is defined the county containing it becomes the core county of the MSA. Any adjacent counties with at least 25 percent of its labor force commuting to or from the core are included in the MSA designation.

As shown in Figure 17, West Virginia has 21 counties that compose or are components of ten different MSAs. Note that only two of these MSAs are completely contained within the state. The largest MSA with component counties in the state is Washington-Arlington-Alexandria, with 5,290,400 residents in 2006. The Cumberland MSA is the smallest with 99,759 residents and includes Mineral County in West Virginia.

FIGURE 17
WEST VIRGINIA'S STATISTICAL AREAS
CENSUS 2000



Source: Office of Management and Budget (OMB)

MSA Performance

The metropolitan statistical areas (MSAs) that included at least one county in West Virginia experienced a lower average per capita personal income growth (PCPI) than the non-metro/non-micro counties in West Virginia. Table 6 shows several key economic performance indicators for West Virginia's MSAs from 2000 to 2007. The MSAs that include at least one West Virginia county had an average growth in PCPI of 4.2 percent per year, which is a percentage point below the West Virginia state average, but greater than the United States average of 3.5 percent per year. West Virginia's Micropolitan Statistical Areas, which are similar to MSAs but are smaller in terms of population, outpaced both West Virginia and the U.S. with an average growth of 4.4 percent per year. The average PCPI of MSAs in 2006 was $46,620, which is well above both the West Virginia average of $28,206, and the national average of $36,714. This number is so high, however, because of the Washington-Arlington-Alexandria MSA which includes Jefferson County in West Virginia. This MSA had a PCPI of $51,868 and has a population greater than all of the other West Virginia MSAs combined. The Cumberland MSA's PCPI of $26,038 in 2006 was the lowest.

TABLE 6
WEST VIRGINIA'S STATISTICAL AREAS

	Per Capita Personal Income		Empl.	Unempl. Rate	Population		Educ. Attain. B.A.+	Housing Prices
	Dollars 2006	Ann. Gr. % 2000-2006	Ann. Gr. % 2000-2006	Ann. Avg. % 2007	Residents 2007	Ann. Gr. % 2000-2007	% of Pop. 2000	Ann. Gr. % 2000-2007
Metropolitan Statistical Areas	**46,620**	**4.2**	**1.8**	**3.3**	**6,922,705**	**1.1**	**35.8**	**n/a**
Charleston MSA	33,010	4.1	0.2	4.1	303,950	-0.3	17.9	3.7
Cumberland MSA	26,038	4.0	0.7	5.1	99,316	-0.4	13.4	8.3
Hagerstown-Martinsburg MSA	30,289	3.7	1.7	4.4	261,198	2.2	14.5	10.9
Huntington-Ashland MSA	27,145	4.0	0.5	4.8	284,026	-0.2	14.9	4.9
Morgantown, MSA	30,011	5.3	2.3	3.3	117,770	0.8	26.0	7.2
Parkersburg-Marietta MSA	28,285	3.5	0.2	4.9	160,656	-0.3	14.7	3.8
Washington-Arlington-Alexandria MSA	51,868	4.1	2.0	3.0	5,306,565	1.4	42.5	12.7
Weirton - Steubenville MSA	27,335	3.4	-0.8	6.2	122,580	-1.0	12.1	4.0
Wheeling MSA	29,253	4.0	0.6	5.1	145,454	-0.7	14.6	4.4
Winchester MSA	30,849	3.2	2.7	3.2	121,190	2.3	18.3	11.4
Micropolitan Statistical Areas	**27,572**	**4.4**	**0.9**	**4.7**	**435,512**	**-0.1**	**13.1**	**n/a**
Beckley	28,828	4.9	1.5	4.4	79,170	0.0	12.7	n/a
Bluefield	27,135	4.3	0.2	4.4	105,205	-0.3	12.7	n/a
Clarksburg	28,995	4.5	1.0	4.4	91,688	-0.1	14.9	n/a
Fairmont	28,738	4.2	0.8	4.2	56,728	0.1	16.0	n/a
Oak Hill	23,930	4.6	0.6	5.4	46,334	-0.4	10.7	n/a
Point Pleasant	26,144	4.1	1.1	6.5	56,387	-0.2	10.3	n/a
Non-Metro/Non-Micro Counties in W.Va.	**24,257**	**4.7**	**0.7**	**5.5**	**447,141**	**-0.4**	**10.2**	**n/a**
W.Va.	**28,206**	**4.3**	**0.8**	**4.6**	**1,812,035**	**0.0**	**14.8**	**5.7**
U.S.	**36,714**	**3.5**	**1.1**	**4.6**	**301,621,157**	**1.0**	**24.4**	**7.5**

Per capita income data is from the U.S. Bureau of Economic Analysis.
Total full & part-time employment is from the U.S. Bureau of Economic Analysis.
Unemployment rate data is from the U.S. Bureau of Labor Statistics.
Population data is from the U.S. Census Bureau.
Educational Attainment is % of the population that is 25 years and older.
House Price Data is from the Office of Federal Housing Enterprise Oversight.
Non-Metro/Non-Micro Counties in WV is calculated using data from WV Bureau of Employment Programs.

Six of ten MSAs had negative annual population growth from 2000 to 2007. The Weirton-Steubenville MSA had the greatest population decrease at -1.0 percent per year from 2000 to 2007. The Wheeling MSA had the second greatest population decrease at -0.7 percent per year. The Charleston and Parkers burg-Marietta MSAs had population growth rates of -0.3 percent per year. The Winchester MSA, containing Hampshire County in the Eastern Panhandle, had the greatest annual population growth at 2.3 percent per year. Table 6 shows that West Virginia's MSAs are growing in population at an annual rate of 1.1 percent, which is higher than West Virginia (no growth) and the U.S. growth rate of 1.0 percent per year. West Virginia's

micropolitan statistical areas and non-metro/non-micro counties, however, have both had a negative annual growth rate from 2000 to 2007, recording rates of -0.1 percent and -0.4 percent annually, respectively.

West Virginia's MSAs had faster growth in employment and lower unemployment rates than both the nation and the state. Metropolitan areas had a 2007 average unemployment rate of 3.3 percent, whereas the nation's average and West Virginia's average were both 4.6 percent. The Weirton-Steubenville MSA had the highest 2007 unemployment rate at 6.2 percent, while the Washington-Arlington-Alexandria MSA had the lowest unemployment rate at 3.0 percent. The Weirton-Steubenville MSA was also the only MSA to experience negative employment growth from 2000 to 2006 at -0.8 percent per year, while the Winchester MSA grew the fastest in terms of employment growth at 2.7 percent per year. The MSAs had a rapid growth rate in employment from 2000 to 2006, averaging 1.8 percent per year, compared to the West Virginia average of 0.8 percent per year, and the U.S. average of 1.1 percent per year. West Virginia's micropolitan statistical areas and non-metro/non-micro statistical areas employments grew in close relation to the West Virginia's growth rate at 0.9 percent annually and 0.7 percent annually, respectively.

Only 14.8 percent of the population of West Virginia at least 25 years old held at least a bachelor's degree in 2000. This is 9.6 percentage points lower than the national average of 24.4 percent of individuals 25 years old or older. This "brain drain" is a serious problem in West Virginia, as the state lacks the education component of human capital, which is a key factor for economic development. The non-metro/non-micro counties are even more hurt by this, with only 10.2 percent of their population at least 25 years old holding a bachelor's degree or above. Only two MSAs including a county in West Virginia had a higher rate of bachelor's or above degree holders in 2000. These MSAs were the Washington-Arlington-Alexandria MSA which contains our nation's capital, and the Morgantown MSA, home to West Virginia University. The Weirton-Steubenville MSA had the lowest rate with only 12.1 percent. West Virginia's Micropolitan Statistical Areas are not much better off, with only 13.1 percent of their population 25 or older holding at least a bachelor's degree.

The Office of Federal Housing Enterprise Oversight (OFHEO) has devised the House Price Index (HPI) as a way of calculating the price changes in single-family homes. The HPI is measured on many different geographic levels, including the national average, Census division, the 50 states, and MSAs. From 2000 to 2007, West Virginia's house prices rose at an annual rate of 5.7 percent per year. This growth was outpaced, however, by the national average of 7.5 percent per year. The Washington-Arlington-Alexandria MSA had the highest annual growth in housing prices at 12.7 percent. Both the Winchester and Hagerstown-Martinsburg MSAs, which are located in the Eastern Panhandle and are in close proximity to the Washington-Arlington-Alexandria MSA, had annual growths above ten percent at 11.4 and 10.9 percent per year, respectively. The Charleston MSA had the lowest annual growth in house prices at 3.7 percent annually, followed closely by the Parkersburg-Marietta MSA at 3.8 percent per year, the Weirton-Steubenville MSA at 4.0 percent annually, and the Wheeling MSA at 4.4 percent annually, all of which were well below the West Virginia average.

County Performance

Population

Only twenty of the fifty-five counties in West Virginia increased in population between 2000 and 2007. West Virginia's overall population gain was relatively small, despite increases in population from domestic and international migration, because of a negative natural increase. Only Berkeley, Hampshire, Hardy, Jefferson, and Morgan counties grew above the national average of 1.0 percent per year. Conversely, thirty-five counties lost population between 2000 and 2007.

As Table 7 shows, between April 2000 and July 2007, West Virginia has had 941 more deaths than births. Berkeley County's natural increase of 3,722 was the highest in the state; while Kanawha County's negative natural increase of 967 was the greatest decrease. This negative natural increase has been offset by population increases from domestic and international migration, located primarily in the Eastern Panhandle because of the location's proximity to Washington D.C.

International migration occurred primarily in Monongalia and Kanawha counties. The combined 2,082 increase in population (1,638 and 444 respectively) accounted for forty-nine percent of West Virginia's total net international migration. The reason these two counties had such relatively high numbers of new international citizens can be attested to the location of West Virginia University in Monongalia County, and the location of the University of Charleston as well as the state's capital in Kanawha County.

Employment

As Table 8 shows, between 2002 and 2007, United States annual job growth has outpaced the state of West Virginia. The U.S. has grown at a rate of 1.1 percent per year, while West Virginia's growth has only been 0.6 percent per year. Pleasants County recorded the highest job growth rate in the state at 3.8 percent annually. This growth is mainly attributed to a 9.1 percent per year growth in goods-producing employment, second only to Lincoln County's 11.3 percent per year growth. Monongalia County had the second highest growth rate in the state at 3.3 percent, driven by a 5.7 percent per year growth in goods-producing employment as well as a 3.1 percent per year growth in service-producing employment.

Conversely, Hancock and Wyoming counties had the largest rate of decrease in employment between 2002 and 2007 (-3.3 percent per year and -1.6 percent per year respectively). Hancock County's loss of overall employment was due to its -10.2 percent per year loss in goods-producing employment which completely negated its 0.4 percent per year growth in service-producing employment. Wyoming County had negative job growth in both the goods-producing (-0.2 percent per year) and service-producing (-2.1 percent per year) sectors.

Table 8 also shows the annual unemployment rates for West Virginia, its counties, and the nation as a whole. In 2005, West Virginia had a lower unemployment rate than the nation. In 2006, however, the state's unemployment rate was a percentage point above the national average. And most recently in 2007, both West Virginia and the U.S. had similar unemployment rates of 4.6 percent. Monongalia County had the lowest unemployment rate in the state at 3.1 percent, while

the highest in the state was Pocahontas County with 7.7 percent of its labor force unemployed, well above the national average.

Personal Income

Per capita personal income in West Virginia grew faster than the U.S. average from 2001 to 2006, according to Table 9. The state averaged an annual growth of 3.9 percent per year, while the nation averaged 3.7 percent per year. Personal income is a measurement of the income received by residents. It includes earnings from work (wages, fringe benefits, proprietor's income, less social insurance taxes), asset income (dividends, interest, and rent), and transfer income (Social Security, Medicare, Medicaid, welfare).

Only Kanawha County had a higher PCPI than the U.S. average in 2006. Kanawha County had a PCPI of $36,879 in 2006, barely beating the national average of $36,714 but greatly outpacing the West Virginia average of $28,206. Clay County had the lowest PCPI in the state at $18,110. Ritchie and Wayne counties had the highest annual growth rates of PCPI between 2001 and 2006 at 5.2 percent. Grant County had the lowest growth rate recording a 1.3 percent per year growth in PCPI from 2001 to 2006.

TABLE 7
WEST VIRGINIA COUNTY POPULATION CHARACTERISTICS

	Total Population						Components of Change - April 2000 to July 2007				
	April 1990	April 2000	July 2000	July 2007	Ann. % Ch. April 1990-April 2000	Ann. % Ch. July 2000-July 2007	Births	Deaths	Natural Increase	Net Domestic Migration	Net International Migration
Barbour	15,699	15,557	15,549	15,532	-0.1	-0.0	1,243	1,384	-141	178	1
Berkeley	59,253	75,905	76,414	99,734	2.5	3.9	8,879	5,157	3,722	20,240	108
Boone	25,870	25,535	25,492	25,201	-0.1	-0.2	2,348	2,193	155	-415	39
Braxton	12,998	14,702	14,720	14,639	1.2	-0.1	1,061	1,252	-191	211	-6
Brooke	26,992	25,447	25,374	23,661	-0.6	-1.0	1,684	2,302	-618	-1,053	-2
Cabell	96,827	96,784	96,712	94,435	-0.0	-0.3	8,332	8,545	-213	-2,087	333
Calhoun	7,885	7,582	7,582	7,201	-0.4	-0.7	564	661	-97	-255	5
Clay	9,983	10,330	10,314	10,120	0.3	-0.3	957	851	106	-280	5
Doddridge	6,994	7,403	7,408	7,262	0.6	-0.3	524	598	-74	-27	-3
Fayette	47,952	47,579	47,498	46,334	-0.1	-0.4	4,128	4,375	-247	-904	108
Gilmer	7,669	7,160	7,169	6,907	-0.7	-0.5	462	580	-118	-114	8
Grant	10,428	11,299	11,289	11,925	0.8	0.8	926	882	44	642	5
Greenbrier	34,693	34,453	34,423	34,586	-0.1	0.1	2,719	3,227	-508	774	20
Hampshire	16,498	20,203	20,294	22,577	2.0	1.5	1,730	1,546	184	2,247	20
Hancock	35,233	32,667	32,620	30,189	-0.8	-1.1	2,465	3,138	-673	-1,655	1
Hardy	10,977	12,669	12,695	13,661	1.4	1.1	1,065	1,009	56	971	15
Harrison	69,371	68,652	68,568	68,309	-0.1	-0.1	5,898	6,228	-330	60	220
Jackson	25,938	28,000	28,043	28,223	0.8	0.1	2,351	2,217	134	204	25
Jefferson	35,926	42,190	42,438	50,832	1.6	2.6	4,497	2,832	1,665	6,988	128
Kanawha	207,619	200,073	199,717	191,306	-0.4	-0.6	16,987	17,954	-967	-7,439	444
Lewis	17,223	16,919	16,865	17,145	-0.2	0.2	1,401	1,638	-237	518	6
Lincoln	21,382	22,108	22,134	22,322	0.3	0.1	2,100	1,878	222	86	5
Logan	43,032	37,710	37,558	35,629	-1.3	-0.8	3,232	3,553	-321	-1,630	23
McDowell	35,233	27,329	27,128	22,991	-2.5	-2.3	2,118	2,731	-613	-3,643	13
Marion	57,249	56,598	56,508	56,728	-0.1	0.1	4,499	5,271	-772	1,041	93
Marshall	37,356	35,519	35,397	33,148	-0.5	-0.9	2,456	2,778	-322	-1,891	7
Mason	25,178	25,957	25,967	25,546	0.3	-0.2	2,141	2,180	-39	-253	-4
Mercer	64,980	62,980	62,932	61,350	-0.3	-0.4	5,257	5,905	-648	-824	89
Mineral	26,697	27,078	27,038	26,722	0.1	-0.2	2,155	2,228	-73	-189	42
Mingo	33,739	28,253	28,022	26,755	-1.8	-0.7	2,654	2,434	220	-1,612	8
Monongalia	75,509	81,866	81,914	87,516	0.8	0.9	6,508	4,574	1,934	2,390	1,638
Monroe	12,406	14,583	13,201	13,537	1.6	0.4	932	1,100	-168	560	-3
Morgan	12,128	14,943	15,014	16,351	2.1	1.2	1,107	1,294	-187	1,602	59
Nicholas	26,775	26,562	26,550	26,160	-0.1	-0.2	2,088	2,184	-96	-205	5
Ohio	50,871	47,427	47,332	44,398	-0.7	-0.9	3,447	4,282	-835	-2,200	158
Pendleton	8,054	8,196	8,166	7,650	0.2	-0.9	612	639	-27	-485	3
Pleasants	7,546	7,514	7,500	7,183	-0.0	-0.6	493	664	-171	-150	15
Pocahontas	9,008	9,131	9,110	8,571	0.1	-0.9	608	868	-260	-263	5
Preston	29,037	29,334	29,290	30,254	0.1	0.5	2,265	2,413	-148	1,182	6
Putnam	42,835	51,589	51,738	55,001	1.9	0.9	4,716	3,387	1,329	2,272	25
Raleigh	76,819	79,220	79,054	79,170	0.3	0.0	6,417	6,723	-306	344	243
Randolph	27,803	28,262	28,207	28,292	0.2	0.0	2,342	2,501	-159	261	40
Ritchie	10,233	10,343	10,337	10,371	0.1	0.0	867	902	-35	104	5
Roane	15,120	15,446	15,463	15,295	0.2	-0.2	1,225	1,294	-69	-49	32
Summers	14,204	12,999	14,326	13,202	-0.9	-1.2	842	1,201	-359	-761	5
Taylor	15,144	16,089	16,082	16,117	0.6	0.0	1,142	1,386	-244	341	4
Tucker	7,728	7,321	7,294	6,868	-0.5	-0.9	445	643	-198	-229	5
Tyler	9,796	9,592	9,586	8,952	-0.2	-1.0	653	832	-179	-423	6
Upshur	22,867	23,404	23,414	23,508	0.2	0.1	2,024	1,904	120	36	34
Wayne	41,636	42,903	42,901	41,231	0.3	-0.6	3,389	3,397	-8	-1,514	58
Webster	10,729	9,719	9,689	9,435	-1.0	-0.4	701	839	-138	-108	12
Wetzel	19,258	17,693	17,671	16,432	-0.8	-1.0	1,406	1,503	-97	-1,100	5
Wirt	5,192	5,873	5,881	5,809	1.2	-0.2	425	432	-7	-37	5
Wood	86,915	87,986	87,879	86,088	0.1	-0.3	7,322	7,104	218	-1,874	114
Wyoming	28,990	25,708	25,583	23,674	-1.2	-1.1	1,967	2,124	-157	-1,781	11
West Virginia	1,793,477	1,808,344	1,807,050	1,812,035	0.1	0.0	150,776	151,717	-941	7,802	4,246
United States	248,709,873	281,421,906	282,194,308	301,621,157	1.2	1.0	29,809,472	17,597,188	12,212,284	-	7,984,271

Source: Data is from the U.S. Department of Commerce, U.S. Census Bureau. <http://www.census.gov>.
Calculation of changes by authors. All changes are annual.

TABLE 8
NONFARM EMPLOYMENT GROWTH AND UNEMPLOYMNENT RATES
WEST VIRGINIA COUNTIES

	Total Nonfarm Employment				Nonfarm Employment Average Annual Growth Rates 2002-2007				Unemployment Rates		
			Annual Gr.(%)		Goods-		Service-				
	2002	2007	2002-2007	Rank	Producing	Rank	Producing	Rank	2005	2006	2007
Barbour	3,790	3,910	0.6	32	4.9	9	0.0	44	6.0	5.5	5.4
Berkeley	27,170	30,330	2.2	6	0.8	24	2.5	7	3.8	4.0	4.2
Boone	7,930	8,880	2.3	5	3.4	11	1.4	14	4.5	4.5	4.6
Braxton	4,240	4,530	1.3	16	3.5	10	0.9	27	5.8	5.3	5.4
Brooke	9,840	9,350	-1.0	50	-3.1	49	-0.2	47	7.1	7.1	5.9
Cabell	53,140	55,380	0.8	27	1.0	23	0.8	28	4.4	4.4	4.1
Calhoun	1,550	1,550	0.0	43	0.5	25	-0.2	46	8.4	6.9	7.0
Clay	2,040	2,270	2.2	7	3.2	14	1.7	8	7.6	6.6	6.9
Doddridge	1,330	1,340	0.1	40	5.6	5	-0.9	52	4.7	5.0	4.8
Fayette	13,420	13,600	0.3	37	-0.4	34	0.4	37	5.7	5.4	5.4
Gilmer	2,110	2,340	2.1	8	0.0	30	2.8	5	4.5	4.5	4.0
Grant	4,240	4,220	-0.1	44	-2.4	48	1.0	21	6.1	5.8	5.2
Greenbrier	13,440	14,380	1.4	15	0.4	26	1.5	13	6.0	5.9	6.2
Hampshire	4,190	4,400	1.0	23	-1.1	40	1.3	17	4.0	3.8	4.0
Hancock	14,670	12,390	-3.3	55	-10.2	54	0.4	36	7.2	7.3	5.7
Hardy	6,450	6,770	1.0	24	-0.5	35	2.9	4	3.7	3.7	4.6
Harrison	33,440	34,410	0.6	33	1.3	21	0.5	34	4.6	4.5	4.2
Jackson	9,100	9,190	0.2	39	-1.9	45	1.2	19	5.8	5.0	4.8
Jefferson	13,690	15,510	2.5	4	-2.4	47	3.3	1	3.2	3.2	3.4
Kanawha	116,510	115,730	-0.1	45	-1.5	43	0.0	43	4.7	4.2	4.0
Lewis	6,080	6,300	0.7	28	-2.0	46	1.3	15	4.9	4.9	5.0
Lincoln	3,020	3,520	3.1	3	11.3	1	1.2	18	6.3	5.8	5.4
Logan	11,920	11,940	0.0	42	0.3	28	-0.0	45	4.8	4.6	5.2
McDowell	5,940	6,250	1.0	22	5.4	7	0.1	41	8.0	7.3	7.6
Marion	21,330	22,520	1.1	21	1.6	20	1.0	23	4.4	4.3	4.2
Marshall	11,380	11,600	0.4	35	-1.8	44	1.3	16	5.7	5.5	5.2
Mason	6,710	7,150	1.3	17	-0.6	36	1.6	10	7.6	6.7	6.8
Mercer	24,620	23,840	-0.6	48	-0.8	38	-0.6	49	4.9	4.7	4.3
Mineral	7,390	7,980	1.5	11	5.3	8	0.3	38	5.2	4.8	4.6
Mingo	8,290	8,910	1.5	14	5.4	6	-0.6	48	5.6	5.2	5.7
Monongalia	45,170	53,230	3.3	2	5.7	4	3.1	3	3.6	3.3	3.1
Monroe	2,400	2,480	0.7	30	5.8	3	-0.7	50	4.5	5.2	5.0
Morgan	3,250	3,220	-0.2	46	-3.1	50	0.5	35	4.5	4.5	4.8
Nicholas	8,930	9,460	1.2	19	2.4	17	0.8	29	5.4	5.1	4.9
Ohio	29,800	30,820	0.7	29	-0.3	33	0.8	30	4.7	4.6	4.2
Pendleton	1,900	1,950	0.5	34	3.3	13	0.2	40	3.7	4.0	4.1
Pleasants	2,900	3,500	3.8	1	9.1	2	1.7	9	6.1	5.4	5.5
Pocahontas	3,810	3,560	-1.3	52	-1.4	41	-1.3	54	6.2	7.4	7.7
Preston	7,290	7,870	1.5	12	-1.4	42	2.6	6	4.6	4.3	4.2
Putnam	18,190	20,090	2.0	9	3.4	12	1.6	12	4.4	3.9	3.7
Raleigh	31,970	33,430	0.9	26	2.0	19	0.7	31	4.6	4.3	4.4
Randolph	12,080	12,830	1.2	18	2.2	18	1.0	24	5.1	4.8	5.1
Ritchie	3,290	3,570	1.6	10	0.1	29	3.1	2	5.7	4.8	5.1
Roane	3,450	3,560	0.6	31	-0.8	37	1.0	20	7.2	6.0	6.4
Summers	2,690	2,720	0.2	38	2.4	16	0.1	42	6.1	6.0	5.9
Taylor	3,490	3,240	-1.5	53	-11.1	55	0.6	32	5.1	5.0	4.8
Tucker	3,090	2,900	-1.3	51	-3.5	52	-0.8	51	6.1	5.9	5.9
Tyler	2,750	2,760	0.1	41	-3.2	51	1.6	11	7.1	6.8	6.2
Upshur	8,610	9,100	1.1	20	1.3	22	1.0	22	4.7	4.5	4.3
Wayne	10,140	10,320	0.4	36	0.3	27	0.3	39	5.1	5.2	4.6
Webster	2,380	2,560	1.5	13	2.8	15	0.9	25	5.7	5.5	5.6
Wetzel	5,470	5,210	-1.0	49	-1.0	39	-1.0	53	9.2	7.8	6.8
Wirt	830	870	0.9	25	0.0	30	0.9	26	7.2	5.8	5.8
Wood	43,090	42,510	-0.3	47	-4.0	53	0.5	33	5.3	4.7	4.6
Wyoming	6,260	5,780	-1.6	54	-0.2	32	-2.1	55	5.2	5.3	6.1
West Virginia	733,100	756,900	0.6	--	0.2	--	0.7	--	5.0	4.7	4.6
U.S.	130,341,000	137,623,000	1.1	--	-0.3	--	1.4	--	5.1	4.6	4.6

Source: West Virginia Bureau of Employment Programs. [http://www.wvbep.org/bep/default.htm]
Calculation of ranks and changes by authors. All changes are annual. A rank of 1 indicates the highest growth rate.

TABLE 9
WEST VIRGINIA PERSONAL INCOME BY COUNTY

	Total Personal Income (Millions $)			Per Capita Personal Income			PCPI Rank	
	2001	2006	Annual Gr. (%) 2001-2006	2001	2006	Annual Gr. (%) 2001-2006	Level 2006	Annual Gr. 2001-2006
Barbour	279.2	350.6	4.7	18,172	22,653	4.5	42	17
Berkeley	1,907.6	2,720.0	7.4	24,275	28,085	3.0	13	52
Boone	487.8	591.0	3.9	19,207	23,495	4.1	37	27
Braxton	238.7	296.4	4.4	16,221	20,293	4.6	51	12
Brooke	586.4	645.5	1.9	23,309	26,997	3.0	20	51
Cabell	2,382.3	2,792.5	3.2	24,829	29,580	3.6	8	41
Calhoun	120.5	143.2	3.5	16,236	19,753	4.0	53	30
Clay	153.4	182.2	3.5	15,009	18,110	3.8	55	33
Doddridge	131.0	149.9	2.7	17,464	20,737	3.5	47	43
Fayette	924.0	1,109.4	3.7	19,615	23,930	4.1	33	29
Gilmer	133.3	163.4	4.2	18,808	23,665	4.7	35	9
Grant	266.6	296.2	2.1	23,544	25,150	1.3	28	55
Greenbrier	779.1	949.4	4.0	22,665	27,465	3.9	16	31
Hampshire	403.1	496.6	4.3	19,599	22,320	2.6	43	53
Hancock	755.9	850.4	2.4	23,407	27,770	3.5	14	44
Hardy	258.5	318.7	4.3	20,204	23,626	3.2	36	48
Harrison	1,714.9	2,142.7	4.6	25,267	31,333	4.4	7	20
Jackson	584.7	687.6	3.3	20,893	24,424	3.2	32	49
Jefferson	1,227.8	1,689.7	6.6	28,359	33,990	3.7	3	37
Kanawha	6,148.0	7,076.3	2.9	31,094	36,879	3.5	1	45
Lewis	345.9	438.4	4.9	20,416	25,604	4.6	25	11
Lincoln	360.5	456.6	4.8	16,297	20,445	4.6	48	10
Logan	783.5	975.3	4.5	21,252	27,302	5.1	18	3
McDowell	426.7	465.4	1.8	16,196	19,898	4.2	52	25
Marion	1,341.0	1,624.0	3.9	23,872	28,738	3.8	11	35
Marshall	765.0	919.8	3.8	21,753	27,458	4.8	17	7
Mason	506.2	608.7	3.8	19,442	23,825	4.1	34	26
Mercer	1,428.5	1,664.3	3.1	23,091	27,231	3.4	19	47
Mineral	565.7	688.9	4.0	20,952	25,795	4.2	24	24
Mingo	556.6	671.1	3.8	20,280	25,150	4.4	28	19
Monongalia	2,118.5	2,756.4	5.4	25,587	31,742	4.4	5	18
Monroe	251.6	298.0	3.4	18,937	22,131	3.2	44	50
Morgan	389.5	526.0	6.2	25,696	32,510	4.8	4	6
Nicholas	529.7	639.9	3.9	20,240	24,432	3.8	31	32
Ohio	1,331.1	1,558.1	3.2	28,565	34,901	4.1	2	28
Pendleton	174.8	202.4	3.0	21,653	26,081	3.8	21	34
Pleasants	170.6	204.0	3.6	22,628	28,215	4.5	12	15
Pocahontas	193.5	225.6	3.1	21,676	25,926	3.6	23	38
Preston	585.6	753.9	5.2	20,070	25,020	4.5	30	16
Putnam	1,358.5	1,723.8	4.9	26,329	31,674	3.8	6	36
Raleigh	1,832.6	2,269.0	4.4	23,392	28,828	4.3	10	23
Randolph	624.9	784.3	4.6	22,127	27,671	4.6	15	13
Ritchie	201.2	262.0	5.4	19,547	25,207	5.2	27	1
Roane	273.7	326.4	3.6	17,751	21,163	3.6	46	40
Summers	229.4	271.9	3.5	16,199	20,383	4.7	49	8
Taylor	292.4	367.1	4.7	18,233	22,780	4.6	41	14
Tucker	148.6	175.3	3.4	20,581	25,416	4.3	26	21
Tyler	175.5	200.9	2.7	18,498	22,061	3.6	45	39
Upshur	439.6	545.1	4.4	18,843	23,223	4.3	40	22
Wayne	775.8	971.8	4.6	18,165	23,412	5.2	39	2
Webster	152.9	194.2	4.9	15,834	20,298	5.1	50	4
Wetzel	378.9	433.3	2.7	21,896	26,039	3.5	22	42
Wirt	98.5	108.3	1.9	16,833	18,717	2.1	54	54
Wood	2,148.8	2,492.8	3.0	24,500	28,900	3.4	9	46
Wyoming	463.5	560.8	3.9	18,492	23,462	4.9	38	5
West Virginia	41,902.5	51,015.5	4.0	23,294	28,206	3.9	--	--
U.S.	8,716,992.0	10,968,393.0	4.7	30,574	36,714	3.7	--	--

Source: Regional Economic Information System, Bureau of Economic Analysis. The data used in this table can be found at <http://www.bea.gov/bea/regional/reis/>. Calculations of ranks and changes by authors. All changes are annual.
A rank of 1 indicates the highest growth rate. Growth rate ranks take into account unpublished significant digits.

Focus On…

West Virginia Construction Update 2008

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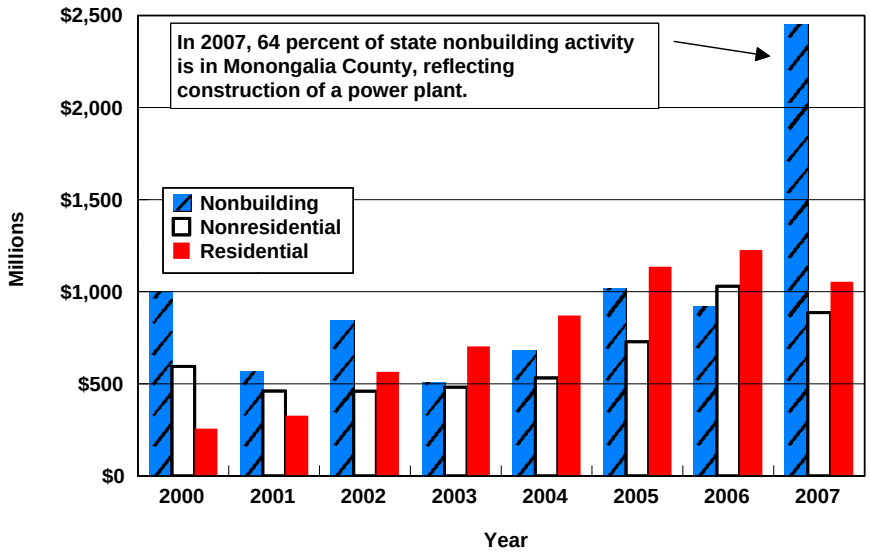
With George W. Hammond, Associate Director, BBER

Total value of construction starts in West Virginia has increased at an average annual rate of 13.1 percent between 2000 and 2007. Total construction starts reached its lowest point in 2001 at $1.35 billion and has steadily increased since, reaching its peak in 2007 at $4.39 billion. It is important to note, however, that without the start of a power plant in Monongalia County and the installation of scrubbers at the Fort Martin power plant that the total value of construction starts in West Virginia in 2007 would have declined from 2006.

As shown in Figure 18, nonbuilding construction starts have risen at average annual growth of 13.6 percent between 2000 and 2007. This growth however is due mainly to the construction of a power plant in Monongalia County, which accounts for 65 percent of all West Virginia nonbuilding construction starts in 2007. Nonbuilding construction starts peaked in 2007 but without the power plant investment, starts would only have valued $900 million, a decline from the 2006 value.

FIGURE 18
W.VA. VALUE OF CONSTRUCTION CONTRACTS BY TYPE
F.W. DODGE



Nonresidential construction starts have grown at an average annual rate of 5.8 percent from 2000 to 2007. Nonresidential construction starts declined in the past year, from $1.03 billion in 2006, to $886 million in 2007. A large contributor to the decline in nonresidential construction starts is Berkeley County, which had $353 million in nonresidential construction starts in 2006, but only

$55 million in 2007. This $298 million difference is more than two times larger than the total difference for West Virginia (a $144 million difference from 2006 to 2007). If Harrison County had not posted a $186 million growth from 2006 ($18 million) to 2007 ($204 million), the total decline in nonresidential construction starts would have been much greater.

Residential construction starts increased between 2000 and 2007 as well, at an average annual rate of 22.4 percent. Residential construction starts troughed in 2000 at $257 million, and peaked in 2006 at $1.23 billion. Similarly to nonresidential construction starts, residential construction starts also declined from 2006 to 2007, down to $1.05 billion. This decline is located mainly in the Eastern Panhandle (Berkeley, Jefferson, and Morgan counties). These three counties combined for a total of $726.6 million in residential construction starts in 2006, 59.2 percent of the state total. These three counties had lower residential construction starts in 2007, however, posting only $672.4 million, a $54.1 million decrease from the previous year. This $54.1 million decrease accounts for 31.4 percent of West Virginia's total decline in 2007 from 2006. Berkeley County did manage a small growth in residential construction starts ($514.8 million in 2006, $543.8 million in 2007), but this growth was nullified by even larger declines of $28.1 and $55.0 million from 2006 to 2007 in Jefferson and Morgan counties, respectively.

From the second quarter of 2007 to the second quarter of 2008 West Virginia surpassed the national rate of house price appreciation. Table 10 shows that house prices in West Virginia appreciated by 3.4 percent between the second quarters of 2007 and 2008. The United States, on the other hand, experienced a negative growth of -1.7 percent. From the second quarter of 2006 to the second quarter of 2007, West Virginia and the nation had appreciation rates at 4.3 and 3.4 percent, respectively. From the second quarter of 2007 to the second quarter of 2008 West Virginia house prices appreciated faster than all of the surrounding states. During that time period three surrounding states, Maryland, Ohio, and Virginia, experienced negative house price appreciations at -4.0, -0.3, and -2.6 percent, respectively.

The Wheeling MSA had the greatest house price appreciation from the second quarter of 2007 to the second quarter of 2008 at 12.3 percent. The Weirton-Steubenville MSA had the second highest appreciation rate at 7.0 percent. During this time period, three MSAs containing a West Virginia county experienced negative house price appreciations. The Winchester MSA had the greatest negative house price appreciation at -9.8 percent. The Washington-Arlington-Alexandria and Hagerstown-Martinsburg MSAs also had significant negative house price appreciations at -9.1 and -4.8 percent, respectively. Notably, the Washington-Arlington-Alexandria, Winchester, and Hagerstown-Martinsburg MSAs are all located in the Eastern Panhandle and Potomac Highlands.

TABLE 10
HOUSE PRICE APPRECIATION IN W.VA. METROPOLITAN STATISTICAL AREAS*
OFFICE OF FEDERAL HOUSING ENTERPRISE OVERSIGHT

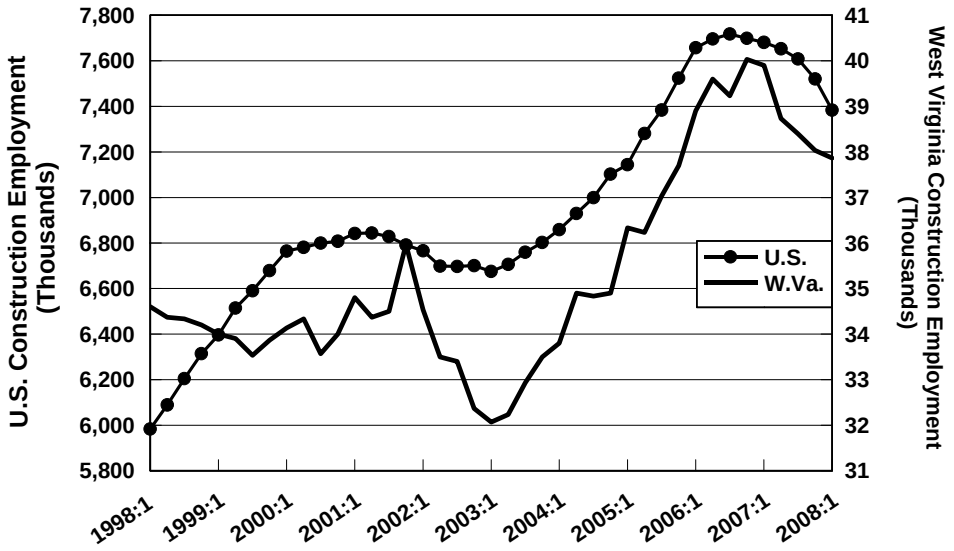
	Annual Percent Change			
	2004Q2-2005Q2	2005Q2-2006Q2	2006Q2-2007Q2	2007Q2-2008Q2
W.Va. MSAs*				
Charleston MSA	4.3	4.1	3.5	6.0
Cumberland MSA	10.9	17.3	11.8	0.8
Hagerstown-Martinsburg MSA	24.6	15.3	2.8	-4.8
Huntington-Ashland MSA	6.0	4.3	5.1	3.5
Morgantown MSA	13.1	8.8	4.9	3.7
Parkersburg-Marietta MSA	7.4	3.0	1.8	2.2
Wash.-Arl.-Alex. MSA	26.3	14.8	0.9	-9.1
Weirton-Steubenville MSA	3.9	0.7	4.4	7.0
Wheeling MSA	1.7	5.4	2.1	12.3
Winchester MSA	27.0	16.2	-2.5	-9.8
W.Va. Non-MSA	6.2	7.8	7.2	4.3
Kentucky	5.6	3.9	3.6	3.1
Maryland	23.0	15.7	4.3	-4.0
Ohio	4.3	1.1	0.7	-0.3
Pennsylvania	12.8	9.8	4.7	1.4
Virginia	21.0	13.4	3.5	-2.6
W.Va.	9.3	7.0	4.3	3.4
U.S.	12.2	8.7	3.4	-1.7

*MSAs with at least one West Virginia county. These data cover repeat transactions on single-family detached properties for which at least two mortgages were originated and subsequently purchased by either Freddie Mac or Fannie Mae. The use of repeat transactions on the same physical property helps to control for differences in the quality of the houses comprising the sample used for statistical estimation. http://www.ofheo.gov/

Between 1998 and 2008 construction employment has steadily increased in both the United States and West Virginia along a similar trend, as Figure 19 shows. Construction employment was at its lowest point in the U.S. in the first quarter of 1998, when there were 6.0 million people employed. Construction employment then soared to 6.8 million in the second quarter of 2001, had a small decline to 6.75 million in the first quarter of 2003, and then rose steadily to 7.7 million in the third quarter of 2006. Since the U.S. construction employment peak in the third quarter of 2006, construction employment in the nation has declined in each consecutive quarter, down to the most recent employment of 7.4 million construction workers in the first quarter of 2008.

West Virginia's construction employment trend in many ways mirrors that of the United States. In the 1999 to 2001 time span, both West Virginia and the U.S. showed trends of steadily growing in construction employment. West Virginia also shrank in construction employment from 2002 to 2003, but West Virginia's decline in construction employment was much more severe than that of the nation. West Virginia hit its lowest point in construction employment for the ten-year period in the first quarter of 2003, when the state employed only 32.1 thousand construction employees. Mirroring the nation, West Virginia grew at a steep pace from 2003 to 2006, when West Virginia's construction employment peaked at 40.0 thousand construction employees in the fourth quarter of 2006. After the fourth quarter of 2006, however, West Virginia shrank in construction employment in every quarter since, down to 37,900 construction employees in the first quarter of 2008.

FIGURE 19
W.VA. AND U.S. CONSTRUCTION EMPLOYMENT TRENDS
SEASONALLY ADJUSTED



County and Labor Market Results

Total construction value per capita in West Virginia was $2,423, as shown in Table 11. Monongalia County ranked first out of West Virginia's counties with a per capita construction value of $19,636. McDowell County ranked second at $8,051 per capita, while Berkeley, Jefferson, and Morgan counties located in the Eastern Panhandle, ranked 3rd ($7,821), 6th ($2,613), and 7th ($2,373), respectively. Wyoming County ranked last in the state, with only $163 in construction starts per capita. Pleasants County ranked second to last with $187.

Monongalia County was far above any county in the state, in terms of nonbuilding construction starts per capita at $18,024. This can be largely attributed to the start of a power plant, as well as the installation of scrubbers at the Fort Martin power plant. Grant County ranked second at $2,839, which is well below the Monongalia County value, but still considerably higher than the West Virginia benchmark of $1,352. Jefferson County, although ranked 6th in total construction starts per capita, ranked last in the state for nonbuilding construction starts at $44. Calhoun and Hampshire counties also had per capita non building construction starts below $50 at $46 and $49, respectively.

Nonresidential construction starts per capita were greatest in McDowell County in 2007, at $6,589. Harrison County ranked second at $2,992 per capita and Monongalia County, who is ranked first in the state for both total and nonbuilding construction starts per capita, ranked third at $1,213. West Virginia had $488 in nonresidential construction starts per capita.

The top three ranked counties in residential construction per capita are all located in the Eastern Panhandle. Berkeley ($5,452), Jefferson ($2,098), and Morgan ($1,347) counties ranked first, second, and third, respectively, in 2007. Hampshire County, located in the Winchester MSA, and in close proximity to the aforementioned Eastern Panhandle counties, ranked 4th with $1,181 per capita in residential construction starts. West Virginia posted $582 per capita in residential construction starts for 2007.

TABLE 11
WEST VIRGINIA COUNTY CONSTRUCTION DATA

Per Capita Construction Value

	Total Construction Value		Value Of Nonbuilding		Value Of Nonresidential		Value Of Residential	
	2007	Rank	2007	Rank	2007	Rank	2007	Rank
Barbour	254	50	79	51	61	34	114	41
Berkeley	7,821	3	1,820	3	549	9	5,452	1
Boone	602	30	584	10	0	45	18	50
Braxton	615	29	258	27	191	25	166	25
Brooke	417	40	289	23	16	44	113	42
Cabell	1,358	15	299	21	883	5	177	23
Calhoun	280	49	46	54	0	45	234	15
Clay	250	52	159	40	25	40	66	47
Doddridge	340	46	108	46	0	45	232	16
Fayette	761	21	137	43	454	13	170	24
Gilmer	1,038	18	314	18	724	7	0	51
Grant	3,328	5	2,839	2	157	29	332	12
Greenbrier	1,891	10	240	29	810	6	842	7
Hampshire	1,428	14	49	53	198	23	1,181	4
Hancock	639	27	476	12	63	33	101	43
Hardy	2,351	8	219	32	996	4	1,137	5
Harrison	3,604	4	279	25	2,992	2	333	11
Jackson	381	43	345	16	36	38	0	51
Jefferson	2,613	6	44	55	470	12	2,098	2
Kanawha	1,450	13	1,103	6	194	24	153	33
Lewis	2,143	9	1,607	4	419	14	117	40
Lincoln	253	51	99	48	0	45	153	32
Logan	1,297	16	1,085	7	47	36	165	26
McDowell	8,051	2	1,309	5	6,589	1	154	29
Marion	551	34	247	28	213	21	91	45
Marshall	715	25	390	15	179	26	146	36
Mason	458	38	147	41	162	28	148	35
Mercer	551	35	454	13	55	35	41	49
Mineral	1,599	12	227	31	503	10	869	6
Mingo	220	53	84	50	0	45	136	37
Monongalia	19,636	1	18,024	1	1,213	3	399	10
Monroe	746	22	516	11	0	45	231	17
Morgan	2,373	7	926	8	100	30	1,347	3
Nicholas	414	41	237	30	23	41	154	30
Ohio	735	24	197	34	353	16	185	21
Pendleton	1,689	11	397	14	630	8	662	8
Pleasants	187	54	124	45	63	32	0	51
Pocahontas	509	36	285	24	41	37	182	22
Preston	745	23	270	26	326	18	149	34
Putnam	1,042	17	295	22	170	27	578	9
Raleigh	601	31	335	17	64	31	202	18
Randolph	313	48	183	37	0	45	130	39
Ritchie	346	45	192	35	0	45	154	31
Roane	398	42	89	49	0	45	308	13
Summers	589	32	169	39	342	17	78	46
Taylor	484	37	191	36	202	22	91	44
Tucker	862	19	830	9	32	39	0	51
Tyler	449	39	313	19	0	45	136	38
Upshur	567	33	100	47	308	19	159	28
Wayne	374	44	306	20	16	42	52	48
Webster	626	28	63	52	372	15	191	19
Wetzel	829	20	181	38	487	11	161	27
Wirt	319	47	129	44	0	45	190	20
Wood	708	26	199	33	238	20	271	14
Wyoming	163	55	147	42	16	43	0	51
West Virginia	2,423	--	1,352	--	489	--	582	--

Construction data is from FW Dodge, July 2008

Focus On….

Evaluating the West Virginia Economic Outlook Forecasts

A forecast is a prediction about the future. In the simplest terms, evaluating a forecast means comparing forecast values to actual realizations. In theory, this is simple; in practice, it gets complicated. The purpose of this section is to systematically compare forecasts from the West Virginia Econometric Model to actual realizations and summarize the results.

Overall, the forecast differences have so far been fairly small for most of the major indicators of the state economy. But, as you know from your mutual fund prospectus, past performance is not necessarily a good indication of future performance. Indeed, part of the reason that the model has performed well during the last nine years is that the overall state/national economic environment has been fairly stable. However, as model forecasts extend to less stable time periods, forecast differences are likely to increase.

Keep in mind that most forecasts differ from what we eventually observe. It is a fact of life that the future is uncertain and an econometric model cannot surmount that. In addition, the current economic situation is uncertain. Even preliminary economic data are released at least one month after the fact and sometimes take years to become "final." Thus, we find ourselves in the position of evaluating what the future may bring, while in possession of only incomplete information about what has just happened!

Indeed, this uncertainty contributes to the importance of timely analysis of current trends and forecasting. The West Virginia Economic Outlook is devoted to increasing our understanding of current and past economic trends and exploring what these may mean for the future. The analysis below is intended to explain in an accessible way how the West Virginia Econometric Model works and how we can systematically track its performance.

What the Model Does

The West Virginia State Econometric Model consists of over 50 equations designed to relate key West Virginia economic variables to each other and to important national variables. The model forecasts nonfarm jobs by industry (until Fall 2003 these industries were classified using the Standard Industrial Classification (SIC) codes), the unemployment rate, population by age group, and inflation-adjusted personal income by major component.

Broadly speaking, the model separates the state economy into those sectors that depend on local economic conditions and those that depend on national/international conditions. For instance, a large part of retail trade activity depends on the income of state residents and population of the state. In contrast, a large part of the activity in the transportation equipment and chemical industries depends on the performance of the national and international economies, since much of the production of these industries is purchased by individuals and businesses located out of state.

In order to produce a forecast for West Virginia, the model requires forecasts for the relevant national and international variables. Thus, each state forecast depends on a specific national

forecast; ours have come from Global Insight (a major international forecasting and consulting firm).

To sum up, the forecast attempts to summarize as much as possible of what we know about the past, present, and expected future course of the state economy.

How to Evaluate a Forecast

The Switch to NAICS

The West Virginia State Econometric Model produced 14 state forecasts, using the SIC-based industry classification for the employment sector. This method of classifying firms into industries is a crucial step in data and model development. Beginning with the forecast produced in November 2003, we adopted the North American Industry Classification System (NAICS), because the U.S. Bureau of Labor Statistics (and the West Virginia Bureau of Employment Programs) began releasing employment data solely on the NAICS basis. In other words, the detailed SIC-based historical employment estimates have been discontinued.

This switch primarily impacts the employment sector of the model, but it also affects our ability to evaluate model performance, since forecasts produced using SIC-based data cannot be evaluated using NAICS-based historical data. Thus, our evaluation of SIC-based employment forecasts ended in November 2003. See past editions of the West Virginia Economic Outlook for forecast evaluations of SIC-based employment data. Forecast evaluation of employment by NAICS industry is now available for selected sectors. Again, recent decisions by the U.S. Bureau of Labor Statistics to limit published statistics to relatively large sectors impacts our ability to evaluate past forecasts. However, forecast evaluation of total employment, the unemployment rate, population by age group, and personal income by major component will continue as before.

The model produces quarterly forecasts, although we also present these results in the form of annual average forecasts. Each release contains forecasts ranging from one quarter ahead to between 12 and 16 quarters ahead.

To summarize the forecasting performance of the model, we focus on forecasts that are one, four, and eight quarters ahead and forecasts that are one, two, three, and four years ahead. The average results from these particular forecast horizons should be representative of the overall performance of the model.

Forecast Horizon

Now, what is the meaning of a one-quarter-ahead forecast? A practical example might answer this question more clearly. Suppose that in the spring of 2007, the most current historical data for employment ended with the second quarter of 2007. A one-quarter-ahead forecast at that time would be a forecast for the third quarter of 2007. A four-quarter-ahead forecast would extend to the second quarter of 2008.

Likewise, suppose that in the fall of 2007, the most current historical data for employment ended with the third quarter of 2007. A one-quarter-ahead forecast at that time would be a forecast for the fourth quarter of 2007. A four-quarter-ahead forecast would extend to the third quarter of 2008. Thus, each forecast has its own one-quarter-ahead forecast, four-quarters-ahead forecast, and so on.

This method of dealing with forecast horizons has an important implication when we analyze annual averages. That's because model forecasts are almost always completed without a full year's worth of data for the current year. In other words, in the fall of 2007 we had employment data through the third quarter of the year, which means that the annual average data for 2007 reflects three quarters of actual results and one quarter of forecast data. Further, that means that our annual data for 2007 is actually a forecast. For the purposes of our example, the annual data for 2007 is a one-year-ahead forecast and data for 2008 is a two-year-ahead forecast, and so on.

Forecast Difference

To measure how far a forecast differs from the actual results, I use the term "forecast difference." A forecast difference is measured simply as a forecast value minus the actual value. A percentage forecast difference is just the forecast difference divided by the actual value, multiplied by 100. Thus, a positive forecast difference tells us that the forecast exceeds the current estimate, whereas a negative difference tells that the forecast falls short of the current estimate.

In the end, I report average percentage forecast differences for all available forecasts at various forecast horizons. Since the forecast difference from each release could be positive or negative, an average of forecast differences would allow positive forecast differences to be canceled by negative forecast differences. In order to account for this, we also compute an average of the absolute percentage forecast differences.

Tracking West Virginia Economic Outlook Forecasts

Table 12 summarizes both the average absolute percentage forecast differences as well as the average percentage forecast differences for all variables. The table is based on data obtained from the evaluation of at most 24 available forecasts. It shows that in general the forecast values have fairly closely matched the actual values. Average absolute percentage forecast differences at the two-year-ahead horizon for the major aggregates (total nonfarm employment, total population, personal income) vary from 0.51 percent to 2.08 percent.

At the two-year-ahead horizon, the average absolute percentage difference is 0.62 percent for nonfarm payroll jobs. The average percentage difference at this horizon is 0.12 percent, indicating that the model has shown a slight tendency to overpredict job growth. Further, a forecast difference of 0.62 percent amounts to 4,693 jobs (evaluated at the 2007 nonfarm payroll employment level). In other words, on average for 22 forecasts, forecast values have tended to be 0.62 percent above or below actual values.

Population forecasts have also exceeded actual estimates on average, although the absolute percentage difference has not been large (0.51 percent at the two-year horizon). That translates into an average forecast difference of 9,241 residents (based on last year's level). For population, a two-year-ahead forecast horizon is really a two-year ahead forecast, because these estimates are released only once a year.

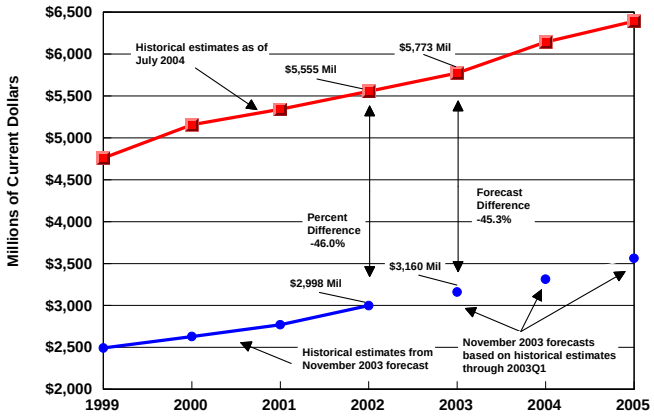
The largest forecast differences produced by the model have been in personal income. At the two-year-ahead horizon, average absolute forecast differences have averaged 2.08 percent. Looking at the forecast detail, wage and salary income shows the smallest forecast differences, while dividends, interest, and rent produces the largest differences.

Part of the reason that the forecast differences are largest in personal income is that most of the components of income (except wages and salaries) are subject to large historical revisions. Figure 20 provides a concrete example of how data revisions affect forecast evaluation, using data for

West Virginia other labor income. This consists of employer contributions of employee pension and insurance funds and employer contributions for government insurance.

In July 2003, the U.S. Bureau of Economic Analysis (BEA) estimated that state income from other labor income amounted to $2,998 million dollars in 2002. This estimate was preliminary and based on incomplete data. For the November 2003 Outlook, the West Virginia Econometric Model used the 2002 data and forecasted from that level, producing a forecast for state other labor income in 2003 (a one-year-ahead forecast) of $3,160 million.

FIGURE 20
THE IMPACT OF DATA REVISIONS ON
FORECAST EVALUATION: W.VA. OTHER LABOR INCOME



*Consists of employer contributions of employee pension and insurance funds and employer contributions for government insurance.

By July 2004, BEA revised its presentation of personal income to include employer contributions for government social insurance, which increased the estimate of state other labor income for 2002 up to $5,555 million.[1] In the forecast evaluation of one-year-ahead forecasts, I compare the forecast (produced in November 2003) for other labor income for 2003 to the latest historical estimate of 2003 other labor income. The forecast difference for this particular forecast is now –45.3 percent. Indicating that the forecast produced in 2003 is significantly below current estimates.

However, it is clear that most of the forecast difference is attributable to the data revision, not to a problem with the forecast model. Indeed, the percent difference between the two historical estimates for 2002 was –46.0 percent. Thus, most of the observed forecast difference in 2003 is attributable to the data revision and not to problems with the model.

Table 13 summarizes the forecast evaluation for the Eastern Panhandle Region. The West Virginia Economic Outlook has produced forecasts for a large number of regions, but I focus on the Eastern Panhandle Region because there are ten forecasts available for evaluation. Having

[1] This change in presentation does not affect the estimate of total personal income, since employer contributions for government social insurance are subsequently subtracted from gross earnings in the computation of personal income.

more than one or two forecasts is important so that one-time events do not dominate the forecast differences.

As the table shows, the Eastern Panhandle Region model has performed in much the same manner as the state model. One-year-ahead average absolute forecast differences for the major aggregates (total nonfarm employment, total population, personal income) range from 0.81 percent to 3.20 percent. Regional forecasts use annual data, so I cannot present a quarterly forecast evaluation. As we noted for the statewide forecasts, forecast differences are larger for personal income, and particularly so for the components of personal income which are subject to significant data revisions.

TABLE 12
TRACKING WEST VIRGINIA ECONOMIC OUTLOOK FORECASTS
QUARTERLY AND ANNUAL AVERAGE FORECAST DATA

	Percentage Differences: Quarterly Data						Percentage Differences: Annual Average Data							
	One Quarter Ahead		Four Quarters Ahead		Eight Quarters Ahead		One Year Ahead		Two Years Ahead		Three Years Ahead		Four Years Ahead	
	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.
Number of Forecasts**	24	24	24	24	22	22	24	24	22	22	20	20	18	18
Employment and Labor Force (%)														
Total Nonfarm Employment	-0.17	0.45	0.05	0.52	0.52	1.00	-0.09	0.38	0.12	0.62	0.55	1.06	1.26	1.70
Goods Producing	-0.03	1.23	-1.10	1.99	-1.82	3.45	-0.29	1.08	-1.37	2.29	-3.61	3.61	-4.08	4.08
Natural Res. & Mining	-2.16	4.11	-5.42	5.42	-10.45	10.45	-2.57	3.89	-6.85	6.85	-13.28	13.28	-16.08	16.08
Construction	-0.44	2.64	-3.45	5.18	-5.49	8.00	-0.85	2.42	-4.28	5.42	-9.29	9.29	-12.85	12.85
Manufacturing	1.08	1.15	2.21	2.21	4.57	4.57	0.98	1.04	2.83	2.83	4.48	4.48	7.48	7.48
Non-Durable Mfg.	1.80	1.80	3.08	3.30	4.17	4.17	1.72	1.74	3.51	3.51	4.45	4.45	7.88	7.88
Service Producing	-0.52	0.61	-0.22	0.48	0.04	0.51	-0.45	0.50	-0.21	0.50	-0.16	0.39	-0.66	0.66
Trade, Trans., & Utilities	-0.74	0.79	-1.61	1.63	-2.07	2.29	-0.83	0.89	-1.97	1.97	-3.12	3.12	-3.62	3.62
Wholesale Trade	-1.04	1.47	-1.98	2.87	-3.82	3.98	-1.09	1.46	-3.16	3.27	-5.94	5.94	-8.66	8.66
Retail Trade	-0.61	0.65	-1.20	1.20	-1.14	1.49	-0.74	0.86	-1.29	1.29	-1.71	1.71	-1.50	1.50
Information	2.77	2.77	4.73	4.86	6.27	6.59	3.04	3.04	5.04	5.18	7.96	7.96	11.02	11.02
Financial Activities	1.05	1.22	1.79	1.79	3.41	3.41	1.24	1.28	2.49	2.49	3.90	3.90	6.36	6.36
Profess. & Business Services	-0.84	2.27	0.10	1.52	0.94	2.30	-0.40	1.62	0.40	1.83	2.63	3.15	1.01	1.01
Educational & Health Services	-0.66	1.72	0.14	2.19	1.00	2.15	-0.50	1.48	0.39	2.31	0.34	1.42	-0.06	0.06
Educational Services	-9.40	12.22	-6.51	14.22	-6.97	16.60	-8.40	11.45	-9.06	15.98	-16.27	16.85	-22.25	22.25
Health Care & Social Assist.	0.25	0.80	0.87	1.71	1.86	1.86	0.30	0.86	1.40	1.71	2.07	2.07	2.12	2.12
Leisure & Hospitality	-1.25	1.29	-0.93	1.18	-0.80	1.45	-1.31	1.39	-0.95	1.14	-1.21	1.90	-2.13	2.13
Other Services	-0.29	1.28	0.47	1.45	1.32	1.41	-0.08	0.95	0.60	1.03	1.50	1.50	1.75	1.75
Government	-0.35	0.68	0.03	0.39	-0.28	0.39	-0.39	0.43	-0.15	0.19	-0.40	0.40	-1.47	1.47
Federal Civilian	2.24	2.24	1.79	1.82	1.67	1.87	1.38	1.38	2.07	2.07	2.09	2.18	1.03	1.03
State & Local	-0.82	0.99	-0.28	0.54	-0.63	0.63	-0.71	0.71	47.60	48.61	66.20	67.37	163.60	163.60
Labor Force	0.70	0.86	1.11	1.35	1.88	1.93	0.83	0.92	1.26	1.50	2.11	2.15	3.46	3.46
Employment	0.79	0.89	0.92	1.17	1.47	1.59	0.88	0.94	1.04	1.29	1.68	1.78	2.91	2.91
Unemployment Rate	-1.61	2.87	3.23	6.32	7.11	10.84	-1.02	2.38	3.48	6.48	7.12	10.97	10.02	12.85
Population (%)														
Total	0.32	0.37	0.37	0.44	0.46	0.57	0.35	0.40	0.42	0.51	0.50	0.67	0.31	0.72
Age 0-17	-0.15	0.95	-0.44	0.94	-0.64	0.89	-0.30	0.96	-0.57	0.84	-0.67	1.14	-0.86	1.38
Age 18-44	1.14	1.24	1.42	1.50	1.80	1.80	1.28	1.37	1.66	1.67	1.97	1.97	2.03	2.09
Age 45-64	-0.45	1.30	-0.51	1.38	-0.67	1.55	-0.48	1.32	-0.64	1.50	-0.85	1.68	-1.14	1.81
Age 65 and up	0.35	0.66	0.51	0.85	0.68	1.21	0.43	0.74	0.64	1.10	0.86	1.31	0.35	1.22
Nominal Personal Income (%)														
Total	0.10	2.07	-0.14	2.08	-0.41	2.32	0.08	2.09	-0.20	2.08	-0.43	2.69	-2.27	3.75
Wage & Salary	-0.30	0.98	-0.59	1.15	-0.86	1.94	-0.15	0.83	-0.57	1.39	-0.74	2.14	-1.85	3.21
Other Labor	-36.59	38.11	-37.07	38.75	-39.02	40.17	-36.63	38.36	-38.80	40.36	-43.27	43.74	-49.42	49.42
Proprietors'	3.47	7.90	2.68	7.76	0.82	6.72	3.19	7.53	2.06	7.54	-0.01	5.94	-4.98	6.54
Div., Int., Rent	-0.70	10.81	0.19	12.81	1.32	15.45	-0.44	11.33	0.56	14.23	2.97	17.26	8.73	19.14
Transfer	4.77	8.67	4.95	9.52	5.34	10.54	4.96	8.92	5.33	10.25	5.53	10.78	1.07	8.73

*Positive numbers indicate that the forecast exceeds current estimates.
Negative numbers indicate that the forecast falls short of current estimates.
** Forecasts evaluated: Mid-Year Review: 1995, 1996, 1997, 1999, 2001, 2003, 2005; Long-Term Forecast 1998, 2000, 2002, 2004, 2006;
West Virginia Economic Outlook: 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006. 2007
NAICS employment forecasts begin in November 2003. BLS no longer publishes seasonally-adjusted
estimates for many employment sectors, so forecast differences cannot be computed.
Beginning with the 2007 forecast, jobs are measured by covered employment. Previous forecasts used nonfarm payroll employment.

TABLE 13
TRACKING EASTERN PANHANDLE REGION FORECASTS

	Percentage Differences					
	One Year Ahead		Two Years Ahead		Three Years Ahead	
	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.	Avg. Diff.*	Avg. Abs. Diff.
Number of Forecasts**	11	11	10	10	9	9
	Nonfarm Employment by Industry (%)					
Total	-0.03	0.86	-0.04	2.02	-0.40	1.88
Goods Producing	1.43	3.26	1.76	5.91	7.60	7.60
Nat. Res. & Mining	0.43	3.99	-1.68	2.24	-2.53	2.53
Construction	2.35	6.30	5.08	14.43	19.26	19.26
Manufacturing	0.77	2.84	-0.16	3.95	0.19	0.19
Service Producing	-0.23	0.48	0.17	1.66	-1.00	1.00
Trade, Trans., Util.	-1.63	1.71	-2.77	3.74	-6.12	6.12
Information	1.35	7.00	-0.29	4.61	-5.35	5.35
Financial Activities	-2.15	2.56	-5.40	5.90	-5.86	5.86
Prof. & Business Serv.	1.77	8.03	10.75	16.03	23.56	23.56
Education & Health	0.92	1.84	1.86	2.58	0.05	0.05
Leisure & Hospitality	1.43	2.48	2.81	2.81	2.69	2.69
Other Services	0.13	1.41	-2.06	2.06	-0.84	0.84
Government	-1.13	1.02	-1.64	2.78	-6.01	6.01
	Civilian Labor Force, Employment, and Unemployment (%)					
Labor Force	-1.66	2.11	-2.03	3.27	-2.85	4.09
Employment	-0.93	1.74	-1.24	3.19	-2.40	3.91
Unemployment Rate	-2.30	5.36	-0.26	11.61	0.33	18.46
	Population (%)					
Total Population	-0.64	0.81	-1.55	1.55	-2.55	2.55
	Nominal Personal Income (%)					
Total	-2.75	3.20	-2.86	2.89	-3.95	4.01
Wage and Salary	-1.37	1.74	-1.80	2.07	-3.14	3.33
Other Labor Income	-35.20	35.24	-38.30	38.42	-43.82	43.82
Proprietors' Income	-6.48	11.71	-9.55	17.31	-13.76	21.11
Dividends, Interest, Rent	-6.39	13.30	-3.78	16.93	-2.40	20.51
Transfer Income	7.97	13.23	8.40	14.59	8.70	14.24

Eastern Panhandle Region: Berkeley, Morgan, and Jefferson Counties

** Forecasts evaluated: 1996, 1997, 1998, 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007 Regional forecasts. Employment forecasts by NAICS industry can only be evaluated for 2004, 2005, 2006, and 2007. Total employment forecast differences are evaluated for all forecasts.

National Outlook

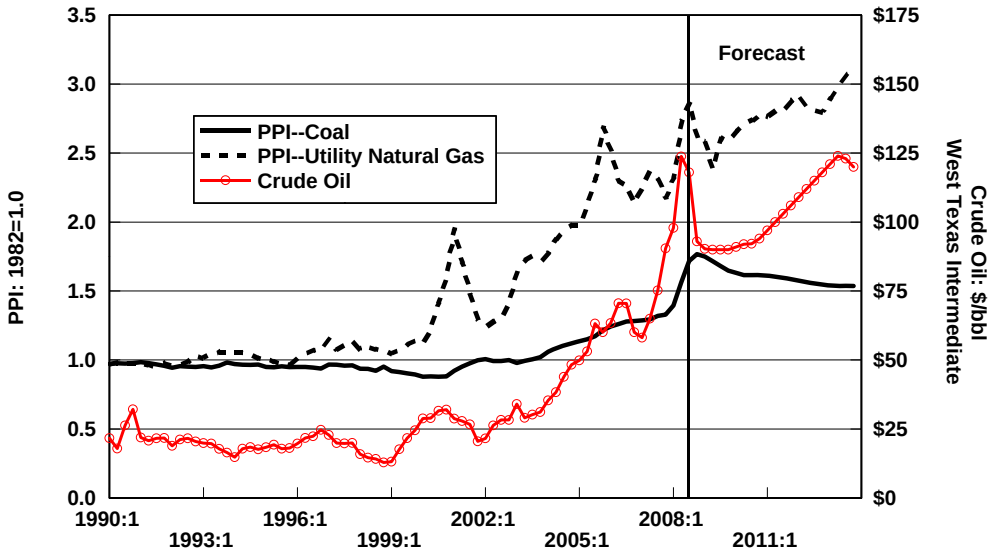
Adam Hoffer, Graduate Research Assistant
With George W. Hammond, Associate Director, BBER

Because no state can produce all the goods and services its residents demand, trade becomes a key economic factor driving state and local economic performance. Thus, West Virginia's economic growth depends, in part, on national and international economic performance. Likewise, the forecast for West Virginia depends on the forecast of the U.S. and the forecasts of West Virginia's global partners. IHS Global Insight, Inc., a worldwide consulting and forecasting group, provided the forecast summarized in this section, which underpins the state forecast.

Recent Developments

The U.S. economy exceeded expectations for the first half of the year, avoiding a decline in real GDP and growing 3.3 percent in the second quarter. This growth was driven by a strong performance in exports, adding 3.1 percentage points to the stagnant 0.2 percent domestically driven growth. The U.S. consumer is finally getting a relief at the gas pump as oil prices have plummeted from nearly $150/barrel in mid-July to less than $90 per barrel now. Figure 21 shows the soaring cost of high energy prices across the board in not only oil, but natural gas and coal as well over the past few years.

FIGURE 21
ENERGY PRICES HAVE SKYROCKETED
U.S. FORECAST FROM IHS GLOBAL INSIGHT OCTOBER 2008



That was the good news. Unfortunately, now comes the bad news. The third quarter posted a -0.2 percent growth of GDP, only the second quarter to yield negative growth since 2001. The start of October marked the 9th straight month of increasing unemployment. Worse yet, the rate of job loss is accelerating. On the employment front, 159,000 jobs were lost in September, the highest mark of the year. This raises the year-to-date average of 84,000 jobs lost per month.

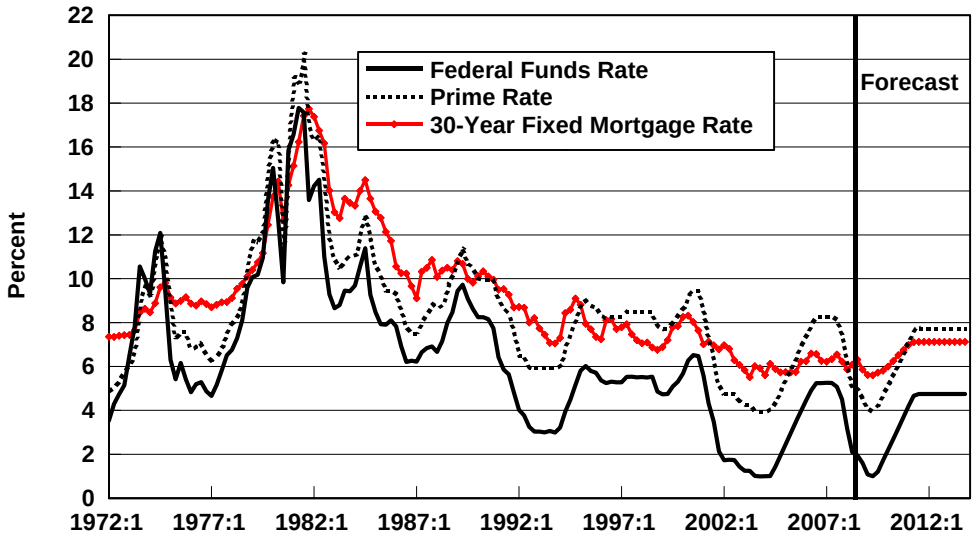
Combining growing unemployment with raising inflation has marked hard times for the American consumer in 2008. Inflation has risen to 5.6 percent and with no sign of wages responding, when prices rise, workers see a decrease in their real wage (wages divided by the price level) and a lower standard of living.

On September 7, mortgage giants Fannie Mae and Freddie Mac were secured in a complete government buyout, replacing existing management and executives and handing control to the Federal Housing and Finance Authority. Following the government buyout, the U.S. Treasury has pledged to buy $700 billion in bad assets and the Federal Reserve has agreed to lend directly to nonfinancial corporations. The tightening credit squeeze and inflation fears have forced the Federal Reserve lowered the funds rate to 1.50 percent. The drop is 289 basis points or 2.89 percentage points from the previous 2007 fourth quarter. Figure 22 shows the federal funds rate along with the prime rate and the 30-year fixed mortgage rate. In response to the financial crisis, in the, the 30-year mortgage rate which had had been increasing throughout 2008, from 5.8 percent up to 6.4 percent, dropped back down below 6 percent.

FIGURE 22

INTEREST RATES START TO RISE IN 2009

U.S. FORECAST FROM IHS GLOBAL INSIGHT OCTOBER 2008

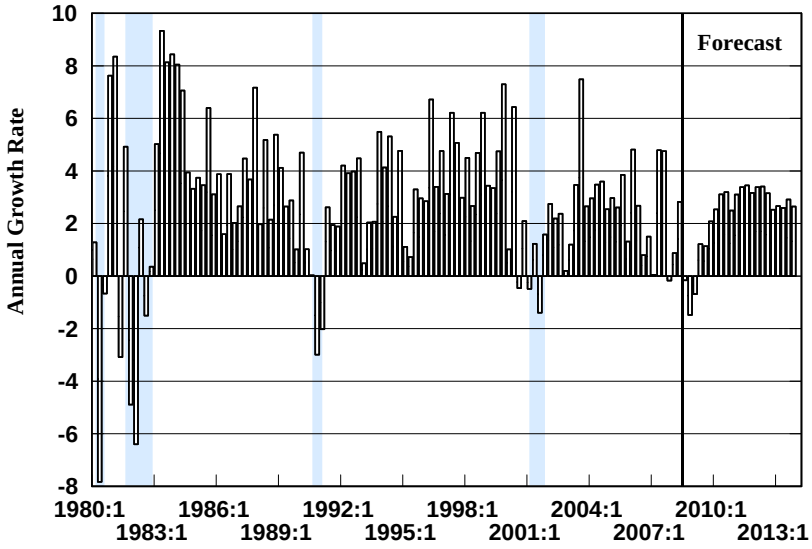


National Forecast

Table 14 shows the national forecast based on data provided by IHS Global Insight. The table shows that real GDP growth is forecast to continue to slow to 0.2 percent in 2009. As Figure 23 shows, the forecast calls for the U.S.to post negative GDP growth for three consecutive quarters, beginning with the third quarter of 2008, before slowly climbing back in 2009. After 2009, GDP is expected to recover, experiencing normalized growth between 2.4 and 3.3 percent from 2010 to 2013.

The real GDP decline is caused by a deceleration in exports, less consumer spending, and weak construction activity. A stronger dollar, combined with slowing global growth and worldwide recession fears, will decrease the demand for U.S. exports. Exports and the fiscal stimulus package drove the American economy through the second quarter of 2008, but as export demand falls and the stimulus package finally runs out of steam, real GDP growth will slow to a halt. Unemployment is expected to reach 7.5 percent by the end of 2009, increasing the current cycle job loss to 2.2 million.

FIGURE 23
U.S. REAL GDP DECLINES IN LATE 2008
U.S. RECESSIONS SHADED
U.S. FORECAST FROM IHS GLOBAL INSIGHT OCTOBER 2008



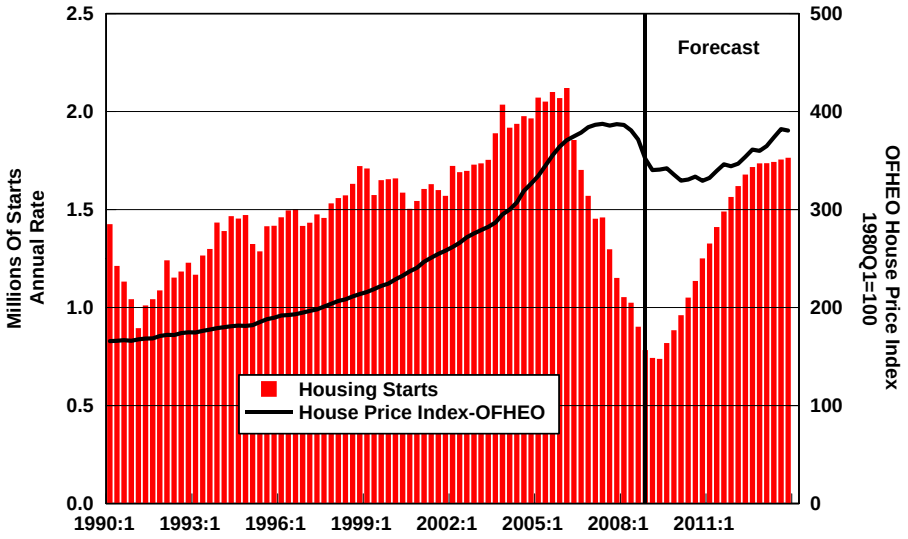
High energy prices and the housing market struggles are at the heart of the decrease in consumer spending. Referring back to Figure 21, oil prices have peaked and are expected to stabilize, remaining around $90.0 barrel in 2009, and increasing slightly between $90-$120/barrel over the next five years. The calmed energy prices will help consumer spending rebound. Consumer spending is expected to return to positive growth in 2009 after declining at the end of 2008.

The housing market has yet to hit bottom and until the housing market stabilizes, we will remain stalled in financial crisis. A massive excess in housing inventory remains the largest obstacle to the turn around. Unfortunately, foreclosures are adding to the inventory of unsold homes. In the

third quarter, foreclosures combined with existing inventories rose to an all-time high. The government buyout of Fannie Mae and Freddie Mac should keep the mortgage market from completely collapsing, but it will not lead to an immediate turnaround in sales. As the credit squeeze tightens, creditors will demand higher down payments and better credit scores. Due to the fact that banks are still holding bad loans, they will focus more on protecting their own capital base, rather than contributing to the market.

Figure 24 illustrates the struggling housing market. Housing starts are expected to bottom out in the second quarter of 2009, plummeting to a 64-year low, before recovering slowly in late 2009. The market is expected to rebound, after housing prices reach bottom in 2010 and demand driven by a higher than previously projected population growth released by the Census Bureau.

FIGURE 24
HOUSING STARTS AND HOUSE PRICES
FALL THROUGH 2010
U.S. FORECAST FROM IHS GLOBAL INSIGHT OCTOBER 2008



The current account deficit is expected to narrow in 2007 for the first time since 2001, it is only a small narrowing of the gap. This is primarily because a $174 billion increase in oil imports almost completely offsets improvement in the rest of the current account. The federal budget deficit gap, on the other hand, continues to grow. The combined cost of the stimulus package, spending growth expanding faster than revenue growth, and the recent bailouts will raise the budget deficit to $787 billion in 2009. This is an increase of $406 billion, more than doubling the existing deficit gap.

TABLE 14
U.S. FORECAST
IHS GLOBAL INSIGHT OCTOBER 2008

	Years						
	Actual	**Forecast**					
	2007	2008	2009	2010	2011	2012	2013
	Annual Percent Change						
Real GDP	2.0	1.5	0.2	2.4	3.1	3.3	2.8
Industrial Production	1.7	-0.7	-1.2	2.0	3.6	3.3	2.6
Nonfarm Employment	1.1	-0.1	-1.0	0.8	1.7	1.8	1.5
Nominal Personal Income	6.1	4.4	2.7	3.7	5.1	5.7	5.7
Personal Consumption Deflator	2.6	3.7	1.4	1.7	2.1	2.2	2.3
Real Export Growth (GDP Basis)	8.4	9.3	5.2	5.8	7.4	6.9	6.5
Real Import Growth (GDP Basis)	2.2	-2.1	-3.2	5.3	6.5	6.1	4.6
Housing Price Appreciation OFHEO Index	2.6	-3.7	-8.8	-2.6	2.9	4.4	5.6
	Percent						
Unemployment Rate	4.6	5.6	7.2	7.4	6.9	6.3	6.0
Federal Funds Rate	5.02	2.21	1.25	2.95	4.59	4.75	4.70
30-Year Fixed Mortgage Rate	6.33	6.04	5.69	6.38	7.08	7.12	7.12
	Billions of Dollars (FY)						
Federal Budget Surplus (Unified Basis)	-162	-406	-787	-592	-504	-483	-432
	Key Prices						
Real Trd.Wtd. Value of U.S. Dollar vs Major Trading Partners (2000=1.000)	0.767	0.720	0.732	0.724	0.723	0.723	0.724
Oil - West Texas Intermediate ($ per barrel)	72.18	108.17	90.08	92.29	101.50	113.50	122.00

Appendix

General Information And Data Sources

The West Virginia forecast uses seasonally adjusted quarterly data and most series are forecast from the second quarter of 2008 to the fourth quarter of 2013.

Covered employment by industry data come from the U.S. Bureau of Labor Statistics and Research, Information and Analysis Division of Workforce West Virginia. It is seasonally adjusted by the WVU BBER. This data is current through the first quarter of 2008 and is forecast from the second quarter of 2008 through 2013.

Household employment, labor force, and unemployment rate data for West Virginia are the average of monthly seasonally adjusted estimates supplied by the Research, Information and Analysis Division, Workforce West Virginia. All employment data are forecast from the third quarter of 2008 to the fourth quarter of 2013.

Historical seasonally adjusted national employment data used in most tables and figures can be found at the Bureau of Labor Statistics web site <http://www.bls.gov/>. Workforce West Virginia offers a wealth of labor market data for the state and its regions online at <http://www.workforcewv.org>

Seasonally adjusted historical nominal personal income data for West Virginia and the U.S. from 1969 to the second quarter of 2008 come from Personal Income by Major Source, Regional Economic Information System, Bureau of Economic Analysis. These estimates are also available free on the Internet through the Bureau of Economic Analysis web site <http://www.bea.doc.gov/>. West Virginia data are forecast from the third quarter of 2008 through the fourth quarter of 2013.

Quarterly West Virginia population estimates are derived from annual data for the 1969 to 2007 period. These data are available through the Bureau of the Census web site at<http://www.census.gov/>. West Virginia population is forecast from the first quarter of 2008 to the fourth quarter of 2013 using a modified single-year age group cohort-component model embedded within the econometric model.

All U.S. forecast data come from the Review of the U.S. Economy, October 2008, IHS Global Insight. All forecast data for West Virginia, except where otherwise noted, come from the West Virginia State Econometric Model, Bureau of Business and Economic Research, West Virginia University.

Frequently Used Terms

Annual Growth Rates between consecutive years are calculated as:

Annual Growth Rate in Percent

$$= \left[\left(\frac{X_t}{X_{t-1}} \right) - 1 \right] \times 100,$$

where X denotes the time series for which the growth rate is being calculated, t denotes the reference time period and t-1 denotes the previous time period.

Civilian Labor Force includes noninstitutionalized civilian residents, aged 16 and older, who are either employed or unemployed.

Consumer Price Index (CPI) is an index of retail prices of a representative basket of goods and services purchased by consumers. Percentage change is commonly used as a measure of inflation. It is not a cost-of-living index. The Consumer Price Index used here is for all urban consumers.

Dividends, Interest, and Rent is income from the three sources mentioned. Dividend income is the dividend income received by individuals. Interest income is the monetary interest received by individuals. Rental income is the income from the rental of real property and royalties. In 2006, income from dividends, interest, and rent accounted for 13.3 percent of West Virginia total personal income.

Federal Funds Rate is the interest rate on Federal Funds, which are reserves borrowed and lent by member institutions to one another, usually overnight. Reserves are deposits at member institutions (e.g. commercial banks, savings and loans, and credit unions) which have not been converted into loans to customers. Member institutions must hold a fraction of deposits as reserves.

Gross Domestic Product (GDP) is the market value of all final goods and services produced by labor and property located in the United States.

Gross State Product (GSP) is the market value of goods and services produced by labor and property located in a state. For more, see the Winter 1998 West Virginia Business and Economic Review

Industrial Production is an index which measures output from manufacturing, mining, and electric and gas utilities industries. The industrial production index's base year is 1992=100.

Nonfarm Payroll Employment includes persons on establishment payrolls who received pay for any part of the pay period which includes the 12th of the month. Nonfarm payroll employment does not include proprietors, the self-employed, unpaid volunteer or family workers, farm workers, domestic workers, or military personnel. Nonfarm payroll employment is a count of jobs not people

Other Labor Income includes payments by employers to private benefit plans for employees and employer contributions for social insurance. Private benefit plans include pension and profit-sharing plans, private group health and life insurance, supplemental unemployment benefit plans, and payments by employers to privately administered workers' compensation plans. In 2006, other labor income accounted for 14.6 percent of West Virginia total personal income.

Personal Income is income received by residents before income taxes. It includes wages and salaries, proprietors' income, other labor income, dividends, interest, rental income, and transfer payments. For more, see the Spring 1997 West Virginia Business and Economic Review

Population is the number of persons whose usual place of residence was within the state (nation) at the time the census was taken. It is also referred to as resident population. Persons in the military or institutionalized are counted where the military base or institution is located, as long as that is within the U.S.

Proprietors' Income is the income of sole proprietorships and partnerships and of tax-exempt cooperatives. A sole proprietorship is an unincorporated business owned by a person. A partnership is an unincorporated business with two or more partners. In 2006, proprietors' income accounted for 6.7 percent of West Virginia total personal income.

Average Annual Growth Rates are compound annual growth rates. For annual data the formula is:

Average Annual Growth Rate in percent

$$= \left[\left(\frac{X_{t+N}}{X_t} \right)^{1/N} - 1 \right] \times 100,$$

where X denotes the time series for which the growth rate is being calculated, t denotes the beginning year and N denotes the number of years over which the growth rate is calculated.

Real (Constant) Dollar figures have been adjusted for inflation. Using real figures eliminates the year-to-year changes in price and gives a clearer picture of the true changes in purchasing power, production, etc. Real GDP (or GSP) gives a more accurate measure of increased production than nominal GDP, which is given at current price levels.

Resident Employment includes all those employed for pay during the week including the 12th of the month, or who worked more than 15 hours unpaid in a family business, and those who were temporarily absent from their regular job. A person may only be counted as employed once using this measure.

Seasonal Adjustment is a statistical procedure designed to remove regularly occurring seasonal fluctuations in time series data. It is designed to account for the fact that some economic time series tend to rise (or fall) in the same month or quarter every year. Typical examples are strong gains in retail sales (and retail trade employment) before Christmas and gains in construction employment in the spring followed by similar losses in the winter.

Ten-Year Treasury Note Yield is the yield on a ten-year treasury note. The yield (interest rate) is expressed as an annualized rate.

Transfer Income is income not related to participation in current production. It includes income from Old Age Survivors and Disability Insurance (OASDI), Medicare, Medicaid, unemployment and workers' compensation, Aid to Families with Dependent Children, and food stamps, in addition to various other sources. In 2006, transfer income accounted for 25.2 percent of West Virginia total personal income.

Unemployment Rate is the percent of the civilian labor force that is unemployed. The civilian labor force is comprised of noninstitutionalized persons 16 years of age or over who are employed or unemployed. A resident is considered to be unemployed for the month if that person is at least 16 years old and is not currently employed but is available and actively looking for work during the survey week (the week including the 12th of the month).

Wage and Salary Income is payments to employees for participation in current production. They are measured before deductions for Social Security and union dues and reflect the wages and salaries disbursed, not necessarily earned during the period. In 2006, wages and salaries accounted for 47.6 percent of West Virginia total personal income.