Region VII Workforce Investment Area Labor Market Study

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Table of Contents 1
Executive Summary2
Description of WIA 76
Demographics of WIA 78
Population Levels and Trends8
Population by Age Group12
Migration14
Educational Attainment and Enrollment15
Labor Force Statistics20
Labor Force Statistics: What do they tell us?
Unemployment Rate Trends in the WIA 7 Region
Labor Force Trends
Industry Employment and Wages27
Industry Mix
Job Growth
Wages Per Worker
Occupational Structure
Occupations in 1998
Occupational Projections
Occupational Wages
Commuting Patterns45
Commuting In-Flows into WIA 7 Region46
Commuting Out-Flows into WIA 7 Region46
Journey To Work47
Labor Market In-Flow and Out-Flow Regions48
WIA 7 Inflow LMR49
WIA 7 Outflow LMR

Executive Summary

The report analyzes the West Virginia WIA 7 Workforce Investment Area (WIA) labor market from a regional perspective. It is designed to identify both the strengths and weaknesses of the regional labor force and will enable policy makers to market the region's strengths. It will also provide opportunities for improvement by identifying the weaknesses of the regional labor force. We will examine the socio-economic and demographic structure of the region and look at recent trends in population change, job growth and wages, and unemployment rates.

Two distinct geographic regions of West Virginia are incorporated in the WIA 7 region. One is the Eastern Panhandle region (Berkeley, Jefferson and Morgan counties), and the other is the Potomac Highland region (Grant, Hampshire, Hardy, Mineral and Pendleton counties). Since two of the Eastern Panhandle counties are in fact part of the thriving Washington D.C. PMSA, they enhance the economic performance of the WIA 7 region as a whole. But we have to keep in mind that the data, dominated by the Berkeley and Jefferson county Figures, may not present the general picture for the region because some of the Potomac Highland counties are not as prosperous.

Job growth in the WIA 7 has been quite steady during the last 20 years. Services replaced manufacturing as the dominant sector in the regional economy during 1980 - 2000. Food and food products (primarily animal and poultry processing) industries accounted for the majority of the manufacturing jobs in the Potomac Highlands. The manufacturing industries that contributed significant numbers in the Eastern Panhandle counties were printing and publishing, non-metallic mineral products, commercial and service industry machineries, glass and glass products, and some food and food processing. In the Potomac Highlands counties the most manufacturing jobs were in food and food processing (especially, poultry processing), wood and wood products, leather and allied products, transportation equipment manufacturing industries. Although manufacture is still strong in the region (19.4 percent), its share has fallen by 7.9 percentage points between 1980 and 2000. Manufacturing job losses were offset by significant gains in services and government sectors. Between 1980 and 2000, services sector added 9.1 percentage points to its total share in the regional jobs. The

government sector, accounting for highest share (23.4 percent) of WIA 7 jobs, was outpaced by the services sector in terms of average annual growth rate. During 1980-2000, the services sector grew at an average annual rate of 5.4 percent. However, in the Eastern Panhandle, government sector grew the fastest at 5.6 percent. In the Eastern Panhandle, professional and technical services accounted for the most jobs, followed by healthcare, and administrative services. Healthcare and support services were the dominant service industries for the Potomac Highlands counties as well as for the region as a whole.

Average wages per worker in the region has been above the state level, and until 1987, also above the national level. However, as job gains and competitive pressures have intensified, average annual wage gains in the region have slowed. Annual wages per worker remain above the state average, but are now below the national level.

When compared to the state and the nation, the occupational structure of WIA 7 is more heavily weighted toward professional and government jobs. This concentration is even more pronounced in the Eastern Panhandle region. Professional and technical occupations (accountants, doctors and lawyers) are high-paying service occupations that help boost the economic performance of the region. Further, the 2000-2010 occupational projection suggests that there will be strong net growth in the professional and technical jobs in the region. Healthcare and related support service occupations are forecast to be significant for the Potomac Highlands. Eight of the top ten occupations projected to grow the fastest in the 2000-2010 period are in the professional, paraprofessional and technical sectors, such as computer and mathematical occupations.

Wage gains are often connected to educational attainment. Nationally, residents with a college education earn nearly twice as much as those with only a high school degree. Education attainment in the WIA 7 (as measured by the share of residents with at least a high school degree in 2000) was 76.4 percent. That exceeded the state average of 75.2 percent, but fell short of the national average (80.4 percent). In terms of college-level educational attainment (measured by the share of the region's population with a bachelor's degree or better), however, the region fell just below the state average and well below the national rate. Indeed, the regional population share with a bachelor's degree or better was 14.5 percent in 2000, compared to 14.8 percent for the state, and

24.4 percent for the nation. At 77.8 percent, the education attainment rates for the Eastern Panhandle was higher than the region, the Potomac Highlands and the state, but still lower than the D.C PMSA and the nation. The Eastern Panhandle counties have fared better (16.7 percent) than the region, the state and the Potomac Highlands in the share of residents with a bachelor's degree or higher.

Overall, the region's education attainment rates follow the state's trends closely, but is well below national rates. Education matters not only for individual economic prosperity, but for a region's prosperity as well. Job growth in the future (particularly for jobs which pay above average wages) will likely demand increasing levels of education. Further, employers looking to locate in a region (and successful homegrown firms) will be keenly aware of education levels of the available work force.

The region's population has increased steadily during the last 20 years. According to data from Census 2000, the WIA 7 region gained 32,522 residents from 1990 to 2000. This translated into an annual rate of growth of 1.7 percent per year, which contrasts with state population growth of 0.1 percent per year and national population growth of 1.2 percent per year. The Eastern Panhandle region population growth in the Potomac Highlands, on the other hand, was much slower than the regional average.

All the counties in the region gained residents, with Berkeley (2.5 percent) and Hampshire (2.0 percent) posting the highest gains. The region as well as the Eastern Panhandle and the Potomac Highlands registered faster population growth rates in the 45-and-older age group than in the under-45 age group during the last decade.

With steady job growth in the region during the 1990s, coupled with population gains, the regional unemployment rate was well below recent state levels. Moreover, at 3.8 percent in 2001, the region's unemployment rate is well below the state rate (4.9 percent) and the national rate (4.8 percent). This is due for the most part to employment growth in the WIA 7 region during the decade. The unemployment rate in the Potomac Highlands was much higher (5.8 percent) than the region and the Eastern Panhandle (4.1 percent), as well as D.C PMSA (3.6 percent).

The commuting reach of the WIA 7 region extends well beyond the eight-county region and as far as the component counties of the Washington D.C. PMSA. These

commuting flows include both exports and imports of workers. However, almost 90 percent of region's residents worked within the region in 2000. While commuting is important for the region, the commutes of WIA 7 region residents tend to be shorter than those for the state or the nation.

The WIA 7 region labor market has been through some economic restructuring during the last 20 years. The region has experienced steady job gains, particularly in the professional and technical occupations, which have rippled positively through the regional economy. The region has generated job gains in other sectors, notably the services and government sectors. Government sector employment has grown faster in the Eastern Panhandle than in the region as a whole as well as the Potomac Highlands. This is due in part to that fact that two of the panhandle counties are in the D.C. PMSA and therefore, have ties with the nation's capital. Educational attainment of the region and sub-region residents have been close to or better than the state average, but below D.C. PMSA and national levels.

The region's unemployment rate has fallen during the 1990s, and these reductions have been accompanied by population gains, indicating net improvement in the economic status of the region.

Description of WIA 7

The West Virginia Workforce Investment Board (WIB) divides the state of West Virginia into seven regions (see Map 1), referred to as Workforce Investment Areas (WIA). The focus of this study is WIA 7 which comprises the Eastern Panhandle counties of Berkeley, Jefferson and Morgan, and the Potomac Highland counties of Grant, Hampshire, Hardy, Mineral, and Pendleton.



Berkeley County is the largest in the region in terms of resident population. The region's largest city, Martinsburg, is also located in Berkeley County. Berkeley and Jefferson counties are part of the Washington D.C. PMSA. Due to their proximity to the nation's capital, some of the counties in WIA 7 are favorably disposed to become centers of business and commerce.

As Map 2 shows, the WIA 7 region is located close to several major metropolitan statistical areas (MSAs), namely, the Washington-Baltimore DC-MD-VA-WV CMSA;

Cumberland MD-WV MSA; and Pittsburgh, PA MSA, as well as some smaller MSAs nearby such as Johnstown, PA MSA. The Washington-Baltimore CMSA consists of three PMSAs – Washington DC-MD-WV PMSA, Hagerstown PMSA and Baltimore PMSA. Due to reasons of proximity, we contrast the economic performance of the Washington DC PMSA to the to the WIA 7 in this report.





The port of Baltimore sits in the center of the Washington/Baltimore Common Market, making it the closest Atlantic port to major Midwestern manufacturing centers. The port provides immediate access to the 6.8 million people in the Washington/Baltimore region, one of the wealthiest consumer markets in the U.S. There are three major airports – Reagan Airport and Dulles International airport in Washington D.C., and BWI, Maryland - within easy reach of the WIA 7 region. The major roads in or around the region include I 68 and I 81, as well as the US Highways 33, 50, 220 and 522.

Demographics of WIA 7

Understanding a region's past, current and future demographic structure is essential for economic development efforts. This section examines several properties of WIA 7's population, with primary focus on changes in the regions' age composition, historical trends in population, and migration patterns of the region's residents. Historical population data are obtained from the U.S. Bureau of the Census, including the latest available data from Census 2000.

According to the latest data, the region gained 32,522 residents between 1990 and 2000. This translates into an annual rate of growth of 1.7 percent per year, which was higher than the state population growth of 0.1 percent per year and national population growth of 1.2 percent per year. All counties in the region gained residents during the decade and also registered an increase in the median ages. Grant, Mineral and Pendleton counties posted population losses in the under-45 age groups during the decade, while all counties recorded moderate to large gains in the 45-and-older age groups.

The three Eastern Panhandle counties accounted for 79 percent of the increase in residents. The Eastern Panhandle region outpaced the WIA 7, the state and the nation between 1990 and 2000. Although the population growth rate for the Potomac Highlands region (0.9 percent) was well below the regional average, it added residents faster than the state (0.1 percent) during the same decade.

Population Levels and Trends

The population of WIA 7 in 2000 was 212,483, which accounted for approximately 11.8 percent of the state of West Virginia's total resident population of 1,808,344. As Figure 1 shows, the population of Berkeley County was largest with a population of 75,905. Jefferson County was ranked second with a population of 42,190. Pendleton County is the smallest in terms of resident population (at 8,196). Martinsburg, in Berkeley County, was the city with the largest resident population at 14,972 in 2000, a 0.6 percent increase over its 1990 population. During the same decade, the District of

Columbia lost residents at an average annual rate of 0.6 percent, but the Washington D.C. PMSA population increased at a rate of 1.5 percent.



Figure 1 Census 2000 Population for the WIA 7 Counties

Between 1990 and 2001, WIA 7 gained 37,134 residents, which translates into an annual rate of increase of 1.8 percent. However, at an average annual rate of 2.2 percent, Eastern Panhandle population growth outpaced the regional, state and national rates during the same period.

As Figure 2a shows, WIA 7 region population growth held up better than it did for the state and the nation since the 1970s. The region has registered population gains in each of the last five census counts, and has outpaced the national population growth rate since 1980. The state rate, however, has lagged behind both.



Meanwhile, the Eastern Panhandle region has followed the national trend in adding residents steadily over the decades. Figure 2b clearly shows that the rise in regional population has been driven by the steady increase in the number of Eastern Panhandle residents. The Potomac Highlands have experienced a relatively muted population growth since the 1980s, compared to the region.



As Figure 3 shows, the WIA 7 component counties were very different in size in terms of population in 1900 (with the largest county being Berkeley). In 1900, the resident population of the largest counties - Berkeley and Jefferson in the Eastern Panhandle - far exceeded the rest of the counties, constituting 38.4 percent of the regional total. The gap keeps widening, with the two county total making up 55.6 percent of the regional total in census year 2000.



Population by Age Group

According to the data from Census 2000, the age distribution of the region's population is weighted towards the older age groups. This is clear when we consider median ages for the WIA 7 counties. Median age is the age that splits a region's population in half. All WIA 7 counties have relatively high median ages, the highest being Pendleton County with a median age of 41.1 years, and ranked 9th in the state. Berkeley and Jefferson Counties - two Eastern Panhandle counties – were almost at par with the nation, having the second and third lowest median ages in the state. Except Berkeley, Hampshire and Jefferson, the rest of the counties have median ages in excess of that for the state (38.9) and the nation (35.3). As Figure 4 shows, the Eastern Panhandle region counties have relatively high median ages, although median age is much higher in the Northern Panhandle or the southeastern part of the state.



The region gets its relatively high median age from a relatively large share of residents in the 25 - 44 year age group, combined with the fact that second highest proportion of the residents were in the 45 - 64 year age group. Figure 5 shows the age distribution for the region, compared to the state and the nation. The region has the highest share of residents in the 25 - 44 year age group, in keeping with the state and the nation.



Further, the region gained residents under the age of 45 during the 1990s, with the number of residents in that age group rising from 119,536 in 1990 to 131,664 by 2000. At the same time, number of residents in the 45-and-older age group also increased from 60,425 residents in 1990 to 80,819 residents by 2000. Average annual growth rate for the population over 45 years of age (3.0 percent) was triple the growth rate for the under-45 age group in the region. This was true for two geographic components of WIA 7 as well, where growth rates for the population 45-and-over was almost double that of the growth rate for the under-45 age group.

Migration

Approximately 60.3 percent of people living in WIA 7 in 1990 lived in the same house five years earlier, as Figure 6 shows. This was a higher rate than the state (63.3 percent) and national (54.2 percent) averages. In addition, a higher percentage of WIA 7 residents moved from another county or state than statewide or nationally. Of those

who moved to the WIA 7 region from another state, the greatest numbers came from the South (22,348 residents), followed by the Northeast (4,204 residents) and the Midwest (1,606 residents). With 7.3 percent of residents moving to the region from abroad, WIA 7 was almost at par with the state's 7.6 percent.

According to Census 2000, 17.7 percent of the Eastern Panhandle residents had lived in a different state in 1995. About 20.6 percent of the Washington D.C. PMSA residents had moved out of state (either to another region within the U.S., Puerto Rico or a foreign country) since 1995, a rate higher than WIA 7, West Virginia and the nation.





Educational attainment is a critical factor in a region's prospects for growth in the 21st century. We address this issue in this report because the level of educational attainment in a region influences location decisions by firms. In addition, information regarding

education levels is important for state and local government officials as they allocate resources impacting a region's training and education needs.

As Table 1 shows, educational attainment in WIA 7 region (as measured by share of residents age 25 and older with at least a high school degree in 2000) was 76.4 percent. That exceeded the state average of 75.2 percent, but fell short of the national rate (80.4 percent). In terms of college level educational attainment (measured by the share of the region's population with a bachelor's degree or better), however, the region fell just below the state average and well below the national rate. Indeed, the regional population share with a bachelor's degree or better was 14.5 percent in 2000, compared to 14.8 percent for the state, and 24.4 percent for the nation.

At 77.8 percent, the astern Panhandle region's education attainment was below the national rate, but well above the WIA 7, the Potomac Highland counties (74.2 percent) and the state's rates.

	High School	Bachelor's
	Degree or More	Degree or More
Berkeley County, WV	77.6	15.1
Grant County, WV	70.8	11.4
Hampshire County, WV	71.3	11.3
Hardy County, WV	70.3	9.4
Jefferson County, WV	79.0	21.6
Mineral County, WV	80.3	11.7
Morgan County, WV	75.8	11.2
Pendleton County, WV	72.0	10.8
Eastern Panhandle	77.8	16.7
Potomac Highlands	74.2	11.1
Washington D.C. PMSA	86.7	41.8
WIA 7	76.4	14.5
Selected Neighboring Counties		
Tucker County, WV	75.5	10.6
Allegany County, MD	79.9	14.1
Garrett County, MD	79.2	13.8
Washington County, MD	77.8	14.6
West Virginia	75.2	14.8
United States	80.4	24.4

Table 1Education Attainment in 2000(Percent of Population 25 Years or Older)

Source: U.S. Bureau of the Census, Summary Tape Files 3C & 3A Prepared by: Bureau of Business and Economic Research, WVU

Like the state and the nation, WIA 7 posted a high share of residents with a high school degree as their highest level of educational attainment in 2000, with 41.3 percent. This exceeded the state average of 39.4 percent and the national average of 28.6 percent, as Figure 7 shows. The region also recorded a slightly lower share than the state or the nation of residents with an associate degree as their highest level of educational attainment in 2000. Overall educational attainment rates are slightly better than the state average (primarily due to fewer residents without high school degree) but well below the national rates.

A larger share of Eastern Panhandle residents had a bachelor's degree or higher compared to the region or the Potomac Highlands. The Washington D.C. PMSA, however, outshone the region, the state, and the nation in its share of residents with advanced educational degrees. The spread of educational attainment was much more even for the PMSA for all education levels above high school. About 23 percent of its residents had at least a bachelor's degree, and 18.8 percent held a graduate or professional degree.



Education matters not only for individual economic prosperity, but also for a region's prosperity as well. Job growth in the future (particularly for jobs which pay above average wages) will likely demand increasing levels of education. Further, employers looking to locate in a region (and successful homegrown firms) will be keenly aware of the educational levels of the available workforce.

School enrollment provides local planners, educators, and businesses with information on future labor force characteristics and prospective students. According to data for first month net enrollment for public schools in 2002, there were 19,538 students enrolled in grades K-6 and 16,075 students enrolled in grades 7–12 in the WIA 7 region. Most of these students will eventually graduate to either the workforce or

continue their education in the region (or elsewhere). Graduation trends in the region reflect the steadily rising population levels during the 1990s. Local high schools graduated 1,958 students in the 1991-1992 school year. That level rose, albeit slightly, to 2,083 students by the 2001-2002 school year. This contrasts with the overall trend in the state, as state graduates fell from 20,801 in 1991-1992 to 17,147 in 2001-2002, as Figure 8 shows.

The Eastern Panhandle region followed the general state trends until-1997 but since then, it outpaced the WIA 7 region as well as the state with a rapid increase in the number of high school graduates. However, the numbers dropped last year.



The rise in educational enrollment and graduation levels reflects growth in the schoolage population during the decade. In 1990, the region had around 36,000 residents of school age. By 2000, the region counted 38,440 residents between the ages of 5 and 17.

19

The region and the sub-regions, however, registered a percentage decline in the number of school age children between 1990 and 2000. Whereas in 1990 the Potomac Highlands region had a slightly higher (20.2 percent) share of school age population than the WIA 7 region (20.0 percent) and the Eastern Panhandle (20.0 percent), by 2000, the percentage of school age children in the Potomac Highlands was lower (17.7 percent) than the region (18.1 percent) and Eastern Panhandle (18.3 percent).

Labor Force Statistics

This section analyzes labor force trends in the WIA 7 region, including trends in the civilian labor force, the number of employed residents, the number of unemployed residents, the unemployment rate, and labor force participation rates. We also compare the performance of the region to the state and the nation.

We find in this section that the regional unemployment rate is well below recent state levels (at 4.8 percent in 2002). This is mostly due to employment growth since outmigration from the WIA 7 region during the decade was not very severe. The increase in the regional unemployment rate during 2001-2002 was most likely an effect of the current national economic downturn.

The most recent Bureau of Labor Statistics release used here does not present the data by sex. Using Census 2000 data enables us to calculate male and female labor force participation rates separately for the region, state and nation.

Labor Force Statistics: What do they tell us?

Labor force statistics allow us to characterize the performance of a given labor market, whether that market is national, statewide, or county level. These statistics tell us about the size of the civilian labor force by measuring the number of employed and unemployed residents. Further, by utilizing a measure of the non-institutional population, we can explore the extent to which the population participates in formal labor market activities. Two fundamental building blocks for this dataset are the number of employed and unemployed residents. Note that in this section we evaluate the employment status of residents, even if these residents hold a job in another state or county. We also restrict our attention to residents, age 16 and older, that are not institutionalized. Examples of institutionalized residents are inmates in a correctional system, patients at nursing homes and hospitals and residents at mental institutions. We will further focus our attention on the civilian labor force and population.

The sum of the number of employed and unemployed residents is called the labor force. The unemployment rate is the ration of the number of unemployed residents to the labor force. The labor force participation rate is the ratio of the labor force to the non-institutionalized population age 16 and older.

Unemployment rate trends in the WIA 7 Region

As Figure 9a shows, the WIA 7 region unemployment rate has followed the state rate trends, remaining below the state rates. The regional rate registered consistent declines since 1991 whereas the state rate started to fall since the following year. Indeed, at 4.8 percent in 2002, the regional unemployment rate is close to one-half of its 1991 level of 9.6 percent.



Further, the regional unemployment rate in 2002 is well below the state rate of 6.1 percent and the national rate of 5.8 percent. Overall, the regional labor market is using the available labor supply much more efficiently than earlier in the decade. The unemployment rate in the region has generally been below the Potomac Highlands rate and above that of the Eastern Panhandle, except in the early 1990s when unemployment rose in all three regions (see Figure 9b). The nearest major PMSA of Washington D.C – a work destination for many of the WIA 7 region residents – has maintained an unemployment rate consistently lower than the region, the state and the nation during the past decade, posting an unemployment rate of 3.6 in 2002.



Recent steady declines in the rate of unemployment are positive, indicating an improvement in employment growth. Indeed, as Figure 10 shows, the WIA 7 region unemployment rate declined during the 1990s because the number of employed residents increased sharply, from 80,670 in 1992 to 103,150 in 2001, although it declined to 100,210 in 2002. The reductions in resident unemployment can be attributed to gains in resident employment during 1992 - 2001. The WIA 7 region registered strong growth in the number of employed residents since 1983, with only a slight dip in 1991-1992. It's fair to say that the resident employment level has remained stable during the decade. So, we can conclude that the region likely achieved the declines in the rate of unemployment due to the steady growth in resident employment for the most part of the last decade.

Resident employment in the WIA 7 region was dominated by the Eastern Panhandle counties. Although the Eastern Panhandle comprises just 3 counties of the 8 in the WIA 7 region, it accounted for 64 percent of the total regional employment in 2002. Of course, we have to remember that two of the panhandle counties are the largest in the

region, both in terms of population and area. Washington D.C PMSA, on the other hand, followed West Virginia's trend closely during the past decade.



Labor force trends

While the WIA 7 region labor market is tighter than it was during the early 1990s, that does not mean that the local labor force is completely employed. One way to see this is to look beyond just the eight-county region and consider a wider local labor market. We can do this by examining the commuting trends from 1990 Census. This data will give an indication of the counties from which the WIA 7 region draws workers and thus provide a better picture of the available labor force.

Using the 2000 Census commuting data and a 1.0 percent threshold (so that the commuters from outlying counties must account for 1.0 percent or more of WIA 7 region jobs), we identify the following counties as contributing significant numbers of

workers to the region: Washington, Maryland; Frederick and Winchester, Virginia; and, Allegany, Maryland.

These counties (plus WIA 7 region counties) compose a region with a significant labor force, registering a civilian labor force of over 258,000 residents in 2002. This greater region also contained over 11,000 unemployed residents in 2002. This suggests that attractive employment opportunities would be met with a significant number of residents from neighboring counties looking for work.

We can further explore these ideas using the civilian, non-institutionalized labor force participation rate. This rate shows us the percentage of the resident population that is actively participating in labor market activities (either working or looking for work). This rate is affected by the age distribution of the population, with older regions (containing a higher share of retirees) tending to register lower levels of labor market participation. Regions with a large share of school-age children will also tend to post low levels of labor force participation. Finally, regions with significant numbers of discouraged workers (those that are not employed and not looking for work) will also post low participation rates.

Figure 11 shows year 2000 participation rates for the region, the state, and the nation. As the Figure shows, the labor force participation rate for the region exceeds that for the state, but falls below the national rate, as well as the rate for the Washington D.C PMSA (72.5 percent). The reason is likely the age-mix effect. The region has a relatively large share of its population in the 45 and over age groups, unlike the PMSA or the nation. Therefore, it has a lower labor force participation rate even though it is comparatively more urbanized than other regions in the state. Figure 11 also shows that the Eastern Panhandle had a higher labor force participation rate than the Potomac Highlands, the WIA 7 region, as well as the state, but it remained below the national level.



Figure 11

According to the Census 2000 data, labor force participation rate for males in the region (71.7 percent) is much higher than the average regional participation rate as well as the female labor force participation rate (56.3 percent). This corresponds to the relatively higher male labor force participation rates for the state (63.0 percent) and the nation (72.2 percent).

Overall, the region is utilizing its available labor supply more efficiently than other regions of the state has in the recent past. In other words, the unemployment rate is well below the recent state levels. This does not mean that the region is running out of available labor. At 4.8 percent in 2002, the WIA 7 region unemployment rate was well below the rates for the Pittsburgh, PA MSA (5.2 percent), Cumberland, MD-WV MSA (6.7 percent), Johnstown, PA MSA (7.0 percent), but above the rates for the Washington DC-MD-VA-WV CMSA (3.6 percent). In addition, in 2002 there were literally thousands of unemployed workers within easy commuting distance.

Industry Employment and Wages

Job growth in the WIA 7 region has been steady during the last 20 years. Further, the region experienced substantial job gains during the early 1980s and to a lesser extent during late 1990s. Employment data presented here are a count of the number of jobs located within the specific geographic region. We examine employment (jobs) and wages within the WIA 7 region, West Virginia, and the nation. These data are from the West Virginia Bureau of Employment programs and the Bureau of Labor Statistics, U.S. Department of Labor. The jobs data include jobs with firms participating in the unemployment compensation program. Therefore, they do not include railroad workers, self-employed workers, student workers, most church workers, and unpaid family workers. This is in contrast to the resident employment data that are part of labor force statistics. Those data estimate the total number of people living in a particular geographic area that also have one or more jobs. Employment data in this section are a measure of jobs. Resident employment is a count of residents with jobs. Since one person may hold more than one job, the two measures do not match.

Employment in the WIA 7 region dipped during the recessionary periods of the early 1980s (Figure 12a). Job growth following the declines has been strong, however, with the region recording net job gains from 1982 to 2001. The region recorded net job gains of 27,523 from 1980 to 2001. The state and the nation both recorded over all job gains during the same period, but WIA 7 outpaced them both by a large margin. At the start of each decade, employment levels dipped slightly following the business cycle downturns experienced nationally.



For the region and the nation, there has been a decline in the average annual employment growth rate during 1990-2000 compared to the last decade although employment levels have been steadily rising over the last two decades. However, the state has grown faster during 1990-2000 than it did during 1980-1990 when it was hit badly by substantial job losses in mining.

As Figure 12b shows employment has been increasing during the same period for the the sub-regions as well, except for a slight dip in 1992 caused by recessionary pressures. In fact, since 1983 there has been a sharp rise in employment in WIA 7 as well as the Eastern Panhandle and Potomac Highlands.

Eastern Panhandle added jobs faster than the other sub-region and WIA 7 during 1983-2000. However, as in the case of the nation and the region, employment growth rates slowed in the last decade compared to 1980-1990, especially in the Potomac Highlands where the decline has been sharpest (1.4 percentage points).



Industry Mix

The industry mix of WIA 7 region influenced its job performance. Figures 13, 14a and 14b show the industry mix of the region, state and the nation for 1980 and 2000, respectively. Manufacturing clearly dominated the regional economy in 1980, accounting for over 27.3 percent of all jobs in the region. Besides manufacturing, the region fell short of both the state and national averages in all other industries but wholesale trade and government. The employment diversification of the region played an important role in its positive job growth performance. The regional trend was driven by the individual trends of its component regions. The manufacturing sector was significant for both the Eastern Panhandle and Potomac Highland region. Services comprised an important share of the Eastern Panhandle jobs but not so for the Potomac Highlands, where the second highest share of jobs were in the government sector. About 56 percent of the total regional jobs were concentrated in the Eastern Panhandle counties in 1980.



As Figure 14a shows, manufacturing still dominated the WIA 7 region in 2000, although to a smaller extent (19.4 percent of total jobs). Manufacturing jobs are smaller share of total jobs in 2000 due to strong job growth in the services sector of the regional economy. The government sector also demonstrated strong growth during the decade. Retail trade has also bolstered regional employment by adding jobs.



The WIA 7 region relatively specializes in manufacturing and services. In 2000, it recorded strong growth in retail trade, services and government employment. The Eastern Panhandle counties accounted for 65.3 percent of the total regional jobs in 2000. As Figure 14b shows, the Eastern Panhandle region reduced the concentration of jobs in manufacturing, whereas Potomac Highland increased its share. Services added jobs in both regions. While the Eastern Panhandle had the largest share of jobs in services, government and retail trade, the Potomac Highlands depended on manufacturing (food and food products, primarily poultry processing, as well as wood and wood products) for most of its employment.



Job Growth

Overall job growth was strong during the 1990s but that growth was unevenly spread across industries and sub-regions. Figure 15a shows the percent job growth by major industry from 1980 to 2000 for the region, the state and the nation. The region faired better than the state and the nation in almost every industry. Most notable, though, are the manufacturing, retail, finance, insurance and real estate, services and government industries. Manufacturing is important because it makes up such a large share of the jobs in the region, while services is where the state and the nation saw much of their job growth. The region posted positive job gains in construction and transportation, communication and public utilities, in contrast with the state's decline.



Figure 15a Services Adds the Most Jobs During

Positive job performance in manufacturing along with strong job growth in services, retail and government explains much of the overall employment gains in the region. However, some of its growth was offset by large job losses in mining.

Although in terms of numbers Eastern Panhandle added more jobs in the service sector between 1980 and 2000, but the Potomac Highland region did so at a much faster rate (see Figure 15b). In 2000, services sector accounted for 39 percent of the Washington D.C. PMSA jobs. There were nondisclosure problems for data on most other sectors for the PMSA.



Figure 16 shows employment trends in the WIA 7 broken down into manufacturing and services jobs as these two sectors were the largest in the region. As can be seen in the graph, services employment has recorded steady growth since the early 1980s. The services sector has helped to cushion the impact of mining job losses, which were minor due to the region's relatively lesser dependence on mining jobs. Services sector includes a wide variety of activities, including healthcare and social services, business services, and travel and tourism related services, among others.



Wages per worker

Average annual wages per employee have been lower in the WIA 7 region than both the state and the nation (Figure 17). Although lower than the state and national level, wages have been relatively higher in WIA 7 than other regions in the state. Declines in jobs in high-paying sectors, such as manufacturing, and job growth in low-paying sectors have caused average wages per employee to decline in recent years. The wages used here have not been adjusted for inflation. Adjusting for inflation would make the declines in wages even sharper.

The Eastern Panhandle followed the average annual wages per worker for the WIA 7 closely until 1992, and ever since it has been steadily rising. The reverse is true for the Potomac Highlands, which has seen a decline in average annual wages below the WIA 7 level since 1992. As additional jobs in poultry processing and other similar low-

paying industries replaced high-paying jobs in mining and precision production, the average wages per worker in the sub-region declined.



Average wages paid per employee by industry paints a similar picture. Figure 18 shows the average wages paid per employee in 2000 by major industry. Wages in the WIA 7 region were less than the nation for almost all the sectors. In the case of wholesale trade and government, average wages per worker was higher in the region than the state. Wages in finance, insurance and real estate, as well as manufacturing and services, were significantly lower than the national average. The Eastern Panhandle was almost at par with the nation for wages in the wholesale trade sector. Wages in the region were lower due mostly to jobs in high-paying mining and precision production industries being replaced by low paying food processing industries since the late 1980s.



Figure 18

Occupational Structure

Employment can be classified in a number of different ways. Two of the most frequently used methods for organizing employment and wage data are by industry and by occupation. Examples of industries include coal mining, steel manufacturing, health care services and state government. Examples of occupations include clerical workers, engineers, bookkeepers, doctors, and lawyers. While there is naturally some overlap between these two classification systems (for instance, cashiers Figure prominently in retail trade industry employment), it is useful to consider industries and occupations separately, especially when considering relative levels of investment in education.

This section analyzes occupational projections and occupational wage data from the West Virginia Bureau of Employment Programs. The occupational wage data are available for all Metropolitan Statistical Areas (MSAs) in West Virginia, the state of West Virginia, and the nation. Since two of the largest WIA 7 counties -- Berkeley and

Jefferson -- are part of the Washington D.C. PMSA, regional outlook tend to be driven by the performance of these two counties.

Occupational projections are available for the Workforce Investment Areas (WIA) in West Virginia, the state of West Virginia, and the nation. The occupational projection data include forecasts up to the year 2010 for the state, and the region and up to 2008 for the U.S.

When compared to the state and the nation, the occupational structure of Workforce Investment Area 7 is more heavily weighted toward precision production and bluecollar jobs. However, there are high-paying professional and technical occupations (such as, accountants, doctors and lawyers) in the region. The latest occupational projections available suggest that there will be little net job growth in the precision production and blue-collar occupations in contrast to strong gains in sales and service occupations. The continued restructuring of the occupational mix in the region will impact income growth, as relatively high-paying occupations (precision production) are replaced by lower-paying jobs in sales and services occupations.

Occupations in 1998

Occupations, like industries, are assigned codes to simplify database processing. Occupational codes have five digits and in general the first digit refers to an overall occupation type and the remainder of the digits successively narrow the occupational description. For example, as shows in Table 2, occupational code 10000 refers to managerial and administrative occupations. Thus, any occupational code starting with a 1 belongs to this major occupational group. Likewise, occupational codes 15000 marrows that definition to line and middle managers. The process of narrowing continues until, for example, we have occupational code 15014, which refers to industrial production managers. Table 2 shows the occupation codes for major occupations.

Table 2 Occupational Codes for Major Occupations

Occ. Code	Occupational Description
10000	Managerial and Administrative
20000 -	Professional, Paraprofessional, Technical
30000	
40000	Sales and Related
50000	Clerical and Administrative Support
60000	Service
70000	Agriculture, Forestry, Fishing and Related
80001	Precision Producion, Craft and Repair
90000	Operators, Fabricators and Laborers

Source: W. Va. Bureau of Employment Programs, Research, Information and Analysis Division. <u>www.state.wv.us/bep/LMI</u>

As Figure 19a below shows, the region specialized in professional and technical, and blue-collar jobs in 1998. Indeed, these two occupational categories accounted for 31.4 percent of WIA 7 employment, compared to 27.3 percent for the state, and 24.3 percent for the nation. The region also posted a larger share of jobs in blue-collar occupations than did the state, and the nation. In contrast, management and professional occupations (25.3 percent) accounted for a smaller share of WIA 7 jobs than they did for the state (26.9 percent) and the nation (28.1 percent). Washington D.C. PMSA had the highest concentration of employment in the professional and technical occupations in 1998.

It should be mentioned here that the 1998 data is used here to present a comparable general overview of occupations for the region, state, nation and the D.C. PMSA using the old standard occupational codes. For more recent years, data for the state and nation are based on two different classifications of industry.



Figure 19a Distribution of Occupations in 1998

Occupational Projections

Occupational projections for WIA 7, published by the West Virginia Bureau of Employment Programs, call for the restructuring in the regional economy to impact the occupational mix as well. As Figure 19b shows, the outlook calls for the regional occupational mix to remain concentrated in sales, high-paying professional and technical, and services occupations between 1998-2008. State projections call for increases in sales and agricultural occupations, and the national outlook calls for the highest concentration to be in high-paying professional and technical occupations.



In contrast to smaller concentrations in sales, food and related, construction, production, transportation, and administrative occupations, the outlook calls for the region to register increases in professional and technical occupations such as computer and mathematical occupations, as well as business and finance, education and training, life, physical and social sciences, legal, social services, healthcare and technical, and maintenance occupations in 2010 (see Figure 20a).



Figure 20a Distribution of Occupations in WIA 7

The region, in fact, is expected to follow the state projections for 2010 (see Figure 20b), according to the latest release by Bureau of Labor Statistics. The largest projected decline for the state is in the administrative occupations. Unlike the region, however, sales and related occupations will still be strong in the state.



Figure 20b Distribution of Occupations in W. Va.

The occupational outlook calls for computer and mathematical occupations in WIA 7 to record the fastest growth during the 2000-2010 period (Figure 21). Job growth in all occupational categories, except sales occupations; agricultural occupations; and services (healthcare, food and personal care) occupations, is expected to outpace the state rates as Figure 21 shows (national occupational projections for 2010 is not comparable to the state and region data). Job gains in agriculture, forestry and related, arts and entertainment, services (healthcare, food and personal care), and sales occupations are forecast to grow faster than the state averages.



This restructuring in the occupational mix will impact average wages in the region. Job gains in the relatively high-paying professional and technical occupations will likely offset any job losses in the low-paying industries.

Occupational Wages

We can exploit a different dataset to gain a rich picture of occupational wages. This dataset provides occupational wages for 2001 for the Washington D.C. PMSA, WIA 7, the state, and the nation. Unfortunately, the occupational codes used for occupational wages do not match those in Table 2, due to recent revisions by the U.S. Bureau of Labor Statistics.

Table 3 shows that although for some of the major occupational categories annual wages in the region are above the state levels, wages are generally lower than the

national wages for all categories except farming, fishing and forestry. Managerial and professional occupations, two of the highest-paying occupations, are expected to record moderate gains in the WIA 7 region during the forecast period.

	• • •	Annual Wages in 2001			
			(\$ per worker	·)	
		W	ashington DC		
SOC Code	Occupation Title	WIA 7	MD-VA-WV	W.Va.	U.S.
11-0000	Management Occupations	\$49,461	\$78,450	\$52,630	\$70,800
13-0000	Business and Financial Operations Occupations	\$38,226	\$59,460	\$40,700	\$50,580
15-0000	Computer and Mathematical Occupations	\$53,955	\$65,050	\$46,410	\$60,350
17-0000	Architecture and Engineering Occupations	\$47,620	\$63,550	\$45,850	\$56,330
19-0000	Life, Physical, and Social Science Occupations	\$42,023	\$65,070	\$42,600	\$49,710
21-0000	Community and Social Services Occupations	\$27,113	\$40,970	\$24,570	\$34,190
23-0000	Legal Occupations	\$37,477	\$79,210	\$43,760	\$69,030
25-0000	Education, Training, and Library Occupations	\$32,444	\$40,670	\$35,760	\$39,130
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	\$26,929	\$47,300	\$28,560	\$39,770
29-0000	Healthcare Practitioners and Technical Occupations	\$46,337	\$59,280	\$42,820	\$49,930
31-0000	Healthcare Support Occupations	\$18,176	\$27,890	\$16,830	\$21,900
33-0000	Protective Service Occupations	\$24,251	\$38,580	\$24,480	\$32,530
35-0000	Food Preparation and Serving Related Occupations	\$14,829	\$18,290	\$14,500	\$16,720
37-0000	Building and Grounds Cleaning and Maintenance Occupations	\$17,558	\$20,430	\$17,210	\$20,380
39-0000	Personal Care and Service Occupations	\$16,564	\$25,370	\$16,210	\$21,010
41-0000	Sales and Related Occupations	\$17,368	\$30,090	\$20,700	\$28,920
43-0000	Office and Administrative Support Occupations	\$21,849	\$32,550	\$22,340	\$27,230
45-0000	Farming, Fishing, and Forestry Occupations	\$25,105	\$25,710	\$22,350	\$19,630
47-0000	Construction and Extraction Occupations	\$22,508	\$35,700	\$32,050	\$35,450
49-0000	Installation, Maintenance, and Repair Occupations	\$31,972	\$38,430	\$31,930	\$34,960
51-0000	Production Occupations	\$23,481	\$29,970	\$27,960	\$27,600
53-0000	Transportation and Material Moving Occupations	\$21,326	\$29,900	\$23,660	\$26,560

Table 3			
Annual Wages	per Worker by	Occupation	

Commuting Patterns

All regional economies experience inflows and outflows of workers through commuting. Smaller geographic areas (like cities or counties) tend to show more pronounced impacts from commuting. Knowledge of commuting flows enables businessmen, policymakers, and educators to gauge the true extent of labor market issues. For instance, a county with a very low unemployment rate may not be in danger of exhausting its labor supply if it is surrounded by counties with significant commuting flows (and available labor).

The commuting reach of the WIA 7 region extends well beyond the eight-county region and even beyond the component counties of the nearby MSAs. These commuting flows include both exports and imports of workers. About 66 percent of WIA 7 region residents worked within the eight-county region in 2000. While commuting is important for the region, the commutes of WIA 7 region residents tend to be shorter than those of West Virginians and U.S. residents.

Commuting In-flows into WIA 7 Region

Figure 22 shows the counties contributing workers to the region in 1990 and 2000 based on the total number of workers in the region. The percentage of core region residents holding regional jobs increased by one percentage point (from 88.7 to 89.7 percent) between 1990 and 2000. The other major contributing counties were Allegany County in Maryland, and Frederick and Winchester counties in Virginia. About 63 percent of the total commuters to the region worked in the Eastern Panhandle counties.



Commuting Out-flows from WIA 7 Region Counties

Out-flows are the other side of the commuting coin. Figure 23 shows the shares of the WIA 7 region's employed residents traveling to work either within the region or to counties outside of it. In 2000, about 65.5 percent of the core region residents commuted to other regional counties, registering a slight decrease since 1990 (65.7

percent). WIA 7 counties contributed about 34.3 percent of its residents to jobs outside of the region in 1990. This percentage did not increase much during the following decade. But there were substantial increases in the out-of-sate commuters for two of the Eastern Panhandle counties. The number of out-of-core region workers went up by 4,365 for Berkeley County and by 2,761 for Jefferson County in 2000.



Figure 23 WIA 7 Region Commuting Out-flows As a Percent of

Journey to Work

Commuting to and from work involves costs. These costs include fuel, vehicle wear and tear, and lost time. The 2000 Census includes data on commuting time to work. As Figure 24 shows, some residents of the WIA 7 region had commutes that were relatively longer, compared to the state and the nation, especially for distances between 40 minutes to 90 minutes of more. Although majority of the workers had commutes that were 10 to 19 minutes, 58 percent of employed residents in the region had a commute lasting longer than 20 minutes (50 percent in 1990), compared to 51 percent for the state (45 percent in 1990) and 53 percent for the nation in 2000 (49 percent in 1990). About 19.3 percent of the Washington D.C PMSA residents had commutes that were longer, lasting between 30 to 39 minutes. Over the last decade, commutes have become longer for people at the regional, state and national level.



Labor Market Inflow and Outflow Regions

The WIA 7 region draws employees from and contributes employed residents to surrounding counties. Thus, the labor market reach of the region extends beyond simple county boundaries. In order to examine the extent of reach for the WIA 7 region, we look to commuting data from the 1990 and 2000 Census. This data tells us the number of residents of the eight-county region that commute to jobs outside of the region and the number of jobs in the region which are taken by residents of other counties.

We care about the flows of commuters into the region because this tells us something about the potential labor supply. After all, the region need not be as concerned about exhausting the eight-county labor supply if there are significant numbers of available workers residing in nearby counties with strong commuting links.

Table 4 summarizes data on commuting flows into the WIA 7 region. In 1990, WIA 7 region residents accounted for 89 percent of regional jobs. However, 2.4 percent of regional jobs were taken by residents of Allegany County in Maryland, followed by 1.9 percent of jobs taken by residents of Washington, Maryland. Using a lower bound of 1.0 percent as our measure of commuting reach, the inflow labor market region also includes Frederick and Winchester, Virginia. As the table below shows in-flow commuting patterns did not change significantly in the next decade.

Counties	Core Region (% of total workers)	
	1990	2000
WIA 7 Counties Allegany, Md. Washington, Md. Frederick and Winchester, Va.	88.7 2.4 1.9 1.0	89.7 2.4 2.2 1.3
Other	2.3	4.8

Table 4WIA 7 Inflow Labor Market CountiesCommuting Data from 1990 and 2000 Census

Source: BEA, 1990 and 2000 Census

With our inflow labor market region, we can gauge the size of the potential labor force for the WIA 7 region. Including the core region, the civilian labor force that is within commuting distance totaled around 258,191 in 2002. Further, also in 2002, there were about 11,696 unemployed residents in the WIA 7 labor market inflow region.

The unemployment rate for the inflow region as a whole (at 4.5 percent) was well below with the nation in 2002 (at 5.8 percent) and well below the West Virginia average (6.1 percent). However, Allegany county posted unemployment rates higher than the inflow region average (and higher than the WIA 7 rate of 4.8 percent), while Washington County (4.6 percent), and Frederick and Winchester county (2.9 percent) remained below the regional, state and national averages.

Further, there were significant numbers of college-educated residents in the inflow region in 2000. For instance, there were at least 35,917 residents with some college education, but no degree, 11,401 residents with an Associate's degree, 18,920 residents with a Bachelor's degree, and 12,407 residents with a graduate or professional degree. Indeed, in terms of the percentage of residents in 2000 with a Bachelor's degree or better, the inflow region exceeded the regional and state averages.

This does not necessarily mean that these residents would be willing or capable of taking a job in the region, but it does highlight the point that job gains in the region need not necessarily be restricted by labor supply problems in the regional counties.

WIA 7 Region Outflow LMR

Just as the region imports workers from nearby counties, it also contributes workers to jobs outside of the region. Table 5 shows outflow commuting patterns for WIA 7 region residents. In 1990, 65.7 percent of region residents held jobs in the region. Frederick and Winchester, Virginia attracted 6.5 percent of employed region residents and Allegany county, Maryland drew 5.2 percent. Using a 1.0 percent cut-off, we also find that Washington, Frederick and Montgomery counties in Maryland, Rockingham and Harrisonburg in Virginia, and the District of Columbia attracted significant numbers of employed region residents. However, in 2000, the percentage of workers employed within the core region decreased to 61.9 percent from 65.7 percent in 1990, indicating that more WIA 7 residents are commuting to jobs outside the region. Frederick and Winchester, Virginia and Washington, Maryland attracted more of the core region residents. The percentage of people commuting outside of the labor market region also increased significantly.

	% of Core Region		
	Employed Residents		
Counties	1990	2000	
WIA 7 counties	65.7	61.9	
Frederick and Winchester, VA	6.5	8.2	
Allegany, MD	5.2	4.8	
Washington, MD	4.6	6.7	
Loudoun, VA	2.7	3.1	
Fairfax, Fairfax City and Falls Church, VA	2.3	2.0	
Frederick, MD	2.1	2.9	
Montgomery, MD	2.1	2.1	
District of Columbia, DC	1.2	1.3	
Rockingham and Harrisonburg, VA	1.2	1.2	
Other	3.9	5.9	

Table 5WIA 7 Labor Market CountiesOut-Commuting Data from 1990 and 2000 Census

Source: 1990 and 2000 Census

The job mix for the WIA 7 region is better balanced than the outflow region. Using covered employment by industry data for 2001 the Bureau of Labor Statistics, we find that the region is more specialized in manufacturing than the outflow region, the state and the nation. As Figure 25 shows, the outflow region and WIA 7 are both less exposed to mining than the state. Services and government sectors account for a much larger share of outflow region jobs than it does for the WIA 7 region, West Virginia or the nation.



Figure 25 Concentration of Jobs in 2001