Northwest Tennessee Workforce Study

for

Northwest Tennessee Workforce Board

and

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TABLE OF CONTENTS

TABLES

FIGURES

INTRODUCTION AND SUMMARY

This study presents a comprehensive analysis of the northwest Tennessee labor force area with comparisons with Tennessee and the nation. The study addresses three major tasks: documenting the current economic structure of the northwest Tennessee area, analyzing local preparedness to grow, and reporting perceived strengths and weaknesses for the study area economy. This section provides a brief summary of results.

Current Economic Structure

The study area consists of seven counties in northwest Tennessee: Crockett, Dyer, Gibson, Lake, Lauderdale, Obion, and Tipton counties. Combined, these counties represent 3.4 percent of Tennessee's labor force, 3.8 percent of the state's population, and about 3.0 percent of the state's payroll employment. Measured by employment and population, the study area is the smallest of the Tennessee's 13 labor force areas.

Counties in the study area vary considerably in size. Almost half (46 percent) of the study area's population resides in Tipton and Gibson counties, while the remaining 54 percent is distributed across the other five counties. Similarly, Tipton and Gibson counties account for 46 percent of the study area's labor force.

Population and employment growth in the study area lags considerably behind that of Tennessee and the United States. The study area unemployment rate is one of the highest in the state and increased from 1990 to 2001, while unemployment rates in Tennessee and the United States fell considerably during the same period.

Population

Population is projected to increase by 1.9 percent from 2002 to 2005 and 3.2 percent from 2005 to 2010. Population growth is expected to be slow compared with Tennessee's expected growth.

Study Area Educational Attainment and Workforce Skills

The proportion of the population with a bachelor's degree or higher is extremely low in all counties, while Lauderdale and Crockett counties have very high proportions of population with less than high school educational attainment. Compared to Tennessee and the United States, educational attainment in the study area is very low.

Personal Income

Personal income has increased steadily over the years, but more slowly than for Tennessee and the United States. From 1990 to 2002, inflation-adjusted per capita income in the study area increased 19.7 percent, compared with 22.6 percent for the United States and 26.9 percent for Tennessee.

Per capita income, a measure of the standard of living, is much less than for Tennessee and the United States, and the difference is growing. In 1990 Tennessee's per capita income was 22 percent higher than that of the study area; in 2002 it was 29 percent higher. Similarly, U.S. per capita income was 42 percent higher than the study area's in 1990 and is now 45 percent higher.

Study area personal income is projected to increase by about 16 percent, after adjusting for inflation, from 2002 to 2010. Real per capita income is projected to increase by 10 percent during the same period.

Civilian Labor Force and Employment

Labor force growth has been almost flat, increasing by only 11 percent from 1988 to 2002, one of the slowest growth rates of similar areas of Tennessee. The labor force participation rate is low at 59.7 percent, compared with more than 70 percent for the Nashville MSA and Memphis MSA and 66 percent for Tennessee.

The labor force in the study area is projected to grow more slowly than in the state from 2002 to 2010, rising 5.1 percent compared with 9.7 percent for Tennessee. The growth of employment will follow a similar path.

Unemployment rates are projected to be high in the study area, projected at 7.8 percent in 2010. The labor force participation rate is expected to continue falling to about 58.7 percent in 2010.

Employment by Occupation

The largest employing occupations are production occupations (23,910), office and administrative support occupations (11,380), and transportation and material moving occupations (10,040); these three occupational groups account for 53 percent of employment in the study area.

Following state and national trends, service occupations constitute about 21 percent of the increase in employment expected from 2000 to 2010. The second largest occupational increase is expected for production occupations, representing nearly 20 percent of total net job gain from 2000 to 2010. By comparison, production occupations constitute just 8.5 percent of the job gain for the state, and 3.4 percent for the United States during the same period.

Payroll Employment

Study area payroll employment grew considerably from 1980 to 1995, but has been flat from 1995 to 2002. Manufacturing is the largest employing sector in the study area, followed by services and retail trade. While the services sector has been gaining jobs, manufacturing has been losing jobs.

Study area payroll employment is projected to increase by 2.5 percent from 2002 to 2005 and 6.5 percent from 2002 and 2010. The largest job increases are expected in the transportation, communications, and public utility sector (16.8 percent), services (14.6 percent), and wholesale trade (13.3 percent) from 2002 to 2010. Jobs in the farm sector are projected to decline by 9.8 percent during the same period.

Local Preparedness to Grow

Some of the factors that determine economic growth can be directed or enhanced by developing and effectively utilizing local resources such as human resources. Other aspects of growth, such as worker's compensation costs and healthcare costs, are much more difficult for local decision-makers to affect.

Developing the region's preparedness to grow has to do with using local resources as effectively as possible. Human resources are a region's most important asset. Education and skills provide the competitive edge for a local workforce, and continuing education helps to keep the competitive edge sharp over time.

Northwest Tennessee, along with many other local economies in the nation, cannot compete effectively with China or the Pacific Rim on the basis of labor cost. The region can compete, however, in terms of productivity, or output per hour worked. If our labor costs more but we produce much more per hour worked, our average production costs can be competitive. Productivity depends on the availability of a well-educated and trained workforce. On this account, the northwest Tennessee workforce is largely unprepared for future growth.

Many of the occupations currently in shortest supply in the study area, such as registered nurses, machinists, tool and die makers, and computer operators, require formal education beyond a high school diploma and require workers to master particular occupational skills. On average, only about 13 percent of these jobs are available to workers with less than a high school diploma; since 31 percent of the study area workforce has less than a high school diploma, a large portion of the workforce does not qualify for these jobs that are available today. In general, demand for employees with less than a high school diploma will shrink considerably during the next 10 years relative to demand for employees with technical training, college experience, or a bachelor's degree particularly among the larger employers.

Local employers are concerned about the poor quality of math skills, writing skills, and, in particular, "soft skills" (getting to work on time, dressing properly, and other basic work habits) in the local workforce. These deficiencies are much more pronounced with large employers (with 50 employees or more). Reading ability skill is also a problem but not as much as math, writing and soft skills.

In addition to labor quality issues, two other major issues are rising healthcare insurance costs and worker's compensation costs. More than half of employers cited healthcare costs as one of the top three constraints to growth, as did 70 percent of large employers. Worker's compensation costs were identified as an important constraint on growth for more than 60 percent of large employers and 30 percent of small employers.

Perceptions of Local Strengths and Weaknesses

Important weaknesses consist of educational attainment of the workforce, apparent lack of regional cooperation, and lack of industrial diversity.

Education. The low educational attainment level of the workforce is a concern for many local employers. Some participants point out the poor quality of education in the region. Even though some people have a high school diploma, for example, their math and reading skills are below eighth grade level. Manufacturing employers are looking for new hires with at least a high school diploma. Some employers highlight the parental effect on low level of educational attainment and poor educational performance in school in the region.

Regional Cooperation. Employers and other stakeholders argue that cooperation is necessary to prepare a unified plan to attract businesses to the region. They believe that a county-by-county approach is not an effective solution to the regional economic problem. The study area should develop an image as a manufacturing community or a retail community and market itself to recruit more businesses.

Lack of industrial diversity. The study area is heavily dependent on manufacturing, owing to important location advantages apparent throughout the state.

The most important strength appears to be a strong work ethic.

Focus group participants argue that the study area has a workforce with the skills needed for many jobs. A good quality of life, strong work ethic, honest people, and strategic location are major strengths of the region.

Although the study area has an abundance of training providers, they are not adequately funded. There are waiting lists for high-demand occupations, including licensed practical nurse and registered nurse, due to lack of funding.

ECONOMIC DEMOGRAPHICS, STATUS, AND TRENDS

Overview of the Study Area

Located in the northwest corner of Tennessee, the study area consists of seven counties: Crockett, Dyer, Gibson, Lake, Lauderdale, Obion, and Tipton county. Geographically, four of the study area counties border the Mississippi River. The study area is primarily a rural region with the exception of Tipton County, which is highly urbanized.

General Characteristics of the Study Area

The study area represents 3.4 percent of the Tennessee's labor force, 3.8 percent of the state's population, and about 3 percent of the State's payroll employment for 2002. Compared to 13 Local Workforce Investment Areas (LWIAs) in Tennessee, the region ranks 13th in labor force size for 2002, 12th in population, and 13th in payroll employment. Measured by employment and population, the study area is the smallest of the 13 LWIAs.

The study area per capita income ($19,288 in 1996 dollars) and unemployment rate (7.07 percent) in 2002 rank 10th and 11th, respectively, out of 13 LWIAs. These figures suggest that the study area is not as economically vibrant as other LWIAs.

Based on population, labor force, and employment, we identified three peer LWIAs: 6, 7, and 10. We further identified two metro LWIAs (9 and 13) to gain further insights into the study area's socioeconomic dynamics. Table 1 highlights the characteristics of the peer LWIAs.

Table 1. Characteristics of Local Workforce Investment Areas (LWIAs) (2002)

Peer LWIAs	Population ('000)	Labor Force	Payroll Employment ('000)
LWIA 6	220	106,249	117
LWIA 7	225	103,934	118
LWIA 10	229	109,584	122
Study Area	222	99,469	107
Metro LWIAs			
LWIA 9	869	479,603	704
LWIA 13	936	472,874	668

Note: Population for 2002 is an estimate.
Source: BLS, Woods & Poole

General Characteristics of the Study Area Counties

The seven counties that make up the study region vary in population size, labor force, and employment. The smallest of the seven counties by population size are Lake (5,548) and Crockett (14,675), and the largest counties are Tipton (53,347) and Gibson (48,330) (Table 2). The remaining three counties have between 24,000 and 37,000 residents. Among the study area counties, Tipton and Gibson are highly urbanized and well connected to the major metro areas of Memphis and Jackson, respectively.

Table 2. Major Characteristics of Counties in Study Area (2002)

Counties	Population ('000)	Labor Force	Payroll Employment ('000)	Total Employment in Manufacturing
Crockett County	15	7,320	7	41%
Dyer County	37	18,009	25	35%
Gibson County	48	20,528	25	36%
Lake County	6	2,640	2	9%
Lauderdale County	25	9,572	11	41%
Obion County	33	16,327	20	41%
Tipton County	53	25,075	17	30%

Notes: Manufacturing employment share is for 2001. We made adjustments to Lake, Lauderdale, and Tipton counties' population because of correctional facilities.
Source: BLS, Woods & Poole, and Tennessee Economic and Community Development

Almost half (46 percent) of the study area's population resides in Tipton and Gibson counties, while the remaining 54 percent is distributed across the other five counties. Similarly, Tipton and Gibson counties provide around 46 percent of the study region's labor force. Employment follows a somewhat different pattern, suggesting structural differences in the counties. Gibson County has around 24 percent of the total number of jobs in the study area, Dyer 23 percent, Obion 18 percent, and Tipton 16 percent. Lake County's contribution to the study region's jobs is the smallest with around 2 percent.

An underlying factor that characterizes the study region's economy is the heavy reliance on manufacturing as a source of jobs. Manufacturing constitutes the largest share of employment in all counties except Lake County, where education and health services and leisure and hospitality are the major sectors. In Crockett, Lauderdale, and Obion counties, the manufacturing sector represents more than 40 percent of total employment. Only

Dyer County has a highly diversified economic structure in which manufacturing, professional and business services, wholesale trade, and information sectors play crucial roles.

Study Area in National and State Context

The study area lags considerably in comparison with the Tennessee and the U.S. economies in terms of population growth and employment growth. The study area's population grew by 12.85 percent from 1990 to 2001, compared to Tennessee's growth of 17.47 percent and U.S. growth of 14.73 percent. Similarly, the study area's labor force was up 11.61 percent from 1990 to 2001 as opposed to Tennessee's gain of 19.80 percent and 12.72 percent for the United States.

Table 3. Study Area Is Lagging Behind (1990-2002)

	Study Area	Tennessee	United States
Population Growth	13.76%	19.01%	15.54%
Labor Force Growth	11.61%	22.57%	15.12%
Employment Growth	10.45%	22.77%	14.89%
Unemployment Rate Change	0.90%	-0.20%	0.20%

Note: Unemployment rate change refers to difference in unemployment rate between 1990 and 2002.
Source: BLS, Woods & Poole, Census, BERC

At 11.07 percent from 1990 to 2001, employment growth in the study area was even less impressive in comparison with that of Tennessee (20.9 percent) and the United States (20.8 percent). A reflection of slow employment growth in the study region was the high unemployment rate relative to that of the United States and Tennessee. The study region's unemployment rate is currently one of the highest in the state. The unemployment rate fell from 5.6 percent to 4.8 percent in the United States and from 5.7 percent to 4.9 percent in Tennessee from 1990 to 2001. However, the unemployment rate in the study area increased from 6.3 percent to 6.7 percent in the same period.

Population Dynamics

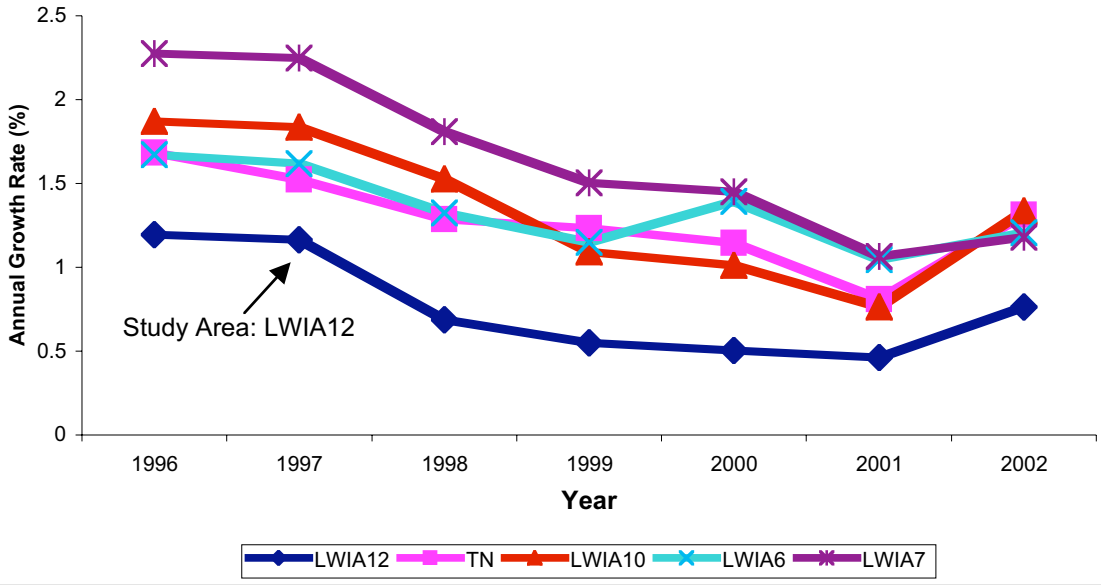
What are the population trends for the study area? How do these trends compare with the peer LWIAs and Tennessee? This section briefly addresses these issues.

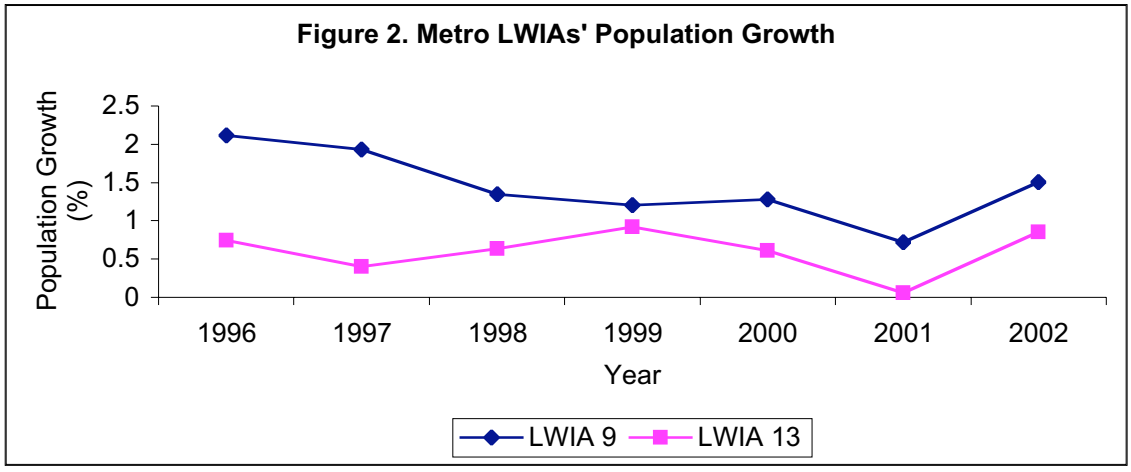
Study Area Population Trend

Study area population grew from 195,000 to 222,000 during the 1990-2002 period. Annual population growth in the study area settled around 0.5 percent from 1998 to 2001, as opposed to the growth in the peer LWIAs of around 1.0 percent during the same period.

Unlike the study area, population growth in the metro LWIAs fluctuates from year to year. Population growth in the Nashville Area (LWIA 9) was very vibrant relative to the study area and the peer LWIAs. Trend data indicate a less dynamic population in the study area relative to the other LWIAS. (See Appendix for population data.)

Figure 1. Study Area Population Growth Trend is Similar to but Less Than Peer LWIAs and Tennessee





Study Area Population Composition

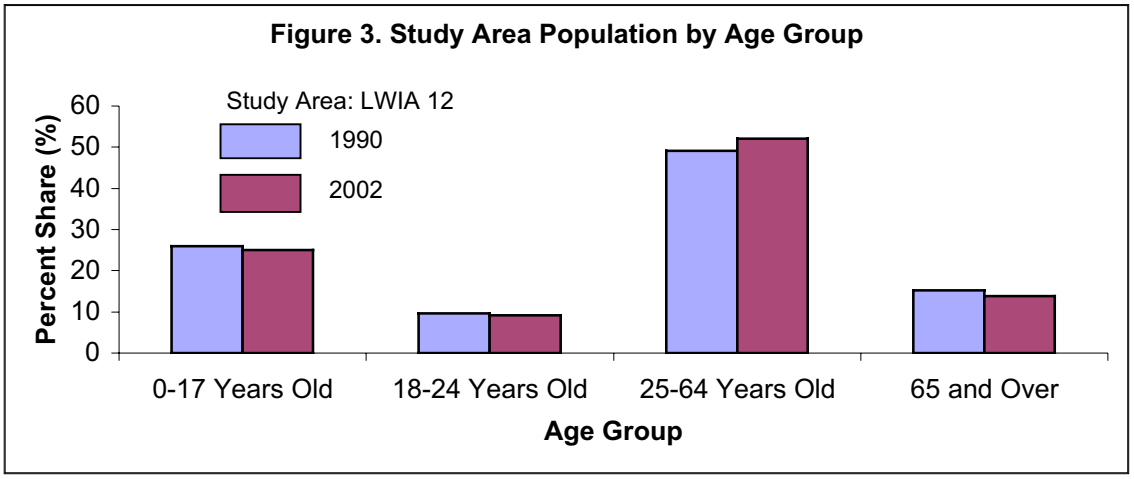
Study area age composition of population changed slightly from 1990 to 2002. The share of school age (0-17 years old), college age (18-24 years old), and retirement age (65 and over) declined, while the share of working age (25-64 years old) population increased 3.0 percent (Table 4). The 1.5 percent decline in the share of retirement age population (65 and over) was large compared with the peer and metro LWIAs and Tennessee.

Table 4. Age Composition of Selected LWIAs and Tennessee (%) (1990 and 2002)

	Study Area	Peer LWIAs		Metro LWIAs		State
1990	LWIA12-90	LWIA6-90	LWIA7-90	LWIA9-90	LWIA13-90	TN-90
0-17 Years Old	26.0	25.4	23.8	24.0	27.5	24.9
18-24 Years Old	9.6	9.7	11.6	11.8	11.3	10.8
25-64 Years Old	49.1	50.5	52.5	53.3	50.8	51.6
65 and Over	15.3	14.5	14.6	10.9	10.5	12.6
2002	LWIA12-02	LWIA6-02	LWIA7-02	LWIA9-02	LWIA13-02	TN-02
0-17 Years Old	25.0	24.1	23.1	23.7	27.9	24.3
18-24 Years Old	9.2	9.5	10.2	10.8	9.7	9.6
25-64 Years Old	52.0	51.8	54.5	55.4	52.5	53.6
65 and Over	13.8	14.5	14.2	10.1	9.9	12.4

Source: Woods and Poole, BERC

The share of school age population (0-17) in the study area was second largest after the Memphis Area (LWIA13) in 2002. In the other age categories, the study area had more similarities with the peer LWIAs than with metro LWIAs and Tennessee. In the latter group, the share of retirement age population was lower than in the peer LWIAs.



A useful measure of evaluating age composition is the dependent population ratio, which is the ratio of dependent population—school age (0-17) and retirement age (65+)—to working age population (18-64). This ratio measures level of additional burden for each working age person in an economy.[1] The study area had the highest dependent population ratios both in 1990 (0.70) and 2002 (0.63). The nearest ratio to the study area was in LWIA6 with 0.66 and 0.63 in the same periods, respectively. The Nashville Area LWIA had the lowest ratio with 0.51 in 2002 (Table 5).

Table 5. Dependent Population Ratio Is the Highest in the Study Area

Geography	1990	2002
Study Area	0.70	0.63
LWIA6	0.66	0.63
LWIA7	0.60	0.58
LWIA9	0.53	0.51
LWIA13	0.61	0.61
Tennessee	0.60	0.58

The economic implication of a high dependent population ratio is that the labor market lacks incentives to attract working-age population from other areas. It also reflects a

[1] The definition of the working-age population might not be the same in all localities because a significant part of the high school age population in some rural areas enters the workforce early rather than finishing high school. High dropout rates in some localities attest to this fact. Similarly, more and more of the retirement-age population is re-entering the workforce. These issues create methodological problems for the application of this ratio across counties.

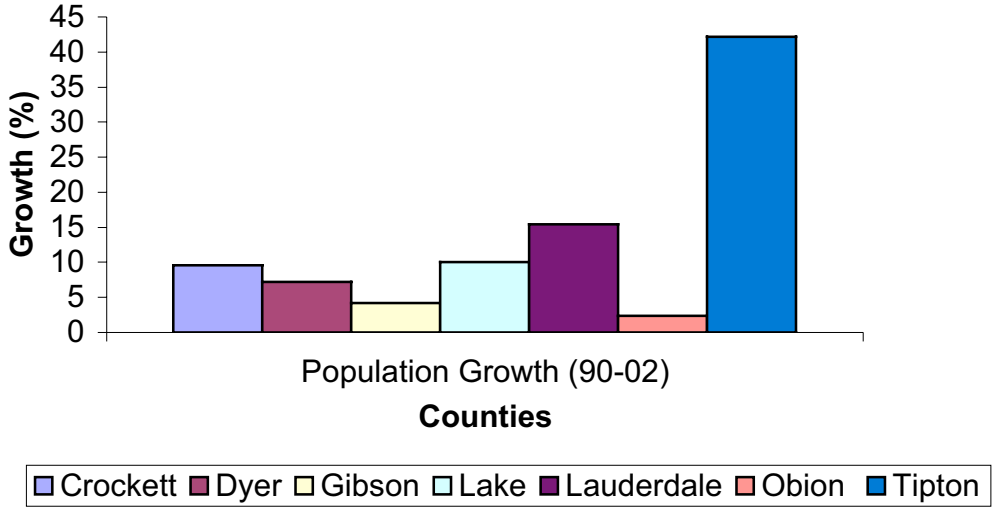
national trend of rising retirement-age population. A high dependent population ratio means a less mobile labor market.

Table 5 suggests that age composition in the study area is skewed more toward young and retirement age population than in the metro LWIAs and Tennessee. The dependent population ratio demonstrates the extent of differences in population age composition between the study area and the selected LWIAs.

County Population Composition

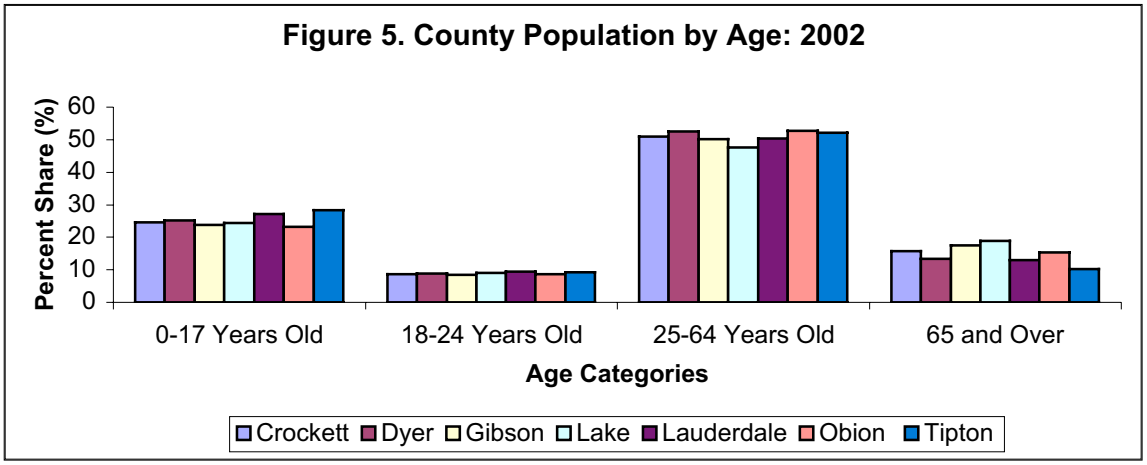
Compared to the selected LWIAs, population growth from 1990 to 2002 in the study area was not vigorous; growth was primarily driven by a phenomenal population increase in Tipton County (42.2 percent). The lowest population growth was in Gibson (4.2 percent) and Obion (2.4 percent) counties (Figure 4). A modest increase (from 7 percent to 15 percent) took place in the four remaining counties. However, these four counties' impact on study area population growth was small. Highly urbanized and adjacent to the Memphis area, Tipton County clearly shows a different population growth pattern from that of the other six counties.

Figure 4. Study Area (LWIA 12) Population Growth was Largely Driven by Population Growth in Tipton County



By age composition, Lake County had the highest share of retirement-age population and the lowest share of working-age population (Figure 5). Compared to other counties, the Tipton County age profile was also different: it had the highest school age population and the lowest retirement age population shares. Lake, Obion, Gibson, and Crockett counties had a higher percent of retirement-age population than the other four counties. Dependent population ratios were the highest in Lake (0.77) and Gibson (0.71) counties.

Lake County had an unusually high (0.77) dependent population ratio, reflecting its completely rural characteristics and relatively different socioeconomic structure. Crockett County is similarly rural, but its dependent population ratio was much lower at 0.68. Key differences between these two counties are Crockett County's proximity to the adjacent Jackson MSA and its 21 percent commuting population to this area.



Population by Race/Ethnic Groups

Racial composition of the population of the study area is more similar to Tennessee rather than the peer LWIAs (Table 6). In 2002, the study area population was more diversified than it was in 1990: 78 percent whites, 19 percent blacks, 1.74 percent Hispanic, and less than 1 percent other groups. Relative to the metro areas, however, this diversification was less impressive.

A significant population shift took place between 1990 and 2002: the share of Hispanic population increased from 0.67 percent to 2.38 percent across Tennessee. This upsurge in

the Hispanic population, however, was less visible in the study area relative to the selected comparison regions. The Hispanic population in the study region increased from 0.5 percent to 1.74 percent between 1990 and 2002. The largest increase in the share of the Hispanic population was in the Nashville Area (4.2 percent) and LWIA 6 (3.5 percent).

Table 6. Race/Ethnicity Composition of Population (%)

1990	White	Black	Native American	Asian	Hispanic
Study Area	80.44	18.70	0.21	0.15	0.50
LWIA6-90	93.28	5.61	0.16	0.36	0.60
LWIA7-90	97.86	1.28	0.15	0.31	0.41
LWIA9-90	78.44	19.20	0.22	1.27	0.88
LWIA13-90	54.56	43.51	0.17	0.90	0.86
TN-90	82.57	15.91	0.20	0.64	0.67
2002					
LWIA12-02	78.07	19.43	0.37	0.39	1.74
LWIA6-02	90.25	5.20	0.40	0.61	3.54
LWIA7-02	95.58	1.41	0.39	0.53	2.09
LWIA9-02	72.55	20.62	0.26	2.36	4.21
LWIA13-02	46.10	49.20	0.16	1.75	2.79
TN-02	79.45	16.71	0.29	1.17	2.38

The presence of a diversified population creates both challenges and opportunities. Challenges primarily stem from language-related communication problems in the job environment. Diversity creates abundant opportunities as well as economic and social dynamism through interactions and new ideas. Recent arguments regarding the changes in traditional development strategies and the growing emphasis on the "creative classes" in an economy have brought diversity issues to the forefront of economic development initiatives.[2]

County Population by Race

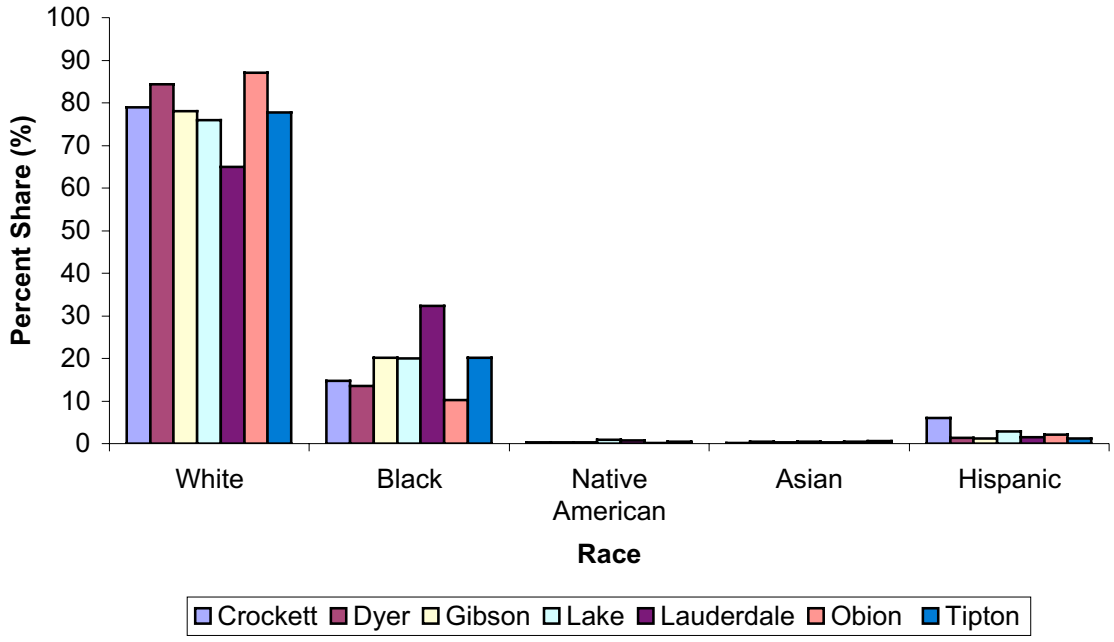
Only Crockett County has a large presence of Native American, Asian, and Hispanic groups (Figure 6). The Hispanic population has the largest share of population in

[2] For similar arguments, see http://www.creativeclass.org/. This website was initiated by Richard Florida, the author of "Rise of The Creative Class."

Crockett County (6 percent), Lake County (3 percent), and Obion County (2 percent). The largest share of the African American population is in Lauderdale County (32 percent). The share of the African American population in the other five counties ranges from 15 percent in Dyer County to 20 percent in Tipton County.

How diverse were these counties in 2002? Lauderdale and Lake counties were more racially diverse with a diversity score of 0.47 and 0.38, respectively. A score close to 1.0 indicates a racially diverse community. Obion and Dyer Counties were the least diverse with diversity scores of 0.23 and 0.27, respectively.[3]

Figure 6. County Population by Race/Ethnicity (2002)



[3] Diversity scores are calculated using the following formula: $Diversity = 1 - \sum_{j=1}^{5} s_j^2$ where j =Racial category (1=White, 2=Black, 3=Native American, 4=Asian, and 5=Hispanic). S_j =Population share of jth racial category. This index is widely used to measure party fragmentation. For an application of this index, see RAE, Douglas W. (1967), *The Political Consequences of Electoral Laws*, New Haven: Yale University Press.

Population Outlook for the Study Area

The study area population is projected to increase by 1.86 percent from 2002 to 2005, rising from 221,930 to 226,060, and 3.2 percent from 2005 to 2010 (from 226,060 to 233,340). Compared with Tennessee's, the projected population growth rate is low. Population in Tennessee is projected to increase from 5,884,880 to 6,031,800 (growth of 3.6 percent) between 2002 and 2005. From 2005 to 2010, Tennessee's population will grow by 5.9 percent, reaching 6,386,040 in 2010.

By age group, the study area's school age population (0-17 years old) is projected to decline by 0.16 percent from 2002 to 2005 and by 0.36 percent from 2005 to 2010. On the other hand, the retirement age population (65 and over) will increase by 2.45 percent from 2002 to 2005 and by 7.9 percent from 2005 to 2010. The increase in the retirement-age population is by far the largest in any age category. As the baby boomers (those born between 1946 and 1964) retire, the share of retirement-age population is expected to increase nationally. Compared to the other age groups, the increase in college-age population (18-24 years old) is projected to be significant: 3.86 percent from 2002 to 2005 and 5.01 percent from 2005 and 2010.

Table 7. Population Outlook for the Study Area

Categories	2002 ('000)	2005 ('000)	2010 ('000)	2002-05 Change (%)	2005-10 Change (%)
Population	221.93	226.06	233.34	1.86	3.22
Population by Age Group					
0-17	55.42	55.34	55.14	-0.16	-0.36
18-24	20.41	21.20	22.26	3.86	5.01
25-64	115.50	118.18	122.12	2.32	3.34
65 and Over	30.60	31.35	33.82	2.45	7.90
Population by Race					
White	173.26	175.34	178.68	1.20	1.91
Black	43.11	44.57	47.61	3.38	6.81
Native American	0.83	0.84	0.77	1.69	-9.24
Asian	0.86	0.90	1.03	4.63	13.51
Hispanic	3.86	4.40	5.26	14.09	19.53
Dependent Population Ratio	0.63	0.62	0.62	-1.73	-0.93
Population Diversity Index	0.35	0.36	0.37	1.90	3.44
Tennessee Population	5824.88	6031.80	6386.04	3.55	5.87

Source: Woods & Poole, BERC

Study area Hispanic population is projected to increase 14 percent from 2002 to 2005 and 20 percent from 2005 to 2010, the largest increase for any racial or ethnic category in the study area. Similarly, the Asian population is projected to grow by 5 percent from 2002 to 2005 and by 14 percent from 2005 to 2010. The smallest projected growth is in the Native American (-0.24) and white population (1.9 percent) from 2005 to 2010. Study area African American population is projected to increase modestly by 3.4 percent from 2002 to 2005 and by 6.8 percent from 2005 to 2010.

Study area population projections indicate a slight change in age and race composition of population, as the dependent population ratio declines by 1.7 percent from 2002 to 2005 and by 0.9 percent from 2005 to 2010.

To summarize, the study area has major issues regarding population dynamics: compared to Tennessee and the selected LWIAs, population is growing more slowly, is less diverse, and has a high dependent population ratio. The outlook for the study area is not as promising as for the other areas, with baby boomers retiring at an accelerated rate and the school-age population declining. On the bright side, a certain influx of Asian and Hispanic population through in-migration or immigration would help to increase regional dynamism. A caution, however, is in order: the Asian and Hispanic migration trend suggests that these groups choose highly urbanized and metro areas as a place of residence rather than rural areas. Tipton County will be the major beneficiary of this population influx.

A comparative perspective is even more revealing: the study area had low rates of population growth compared to the selected peer LWIAs and metro LWIAs, as well as the United States and Tennessee. As U.S. economic conditions improve, the region's population needs to be well positioned for the future challenges of a competitive economic environment. Our examination of study area population does not indicate that it will bear up well faced with future competitive challenges.

Educational and Skill Issues

Educational Attainment

A region's educational attainment level is closely associated with occupational mix, quality of life, industrial composition, and wage rates. Census 2000 data indicate that educational attainment in the study area is low compared to that of the United States and Tennessee. The percent of population over 25 with less than a high school education is highest in Lauderdale (36 percent), Crockett (35 percent), Lake (34 percent), and Dyer (34 percent) counties (Table 8). "No skill" refers to the level of educational attainment with less than high school. Only Tipton County had a semi-skilled population percentage that was higher than the state average and closer to the U.S. average.

Table 8. Educational Attainment (2000) (%)

Area	Bachelor's Degree or Higher	Associate's Degree or Some College	High School Diploma or Equivalent	Less Than High School
Crockett	9.1	18.8	37.3	34.9
Dyer	12	20.7	33.6	33.7
Gibson	10.1	21.4	39.3	29.1
Lake	7.6	21.6	37.0	33.8
Lauderdale	8.6	18.3	37.0	36.1
Obion	10.3	19.4	41.3	29.0
Tipton	10.8	27.1	36.7	25.4
Tennessee	19.6	24.7	31.6	24.1
United States	24.4	27.4	28.6	19.6

Note: Lake and Lauderdale are estimates that exclude prison population.

The proportion of population with college or higher educational attainment level, according to Table 8, is lower than state and U.S. averages for all seven counties.

Skill Mismatch[4]

Education and experience determine the skill level of an individual. Skill levels needed by employers can vary greatly from one industry to another. A region that has small percentages of highly skilled or semi-skilled workers can limit the types of industry that would consider the region for a new plant or an expansion of an existing plant. Industries that are attracted to low-skill regions will likely pay low wages, which in turn limits the overall standard of living in the region.

Table 9. Skill-Mismatch Index (SMI) for the Study Area Counties

Industry Division	Crockett	Dyer	Gibson	Lake	Lauderdale	Obion	Tipton	Tennessee	U.S.
Agriculture, forestry, and fishing	69	20	44	65	89	75	65	79	275
Mining	698	654	394	647	775	391	288	334	383
Construction	277	292	101	230	324	103	78	256	452
Manufacturing	592	488	339	556	662	359	219	141	143
Transportation, communications, and public utilities	1,128	958	754	1,025	1,222	817	469	396	274
Wholesale trade	984	791	670	920	1,069	728	432	246	116
Retail trade	344	258	166	276	395	218	39	88	172
Finance, insurance, and real estate	2,086	1,732	1,693	2,026	2,197	1,789	1,316	819	446
Business and repair services	1,093	850	813	1,052	1,175	882	574	260	82
Personal services	267	211	104	210	313	141	19	100	224
Entertainment and recreation services	785	566	570	737	852	649	356	121	14
Professional and related services	2,774	2,344	2,421	2,780	2,884	2,509	2,079	1,311	844
Government	2,188	1,827	1,770	2,107	2,304	1,878	1,353	885	497

Note: Excellent Skill Match: SMI<36; Good Match: 36<SMI<65; Average Match: 65<SMI<144; Poor Match: 144<SMI<256; Bad Match: 256<SMI<400; and Worst Match: SMI>400
Source: BLS, BERC, and David J. Peters, *Manufacturing in Missouri: Skills-Mismatch Index*, www.ded.mo.gov.

We compared skill levels in northwest Tennessee with skills desired by employers for each major industry. Skills desired by employers are estimated from national averages for each industry. The results are presented in Table 9 in terms of a skill-mismatch index (SMI). A

[4] To compute Skill-Mismatch Index (SMI), we use the following formula: $SMI_{sector} = \sum_{j=1}^{4} (S_j - M_{ij})^2$

where: j = skill level (1=High, 2=Semi, 3=Low, 4=No Skill). S_j = percent of county population with skill level j. M_{ij} = percent of workers in industry i with skill level j.

low score for the SMI indicates a relatively good match between skills employers desire and skills available in the area, while a high score (144 or above) signals a poor match. A detailed explanation of the SMI can be found on page 114 of this report.

A glance at the skill-mismatch figures indicates that the region is in poor condition. Only in Tipton and Gibson counties does the local skill supply fairly match with the skill demand in agriculture, construction, retail trade, and personal services. The skill composition in Obion County is an "average match" in construction and personal services and a "poor match" in retail trade. Short- or medium-term skill training would make an important difference in this county. The irony is that all of these counties except Lake rely heavily on manufacturing jobs, but none has a skill composition that matches with the demands of the 21st century manufacturing sector. The skill-mismatch index for Tennessee is poor in only three sectors: finance, insurance, and real estate; professional and related services; and government. In seven sectors, skill composition is between "good match" and "poor match," and two sectors have a "bad match."

At the U.S. level, except in professional and related services, the mismatch index is at a manageable level.

Workforce Literacy

A complementary skill-related issue is the adult literacy rate. Based on the discussion of educational attainment and skill-mismatch, we can draw a general conclusion the study area workforce has severe limitations in performing successfully in today's economy. Adult literacy levels for the study area further strengthen this conclusion. The task-oriented adult literacy levels are between Levels 1 and 5, 1 being the worst and 5 the best. Experts argue that the presence of a high percentage of Level 1 or 2 adult literacy has dramatic socioeconomic implications[5]: At these literacy levels, adults are less likely to earn high wages and more likely to go to prison, be on welfare, and be in poverty. According to the National Institute for Literacy (NIFL), among other things, adults at

[5] For a discussion of literacy related issues, see National Institute for Literacy at http://www.nifl.gov.

Level 1 **cannot** determine eligibility from an employee benefits table and calculate the total cost of a purchase from an order form.

Table 10. Percent of Adults in Each Adult Literacy Level

	Level 1	Level 1 or 2
Tennessee	21%	53%
Study Area	25%	65%

Notes: These estimates are based on 1992 National Adult Literacy Survey and 1990 Census Educational Attainment data. Data are old, but these are the latest available figures.
Source: http://www.casas.org/lit/litcode/Search.cfm.

What are the adult literacy levels[6] in the study area? The results, based on synthetic estimates that take into account a task-oriented 1992 National Adult Education Survey and 1990 Census educational attainment data, are dramatic for the study area. Twenty-five percent of adults are at Level 1, and 65 percent are at Level 1 or 2.

The implications are clear: the labor force in the study area does not have the necessary task-oriented literacy level to perform successfully in a competitive economic environment. What is at stake is further loss of possible future economic opportunities due to the poor literacy level in the study area. Compared to Tennessee's workforce, the study region's workforce is poorly equipped for elaborate job-related tasks.

Economic Structure: Personal Income

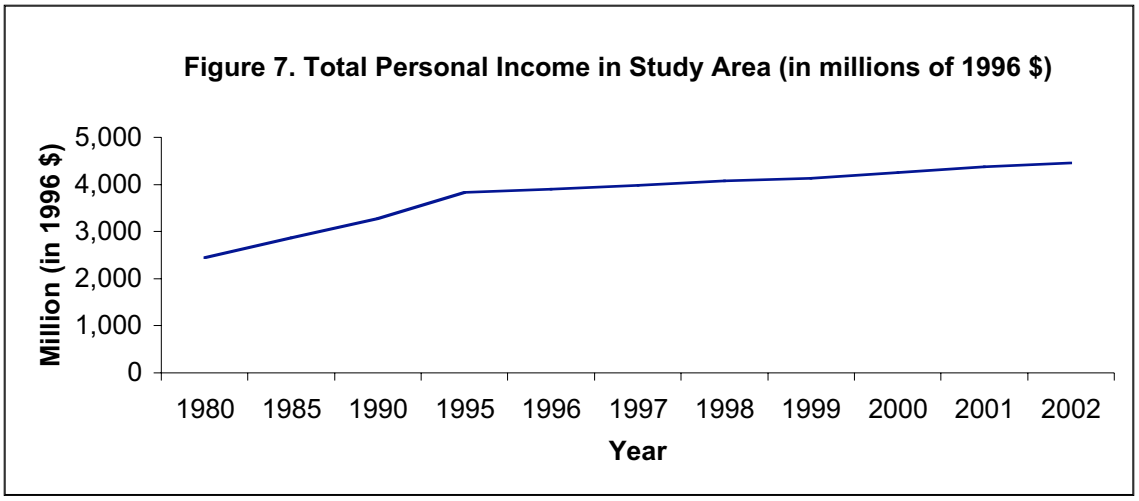
Study Area Personal Income

Study area inflation-adjusted personal income increased from $3,268 million (in 1996 dollars) in 1990 to $4,462 million (in 1996 dollars) in 2002, a gain of 37 percent. Thus, the trend in personal income indicates a steady increase over the years. However, compared to the peer LWIAs, study area personal income showed the smallest increase. Personal income increased more rapidly than the study area in LWIA 10 (54 percent), in LWIA 7 (52 percent), and in LWIA 6 (42 percent) from 1990 to 2002.

[6] The 1992 National Literacy Survey is a task-oriented survey that measures the ability of adults to perform certain tasks. For more information, see National Educational Statistics at http://nces.ed.gov.

Real personal income rose by 45 percent in the Memphis area and by 60 percent in the Nashville area in the same period. The increase in personal income in the Nashville area was by far the largest increase among the selected reference groups.

The 42 percent increase in real personal income in the United States was higher than in the study area (37 percent) but lower than in Tennessee (50 percent) between 1990 and 2002. The personal income growth rate was significantly lower in the study area than in the state, the United States, the metro LWIAs, and peer references.



Per capita personal income is a population-weighted measure of economic welfare. This measure allows us to compare the standard of living across regions. Historical real per capita income data (Figure 8) suggests two clusters of regions: (1) the metro LWIAs, the state, and the United States are in the first cluster, and (2) all peer LWIAs are in the second cluster.

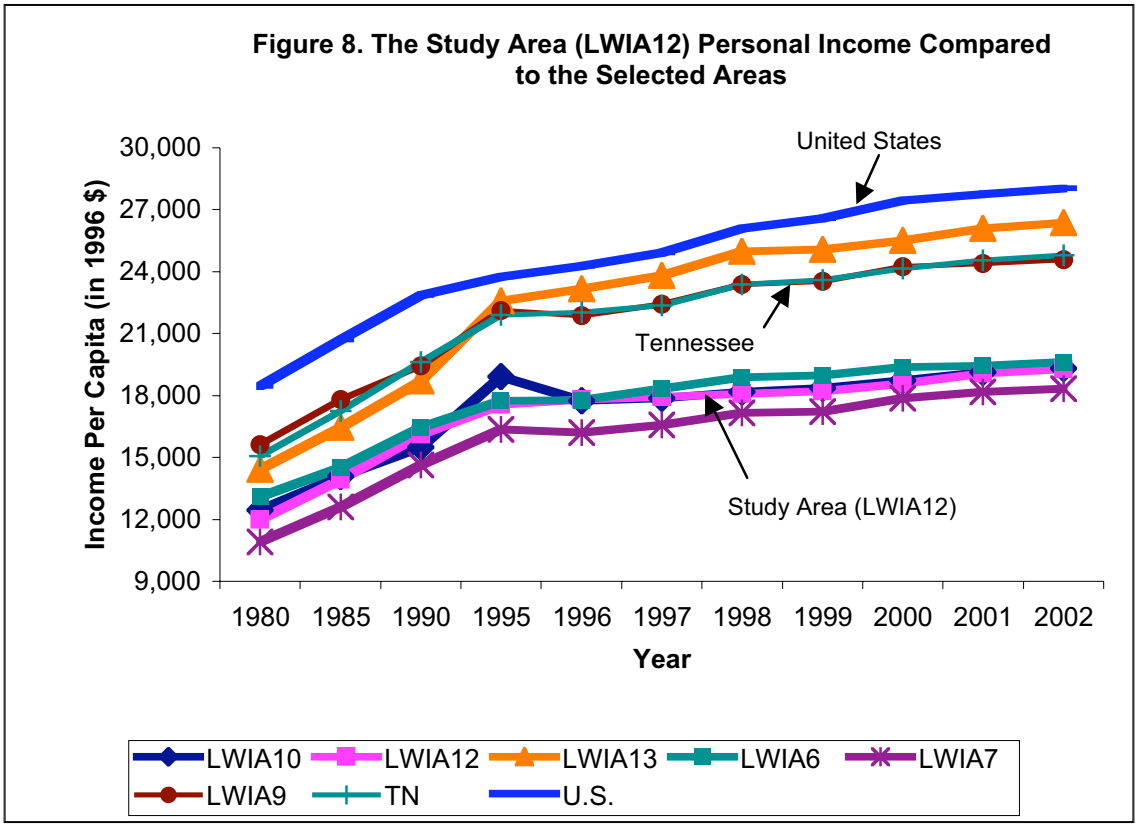


Figure 8 shows that there is a large difference between the two clusters. In the 1980s, real per capita income in the peer LWIAs (including the study area) was somewhat closer to the metro LWIAs and Tennessee. From the early 1990s, real per capita income between these two clusters has diverged dramatically. For example, Memphis area real per capita income surged sharply from 1980 to 2002.

Between 1990 and 2002, study area per capita income increased 19.7 percent from $16,118 to $19,288 (in 1996 dollars). However, growth in the study area was far behind that of the United States (22.6 percent), the state (26.9 percent), and the Memphis area (40.9 percent). The highest per capita income among the selected regions was $28,020 in the United States and the lowest $18,330 in LWIA 7 (in 1996 dollars) in 2002.

Table 11. Change in Per Capita Personal Income

	Per Capita Income				Percent Change in Per Capita Income (%)			
Year	1990	1995	2000	2002	1985-90	1990-95	1995-00	2000-02
LWIA10	$15,504	$18,914	$18,735	$19,307	10.0	22.0	-0.9	3.1
Study Area	**$16,118**	**$17,570**	**$18,591**	**$19,288**	**15.8**	**9.0**	**5.8**	**3.8**
LWIA13	$18,713	$22,593	$25,511	$26,369	13.7	20.7	12.9	3.4
LWIA6	$16,465	$17,753	$19,385	$19,620	13.5	7.8	9.2	1.2
LWIA7	$14,626	$16,356	$17,863	$18,330	15.9	11.8	9.2	2.6
LWIA9	$19,446	$22,116	$24,241	$24,573	9.3	13.7	9.6	1.4
TN	$19,629	$21,910	$24,155	$24,805	13.8	11.6	10.2	2.7
U.S.	$22,856	$23,754	$27,432	$28,020	10.3	3.9	15.5	2.1

Data suggest that study area per capita income is diverging from the trend of the United States, the state, the Memphis area, and the Nashville area. In 1990, Tennessee's per capita income was 22 percent higher than that of the study area; in 2002 it was 29 percent higher. Similarly, U.S. per capita income was 42 percent higher than that of the study area in 1990 and is now 45 percent higher. An increasing divergence is even more visible when we compare the study area with the Memphis area: the difference between the two grew from 16 percent in 1990 to 37 percent in 2002.

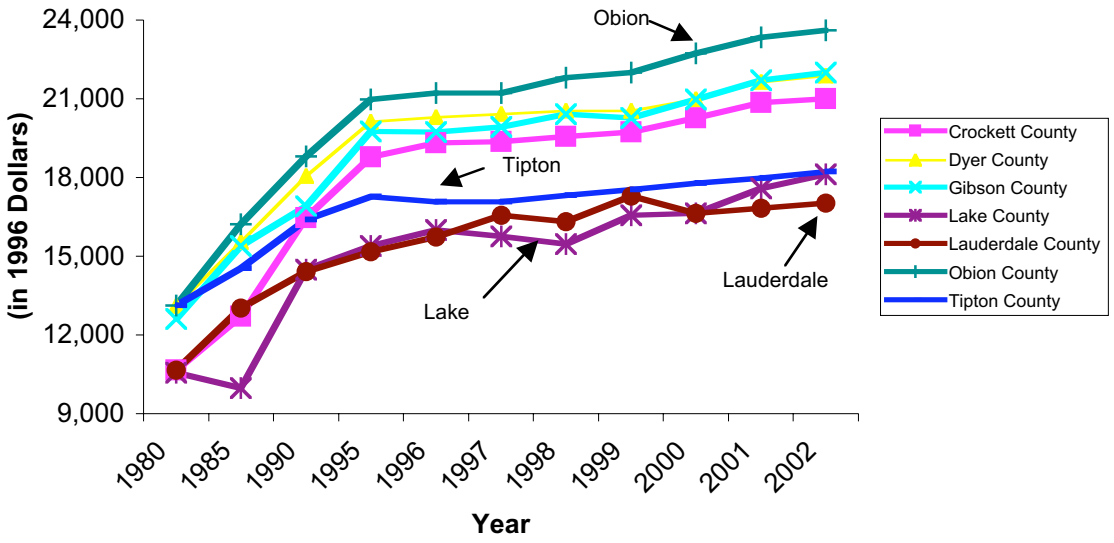
The peer LWIAs were catching up with and even surpassing the study area during the period 1990 to 2002. For example, per capita income in LWIA 10 was $15,504 in 1990, lower than in the study area. In 2002 it was $19,307, slightly higher than study area per capita income.

County Personal Income

Per capita personal income by county shows an interesting trend: Lake, Lauderdale, and Tipton counties performed the poorest relative to the other counties, as their growth rates were almost flat after 1995. The gap between Obion County, which had the highest per capita income in real dollars, and Lauderdale County, which had the lowest per capita income, was significant. In 2002 Obion County's per capita income was $23,601, which was 39 percent higher than Lauderdale County ($17,022). In 1990 the difference in per

capita income between these two counties was 30 percent, which suggests that, over the years, per capita income among the study region's counties was diverging.

Figure 9. County Trend in Per Capita Personal Income (in 1996 Dollars)



Real per capita income in Gibson County increased 30 percent from $16,893 to $22,000 between 1990 and 2002. The second highest increase was in Crockett County, 28 percent from $16,455 to $21,006. Obion County's per capita income grew by 26 percent in the same period. The lowest increases were in Tipton County (11 percent), in Lauderdale County (18 percent), and in Dyer County (21 percent).

Table 12. Changes in County Per Capita Income

	Per Capita Income (in 1996 Dollars)				Percent Changes (%)		
County	1990	1995	2000	2002	1990-95	1995-00	2000-02
Crockett County	$16,455	$18,771	$20,272	$21,006	14.1	8.0	3.6
Dyer County	$18,055	$20,119	$20,977	$21,883	11.4	4.3	4.3
Gibson County	$16,893	$19,758	$20,976	$22,000	17.0	6.2	4.9
Lake County	$14,500	$15,392	$16,637	$18,119	6.2	8.1	8.9
Lauderdale County	$14,419	$15,172	$16,628	$17,022	5.2	9.6	2.4
Obion County	$18,808	$20,978	$22,725	$23,601	11.5	8.3	3.9
Tipton County	$16,383	$17,261	$17,769	$18,222	5.4	2.9	2.5

Source: Woods and Poole, BERC

Increases in total personal income present a different picture (Table 11). From 1990 to 2002, the largest increases in total personal income were in Tipton County (58 percent) from $621 million (in 1996 dollars) to $982 million and Crockett County (40 percent) from $220 million to $308 million. The lowest total income growth was in Lake County (14 percent) from $88 million to $101 million.

Table 13. Total personal Income (in millions of 1996 dollars)

County	1990	2002	Change (%)
Crockett County	$220	$308	39.9
Dyer County	$631	$820	30.0
Gibson County	$784	$1,063	35.6
Lake County	$88	$101	14.4
Lauderdale County	$327	$421	28.6
Obion County	$597	$768	28.5
Tipton County	$621	$982	58.2

Source: Woods & Poole, BERC

By personal income level, the largest counties were Gibson County ($1,063 million), Tipton County ($982 million), and Dyer County ($820 million). The smallest counties were Lake County ($101 million), Crockett County ($308 million), and Lauderdale County ($421 million).

Regional Personal Income Outlook

Study area real personal income is projected to increase by about 16 percent from $4,462 million in 2002 to $5,160 million in 2010. The percent increase projected for per capita income is somewhat less than personal income. Per capita income is projected to increase by 10 percent from $19,288 to $21,218 (inflation adjusted) during the same period.

All study area counties are expected to experience an increase in real total personal income of more than 10 percent between 2002 and 2010. Tipton and Dyer counties are projected to have the largest increase, 23 percent and 16 percent, respectively. Projected income in Dyer County will be close to $1 billion in 1996 dollars. Tipton County ($1,208 million) is expected to catch up with Gibson County ($1,208 million) in personal income

in 2010. The lowest growth in real personal income is projected to be in Obion County (11.7 percent) and Lauderdale County (12 percent). It should be noted that these projections do not take into account manufacturing job losses that have occurred in the area since 2002.

Compared to Tennessee and the United States, however, total personal income in the study region will grow slowly. Real personal income is projected to increase by 20 percent in Tennessee and by 18 percent in the United States between 2002 and 2010.

Table 14. Personal Income Outlook

	Total Personal Income (millions of '96 dollars)				Per Capita Income (1996 dollars)			
	2002	2005	2010	% Growth (2002-10)	2002	2005	2010	% Growth (2002-10)
Study Area	$4,462	$4,718	$5,160	15.6	$19,288	$20,008	$21,218	10.0
Crockett County	$308	$323	$350	13.4	$21,006	$21,662	$22,901	9.0
Dyer County	$820	$867	$951	16.0	$21,883	$22,730	$24,183	10.5
Gibson County	$1,063	$1,118	$1,208	13.6	$22,000	$22,956	$24,429	11.0
Lake County	$101	$105	$114	13.7	$18,119	$18,815	$19,821	9.4
Lauderdale County	$421	$438	$471	12.0	$17,022	$17,557	$18,568	9.1
Obion County	$768	$801	$857	11.7	$23,601	$24,464	$25,889	9.7
Tipton County	$982	$1,066	$1,208	23.0	$18,222	$18,951	$20,060	10.1
Tennessee	$144,489	$154,702	$173,278	19.9	$24,805	$25,648	$27,134	9.4
United States	$8,081,254	$8,599,157	$9,545,583	18.1	$28,020	$28,961	$30,637	9.3

Source: Woods & Poole, BERC

Growth in per capita income is projected to be similar to growth in total personal income across the reference regions and counties. Growth in the counties ranges from 9 percent in Crockett to 11 percent in Gibson County. In 2010, Obion County is expected to have the highest per capita income with $25,889 and Lauderdale County the lowest with $18,568.

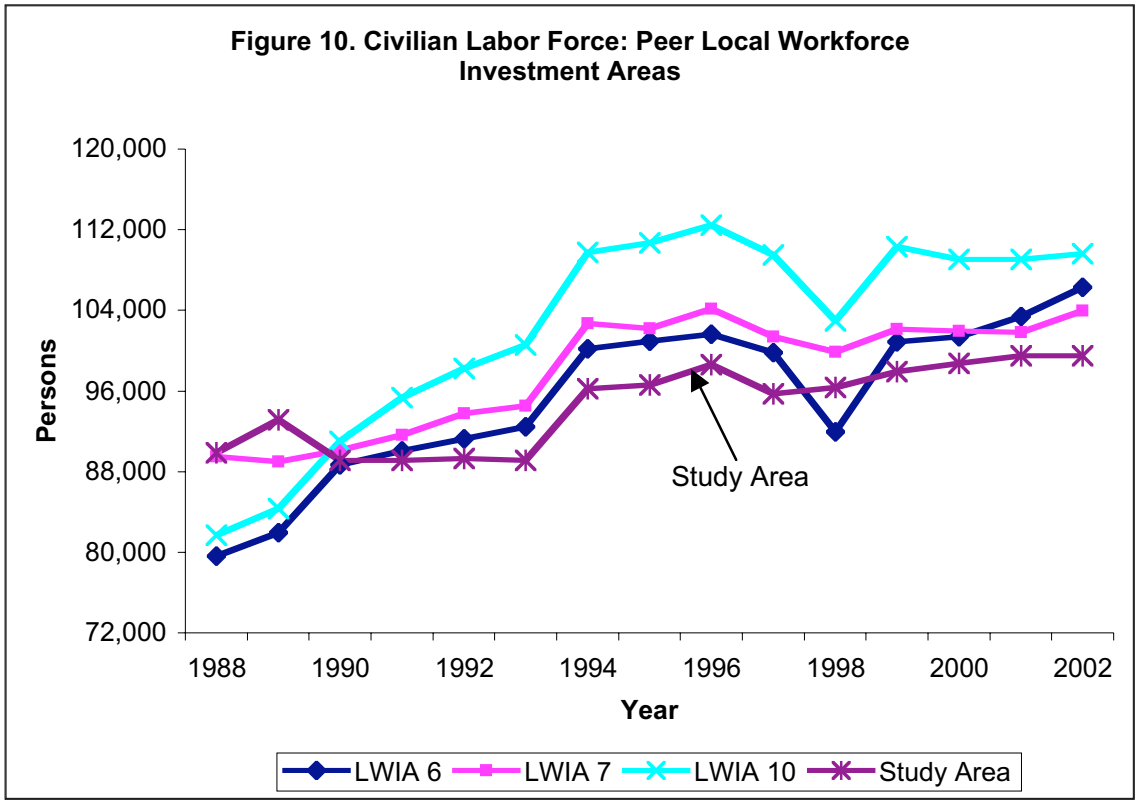
Economic Structure: Civilian Labor Force, Employment, and Unemployment Rate

In this section we examine the size of the labor force, the unemployment rate, and the force participation rate. We also compare performance of the study area with that of the selected regions, the state, and the United States.

Study Area Civilian Labor Force, Employment, and Unemployment Rate

A key economic concept is civilian labor force, defined as the civilian population who are able and willing to work, either employed or looking for a job. For a competitive regional economy, both the quantity and quality of labor force is crucial.

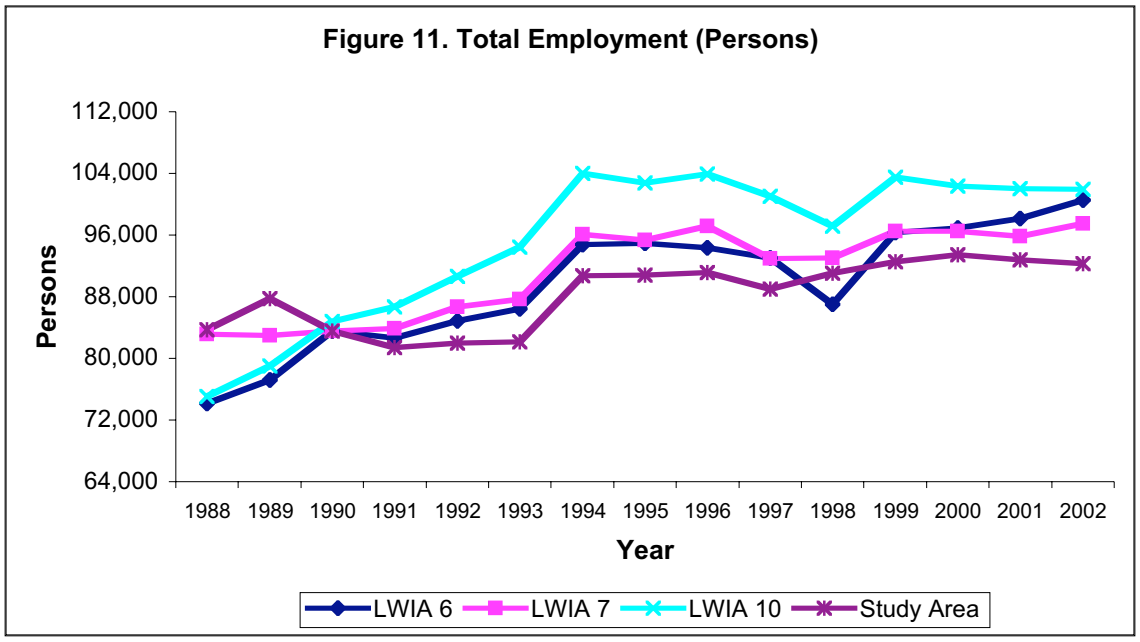
Study area civilian labor force has been almost flat, increasing by only 11 percent from 89,870 to 99,480 between 1988 and 2002. Compared to the peer LWIAs, the study area labor force trend is one of the poorest. Given local population dynamics, this should not be a surprise. LWIA 10 is the only peer region whose labor force increased considerably over the years. The study area, LWIA 6, and LWIA 7 have similar labor force trends (Figure 10).



The peer regions' employment trends follow their labor force trends. Compared to others, LWIA 10 has slightly different trajectory in that it has a more robust employment and labor force market (Figure 12).

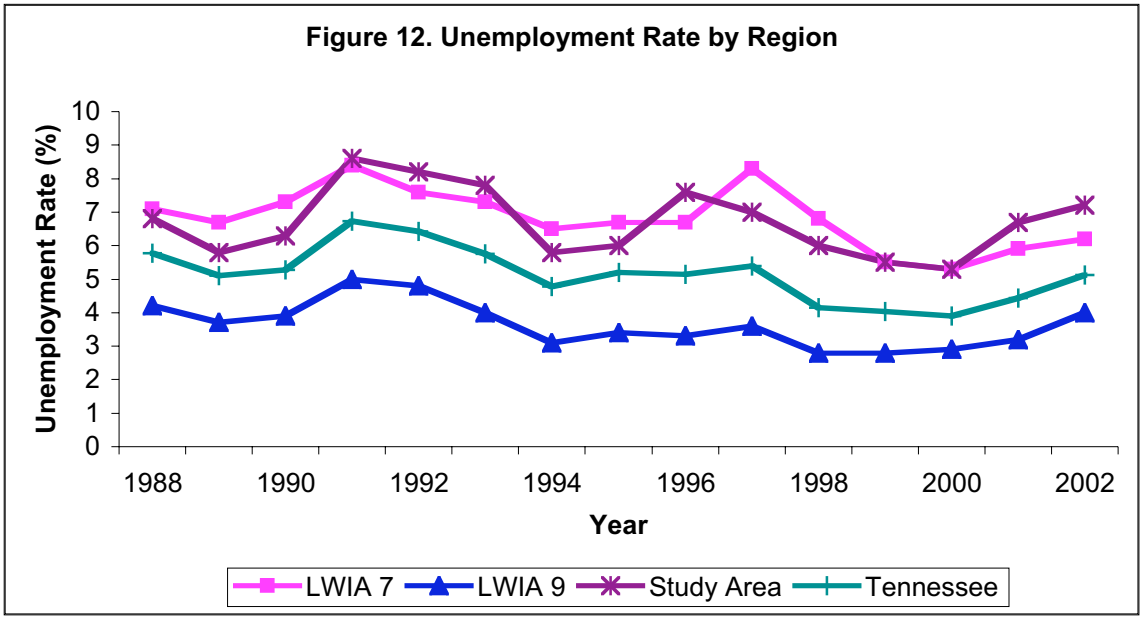
The study area unemployment trend is worse than that of the selected regions. As Figure 13 demonstrates, the study area has a consistently higher unemployment rate than the other regions with the exception of LWIA 7. The study area unemployment rate (7 percent in 2002) was close to what it was in 1988. The graph suggests that the persistent high unemployment rate is a structural problem rather than a short-term problem.

The Nashville area unemployment rate has never been higher than 5 percent. The Tennessee unemployment rate gradually decreased and stabilized at around 6 percent.



The study area had the lowest growth rate (12 percent) in the civilian labor force between 1990 and 2002 and the Nashville area had the highest (27 percent). Compared with the peer regions, the study area was far behind LWIA 10 and LWIA 6; each experienced

around a 20 percent increase in the same period. The labor force in Tennessee increased 23 percent, surpassing all of the selected regions except the Nashville area.



From a comparative perspective, slow employment growth in the study area creates more concern. While almost all reference regions had employment growth equal to or more than labor force growth, the study area followed a different path: employment increased only 10 percent, compared to 12 percent increase in its labor force from 1990 to 2002 (Table 15).

A useful concept that is often used to explain labor force dynamics is the labor force participation rate. This concept is measured as a ratio of civilian labor force to population 18 and over.[7] The labor force participation rate is the lowest in the study area (59.7 percent) and in LWIA 7 (59.9 percent). It is no surprise that the participation rate is more than 70 percent in the Nashville and Memphis areas. The participation rate in Tennessee is around 66 percent, higher than in the peer regions.

[7] Traditionally labor force participation rate in the United States is calculated as a ratio of civilian labor force to the population 16 and over. To be consistent with the population analysis in the previous sections, we used 18 and over. Usefulness of this concept stems from its function as a tool that allows us to make comparison across regions that are not otherwise comparable.

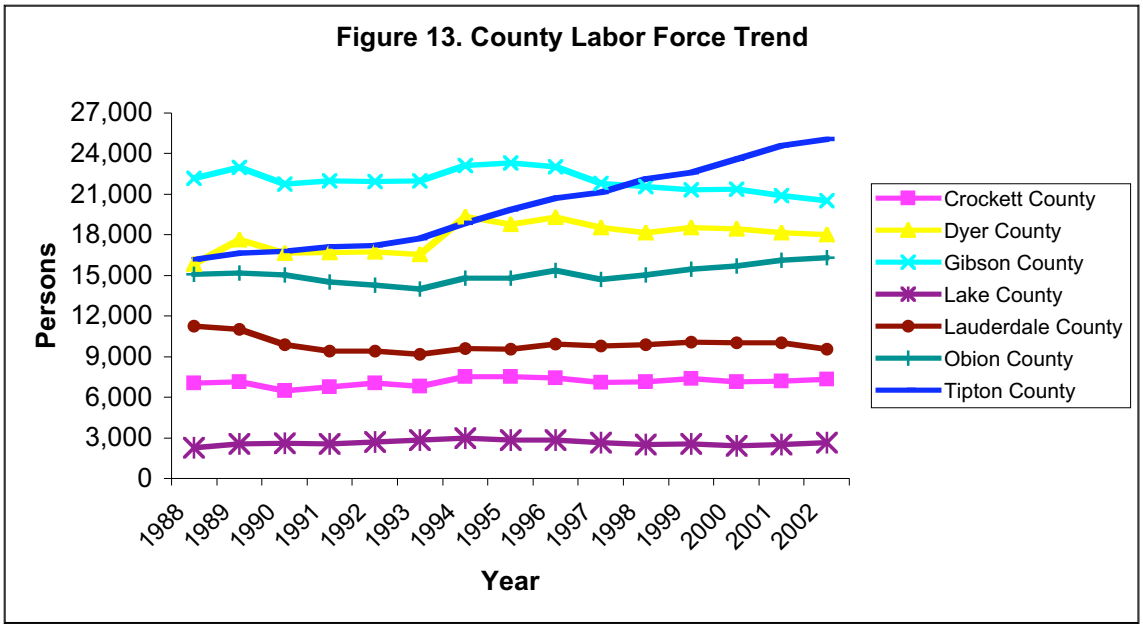
Table 15. Civilian Labor Force, Total Employment (Persons), and Unemployment Rate

	Civilian Labor Force			Employment (Persons)			Unemployment Rate	Population 18+ in Labor Force
Region	1990	2002	Change (%)	1990	2002	Change (%)	2002 (%)	2002 (%)
LWIA 6	88,650	106,280	20	83,580	100,500	20	5.4	63.7
LWIA 7	90,100	103,940	15	83,520	97,510	17	6.2	59.9
LWIA 9	377,380	479,600	27	362,830	460,190	27	4.0	72.3
LWIA 10	91,030	109,590	20	84,820	101,900	20	7.0	63.7
Study Area	89,130	99,480	12	83,550	92,280	10	7.2	59.7
LWIA 13	406,970	472,880	16	388,620	447,670	15	5.3	70.0
Tennessee	2,387,440	2,926,370	23	2,261,510	2,776,450	23	5.1	66.4

Source: BLS, Tennessee Department of Labor and Workforce Development
Note: Labor Force Participation Rate is calculated as a ratio of civilian labor force over population 18+ and over to be consistent with analysis of population dynamics in the previous sections.

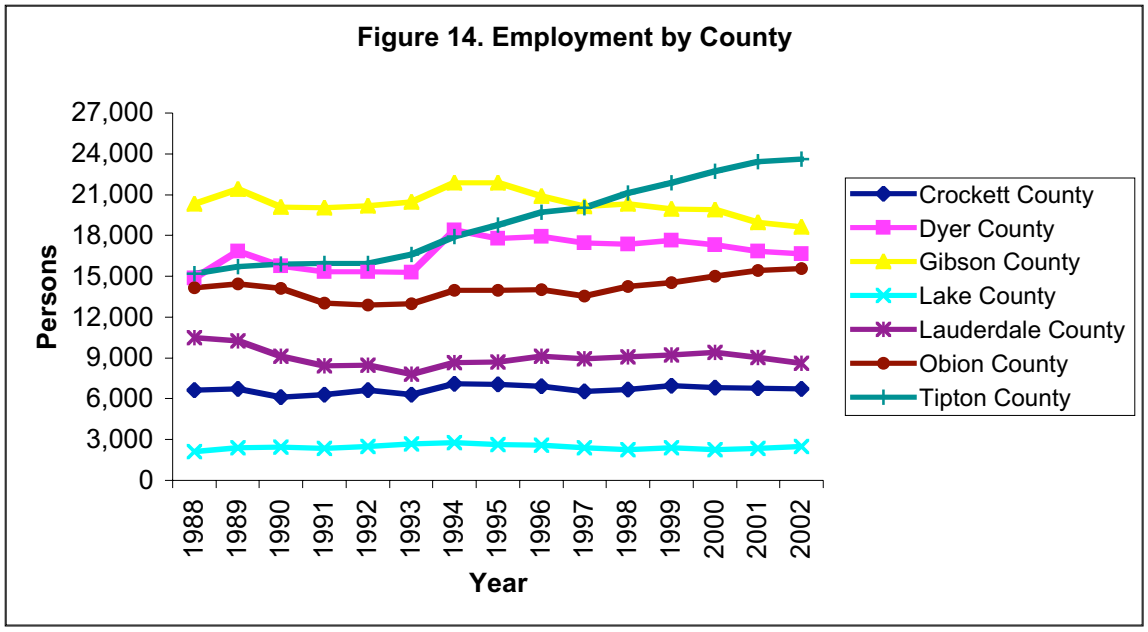
County Civilian Labor Force, Employment, and Unemployment Rate

Labor force dynamics vary from county to county. Figure 14 points to three groups of counties. The first contains Lake, Lauderdale, and Crockett counties, whose labor force is flat over the years. The second group includes Tipton and Obion counties, whose labor force trend is positive. (The labor force trend in Tipton County is extremely positive compared to other counties. In line with the analysis in the previous sections, Tipton County contributes to study area labor force considerably. The labor force trend in Obion County shows a moderate increase.) In the third group are Dyer and Gibson counties, whose labor force slightly increased until 1997 and then started a slight downward trend.

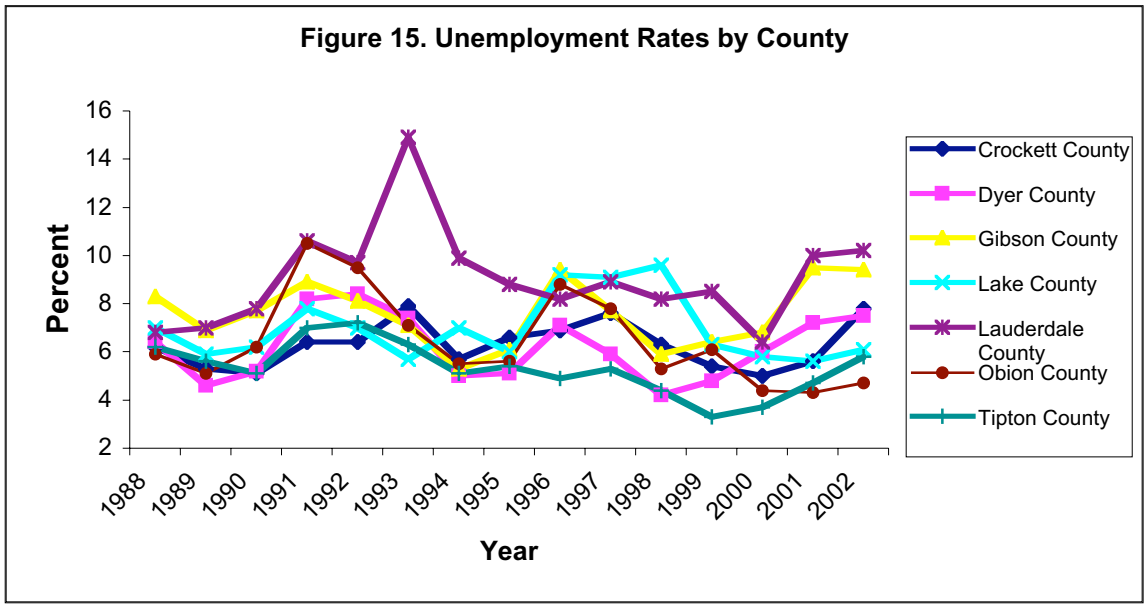


The county employment trend is quite similar to the labor force trend. Obion and Tipton counties show positive employment trends, while the employment trend in Tipton County shows a more brisk increase than its civilian labor force.

Employment in Lake and Crockett Counties is flat, while the three remaining counties indicate a negative trend over the years.



Considering these trends in labor force and employment, it is not very surprising that unemployment rates are high in Lauderdale, Crockett, Dyer, and Gibson counties. The unemployment rate in Tipton County is historically lower than in the other counties. Unemployment rates in some counties are high and fluctuate over the years, indicating both structural and cyclical causes.



As for changes in the labor force between 1990 and 2002, Tipton County grew by 50 percent from 16,770 to 25,080 and Crockett County by 13 percent from 6,460 to 7,320. The labor force in Gibson and Lauderdale counties decreased by 6 percent and 3 percent, respectively, in the same period. Changes in employment followed a similar pattern. Tipton County added 7,710 employees for a 48 percent increase. While Obion and Crockett Counties increased employment by 10 percent, Gibson and Lauderdale counties lost 7 percent and 6 percent, respectively. The impact of these figures on unemployment rates is clear. Lauderdale and Gibson counties had the highest unemployment rate, 10.2 percent and 9.4 percent, respectively. The lowest unemployment rates were in Obion and Tipton Counties with 4.7 percent and 5.8 percent, respectively.

Table 16. Civilian Labor Force, Total Employment (Persons), and Unemployment Rate

	Civilian Labor Force			Employment (Persons)			Unemployment Rate	Population 18+ in Labor Force
Region	1990	2002	Change (%)	1990	2002	Change (%)	2002 (%)	2002 (%)
Crockett County	6,460	7,320	13	6,130	6,750	10	7.8	66.1
Dyer County	16,650	18,010	8	15,780	16,660	6	7.5	64.2
Gibson County	21,740	20,530	-6	20,070	18,610	-7	9.4	55.8
Lake County	2,590	2,640	2	2,430	2,480	2	6.1	62.9
Lauderdale County	9,880	9,570	-3	9,110	8,590	-6	10.2	53.1
Obion County	15,040	16,330	9	14,110	15,560	10	4.7	65.4
Tipton County	16,770	25,080	50	15,920	23,630	48	5.8	64.9

Source: BLS, Tennessee Department of Labor and Workforce Development
Note: Labor Force Participation Rate is calculated as a ratio of civilian labor force over population 18 and over to be consistent with analysis of population dynamics in previous sections.

Lake County had the third lowest unemployment rate (6.1 percent) in 2002. The lowest labor participation rates were in Lauderdale County (53.1 percent) and Gibson County (55.8 percent). Both of these counties had the highest unemployment rates in 2002. Low labor participation, whatever the reason might be, has serious policy implications for a region, indicating that a region's working-age population is either withdrawing from the labor market or never entered the job market. Attracting new firms to a region with a low labor force participation rate may be quite difficult. A serious investigation into the reasons for low labor force participation in the study area is necessary to develop policies to address this problem.

Labor Force and Employment: Outlook

Compared to Tennessee, the labor force outlook for the study region is not strong. Study area labor force is projected to grow around 5.14 percent from 99,480 in 2002 to 104,596 in 2010 as opposed to the 9.71 percent growth in Tennessee's labor force. Projections for individual counties except Tipton are also not strong. Between 2002 and 2010, labor force growth in Obion, Lauderdale, and Gibson counties is projected to be 1.8 percent, 2.33 percent, and 2.32 percent, respectively. These are indeed not-so-good projections for these counties compared to a projected increase of 11.77 percent in the Tipton County labor force. Obviously, the projected labor force increase in the study area is largely due to growth in Tipton County (Table 17).

Table 17. Outlook: Civilian Labor Force, Employment, Unemployment Rate, and Labor Force Participation

	Civilian Labor Force				Employment				Unemp. Rate	Labor Force Participation
	2002	2005	2010	% Growth (2002-10)	2002	2005	2010	% Growth (2002-10)	2010 (%)	2010 (%)
LWIA 12	99,480	101,837	104,596	5.14	92,280	96,411	97,026	5.14	7.80	58.69
Crockett	7,320	7,325	7,616	4.04	6,750	6,957	7,023	4.04	8.44	64.43
Dyer	18,010	18,823	18,910	5.00	16,660	17,688	17,493	5.00	8.10	63.08
Gibson	20,530	21,589	21,007	2.32	18,610	20,122	19,042	2.32	10.32	55.49
Lake	2,640	2,412	2,728	3.35	2,480	2,273	2,563	3.35	6.45	61.90
Lauderdale	9,570	10,184	9,793	2.33	8,590	9,534	8,790	2.33	11.41	52.46
Obion	16,330	15,830	16,624	1.80	15,560	15,135	15,840	1.80	4.95	65.19
Tipton	25,080	25,735	28,032	11.77	23,630	24,787	26,411	11.77	6.14	62.04
Tennessee	2,926,370	2,995,798	3,210,589	9.71	2,776,450	2,879,148	3,046,630	9.73	5.11	65.72

Source: Tennessee Department of Labor and Workforce Development, BLS, BERC

The employment growth trend is projected to be very similar to the labor force trend. Study area employment is projected to increase from 92,280 in 2002 to 97,026 in 2010. Unemployment rates are projected to be high across the study area, around 7.8 percent in 2010. The largest unemployment rates are projected to be in Lauderdale County (11.41 percent) and Gibson County (10.32 percent). The lowest unemployment rate is projected for Obion County (4.95), lower than the projected state unemployment rate (5.11 percent) in 2010. Again, these projections do not take into account recent manufacturing job losses.

The labor force participation rate in the study area is expected to drop further to 58.69. A slight decrease in participation rate across the counties is expected in 2010.

To summarize, labor force in the study area is less vibrant than in other regions. Low labor force participation in some counties is especially acute and not likely to go away in the short and medium run. A policy intervention that would change structural elements in the economy might change the course of labor force dynamics. Tipton County is an outlier in the region; if we take out Tipton County from the region, the projected increase in the study area's labor force would be 2.9 percent instead of 5.14 percent.

Economic Structure: Employment by Occupation

What is the study area's occupational mix? What is the occupational outlook for the study area and the state? Which occupations are growing nationwide? What implication do national trends have for the study area? This analysis briefly sheds light on these issues.

Current Occupational Mix (2000)

There were 85,350 jobs by occupation in the study area for 2000; the largest occupational groups were production occupations (23,910), office and administrative support occupations (11,380), and transportation and material moving occupations (10,040). These three occupational groups accounted for 53 percent of all employment in the study area. The three smallest occupational groups were farming, fishing, and forestry occupations (1,250), construction and extraction occupations (2,760), and installation, maintenance, and repair occupations (3,650). Three of these occupations accounted for an additional 9 percent of total employment. The remaining 38 percent of employment was distributed across four occupations: management, business, and financial occupations (9.5 percent), professional and related occupations (10.8 percent), service occupations (10.8 percent), and sales and related occupations (6.9 percent).

How does the study area occupational mix compare with that of the reference regions? The share of managerial, business, and financial occupations in the study area was 9.6 percent less than the share of the same occupations in LWIA 7.[8] The share of the study area professional and related occupations was almost 39 percent less than the share of the same occupations in peer LWIA 7. The share of these two occupational categories in the selected regions was larger than their share in the study area. Table 18 presents the study area occupational mix from a comparative perspective.

Table 18. Occupational Mix Compared to the Reference Regions' Occupational Mix (2000) (Percent Above or Below the Region's Share)

	U.S. and State (%)		Peer Regions (%)			Metro Regions (%)	
	Study Area/ Tennessee	Study Area/ U.S.	Study Area/ LWIA6	Study Area/ LWIA7	Study Area/ LWIA10	Study Area/ LWIA 9	Study Area/ LWIA13
Management, Business, and Financial	-8.08	-10.85	-8.48	-9.64	-1.34	-17.29	-15.45
Professional and Related	-34.38	-41.35	-28.39	-38.59	-18.82	-41.00	-27.88
Service	-33.74	-39.94	-11.90	-18.96	-15.48	-38.38	-38.72
Sales and Related	-32.02	-35.34	-15.95	-14.44	8.08	-40.49	-37.86
Office and Administrative Support	-13.15	-18.71	16.57	3.64	-2.13	-14.20	-25.87
Farming, Fishing, and Forestry	130.60	49.22	-27.65	-36.98	-31.57	1036.57	635.05
Construction and Extraction	-32.56	-36.81	-20.62	-17.86	-22.15	-24.66	-31.54
Installation, Maintenance, and Repair	7.62	6.98	7.61	-3.79	-6.62	10.13	7.41
Production	121.52	212.30	14.10	46.47	9.08	217.98	382.18
Transportation and Material Moving	24.18	69.77	44.83	47.96	50.79	37.49	-5.73

Source: Tennessee Department of Labor and Workforce Development, BLS, and BERC

Based on these data, we can draw three general conclusions for the study area. The first observation has to do with occupations that are under-represented in the study area; we

[8] The formula for calculations in Table VII.1 is: $Diff(\%) = ((\frac{OS_{(SA)i}}{OS_{(RG)i}}) - 1) \times 100)$ where OS = share of occupation; SA = study area; *i*= *i*th occupation; and RG = Reference Region. For example, the share of service occupation in the study region is 10.8. The share of service occupations in the United States is 17.9 percent. The share of service occupations in the United States is 39.94 percent higher than the share of service occupations in the study area.

have mentioned two of these above. The third is service occupations. The share of service occupations in the state, the United States, and the metro LWIAs was more than 30 percent higher than the share of this occupation in the study area.

The second observation is that production occupations and transportation and material moving occupations are over-represented in the study area occupational mix. The share of production occupations in the study area, for example, was 382 percent higher than the share of the same occupations in the Memphis area occupational mix.

Occupational Mix Outlook for the Study Area

What are the expectations for the study area's occupational mix during the next 10 years? Occupational employment in the study area is projected to increase by 11,700 from 2000 to 2010. In line with the state and national trend, service occupations constitute about 21 percent of this increase. The second largest increase in the study area is expected to be in production occupations, contrary to the national and the state trend: production occupations constitute only 3.4 percent of the projected increase in U.S. occupational employment and 8.5 percent of the increase in state occupational employment.

Table 19. Occupational Outlook (2000-2010): Study Area vs. Tennessee and the U.S.

	Study Area			Reference Regions	
Occupational Group	2000	2010	Change (%)	Tennessee (%)	U.S. (%)
Total, All Occupations	85,350	97,050	100	100	100
Management, Business, & Financial Occupations	8,110	8,680	4.87	10.62	9.55
Professional and Related Occupations	9,200	10,910	14.62	20.44	31.37
Service Occupations	9,180	11,650	21.11	21.44	22.96
Sales and Related Occupations	5,880	6,980	9.40	9.53	8.36
Office and Administrative Support Occupations	11,380	12,740	11.62	10.89	9.80
Farming, Fishing, and Forestry Occupations	1,250	1,040	-1.79	-0.58	0.23
Construction and Extraction Occupations	2,760	3,380	5.30	5.76	4.46
Installation, Maintenance, & Repair Occupations	3,650	4,190	4.62	3.59	2.99
Production Occupations	23,910	26,220	19.74	8.46	3.39
Transportation and Material Moving Occupations	10,040	11,270	10.51	9.86	6.90

Source: Tennessee Department of Labor and Workforce Development, BLS, BERC
Note: 2010 Occupation projections for Tennessee are currently under revision by the Department of Labor and Workforce Development.

Management-related occupations and professional occupations make up 5 percent and 15 percent, respectively, of the total increase expected for the study area. However, the

increase in these occupations is expected to be far larger in both the United States and the state. In fact, professional-related occupations constitute 31.4 percent of the U.S. increase and are considered to be the occupations of the future.

The study area occupational mix is not converging toward the U.S. and state occupational mixes, as more increases are expected in traditional, low-skill occupations than high-skill professional and managerial occupations. This is partly the result of the study area's economic structure and slow economic growth.

Nationwide future job openings by educational categories and work experience might further shed light on the future of occupational mix and increasing economic activity in the study region. According to BLS estimates, about 66 percent of new job openings in the United States will require either education attainment beyond high school level or moderate to long-term on-the-job training. The educational attainment level in the study area is not likely to face these challenges.

Many of the projected high-skill jobs pay higher wages than low-skill jobs. In the study area, the occupations that exhibit excellent outlooks for employment and that require at least a bachelor's degree pay significantly more than the jobs that require only short- to medium-term training.[9] Given the study area's educational profile as analyzed earlier, the occupational projections and increasing level of skill requirement for the occupations suggest policy actions for the region to prepare employees with skills needed for the future.

Economic Structure: Wages by Industry

Wages differ by industry and occupational mix in a region. Low-wage industries that represent a large share of employment in a region pull down the average wage rate, thereby causing an economy-wide effect. However, regardless of the industrial

[9] Tennessee Department of Labor and Workforce Development, at www.state.tn.us/labor-wfd/outlooks/lwia12.pdf (last accessed on December 12, 2003).

composition of a region's economy, population and labor force dynamics are a factor in determining the average wage level. The relationship between these economic and demographic variables is closely intertwined. We have so far analyzed population, labor force, employment, educational, and occupational dynamics. In this section we will examine study area sectoral wage dynamics to shed light on how wage rates in the region differ across the sectors and the reference regions.

Table 20. Study Area Private Sector Average Weekly Wages (in Current $)

Sector (SIC)	1997	1998	1999	2000	Increase (97-00) (%)
Agriculture	$335	$329	$338	$341	1.66
Construction	$427	$483	$514	$514	20.42
Finance, Insurance, and Real Estate	$454	$480	$494	$490	7.80
Manufacturing	$549	$583	$605	$638	16.32
Retail Trade	$247	$262	$260	$268	8.51
Services	$343	$346	$366	$382	11.34
Transportation and Public Utilities	$491	$488	$528	$547	11.34
Wholesale Trade	$518	$495	$497	$554	7.09
Inter-Industry Wage Difference (%)	122.28	122.70	132.56	138.29	13.10
Inter-Industry Wage Spread ($)	$302	$321	$345	$370	22.72

Source: BLS, BERC
Notes: Study Area Average Weekly Wage is a simple county average of weekly wage for a given sector. Those sectors with missing data were omitted.

Wage Profile of the Study Area

We analyze wages using Standard Industrial Classification (SIC) code between 1997 and 2000 and the North American Industry Classification System (NAICS) beginning with 2001. The change in the classification system creates a problem for the purpose of presenting trend data over the years.

Average weekly wages show differences across industries in the study area. Average weekly wages are lowest in retail trade and agriculture. The highest wages in the study area were in manufacturing, with weekly wages of $549 in 1997 and $638 in 2000. Retail trade wages increased by 8.5 percent between 1997 and 2000 from $247 to $268. Wages in agriculture were almost stagnant, increasing only 1.66 percent from $335 to $341, by far the smallest increase between 1997 and 2000. During the same period, average

weekly wages in manufacturing increased by 16.3 percent. The largest increase in weekly wages was in the construction sector with a 20.4 percent gain, from $427 to $514.

The inter-industry wage difference highlights the wage spread across the study area industries.[10] In 1997, the highest-wage sector was paying 122 percent more than the lowest-wage sector; the inter-industry wage spread was $302. In 2000, the spread is even more, $370 with a 138 percent difference.

Table 21. Study Area Private Sector Average Weekly Wages (in Current $)

Sector (NAICS)	2001	2002	Change (%)
Accommodation and Food	$164	$172	4.95
Administrative Support & Waste Management	$439	$310	-29.33
Agriculture, Forestry, Fishing, and Hunting	$349	$352	0.76
Arts, Entertainment and Recreation	$214	$223	4.09
Construction	$530	$509	-4.07
Educational	$316	$369	16.77
Finance and Insurance	$540	$589	9.15
Health Care and Social Assistance	$451	$505	11.78
Information	$472	$484	2.66
Management of Companies and Enterprises	NA	NA	NA
Manufacturing	$630	$657	4.17
Mining	NA	NA	NA
Other (Except Public Administration)	$357	$360	0.74
Professional, Scientific, and Technical	$316	$449	42.13
Real Estate and Rental and Leasing	$359	$381	6.25
Retail Trade	$321	$334	3.91
Transportation and Warehousing	$537	$566	5.50
Utilities	NA	NA	NA
Wholesale Trade	$542	$558	3.03
Inter-Industry Wage Difference (%)	285.6	282.7	-1.01
Inter-Industry Wage Spread ($)	$467	$485	3.89

Source: BLS, BERC

One of the important aspects of NAICS is that it provides more information about the industry composition of an economy. Since some of the SIC categories are further disaggregated, the results and analysis in this part are not directly comparable to the SIC results presented above.

[10] Inter-Industry Wage difference refers to: $IIWD = ((\frac{MaxW(S_r)}{MinW(S_r)} - 1) \times 100)$, where IIWD = Inter-Industry Wage Difference (%), MaxW = maximum wage, MinW = minimum wage, S = sectors, and r = region.

The smallest weekly wage among the NAICS sectors was in accomodation and food services, $164 in 2001 and $172 in 2002. The largest weekly wage was recorded in the manufacturing sector with $657 in 2002. The largest weekly wage change took place in the professional, scientific, and technical services sector, rising by 42 percent from $316 to $449. On the negative side, wages in administrative support and waste management declined by 29.3 percent. The manufacturing sector is *the* key sector in the study area economy. Growth in this sector was 4.2 percent, from $630 to $657 between 2001 and 2002.

According to the inter-industry wage spread, wages in the lowest-paying sector were 286 percent lower than in the highest-paying sector in 2001. In 2002, the wage difference was 283 percent.

Table 22. Share of Industry Wage in Total Wages by Region (2002)

Sector (NAICS)	Study Area	LWIA6	LWIA7	LWIA13	Tennessee
Accommodation and Food	1.80	2.42	3.04	4.55	3.97
Administrative Support and Waste Management	2.92	5.56	2.13	9.02	5.94
Agriculture, Forestry, Fishing, and Hunting	0.98	NA	0.19	0.10	0.22
Arts, Entertainment and Recreation	0.17	0.36	0.32	1.13	1.04
Construction	6.41	4.14	5.36	5.78	5.51
Educational	0.03	0.05	0.03	0.94	1.66
Finance and Insurance	4.54	2.98	4.47	10.81	6.94
Health Care and Social Assistance	3.61	6.48	10.04	14.51	12.29
Information	1.21	1.60	2.59	2.74	2.93
Management of Companies and Enterprises	NA	0.50	0.12	1.94	1.52
Manufacturing	59.07	50.14	46.30	14.75	23.03
Mining	NA	NA	0.52	0.02	0.22
Other (Except Public Administration)	1.67	1.64	1.68	2.73	2.31
Professional, Scientific, and Technical	0.81	7.85	2.23	5.79	6.33
Real Estate and Rental and Leasing	0.63	0.84	0.57	2.42	1.43
Retail Trade	10.18	10.84	13.19	11.22	9.86
Transportation and Warehousing	2.00	0.32	5.26	NA	6.96
Utilities	NA	NA	NA	0.00	0.23
Wholesale Trade	3.98	4.31	1.95	11.54	7.62

Source: BLS, Tennessee Department of Labor and Workforce Development, BERC

Although average weekly wages help us compare industries, they do not give any information regarding a region's industry composition. A clear example of this is that the largest wage increase in the study area was in the professional, scientific, and technical

services sector from 2001 to 2002. However, the share of this sector (0.81 percent) in total wages was minuscule. What matters to the study area economy are weekly wage rates in the manufacturing sector; more than 59 percent of all study area private sector wages were generated in the manufacturing sector in 2002. This is the largest share of any industry across the reference regions.

By looking at the wage share of seven sectors that require more high- and semi-skilled labor force than other sectors, we can clearly see regional differences. These sectors were arts, entertainment, and recreation; educational; finance and insurance; health care and social assistance; information; management of companies and enterprises; and professional, scientific, and technical services. The combined wage share of these sectors was only 16.78 percent in the study area. The sectors' combined share in the peer LWIAs was close to the study area share but outperformed the study area with 19.82 percent in LWIA 6 and 19.80 percent in LWIA 7. The combined share of these sectors in total wages was 37.86 percent in the Memphis area and 32.71 percent in Tennessee.

Table 23. Average Weekly Wages by Industry and Region ($) (2002)

Sector (NAICS)	Study Area	LWIA6	LWIA7	LWIA13	Tennessee
Accommodation and Food	$172	$181	$177	$298	$258
Administrative Support and Waste Management	$310	$392	$515	$480	$449
Agriculture, Forestry, Fishing, and Hunting	$352	NA	$588	$445	$415
Arts, Entertainment and Recreation	$223	$325	$272	$694	$542
Construction	$509	$419	$408	$643	$665
Educational	$369	$231	$196	$578	$677
Finance and Insurance	$589	$568	$611	$1,053	$948
Health Care and Social Assistance	$505	$468	$491	$709	$670
Information	$484	$512	$473	$606	$783
Management of Companies and Enterprises	NA	$924	$683	$1,055	$903
Manufacturing	$657	$617	$503	$826	$744
Mining	NA	NA	$615	$841	$865
Other (Except Public Administration)	$360	$341	$384	$421	$453
Professional, Scientific and Technical	$449	$826	$400	$717	$907
Real Estate and Rental and Leasing	$381	$388	$343	$434	$578
Retail Trade	$334	$321	$330	$428	$436
Transportation and Warehousing	$566	$526	$658	$880	$736
Utilities	NA	NA	NA	$501	$902
Wholesale Trade	$558	$573	$591	$740	$834
Inter-Industry Wage Difference (%)	283	412	285	254	267
Inter-Industry Wage Spread ($)	$485	$743	$506	$757	$690

Source: BLS, Tennessee Department of Labor and Workforce Development, BERC

In 2002, the Memphis area and Tennessee had average weekly wages higher than study area wages. Average weekly wages were the lowest compared to the reference regions in the accommodation, administrative support, agriculture, wholesale trade, arts, and entertainment sectors. In the construction, health care and social assistance, manufacturing, retail trade, and educational services sectors, weekly wages were higher in the study area than in peer LWIAs 6 and 7. On average, compared to the Memphis area and the state, weekly wages across private sector industries were $255 less in the study area.

County Wage Profiles

How do average weekly wages by industry vary in the study area counties? Before we look at the county level data, one caveat is in order: wage data are missing for some sectors across the counties.

Table 24. Average Weekly Wages by Industry and County ($) (2002)

Sector (NAICS)	Crockett	Dyer	Gibson	Lake	Lauderdale	Obion	Tipton
Accommodation and Food	n.a.	$166	$162	$193	n.a.	$159	$178
Administrative Support and Waste Management	$301	$249	n.a.	n.a.	$171	$391	$440
Agriculture, Forestry, Fishing, and Hunting	$357	$246	$390	$346	$438	$335	n.a.
Arts, Entertainment and Recreation	n.a.	$203	$209	n.a.	n.a.	$218	$261
Construction	$607	$635	$512	$207	$379	$683	$539
Educational	n.a.	$369	n.a.	n.a.	n.a.	n.a.	n.a.
Finance and Insurance	$449	$650	$540	$518	$596	$616	$757
Health Care and Social Assistance	n.a.	$592	n.a.	n.a.	$417	n.a.	n.a.
Information	n.a.	$488	$609	n.a.	$415	$459	$451
Manufacturing	$603	$641	$637	$684	$562	$852	$618
Other (Except Public Administration)	$345	$375	$317	n.a.	$335	$392	$393
Professional, Scientific, and Technical	n.a.	n.a.	$373	n.a.	n.a.	$531	$442
Real Estate and Rental and Leasing	$769	$592	$295	$121	$269	$293	$328
Retail Trade	$276	$336	$328	$355	$328	$382	$332
Transportation and Warehousing	n.a.	$630	$502	n.a.	n.a.	n.a.	n.a.
Wholesale Trade	$545	$620	n.a.	n.a.	$575	$479	$571
Inter-Industry Wage Difference (%)	179	292	293	465	249	436	325
Inter-Industry Wage Spread ($)	$493	$484	$475	$563	$425	$693	$579

Source: BLS, Tennessee Department of Labor and Workforce Development, BERC

A glance at Table 24 reveals significant variation in sectoral wages within a county, as well as across the counties. Overall, manufacturing paid the highest weekly wages across the counties. Manufacturing wages in Obion County were the highest with $852 in 2002.

The lowest manufacturing weekly wages were in Lauderdale with $562. Obion County had the highest average weekly wages in retail trade with $382, and the lowest were in Crockett County with $276. Construction wages were also among the study area's highest. In all counties, except Lake and Lauderdale, the construction sector paid high average weekly wages ranging from $512 in Gibson County to $683 in Obion County. Lake County had the lowest construction sector wages with $207 in 2002.

Bearing in mind the incomplete information for some counties, we can make some general countywide wage-related observations. On average, the lowest-wage county across the sectors was Lake with around $346, whereas the highest-wage county, on average, was Crockett with around $472. Dyer County ($453) was similar to Crockett County.

On average, the lowest-paying sector was accommodation and food with an average weekly wage of $172 in 2002. The highest weekly-wage sector, on average, was manufacturing with around $657. Average weekly wages in other sectors across the counties ranged from $223 in arts, entertainment, and recreation to $589 in finance and insurance.

Study Area Average Weekly Wages: Outlook

Study area weekly wages are projected to increase by 16 percent from 2002 to 2010, adjusted for inflation. These projections should be interpreted cautiously since the study area wages are aggregated and we have a missing data problem. The ratios for projections are based on SIC-code industries. For certain NAICS categories we used economy-wide average ratios.

In the manufacturing sector, real average weekly wages are projected to increase by 13 percent from $657 to $740 in 2010. The projected increase in the construction sector is 14 percent from $509 to $579 in 2010. The finance and insurance and real estate sectors are expected to show strong growth in real weekly wages with growth of more than 20 percent. While retail sector average weekly wages are projected to grow slowly,

transportation and warehousing sector weekly wages are expected to jump by 23 percent between 2002 and 2010. Wholesale trade weekly wages will grow by 12 percent.

Table 25. Study Area Wage Projections (2010)

Sector (NAICS)	2002	2005	2010
Accommodation and Food	$172	$188	$216
Administrative Support and Waste Management	$310	$327	$351
Agriculture, Forestry, Fishing, and Hunting	$352	$355	$365
Arts, Entertainment and Recreation	$223	$244	$280
Construction	$509	$538	$579
Educational	$369	$403	$463
Finance and Insurance	$589	$633	$708
Health Care and Social Assistance	$505	$532	$580
Information	$484	$511	$557
Manufacturing	$657	$688	$740
Other (Except Public Administration)	$360	$379	$413
Professional, Scientific, and Technical	$449	$474	$516
Real Estate and Rental and Leasing	$381	$409	$458
Retail Trade	$334	$343	$355
Transportation and Warehousing	$566	$609	$696
Wholesale Trade	$558	$584	$626

Source: BLS, Woods & Poole, BERC
Note: Projections are calculated using ratios from Woods & Poole's county earnings by industry projections.

Economic Structure: Payroll Employment by Industry

What is the level of payroll employment by industry in the study region? Compared to the peer regions, metro regions, Tennessee, and the United States, how well does the study region perform in terms of payroll employment growth? What is the level of industry concentration? What does the level of industry concentration imply? What is the outlook for payroll employment by industry? This section primarily addresses these issues. Underlying data for this analysis are available in the appendix.

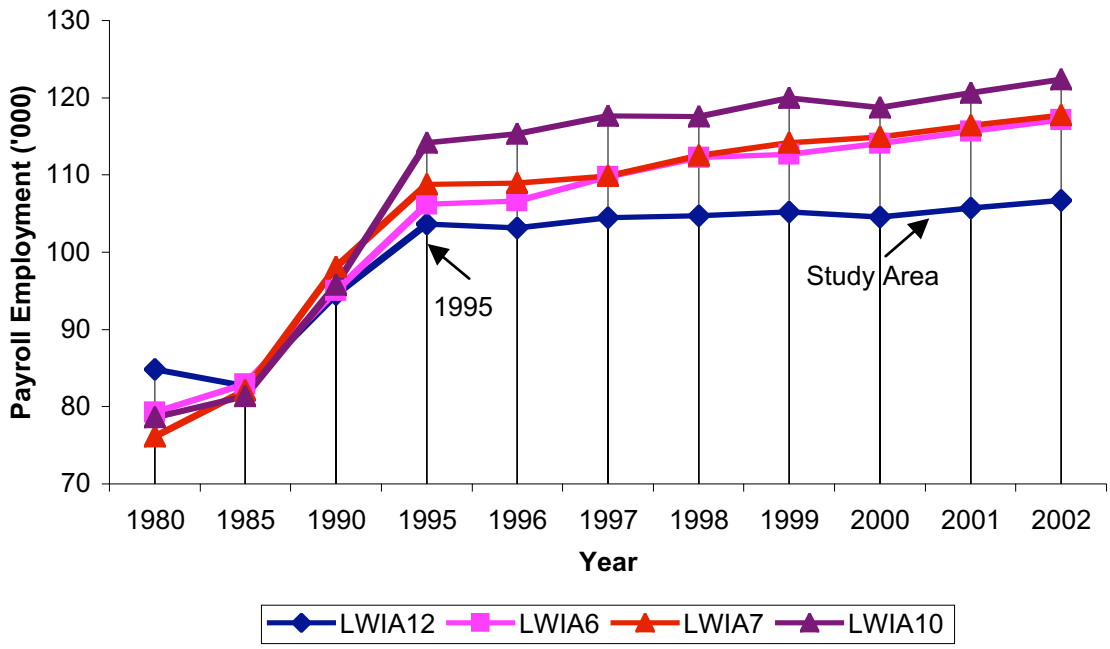
Payroll Employment Trend in the Study Region

Study area payroll employment was approximately 85,000 in 1980, rising to 104,000 in 1995. However, from 1995 to 2002 employment growth was nearly flat. Compared to the peer LWIAs, the study area lags behind. In the three peer LWIAs, payroll employment

was less than 80,000 in 1980. Payroll employment trends were similar between 1985 and 1990 but began to diverge in 1985: the peer LWIAs outgrew the study area by at least 9.8 percent by 2002. For example, in 1985, all peer LWIAs had about the same payroll employment; by 2002, the study area had the smallest employment of the peer regions. Table 24 highlights employment by sectors in the peer LWIAs.

From 1990 to 2002, study area payroll employment grew by 12.87 percent, the lowest growth rate among the peer LWIAs. In this period, payroll employment grew by 19.97 in LWIA 7, 23.33 percent in LWIA 6, and 27.86 percent in LWIA 10.

Figure 16. Total Payroll Employment by Study Area and Peer LWIAs



The distribution of payroll employment across the sectors is changing. While the services sector had employment gains, employment in manufacturing was slipping. Between 1990 and 2002, services employment increased 6,000 while the manufacturing sector lost 2,300 jobs. The manufacturing sector job pattern across the reference regions shows

significant variation. While LWIA 7 lost 6,000 manufacturing sector payroll jobs, LWIA 10 added 2,300 jobs in the same period.

Table 26. Payroll Employment by Industry and Reference Regions ('000)

Industry	Study Area		LWIA 6		LWIA 7		LWIA 10	
	1990	2002	1990	2002	1990	2002	1990	2002
Total, Payroll Employment	94.5	106.7	95.0	117.2	98.1	117.7	95.7	122.4
Farm Employment	6.6	6.1	10.2	10.6	12.2	11.8	9.7	10.1
Agricultural Services, Other Employment	1.1	1.4	1.6	2.2	0.9	1.4	0.6	1.3
Mining Employment	0.1	0.1	0.2	0.2	0.5	0.5	0.3	0.1
Construction Employment	5.1	6.9	5.3	7.0	4.8	8.7	5.3	7.0
Manufacturing Employment	31.4	29.1	24.5	25.6	29.3	23.1	30.5	32.8
Transportation, Communications, and Public Utility Employment	2.5	3.6	2.4	3.4	3.5	5.3	2.7	4.1
Wholesale Trade Employment	3.2	3.5	2.3	3.2	2.7	3.7	2.3	3.8
Retail Trade Employment	13.6	15.5	13.2	17.6	12.1	17.4	13.0	16.4
Finance, Insurance, and Real Estate Employment	4.0	5.4	3.4	5.3	3.4	5.9	4.0	5.9
Services Employment	16.0	22.0	20.0	27.7	15.6	24.4	16.0	25.3
Government Employment (Federal, Military, State, and Local)	10.9	13.3	11.8	14.4	13.2	15.5	11.3	15.6

Source: Woods & Poole

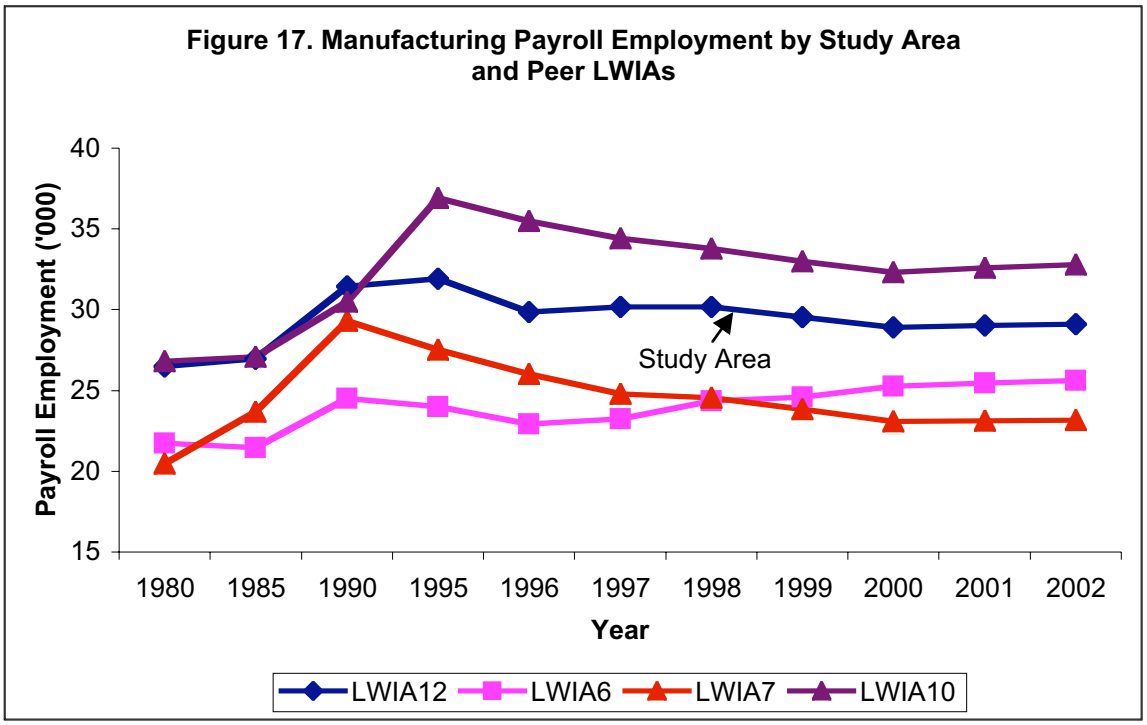


Figure 18 reveals manufacturing payroll employment trends for the peer regions. Both LWIA 7 and the study area reached their peak in manufacturing employment in 1990, then started gradually losing jobs. However, the LWIA7 manufacturing sector lost more jobs than the study area's manufacturing sector. LWIA 10 reached its peak of 37,000 manufacturing jobs in 1995, but unlike the study area and LWIA 7, it gained manufacturing jobs from 1990 to 2002.

Comparative Sectoral Employment Dynamics

The manufacturing sector in the study area has the largest employment share with 27.27 percent in 2002; the second largest sector is services with 20.58 percent. Retail trade was the third largest with 14.56 percent. Compared to the reference regions, the manufacturing sector is the largest in the study area. In the Memphis and Nashville areas, the services sector had more than one-third of payroll employment with 32 percent and 37 percent, respectively. The lowest share of the services sector was in the study area (20.6 percent). Sectoral employment composition in the Nashville and Memphis areas was similar to that of Tennessee and the United States.

Table 27. Payroll Employment in Total Payroll Employment by Regions, State, and United States (2002) (%)

Sectors	Study Area	LWIA 6	LWIA 7	LWIA 10	Memphis Area	Nashville Area	Tennessee	U.S.
Farm	5.67	9.06	9.99	8.26	0.34	0.74	2.93	1.81
Agricultural Services, Other	1.32	1.84	1.17	1.06	0.87	0.67	0.94	1.31
Mining	0.10	0.13	0.41	0.09	0.07	0.09	0.17	0.47
Construction	6.43	5.97	7.39	5.69	4.91	5.48	6.10	5.75
Manufacturing	27.27	21.86	19.66	26.80	7.31	10.02	14.45	11.15
Transportation, Communications, and Public Utility	3.35	2.93	4.50	3.37	11.71	5.42	6.09	4.92
Wholesale Trade	3.24	2.76	3.15	3.11	7.00	5.45	4.64	4.57
Retail Trade	14.56	15.00	14.75	13.39	15.99	17.30	16.64	16.23
Finance, Insurance, and Real Estate	5.04	4.53	5.05	4.83	7.37	7.74	6.86	8.04
Services	20.58	23.67	20.76	20.67	32.13	37.41	29.30	32.25
Government (Federal, Military, State, and Local)	12.45	12.26	13.16	12.71	12.30	9.66	11.88	13.50
Herfindahl Industry Concentration Index	1,656	1,571	1,420	1,633	1,758	2,043	1,638	1,758
Industry Dispersion (Rae Index)	0.83	0.84	0.86	0.84	0.82	0.80	0.84	0.82
Effective Number of Sectors	6.0	6.4	7.0	6.1	5.7	4.9	6.1	5.7

Source: BERC and Woods & Poole

Table 25 introduces the Herfindahl Index (HI), widely used by the U.S. Department of Commerce to measure monopolistic competition in an industry, to show the level of industry concentration in employment.[11]

The Herfindahl index (HI) measures competitiveness of the sectoral labor market. An index value of 1000 or smaller indicates a highly competitive sectoral labor market, an index value between 1000 and 1800 indicates a moderately concentrated sectoral labor market, and an index value 1800 or more indicates a highly concentrated labor market, which means job seekers can find jobs in only a few sectors.

The Herfindahl Index score for the study area is 1,656, which indicates that employment by industry is moderately concentrated in certain sectors. Employment is more concentrated in the study area than in the peer LWIAs. However, the Nashville and Memphis areas have high HI scores (2,043 and 1,758, respectively), indicating concentration in a few sectors. Concentration scores in these areas are higher than for Tennessee and the United States.

Before interpreting the implications for a region's economy, a caveat is in order: to calculate this index we used data at a highly aggregated level (11 sectors) and therefore must be cognizant of the resulting loss of information. Furthermore, this analysis does not take into account inter-industry linkages, a necessary step for the proper calculation of an index figure.

A low level of economic diversity or high concentration of a few firms might have serious implications for the future of a region's economy. If the manufacturing sector declines, with the effect of inter-industry linkages, all sectors would experience a big hit. Regions with less diversity are more prone to adverse employment effects in a few sectors than the regions with a more diverse employment base.

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[11] The Herfindahl Index is calculated using this formula: $HI = \sum_{j=1}^{n} S_{ji}^{2}$ where HI = Herfindahl Index, j = sector, S = percent of payroll employment, I = region.

County Payroll Employment Profile

Crockett and Tipton counties have more diverse economies than the other counties. Although they are an odd couple by the sectoral distribution of employment, Lake and Obion counties were the least diverse of all the counties. By sectoral employment, the counties show great variation. For example, Lake County shows 31 percent of employment in the government sector (local, state, and federal), whereas Gibson County has a similar concentration in the manufacturing sector (around 30 percent). The manufacturing sector has the highest share of payroll employment in Lauderdale and Obion Counties with more than 31 percent. Next come Crockett, Dyer, and Gibson counties with more than 25 percent and Tipton with more than 22 percent. The lowest share of manufacturing in payroll employment is in Lake County with 4.6 percent.

Table 28. Payroll Employment in Total Payroll Employment by Counties (2002) (%)

Sectors	Crockett	Dyer	Gibson	Lake	Lauderdale	Obion	Tipton
Farm Employment	10.58	3.90	5.26	9.32	7.86	5.51	5.13
Agricultural Services, Other Employment	3.20	0.88	1.32	3.16	1.43	1.01	1.24
Mining Employment	0.00	0.12	0.02	0.00	0.04	0.14	0.22
Construction Employment	7.91	5.77	6.22	1.69	4.46	5.75	9.92
Manufacturing Employment	25.76	25.33	29.68	4.59	31.28	31.31	22.76
Transportation, Communications, and Public Utility Employment	3.35	3.83	3.42	1.99	3.67	3.08	2.84
Wholesale Trade Employment	3.76	2.67	2.34	1.17	3.33	3.87	4.76
Retail Trade Employment	9.62	15.07	14.84	17.29	14.79	16.23	12.84
Finance, Insurance, and Real Estate Employment	5.66	5.79	5.56	4.42	4.19	4.34	4.35
Services Employment	19.52	25.39	19.87	25.35	12.72	19.43	20.99
Government Employment (Federal, Military, State, and Local)	10.63	11.23	11.47	31.02	16.24	9.34	14.96
Herfindahl Industry Concentration Index	1,492	1,744	1,744	2,049	1,748	1,816	1,523

Source: BERC, Woods & Poole

Payroll Employment Outlook for Study Area

Study area total payroll employment is projected to increase by 2.5 percent from 2002 to 2005 and 6.5 percent from 2002 to 2010. The largest projected increases are in transportation, communications, and public utility (16.8 percent), services (14.6 percent), and wholesale trade (13.3 percent) between 2002 and 2010. Payroll jobs in the farm sector are projected to decline by 9.8 percent between 2002 and 2010. The lowest projected growth is expected to be in manufacturing, mining, and retail trade with 2.3

percent, 2.9 percent, and 3.2 percent, respectively. Since the base year for the projections is 2002, the projections do not take into account manufacturing job losses that have occurred in the area since 2002.

Although payroll employment growth in the services sector is expected to be much larger than the growth in the manufacturing sector, manufacturing will still be the largest employer with 26.2 percent in 2010. The services sector's share is 22.1 percent. Diversity of employment is not expected to change.

Table 29. Payroll Employment by Industry ('000), Sectoral Distribution, and Percent Change

	Number ('000)			Share in Total (%)		Percent Change	
Industry	2002	2005	2010	2005	2010	2002-05	2002-10
Total, Payroll Employment	106.7	109.4	113.7	100	100	2.5	6.5
Farm	6.1	5.8	5.5	5.3	4.8	-4.1	-9.8
Agricultural Services, Other	1.4	1.5	1.5	1.3	1.3	3.2	7.0
Mining	0.1	0.1	0.1	0.1	0.1	0.0	2.9
Construction	6.9	7.2	7.6	6.6	6.7	4.6	10.4
Manufacturing	29.1	29.4	29.8	26.8	26.2	0.9	2.3
Transportation, Communications, and Public Utility	3.6	3.8	4.2	3.5	3.7	5.8	16.8
Wholesale Trade	3.5	3.6	3.9	3.3	3.4	5.3	13.3
Retail Trade	15.5	15.8	16.0	14.4	14.1	1.5	3.2
Finance, Insurance, and Real Estate	5.4	5.5	5.7	5.0	5.0	2.3	6.4
Services	22.0	23.2	25.2	21.2	22.1	5.6	14.6
Government (All Units)	13.3	13.6	14.2	12.5	12.5	2.7	7.1
Herfindahl Industry Concentration Index				1,653	1,652	NA	NA

Source: Woods & Poole, BERC

Economic and Demographic Policy Issues for the Study Area

Based on our analysis of regional socioeconomic structure, we highlight several policy issues for the study area. First, study area population growth is somewhat stagnant compared to the peer LWIAs. Population growth through migration is strongly related to relative economic opportunities in a region. Expanded relative economic opportunities and relatively high wage rates attract economic migrants to a region from other counties and states. Our analysis indicates that the study area lacks the dynamics to boost

population growth on a par with the peer LWIAs. Unevenness in population growth within the study area should also be a concern.

The distribution of population by age cohort does not differ much from the peer LWIAs. However, the percentage ratio of dependent-age population (0-17 and 65+) is higher in the study area than in the Memphis area, the Nashville area, and Tennessee. As baby boomers start retiring, this issue is likely to become a big concern. Policies should be developed to address relative wage and employment opportunities in the study area to attract more of the working-age population.

Study area racial make-up is close to the racial make-up of Tennessee's population as well as the Nashville area population. The absence of a relatively large Asian and Hispanic population, which constitutes an important share of the United States' population, indicates that immigrants are not considering the study area as a place to live and work. A slight increase of the share of these groups by 2010 is most likely for Tipton County, a highly urbanized county relative to other counties in Tennessee and the study area.

Second, labor force quality is ultimately driven by the population aged 25 and over with at least a high school education. Study area counties are lagging behind Tennessee and the United States in this area. On average, at least one in every three persons in the study area is without a high school diploma.

Of further concern is the level of adult literacy in the Study Area. According to synthetic adult literacy estimates, Level 1 or 2 adult literacy is very high in the study area relative to Tennessee. A synergy between region's companies, higher education, and workforce training organizations should be promoted to address educational attainment and task-oriented adult literacy levels of the workforce. Proactive policies are necessary to break the vicious cycle of educational and literacy problems.

The study area skill supply as measured by educational attainment may create serious impediments for companies considering expanding in or relocating to northwest Tennessee. Our analysis indicates that the supply of skills in the study region matches only a few sectors closely. Future job trends in the United States are moving toward more professional and related services. The local skill level does not match the skill demand of the study area's highly concentrated manufacturing sector. A regional emphasis on skill supply and demand issues is necessary in order for the study area to prepare skilled labor across the sectors.

Third, study area per capita income is well below the state and national averages. Over the years, the gap between per capita income for the study area and that of the state and the United States is growing rather than converging. This widening gap has a lot to do with the structure and level of economic activity in the study area. The unemployment rate is high, the civilian labor force is not growing at a level comparable to the peer LWIAs, and the occupational mix is tilted toward low-skilled and low-paying jobs.

Fourth, it is projected that one in every three new occupations in the United States will be in the professional and related services occupations. These occupations require a high skill level and pay relatively high wages. In the study area, one in 10 new jobs is expected to be in this category. The study area is not equipped to deal with this national trend based on the current educational attainment level.

Fifth, total wages in the study area are highly concentrated in the manufacturing sector. Almost 60 cents of every dollar in study area wages is generated in manufacturing. This wage concentration in the manufacturing sector creates potential instability. In the Memphis area, the manufacturing share in total wages is only about 15 percent.

Finally, study area payroll employment growth is stagnant compared to the peer LWIAs. Payroll employment is highly concentrated in the manufacturing sector, unlike the Memphis area, Nashville area, and Tennessee economies, where payroll employment is more concentrated in the services sector.

SURVEY OF EMPLOYERS

Sample and Data Collection

Questionnaires were mailed to employers in early October of 2003; a press release highlighting the importance of the study was issued by MTSU media services in mid-October. A follow-up reminder letter was mailed to employers in late October. Follow-up assistance was obtained from local chambers of commerce early in November, and a second questionnaire was mailed to non-respondents in mid-November. A final follow-up call to the largest employers was completed late in November.

The sample of 738 employers was obtained from two sources: (1) a listing of employers purchased from Marketing Design Systems of Pennsylvania, and (2) the West Tennessee Directory of Manufacturers, published by the West Tennessee Industrial Association. The sample targeted only certain sectors, including construction, manufacturing, wholesaling, professional services, the financial sector, and health care. Of the initial 738 questionnaires distributed, 90 were returned as undeliverable or no longer in business, leaving 648 eligible employers in the sample. We received 173 completed questionnaires, resulting in a response rate of 26.7 percent of the eligible respondents.

Total Sample	738
Less: Ineligible	90
Equals: Eligible	648
Completed	173
Response Rate	26.7%

Measured in terms of the proportion of employment covered by the sample frame, the response rate is considerably larger. A total of 14,418 full-time and part-time jobs are reported, representing 35 percent of employment in the industrial sectors covered by the sample.

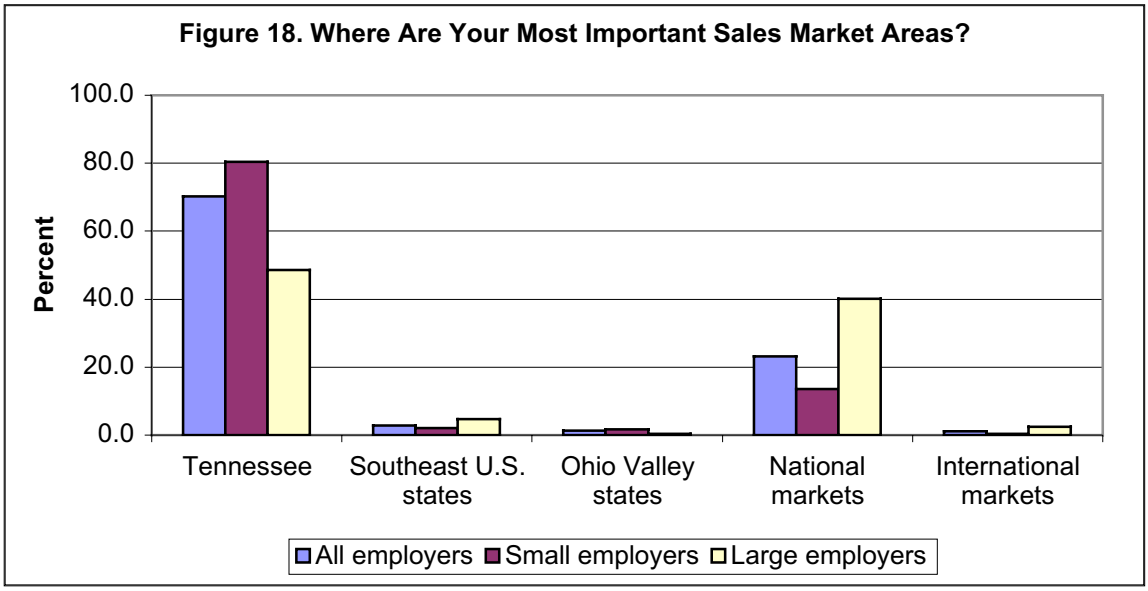
Summary of Responses

A brief summary and discussion of the results of the employer survey are provided next. Results for each question on the survey are presented.

Market Area

Measured by employer size, national markets are much more important than other market areas for northwest Tennessee companies in sectors covered by this study, with 73.9 percent of weighted responses. This result is due to the large manufacturing employers in the northwest Tennessee area.

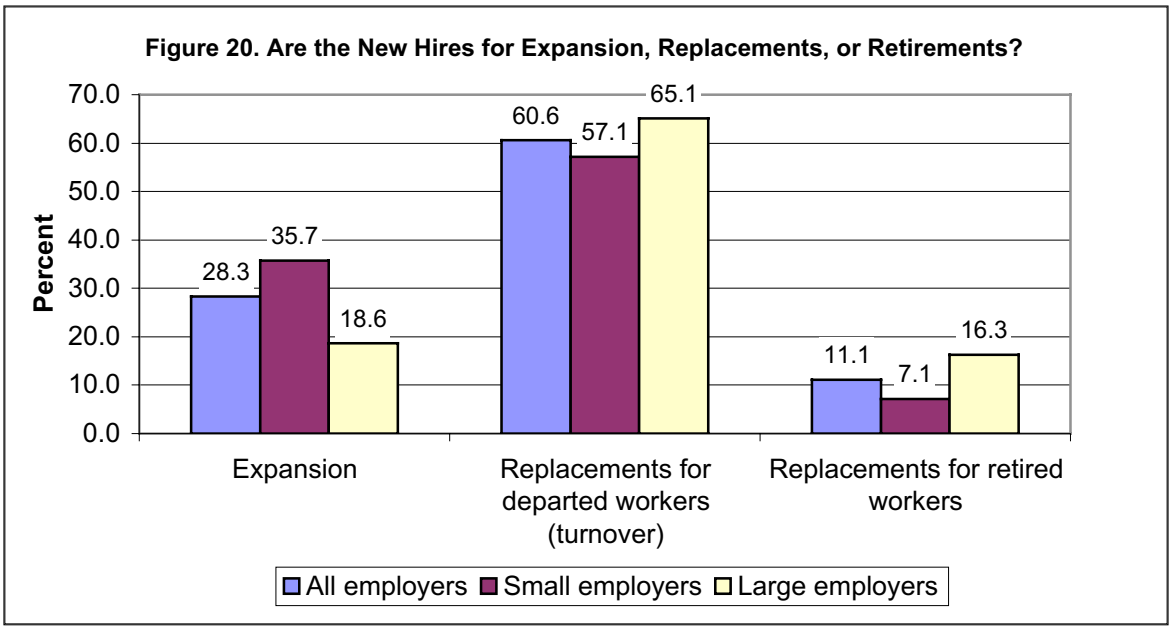
For the average employer, however, Tennessee is the most important market area, 68.4 percent of the responding companies. Few local businesses rely heavily on international markets or markets within the multi-state region.



Demand for Workers

Approximately one in four employers in the study area currently desire to hire entry-level workers; this result holds regardless of employer size. Approximately 71 percent of employers are not hiring at the present time.

For employers that are hiring, the vast majority of new hires are needed as replacements due to turnover. A smaller percentage of new hires are for net job expansions, with the rest needed as replacements for retirements.



Employee Benefits and Health Care Costs

Most employers offer medical and dental insurance benefits and paid vacations to permanent, full-time employees; only 7.8 percent provide no benefits at all. The vast majority of employers (84.3 percent) that provide health care benefits for employees also offer coverage for the employee's family. Retirement benefits are less prevalent; while most employers offer a defined contribution plan, only one-fourth offer a pension plan for employees.

Table 30. Benefits Offered to Permanent, Full-Time Employees (percent)

Type of Benefit	All Employers	Small Employers	Large Employers
Medical Insurance	78.4	69.8	98.2
Dental Insurance	50.9	36.2	87.5
Paid vacations and Holidays	83.6	78.4	98.2
Company Pension	25.0	16.4	41.1
Defined Contribution Retirement Plan	59.5	48.3	89.3
Childcare Subsidies, On-Site Childcare	1.7	1.7	1.8
No Benefits Provided	7.8	8.6	1.8
Other (please specify)	17.2	15.5	26.8

Rising health care costs for employers is a critical problem for 22.9 percent of study area employers, severely limiting the number of jobs that can be provided in the area. Rising health care costs are at least a moderate problem for a 69.5 percent of area employers.

Table 31. To What Extent Do Rising Health Care Insurance Costs Limit the Number of Employees Your Company Can Hire?

	Severity of Problem (percent of employers)				
	Not a Problem	Low	Medium	High	Critical Problem
All Employers	16.79	13.74	20.61	25.96	22.9
Small Employers	16.67	16.67	24.36	17.95	24.36
Large Employers	16.98	9.43	15.09	37.73	20.75

Quality of the Study Area Workforce

The quality of the study area labor force meets needs acceptably for more than half of employers. Larger employers are less satisfied with the quality of the local labor force; only 13.0 percent of employers weighted by size believe that their needs are met very well, compared with 22.0 percent of all employers. And 26.8 percent of employers by size are not very satisfied with the quality of the local labor force.

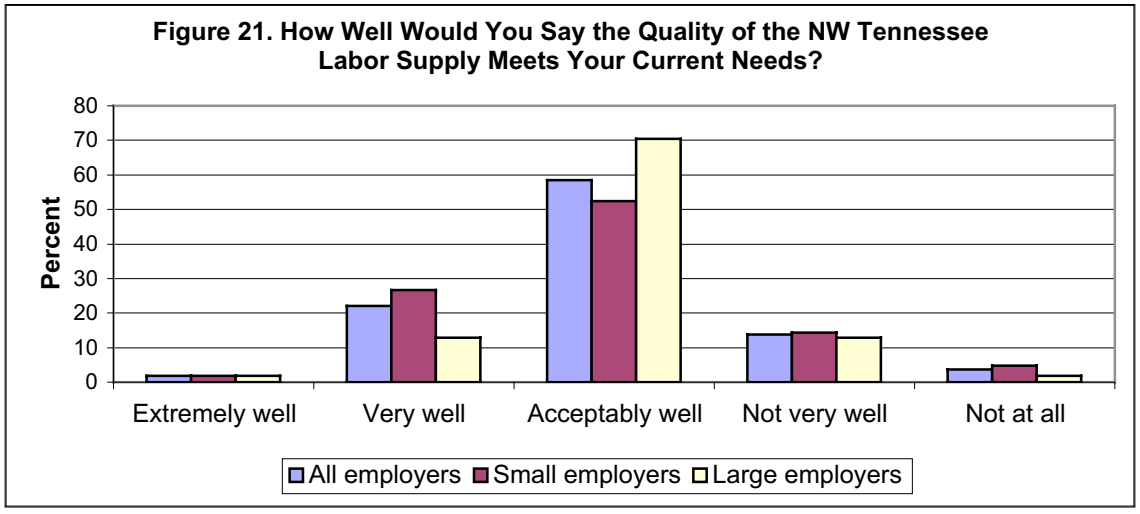


Table 32. Skill-Related Problems in Hiring or Retaining Qualified Employees

	Severity of Problem (percent of responses)				
Potential Problem	Not a Problem	Low	Moderate	High	Critical Problem
Reading skills for job applicants					
All employers	34.38	41.26	18.13	5.01	1.25
Small employers	40.38	41.34	13.46	2.88	1.92
Large employers	23.21	41.07	26.79	8.93	0
Math skills for job applicants					
All employers	25.95	36.08	27.85	8.86	1.27
Small employers	29.13	38.83	25.24	5.82	0.97
Large employers	20	30.91	32.73	14.55	1.82
Writing skills for job applicants					
All employers	18.13	39.39	33.13	8.76	0.63
Small employers	21.15	41.34	30.77	5.76	0.96
Large employers	12.5	35.72	37.5	14.29	0
"Soft skills" for job applicants					
All employers	9.94	34.78	31.05	19.87	4.35
Small employers	13.33	36.19	30.48	14.29	5.71
Large employers	3.57	32.15	32.14	30.36	1.79

Employers were asked to indicate the extent to which several desired characteristics for prospective employees are problematic, including language differences, reading skills, math skills, writing skills, and soft skills for job applicants. Employers were also asked the extent to which high turnover is a problem, as well as whether the availability of housing and transportation for prospective employees presents problems.

Among employee characteristics, language differences are not a problem for most employers, with just 12.5 percent reporting moderate to critical problems with this employee characteristic. More employers reported difficulties in attracting employees who have adequate reading, writing, and math skills, however. Reading skills for new hires are a problem (moderate to critical) for 24.4 percent of employers, math skills are a problem for 38.0 percent of employers, and writing skills are a problem for 42.5 percent of employers. Larger employers report more difficulty with these characteristics, as shown in the tabulations weighted by employment size; reading skills are a big problem (high to critical) for 9.5 percent of employers weighted by size, math skills are a big problem for 21.5 percent, and writing skills are a big problem for 14.3 percent.

Table 33. Other Problems in Hiring or Retaining Qualified Employees

	Severity of Problem (percent of responses)				
Potential Problem	Not a Problem	Low	Moderate	High	Critical Problem
Language Differences					
All Employers	54.38	33.13	10.01	0.63	1.88
Small Employers	57.69	29.8	9.61	0	2.88
Large Employers	48.21	39.29	10.72	1.79	0
High Turnover					
All Employers	21.25	38.75	25.64	11.26	3.13
Small Employers	28.85	35.58	22.11	10.58	2.88
Large Employers	7.14	44.65	32.15	12.5	3.57
Availability of Housing for Potential Employees					
All Employers	55.77	34.61	5.77	3.2	0.64
Small Employers	66	27	5	1	1
Large Employers	37.5	48.21	7.15	7.15	0
Availability of Transportation for Potential Employees					
All Employers	40.13	40.12	14.01	4.46	1.27
Small Employers	47.52	30.69	16.83	3.96	0.99
Large Employers	26.79	57.14	8.93	5.37	1.79

The lack of soft skills such as getting to work on time, dressing properly, and other basic work habits is the most severe problem found among new hires in the study area. Remarkably, 55.3 percent of employers and 79.1 percent of employers weighted by size

report moderate to critical problems with soft skills among new hires, indicating that soft skills are more of a problem with large employers than with smaller employers.

High turnover of employees is a problem (moderate to critical) for about four in 10 employees in the study area, while nearly twenty percent report that the availability of transportation is a problem for new hires. The availability of housing for new hires is much more of a problem for larger employers, with 20.1 percent reporting moderate to critical problems when results are weighted by size of employer compared with just 3.8 percent for all employers weighted equally.

Occupations Currently in Shortest Supply

One hundred thirty-eight employers identified occupations that are in short supply in the northwest Tennessee labor market area. Although need is widespread over a variety of

Table 34. Types of Occupations in Shortest Supply

SOC* Group	Occupation Titles	Employers
11	Management occupations	6
13	Business and financial operations occupations	2
15	Computer and mathematical occupations	3
17	Architecture and engineering occupations	11
19	Life, Physical, and social science occupations	1
21	Community and social services occupations	2
23	Legal occupations	1
27	Arts, design, entertainment, sports, media occupations	7
29	Health care practitioners and technical occupations	17
31	Health care support occupations	3
35	Food preparation and serving occupations	1
37	Building and grounds cleaning and maintenance occupations	2
39	Personal care and service occupations	1
41	Sales and related occupations	8
43	Office and administrative support occupations	18
45	Farming, fishing, and forestry occupations	3
47	Construction and extraction occupations	10
49	Installation, maintenance, and repair occupations	11
51	Production occupations	22
53	Transportation and material moving occupations	9
	Total	138

Note: *Standard Occupational Classification

occupations, a few occupational groups stand out with responses from ten or more employers. These include production; office and administrative support; health care practitioners and technical; installation, maintenance, and repair; architectural and engineering; and construction and extraction occupations.

Some specific occupations were mentioned by employers more often than others; Table 32 shows the specific occupations that were identified by five or more employers. Not surprisingly, registered nurses, licensed practical nurses, and truck drivers top the list; these occupations are scarce in just about any labor market. Also listed are sales workers, customer service workers, computer operators, and skilled production workers.

Table 35. Specific Occupations in Shortest Supply

Registered Nurses
Licensed Practical Nurses
Truck Drivers
Maintenance Workers
Sales Representatives
Tellers
Customer Service Representatives
Receptionists/Clerks
Machinists
Tool and Die Makers
Computer Operators
Laborers
Welders/Fabricators

The list of occupations in demand shows that jobs are currently available in the northwest Tennessee area for workers who have the proper education, skills, and experience.

Desired Education and Experience

Employers' education requirements for occupations in shortest supply greatly exceed prevailing education levels: employers require a bachelor's degree or higher for 17.6 percent of the occupations currently in demand, much higher than the current prevalence of bachelor's degrees in the area labor force of 10.1 percent. The mismatch of demand

and supply is much more severe among large employers, with 23.2 percent preferring a bachelor's degree for the occupations in shortest supply.

Table 36. For the Occupations in Shortest Supply, Tell Us Your Preferences for the Level of Education Desired for New Hires.

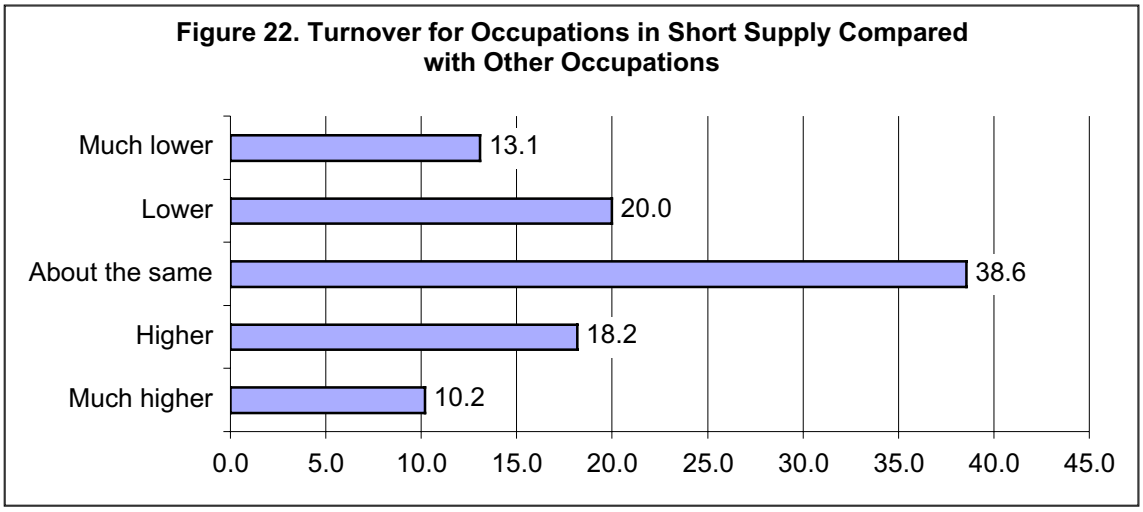
	This Study: Preferred Education Level for New Hires			Education Level from the 2000 Census	
Level of Education	All Employers	Small Employers	Large Employers	Northwest Tennessee	All of Tennessee
Less Than a High School Graduate	13.4%	16.6%	8.7%	31.1%	24.1%
High School Graduate	55.4%	53.8%	57.7%	37.6%	31.6%
Some College or Associate's Degree	10.3%	10.4%	10.1%	21.2%	24.8%
Bachelor's Degree or Higher	17.6%	13.9%	23.2%	10.1%	19.6%
Other	3.3%	5.3%	0.4%		
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Nearly 30 percent of employers are willing to hire employees with little or no experience (six months or less) for the occupations in shortest supply. However, about one-third of employers (32.3 percent) are seeking employees with significant work experience of at least two years or more.

Table 37. Level of Experience Desired for New Hires in Shortest Supply

Level of Experience	All Employers	Small Employers	Large Employers
No Minimum Experience Required	22.9%	19.4%	27.9%
Up to Six Months	6.7%	7.4%	5.7%
Six Months up to One Year	15.8%	16.6%	14.8%
One Year up to Two years	21.9%	25.1%	17.2%
Two Years up to Four years	20.5%	20.0%	21.3%
Four Years up to 10 years	10.1%	9.1%	11.5%
Ten Years or More	1.7%	2.3%	0.8%

Turnover rates vary considerably for the occupations in short supply. Approximately one-third have lower turnover rates than other occupations, and 28.2 percent have higher turnover rates.



Occupational Needs during the Next 10 Years

Local employers will increase hiring most among technical school graduates, persons with some college experience and those with bachelor's degrees: 47.1 percent expect to hire more employees with technical degrees, 45.6 percent will add employees with some college experience, and 42.3 percent will hire more employees with bachelor's degrees. The bulk of the increased demand for technical training will come from large employers. The demand for bachelor's degrees is evident in both large and small employers.

The demand for additional employees with less than a high school education will shrink sharply during the coming 10 years: only 10.3 percent of employers expect to hire additional employees with less than a high school education, while 58.8 percent expect to cut back on employees in this skill level. Demand will drop most drastically among large employers, with 74.1 percent responding that they will require fewer employees with less than a high school education.

Employers were asked to identify the occupations that will be in shortest supply during the next 10 years. Ten occupations were mentioned; those that were mentioned by three or more employers are shown in Table 36. Except for certified nurse assistant, these occupations were also identified as currently in short supply in the discussion above.

Table 38. Hiring Needs for the Next 10 Years by Education Level

Hiring Needs for Next 10 Years	Less Than High School	High School Diploma or G.E.D	Technical School Completion	Some College	Associate's Degree	Bachelor's Degree or Higher
			All Employers (percent)			
More Employees	10.29	40	47.13	45.57	31.25	42.31
Same Number of Employees	30.88	50	44.83	46.84	62.5	50
Fewer Employees	58.82	10	8.05	7.59	6.25	7.69
			Large Employers (percent)			
More Employees	3.7	45.45	59.52	45.95	33.33	44.74
Same Number of Employees	22.22	40.91	35.71	45.95	66.67	55.26
Fewer Employees	74.07	13.64	4.76	8.11	0	0
			Small Employers (percent)			
More Employees	14.63	36.36	35.56	45.24	29.41	40
Same Number of Employees	36.59	56.06	53.33	47.62	58.82	45
Fewer Employees	48.78	7.58	11.11	7.14	11.76	15

Table 39. Occupations in Shortest Supply During Next 10 Years

Occupation	Responses
Registered Nurse	7
Licenses Practical Nurse	6
Certified Nurse Assistant	4
Maintenance Employees	3

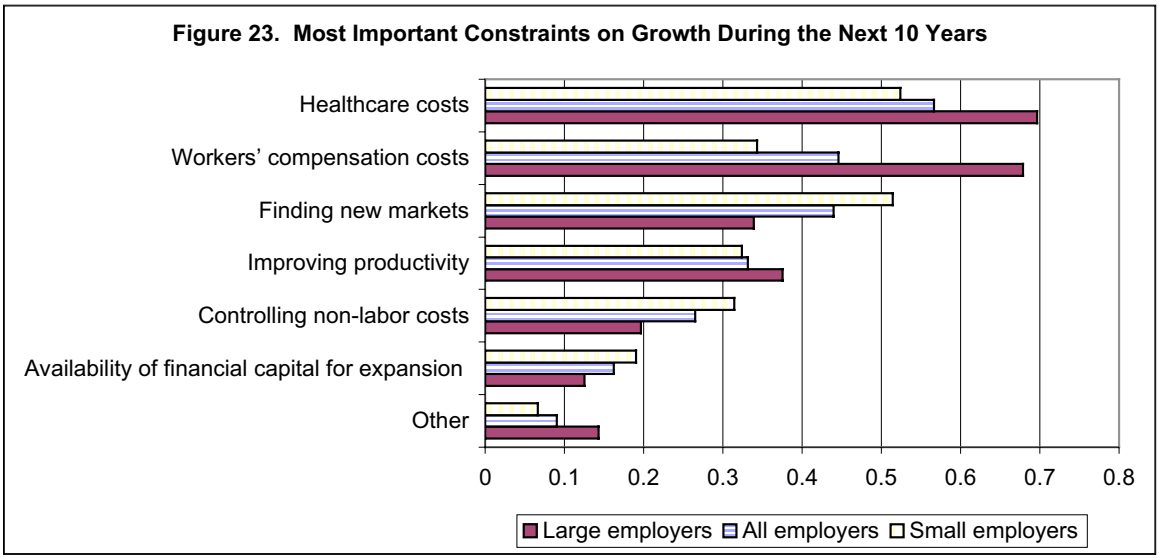
Expectations regarding employers' level of employment 10 years from now vary greatly. Approximately 13.1 percent expect to cut jobs, and 18.3 percent expect no net change in employment. About four in 10 employers (42.3 percent) expect employment gains of up to 50 percent over the next 10 years, and 17.5 percent expect to increase employment in the range of 50 percent to 100 percent. Only about 8.8 percent expect to at least double their employment levels.

Employers were asked to identify the three most important constraints on growth during the next 10 years. Health care costs and workers' compensation costs were most often cited as constraints to growth, followed by finding new markets and improving

productivity. Health care costs are more of a constraint for large employers than for small employers, and workers' compensation costs are much more of a constraint on growth. Getting control of non-labor costs is important for about one-third of the smaller employers, and the availability of financial capital does not appear to be a limiting factor.

Table 40. Desired Level of Employment 10 Years from Now

Level of Employment	Percent
Fewer Employees	13.1
About the Same Number	18.3
Up to 50 Percent More	42.3
51 Percent to 100 Percent More	17.5
More Than 100 Percent More	8.8



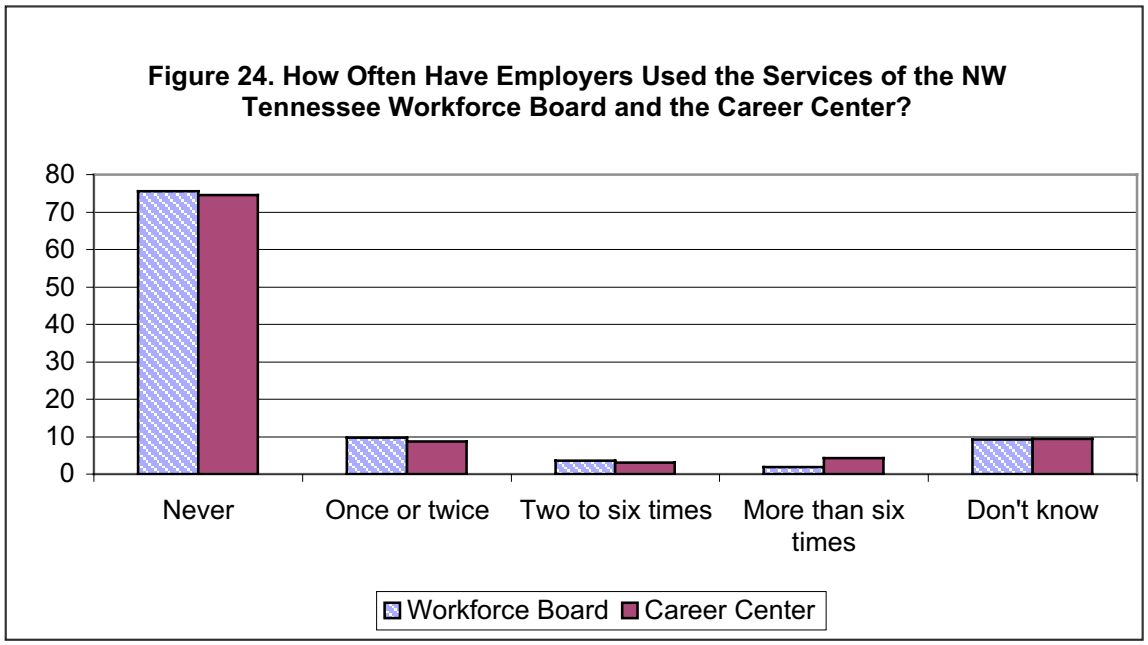
Training Needs

About one in 10 employers in the study area do not offer training for employees. Nearly half (46.2 percent), however, provide up to three months of on-the-job training. Approximately one-fourth provide three months or more of on-the-job training.

Table 41. How Much Training Do You Currently Offer Your Employees?

Training Offered	Percent
None	11.5
Up to Three Months On-the-Job Training	46.2
Three to Six Months On-the-Job Training	14.7
More Than Six Months On-the-Job Training	12.2
Other	15.4

A majority of employers in the study area have not utilized the services of either the Northwest Tennessee Workforce Board or the Northwest Tennessee Career Center; about 75 percent responded that they had not used either of the services. Approximately 16 percent of employers have used the services of the two organizations at least once.



About one in five (20.9 percent) of employers definitely could use help training their employees in computer skills, and another one in four could possibly use help. Approximately 54 percent do not need computer training for their employees.

Table 42. Could Your Company Use Help Training Your Workforce in Computer Skills?

Yes	20.9
No	53.8
Possibly	24.1
Other	1.3

Employers were asked to identify other training needs for their workplaces. A few types of needed training were mentioned by more than one employer, including CNC (Computer Numerical Control) programming, PLC (Programmable Logic Controller), certified nurse assistant (CNA) training, electrical training, lean manufacturing, and maintenance tech training.

Table 43. Other Training Needs Mentioned by Employers

CNC programming for machinists (4)
More CNA classes (3)
PLC (3)
Electrical training for helpers (2)
Lean manufacturing principles (2)
Maintenance tech skills (2)
Auto body repair and painting
Basic maintenance
Blueprint reading
Bookkeeping
Broadcast formatics
Chemical engineering
Complex sheet metal layout
Computer literate applicants
Computer skills
Computer software training for metal working machinery
Design engineering
Forklift drivers
Graphic
Intermediate computer programming (general database skills)
Lab training
Licensed practical nurse training
Main related discipline critical problem solving skills

FOCUS GROUP INTERVIEWS

"There needs to be some coordination of efforts. It's not going to be Dyersburg against Union City or Covington against Dyersburg; we all need to work together."

Background

The purpose of the focus groups was twofold: first, to gather richer data on perceptions of the strengths and weaknesses of the local economy and the local labor force, and second, to gather opinions regarding preliminary research findings. Perhaps one of the greatest advantages of focus groups is that they put a "voice" to the numbers; for this reason a fairly extensive number of quotes have been included in this summary. While the focus group interviews provide important context and detail, the interview results may not necessarily represent the views of all area employers.

In early September an initial focus group was conducted with human resource managers in Dyer County to determine that the issues identified for the survey were complete and clear. Participants in this focus group seemed to have a strong, positive attitude toward the future of Dyersburg and Dyer County. There were some concerns about the workforce, but a general feeling that there is a strong work ethic among most of the workers. There were no new topics identified to add to the survey. Other comments will be discussed in the general summary.

In mid-November a sufficient number of surveys from the main project had been returned to provide preliminary data to discuss with focus groups. Sessions were set up for Union City and Dyersburg on November 19 and Covington and Trenton on November 20. Focus group participants were recruited from businesses, social service agencies, workforce boards, and local government. Graduate students telephoned potential participants, identified the purpose and time of the meeting, and invited the individuals to attend. With much difficulty, they were able to recruit eight to 10 participants to agree to attend in each city. The difficulty of getting participation may simply reflect a busy time

of year and potential participants who play critical roles in their organizations and cannot miss work for a couple of hours. Other explanations are that the potential participants did not see the topic as warranting time away from work or that they were unfamiliar with what would be required of them in a focus group. While eight to 10 had agreed to attend in each city, only about half of that number, or less, actually showed up for each session. All sessions had a rich and productive discussion; however, the concern is that this low participation may reflect a lack of community involvement, which could greatly affect the implementation of a marketing plan to address the community audit results.

Common Themes

General Concerns

Certain ideas were repeated in each focus group. Although there was clear agreement that the economy of the area was in decline and there were serious concerns about how the situation could be turned around, the participants were unanimous in their resilience and in their underlying optimism that this area could rebound. There was the sense that, while the economic climate might still have a little further to fall, it would improve in the next five to 10 years. However, the national economy is seen as leading the local economy by at least several quarters, so any improvement at the national level is likely to have a delayed impact locally.

> *It's been hard to predict business because of the uncertainty of the major manufacturers that we sell to. They don't know what their business is going to be. This is the first time we've seen some of the large companies…say "we don't know, we can't give you forecasts."*

> *I talk to people all over this country, in the same business that I'm in, and the one constant they talk about is "I'll be glad when the economy comes back"…. Everyone is skittish about committing to long-range orders. Ones that used to forecast out seven, eight, or nine months, I feel lucky if I get 60 days out of them*

now. Then I've got vendors that I've got to go out 120 days on, and I'm just rolling the dice…. It's a nightmare.

All participants agree that the economy has weakened over the past few years beyond the national downturn because of a loss of jobs locally. The layoffs from Goodyear have reverberated across all the counties. Agriculture is a key driver of the local economy, and this year has been a good one for farmers, but participants noted the very volatile nature of the agriculture market. Throughout all areas participants voiced a clear need for more industry to be recruited into the area.

Our industrial recruiting is not very effective. We don't need grants; we need jobs.

This area needs jobs. You give it jobs, it will rise to the jobs.

I don't think any of the plants around here are running full bust…. And we've got five on layoff. But I must say we've seen some orders in the last month that will keep our people working through Christmas, and normally we've got to shut down part of the month in December and have for the last 15 years.

You can't walk 50 feet in any direction in this area without running into people where there's somebody who has been laid off…. When you've got a group of people that you're responsible for and you have to let them go home, when you get up you feel like a total failure, because you didn't do your job. I can't control the national economy, but you always think, what could I have done to have made things different.

The local area is losing jobs to Mexico, China, and other areas outside the country that can offer much cheaper labor, a non-union atmosphere, no benefits.

Any time you've got a labor-intensive operation…especially if it is a small item that can easily be shipped, you are in danger of losing it (to overseas).

[My] company has gone through some hard times…. it's on the edge; we're making it month at a time, quarter at a time. We'd certainly like to breathe some new life into it. But our biggest problem is investment capital. We've got the ideas, we've got the potential market, but if you don't have the investment capital, it's all for naught.

Participants had a clear understanding that the seven counties represented by the Northwest Tennessee Workforce Board were not economically equal. Tipton County was seen as a bedroom community of Memphis and, as such, economically more advantaged than some of the other counties.

Tipton, they are growing gangbusters because Memphis is migrating out into that county. It's becoming a bedroom market for the Memphis area…up Highway 51 to Millington and Munford and Atoka, in Tipton County; they're experiencing rapid growth. A lot of those people drive to Memphis to work…. It tends to skew the numbers when you throw Tipton County into the mix…. Construction is just crazy down there.

Some mentioned that the unemployment rate for Tipton was less than half that of Lauderdale county. One suggested that eventually Covington would become a bedroom community for Memphis.

I-69 may help in recruiting efforts; however, it may take three to seven years to build it.

But it's going to take a while for that to happen, a while for that to get completed all the way; just because it's to Memphis from Detroit, that's not going to have an impact here. The impact is not going to take place until it's completed down to the Mexican border; then you're going to start seeing some impact.

There were mixed feelings about how much of an impact the new interstate would have, the nature of the impact (types of jobs), and the timeframe for the impact.

I-69 coming through, I've got mixed emotions about that because it makes Mexico (labor market) more available.

Workers' compensation is a major problem for northwest Tennessee. Some companies have elected to locate in Arkansas or other states rather than deal with this issue.

We're not an employer-friendly environment.

A detriment to us and to the state of Tennessee is workers' compensation. It's killing us.

You've got plants that have closed because of workers' compensation.

Another concern mentioned was the state tax structure. The lack of a state income tax was mentioned as a weakness in recruiting business.

The people that we compete against…. it's not a level playing field. A lot of the product that comes into the country, they don't have the same bottom line burdens that we do… such as liability insurance, federal regulations, a lot of different things.

Unless something changes, there is nothing on the horizon to keep (graduating) students here. They're going to have to go somewhere else. Whether that's a college or high school graduate, nobody is hiring.

They feel they have to leave to succeed.

More jobs are needed not just at entry-level positions but also in middle management to get college graduates to stay in the area.

> *Right now, in banking, a high school degree is not enough for the technical skills they need, communication skills, people skills, soft skills are not there...just things that a lot of us who are older learned at home, such as people skills, communication skills, how to dress.*

> *The ones who excel, they're going to leave (to go to college), but we need those people back. We don't have time to bring them in and bring them up through the ranks.*

There is a nursing shortage. Those who go into nursing often go to Jackson.

> *Then when they find out in Nashville you get paid $3 to $5 more per hour, they go to work for Vanderbilt. They don't realize the cost of living there.*

Of the displaced workers seen by a workforce professional, even those who have a high school diploma often do not have the accompanying skills (are unable to score at an eighth grade level in both reading and math). Only about 10 percent of those tested score at this level for both. As one businessperson put it, "Sometimes they have the diploma, but they don't have the abilities that go along with it…. it's almost like they have a sixth grade level…. it's just a shame when you have someone come in and they struggle to fill out an application…. They have a difficult time presenting themselves…. some of these young people have no hope, absolutely no hope. It's like [the kids think] 'I'm doing this [interview], but I don't look to get anything; I might get on at McDonald's or down at the filling station.' That's not a lot to look forward to."

> *I don't think that in this area you have the vocational techs that you do in the larger areas.*

It is hard to find people who can read gauges, read fractions, measure things. Those who don't go on to college don't really have any job search skills. There is some concern that education is undervalued in the area. Many mentioned that parents say they got along without a high school diploma and don't see why it will keep their children back.

> *If it comes down to 40-year-olds who still did not get a high school education, didn't see the need for it, how is that going to impact how they deal with their kids? Are they now saying, "Well, I should have done it" and telling their children that it's important? Or is it still the attitude of 'no, this isn't important." What kind of message are the kids getting at home?*

Lack of parental support/supervision may also explain poor performance in school.

> *Almost all manufacturers in the area require a (high school) diploma now.*

> *What's the success rate of the various schools in the area?… Does one put out a better product?… Are there schools in the area better equipped to equip the students to go out in the world as opposed to the "get me by" schools?*

> *But I would just like to see Dyer County and Tennessee pay more attention to the issue of education…. I just think that has so much to do with the future of our (area).*

> *We have such a great asset in Dyersburg State, which supports so many. An opportunity to get some higher education that they would otherwise not have had… [but] the funding is not there. The administration continues to cut funding for higher education.*

> *But one of the commissioners was opposed because they were talking about raising taxes…and he said, "Well, it was good enough for me when I was growing*

up, and I don't know why it can't be good enough for these kids today." I think that's the mentality of a lot of people.

If we could just educate a generation of people that recognize the importance of education whether it's high school, technical school, or college. Then that would start the ball rolling in the other direction.

There seem to be two groups of displaced workers. The first group is those who have had a relatively long job history with a few companies, have recently been laid off, but who have essentially strong work ethics. The second group is those who are perennial job-hoppers, unable to hold a job for any extended period of time and with poor soft job skills.

There is a concern that younger workers "don't want to work. You can't get a younger person who wants to work."

They (young people) don't have a good work ethic, in any way…unless it's got a joystick on it…attitude. Everything was given to them.

We called a young man in that we thought we might want to put on board. One of our guys talked to him on the phone, and he said he would call back and set up a time to come in and interview, and he never called. I ran into him, and I said "We wanted to talk to you about a job." He said, "I just didn't call back." I asked if he had found another job; he said, "No, not yet." This was two weeks later. I told him there was no point in calling now.

You look at Detroit…or Wisconsin, Michigan…. They train machinists in those (high) schools…. You've got to turn people out at the high school level that have a reasonable trade. [Here and across the river in Missouri] the kids come out, and they go to work for a farmer, basically live on a farm…. It's the only thing you

can get…. I'll put it to you this way: even the Mexicans don't come into this area very heavily—there's just nothing here (work).

There is a sense that this area may have to try a little harder to recruit business. It doesn't have any major natural attractions or points of interest. Northwest Tennessee seems to be missing an overall image that it can present to potential industries, or at least the participants were unable to clearly define an image for the area.

Need to set goals. Identify if the area is a manufacturing community or a retailing community.

Given the small economic size of some of the counties and the small economic size of the area as a whole relative to other areas in the nation, participants mentioned the advantages of joining forces across the counties in recruiting efforts.

In southern Illinois, they formed the Highway 13 corridor, they've got five cities, they go together, and they recruit. It doesn't matter. Whatever city that plant lands in, it helps all…. I think that's something that you're going to have to see here. There needs to be some coordination of efforts. It's not going to be Dyersburg against Union City or Covington against Dyersburg; we all need to work together. Let's go. It's expensive to target some of these industries. They're not in St. Louis or Detroit. They're in Tokyo, Seoul or somewhere else. And that's major bucks.

Another participant pointed out that many people live in one county and work in another and followed it up by saying, "It behooves all of us to become more regional…. [We] can't survive without all of us banding together to get an industrial tract…."

It's very, very competitive. You have to be prepared; you have to be proactive. There are a lot of different things you have to do to sell these companies on this area.

It would really be helpful if there were money available to help smaller communities finance DVDs on the area to use as recruitment tools.

> *Something that we should recognize as a problem—I think that in any organization, you get the same people in the same positions for too long a time, and they get stale. That's what has happened to a whole lot of cities in northwest Tennessee. The people who made the decision to go out and recruit Goodyear 25, 30 years ago are the same people in there today or still controlling what's going on. They've got theirs. They want the area to stay the same. But then you have people like those sitting here today…. They see this is bad, we need to do something now.*

Healthcare costs in the area have been driven up by the health insurance policies provided by Goodyear. Costs are higher than even in neighboring counties.

Strengths

The area has an available workforce with skills needed for many jobs. Many training facilities provided by the state. The area is known for having a good workforce—strong work ethics, team players. Quality of life is good. The people in the area are "good, honest people." Companies would have no problem finding plenty of workers to fill positions. Many of the displaced workers have few technical skills but an abundance of industrial skills. Nordyne was an example of a company that had been hiring and had had no problems finding qualified people required for the work.

> *We all have our problems and are all weathering our layoffs; but the one community that has done a good job of attracting industry is Dyer County…. They did a community campaign, raised a war chest, a goal of two and a half million dollars…formed a hit team of members of the community that could be called on at a moment's notice to cater to an industry or prospect…. They target an*

industry…a unified effective team, with answers to every question a prospect could have. They are able to overcome a lot of obstacles this state faces.

Around here, they still know their banker on a first-name basis…. You know that manager of Wal-Mart. That's important in this part of the world. In Memphis I dare say it's not important…. The new Lowe's manager…he makes himself known, because people who shop there want to be able to walk up to him and say, "Hey, how are you doing?" That's important in this market.

There are a lot of people here who do care about other people. It is a strong community in that respect. I think we have some positives; we just need to sell those positives to other people.

Overall, the preliminary survey results were not surprising to the participants. However, several did mention that they were surprised that healthcare insurance costs were not seen as a more severe problem (question 11). Some suggested that it is because companies are not hiring new employees; therefore, this is not an issue. "We've had to sacrifice people to maintain our level of benefits…. We've foregone pay increases to our employees and put it in the benefits."

Specific Concerns

Union City

Obion County is reinventing its Chamber of Commerce: moving away from concentrating on community events—putting on a fall fest, hosting roundtable community luncheons—and focusing on recruiting new industry to the area. "Things like Goodyear have made us open our eyes this year. We're starting to realize just how vulnerable we are to substantial job loss…focusing on getting small to medium industry here to diversify, because in Obion County all our eggs are in one basket, and that's Goodyear."

There is no market for starter homes. Few spec houses are built. Young consumers are very afraid to commit to buying a house because they are not confident that they will have a job long term.

Dyersburg

[The city] has a lot of potential for growth, more opportunities [than some of the surrounding counties].

> *We've been fortunate to see several expansions in our area recently, simply because the work ethic is so good.*

> *We've got some of the best industries in our area of any of the surrounding counties. They're high quality industries and are very diversified.*

Some folks have problems getting to work. They can't get a job because they don't have a car, and they can't get a car because they don't have a job. Most who really want to work can find a way to get there.

It is hard to get some of the displaced workers to understand that they need their GED. They were able to do the work for their former company without it and don't understand why they would need it to do the same work for another company, but often it is a minimum requirement.

> *They don't make a connection of the time spent [working on the GED] and the payoff of opening doors [to jobs].*

Trenton

With no jobs on the horizon, displaced workers really don't know what will happen when the unemployment payments run out.

It would amaze you to look at the Chamber's list of available property, hundreds of thousands of square feet of empty plant space right here in Gibson County. Office space, too. It's almost a "name your price" [situation].

Covington

Thirty-eight percent do not have a high school degree.

It's the culture…. I got the state to set up a special class (for 135 recently displaced workers who did not have a high school degree) to get those people their GED. One person showed up for the class.

The older you get the more intimidated you are to return to school. It's especially hard for a man…. Don't know if it's a pride factor or if he just thinks he should be doing something else."

[With manufacturing] years ago, all you had to do was go out there and stand beside someone for a day or two, and they would show you how to do it and you got it. Now they're either going to give you a manual or tell you to download your instructions, and people are intimidated.

A strength is the area's state representative (Fitzhugh), who is a local bank executive. He is very active in the community.

Because we're kind of in the middle, we get it [economic impact of closings] from both directions (north and south).

Anything that happens on 51 corridor between Dyersburg and Memphis benefits all this area.

Locally owned small businesses find it hard to survive when Wal-Mart and other big-box retailers come into an area.

They will hire twice as many part-time employees rather than full-time (with benefits).

These large retailers don't care about the workers because they are more anonymous in such a large organization.

When you walk around the square, there are several empty buildings.

SURVEY OF WORKFORCE PROFESSIONALS

Local workforce professionals were interviewed by telephone regarding various barriers to employment, including education, soft skills, local conveniences (transportation, housing, childcare), training, and personal problems such as bankruptcy, drug usage, and criminal record. The perceptions of workforce professionals concerning barriers to employment among the local workforce are valuable for the insight provided to the workforce development policy process.

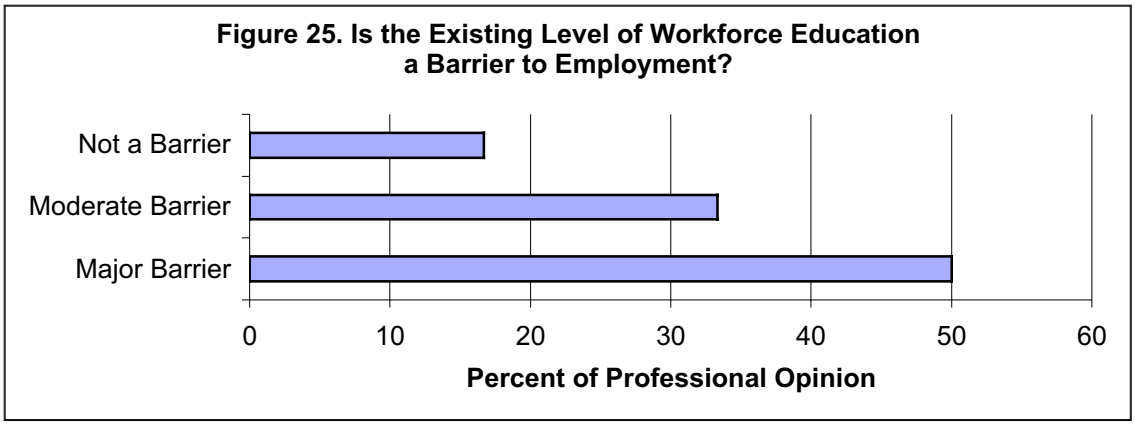
Method

The study sponsor identified approximately 40 workforce professionals, employed by the local workforce board, by the technology centers, and by private employment agencies. Phone interviews were completed with 30 professionals, constituting 75 percent of our target group of professionals. The professionals were asked 17 questions; responses are summarized below.

We then collapsed survey responses into three major categories, using a well-known "barrier to employment" framework. If an expert cites an issue (i.e., skill, access to childcare) as a barrier to employment for more than 40 percent of the labor force, we label that issue as a "major barrier" to employment; for between 10 percent and 40 percent of the labor force, a "moderate barrier" to employment; and for less than 10 percent of the labor force, "not a barrier" to employment.

Analysis of Barriers to Employment

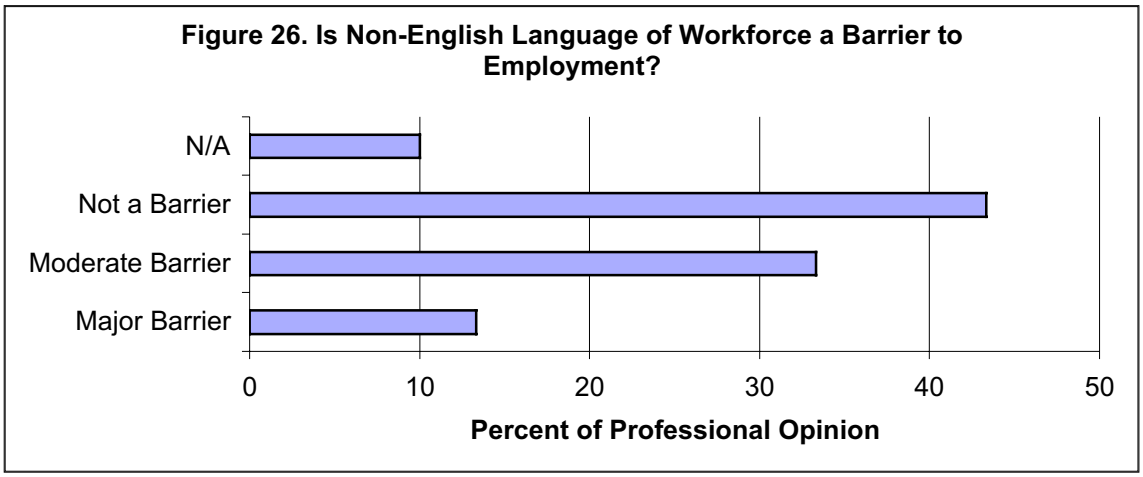
Study area experts have serious concerns regarding the educational level of the workforce. Five of 10 local government and social services professionals cite the level of workforce education as a "major barrier" to employment.



One-third believe that education constitutes a moderate barrier to employment, and a little over more than one in 10 professionals do not see education of workforce as a barrier to employment.

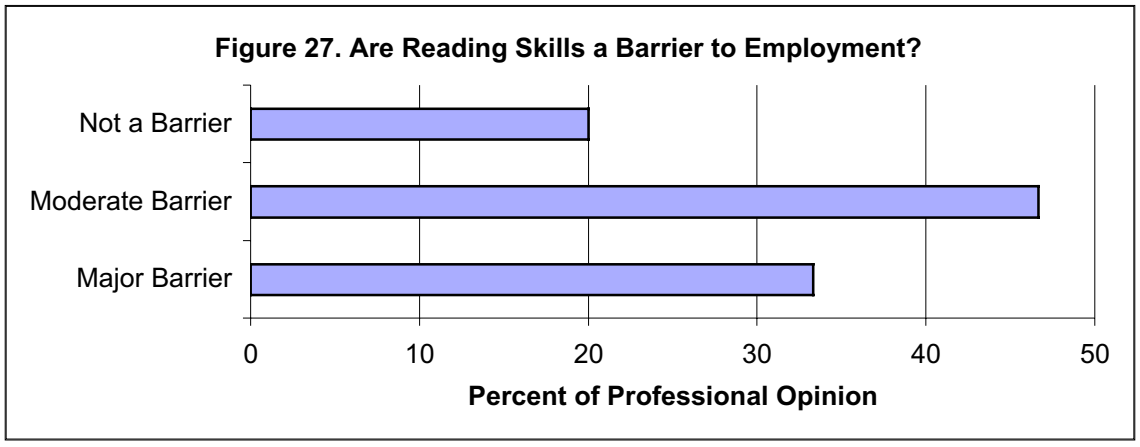
Non-English Language as a Barrier

The prevalence of non-English speakers is not perceived as barrier to employment. More than four in 10 experts believe that non-English language is not a barrier to employment, while one-third see it as a moderate barrier. Those experts who think that non-English language of the local workforce is a major barrier are a little more than one in 10. Three respondents did not answer this question.



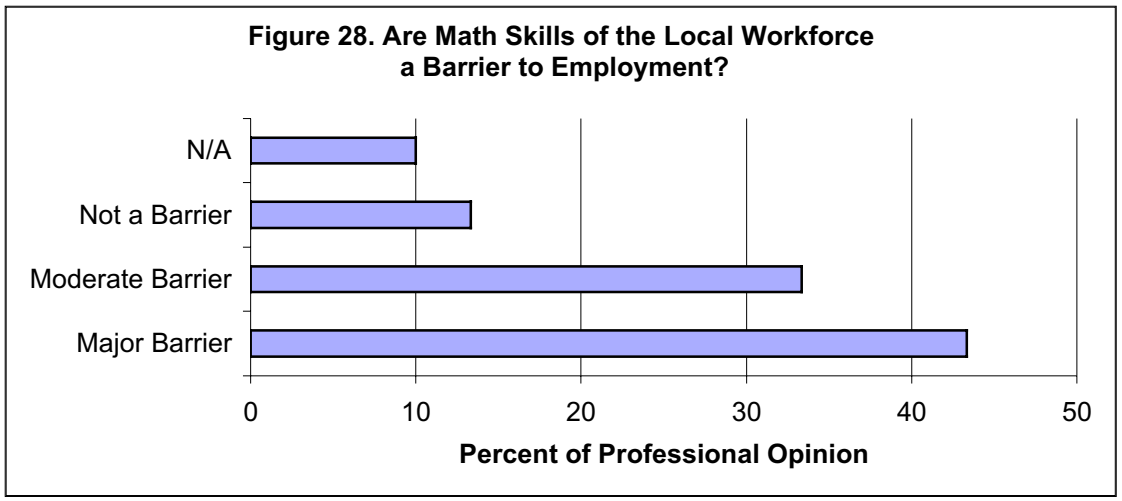
Reading Skills as a Barrier

Local workforce professionals overwhelmingly cite reading skills as a barrier to employment in the study area. About five in 10 professionals believe reading skills are a moderate barrier, one-third see them as a major barrier to employment, and two in 10 believe they are not a barrier.



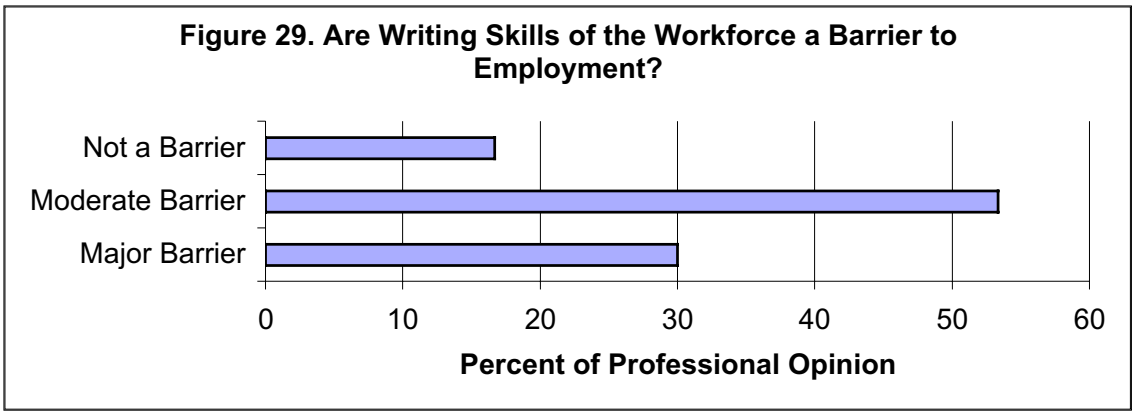
Math Skills as a Barrier

Similarly, math skills of the local workforce are viewed as extremely inadequate by the local workforce experts. About four in 10 professionals reported that the math skills of the workforce are a major barrier to employment, one-third cite them as a moderate barrier, and one in 10 does not see them as a barrier. Three respondents did not answer this question.



Writing Skills as a Barrier

Writing skills are also viewed as a barrier to employment, but not as much as math skills. More than half of professionals think that writing skills are a moderate barrier, and one-third consider it a major barrier. Some experts even went so far as to argue that more than 90 percent of the local workforce has problems with writing. However, about two in every 10 professionals think otherwise: they do not see writing skills of the local workforce as a barrier to employment.

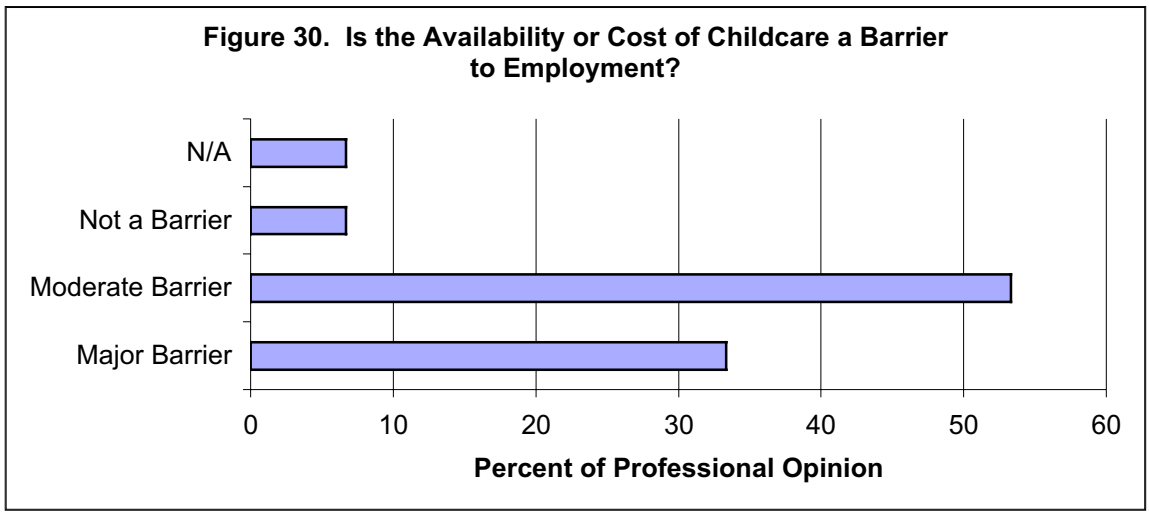


Region-Specific Issues as Barriers

We asked local workforce experts whether they perceived issues such as access to childcare, availability of housing, availability of transportation, and unstable housing environment as barriers to employment.

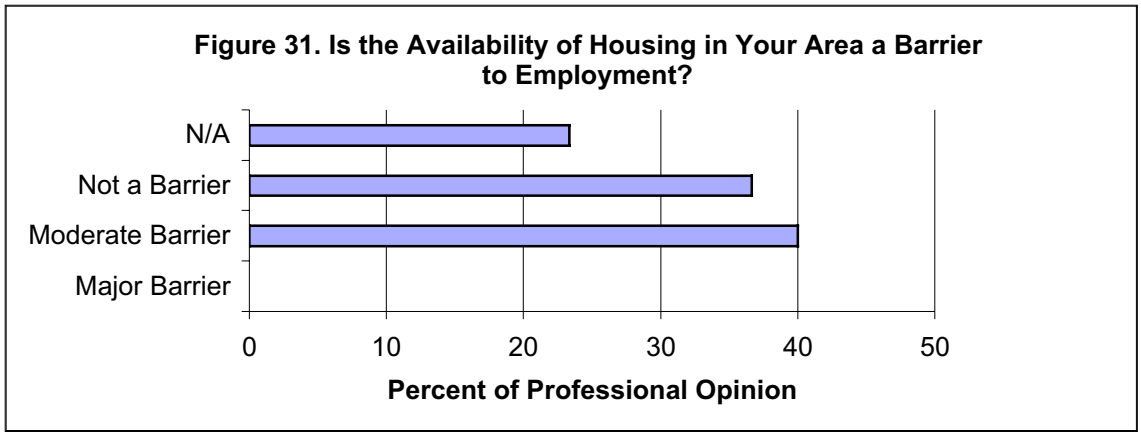
Childcare Availability or Cost

Almost all of the experts agreed that the availability or cost of childcare creates a barrier to employment. However, the degree of emphasis differs. More than half of professionals see it as a moderate barrier, while one-third acknowledge that childcare is a major barrier to employment. Two professionals did not see childcare as a barrier to employment.



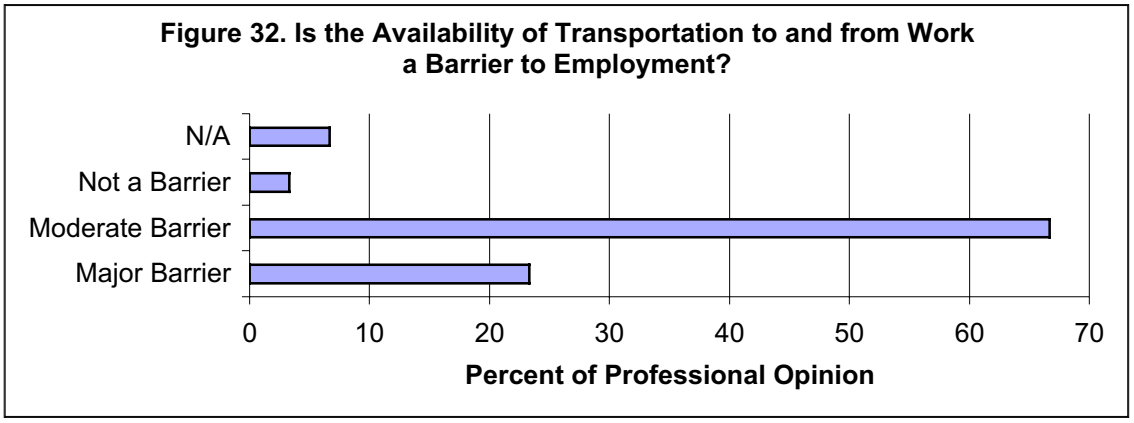
Availability of Housing as a Barrier

Can workers find a place to live? Is housing availability in the region a barrier to employment? None of the local workforce experts think that housing availability is a major barrier to employment. Four in 10 professionals believe it is a moderate barrier, while a little more than one-third believe that local housing availability is not a barrier. The remaining one-fifth did not register their opinion regarding local housing availability.



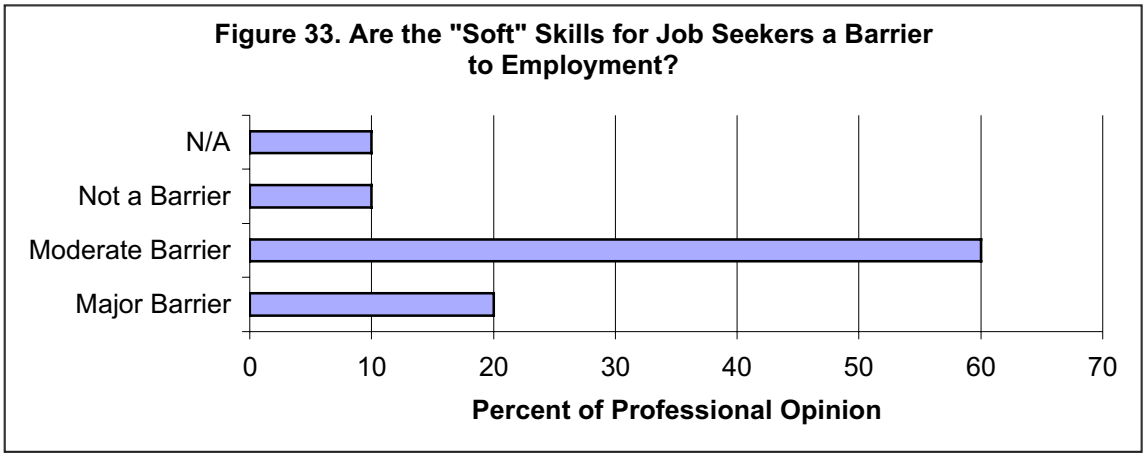
Availability of Transportation as a Barrier

With respect to availability of transportation, two-thirds of respondents cite it as a moderate barrier to employment. One respondent does not see this issue as a barrier to employment. Seven percent of respondents did not register their opinion on this issue.



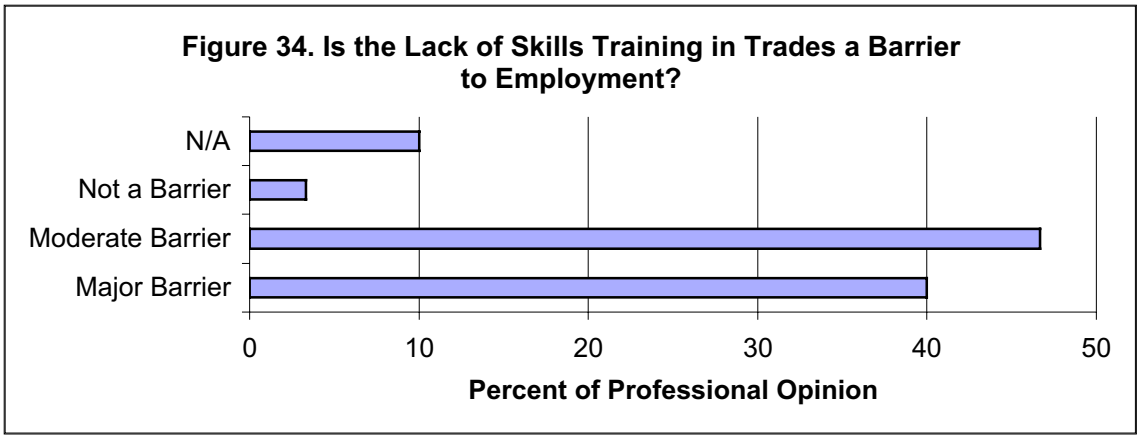
"Soft" Skills as a Barrier

Almost two-thirds of the respondents cite soft skills as a moderate barrier to employment, and one-fifth believe that it is a major barrier. One in 10 respondents did not see "soft" skills as a barrier to employment. Three experts did not register their opinion on this issue.



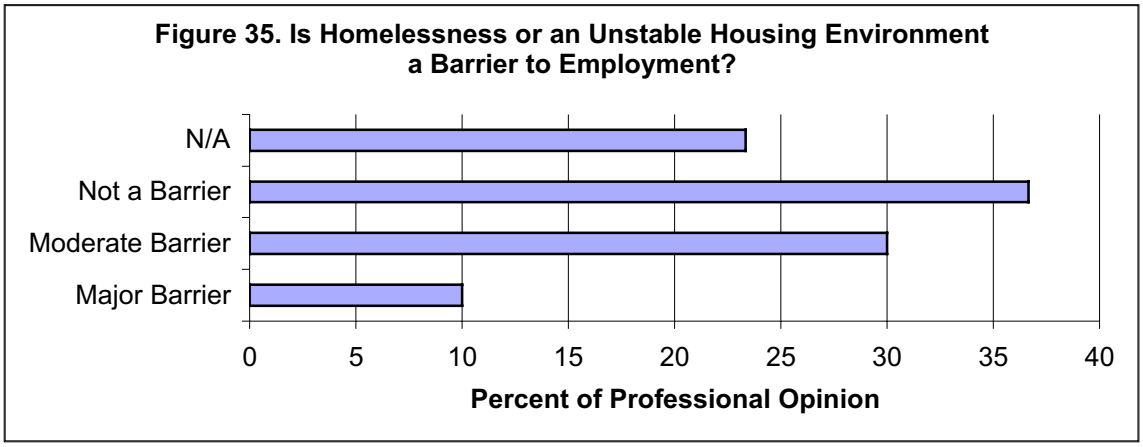
Skill Training as a Barrier

Does the lack of training in a trade constitute a barrier to employment? Almost nine in 10 professionals said that lack of training is a moderate to major barrier to employment. According to one expert it is not an obstacle, while three respondents did not register opinions.



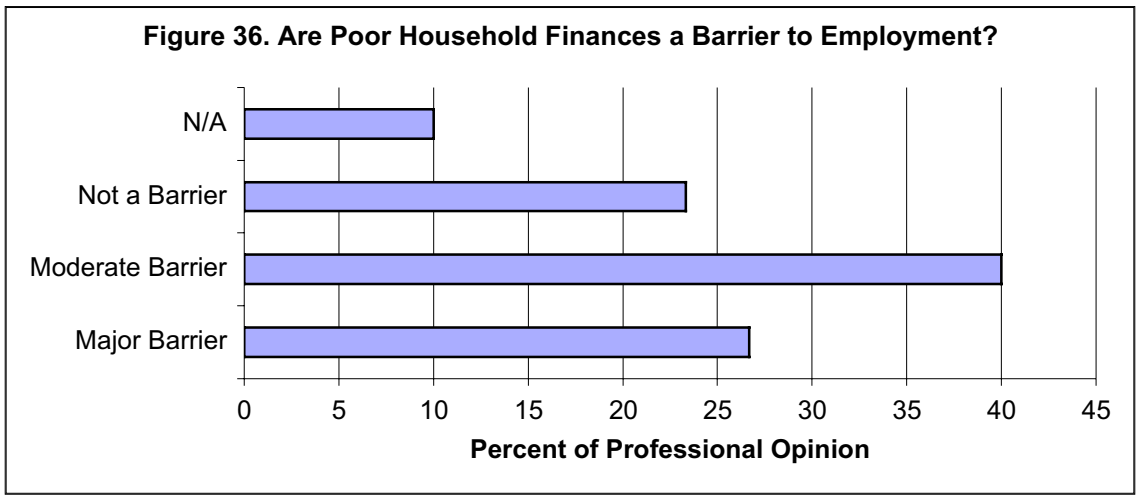
Homelessness or Unstable Housing Environment as a Barrier

More than one-third of professionals think that an unstable housing environment is not a barrier to employment. Two in 10 professionals did not convey their opinions. While about one-third of experts see unstable housing environment as a moderate barrier, only three of them cite this as a major barrier.



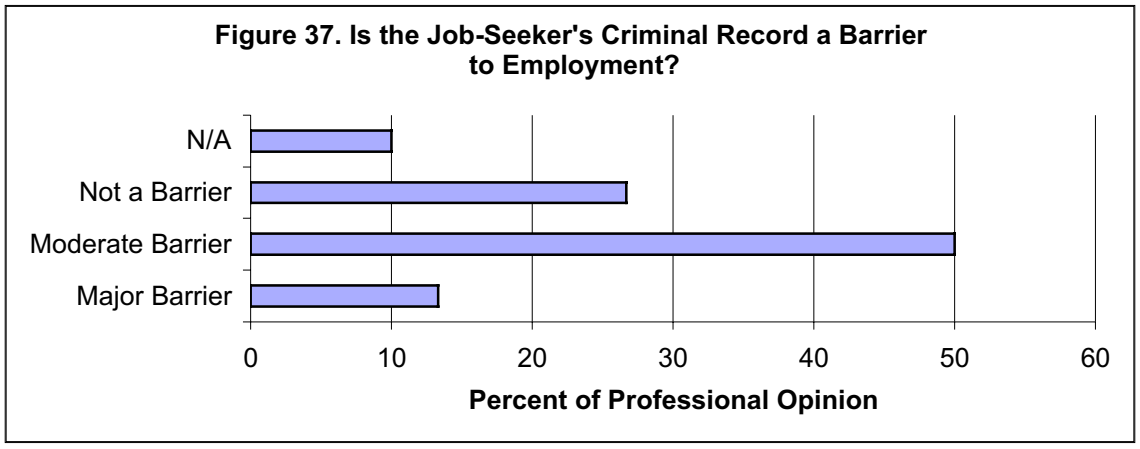
Poor Household Finances as a Barrier

Are poor personal finances getting in the way when trying to land a job? About three in 10 workforce experts strongly believe that poor household finances are a major barrier to employment, and four in 10 believe it is a moderate barrier. Six professionals do not see it as a barrier, and three respondents did not answer this question.



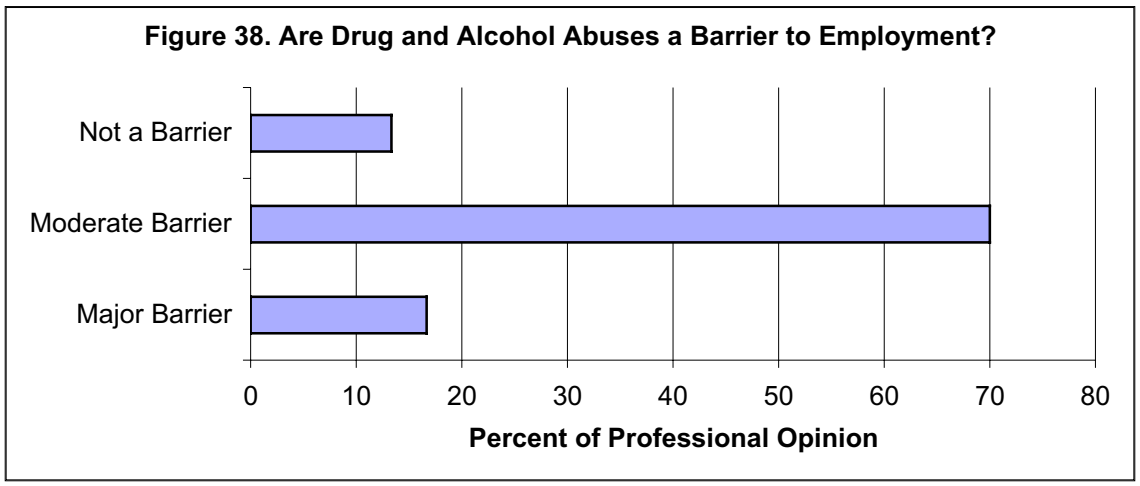
Criminal Record as a Barrier

An individual's criminal record is viewed as a moderate, but not a major, barrier to employment. About one-third do not see a criminal record as an impediment to employment. Three respondents did not answer the question.



Drug and Alcohol Abuse as a Barrier

Finally, we asked experts their opinions about drug and alcohol abuse as a barrier to employment. Seven in 10 respondents acknowledge it as a moderate barrier, and about two in 10 experts cite it as a major barrier. Four respondents did not see it as a barrier.



Other Barriers to Employment

We asked workforce experts to name other barriers to employment in northwest Tennessee. The most frequently cited barrier is "lack of jobs" in the region. "Mental instability," "lack of home phones," and "lack of qualifications" are other barriers to employment experts cited during the survey.

When we asked whether there is anything else they want to tell us about the barriers to employment in the region, those who responded pointed out the "poor quality of education." Overall educational levels are a primary concern, although one expert mentioned poor quality of "reading and writing skills." Further, according to an expert, non-English language is not an issue in the region.

The experts we surveyed have extensive knowledge about the region and workforce issues. The average tenure of these experts in their current position is 10 years and six months. More than 40 percent of these experts have worked in their current positions more than six years, 20 percent less than one year, 30 percent one to three years, and 10 percent three to six years.

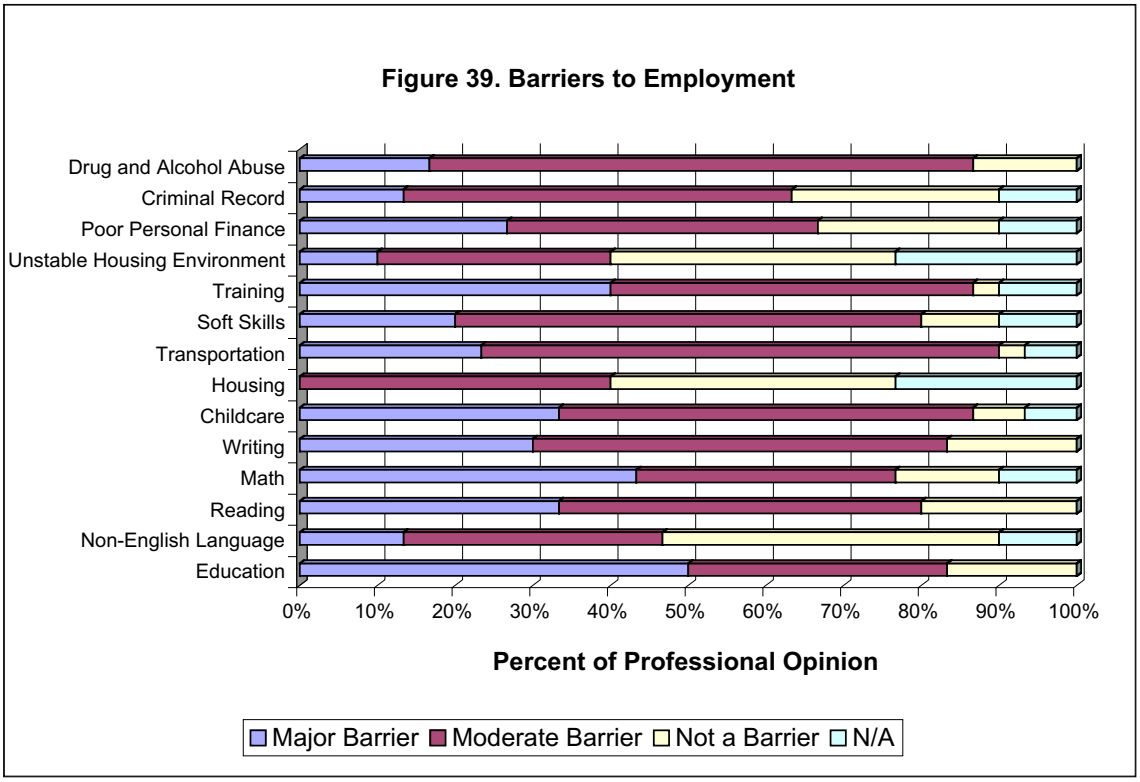
Table 44. Years of Work in Current Position

	Percent
Less than 1 year	20%
1-3 Years	30%
3-6 Years	10%
6 and More	40%
Average Years	10 Years and 6 months

Conclusions

Combined survey results are presented in the following figure. As can be seen, more than 30 percent of experts agree that training skills, education, childcare, math, and reading are major barriers to employment in the survey region. An unstable housing environment, the availability of housing, and prevalence of non-English language are not viewed as barriers by more than 30 percent of experts. An overwhelming percentage of experts agree that drug and alcohol abuse, availability of transportation, childcare, and writing skills are moderate barriers to employment.

Figure 39. Barriers to Employment



Appendix

Table 45. Geographical Guide

LWIA	=	Local Workforce Investment Area
LWIA 12	=	Study area (or study region, used interchangeably)
Peer LWIAs	=	LWIA 6, LWIA 7, LWIA 10
Nashville Area	=	LWIA 9
Memphis Area	=	LWIA 13
LWIA 12	=	Crockett, Dyer, Gibson, Lake, Lauderdale, Obion, and Tipton counties
LWIA 6	=	Bedford, Coffee, Franklin, Grundy, Lincoln, Moore, and Warren counties
LWIA 7	=	Macon, Clay, Fentress, Pickett, Overton, Jackson, Smith, Putnam, DeKalb, White, Van Buren, and Cannon counties
LWIA 9	=	Trousdale, Wilson, Davidson, and Rutherford counties
LWIA 10	=	Hickman, Perry, Lewis, Maury, Marshall, Giles, Lawrence, and Wayne counties
LWIA 13	=	Fayette and Shelby counties

Table 46. Data Source Guide

Population Data	Woods & Poole, Census Data
Education Data	Census Data, National Survey of Adult Literacy, Bureau of Labor Statistics (BLS)
Personal Income Data	Woods & Poole
Payroll Employment Data	Woods & Poole
Employment by Occupation Data	Tennessee Department of Labor and Workforce Development, BLS
Wage Data	BLS, Bureau of Economic Analysis (BEA)
Civilian Labor Force, Employment, Unemployment Data	Tennessee Department of Labor and Workforce Development, BLS

Table 47. Population by Local Workforce Investment Area (in Thousands)

	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Total Population												
LWIA												
LWIA10	184.966	208.592	212.496	216.401	219.704	222.1	224.344	226.054	229.076	231.654	236.984	250.54
LWIA12	195.080	208.199	210.520	212.839	215.251	217.222	219.119	220.146	221.930	223.336	226.061	233.344
LWIA13	853.995	897.387	904.052	907.698	913.472	921.874	927.522	928.062	935.948	943.071	957.577	994.882
LWIA6	185.522	200.467	203.816	207.112	209.856	212.266	215.227	217.476	220.096	222.282	226.835	238.477
LWIA7	185.247	201.139	205.716	210.341	214.145	217.368	220.517	222.869	225.494	227.719	232.187	243.681
LWIA9	705.942	785.971	802.574	818.108	829.101	839.078	849.816	855.932	868.841	881.014	905.606	968.052
County												
Crockett	13.392	13.837	13.937	14.155	14.364	14.436	14.564	14.571	14.675	14.753	14.900	15.268
Dyer	34.945	35.890	36.324	36.651	36.881	37.104	37.339	37.182	37.471	37.702	38.155	39.344
Gibson	46.402	47.683	47.952	48.224	48.186	48.181	48.144	48.109	48.330	48.461	48.682	49.453
Lake	6.060	6.342	6.225	6.076	5.944	5.786	5.830	5.625	5.548	5.553	5.605	5.769
Lauderdale	22.685	24.373	24.593	24.768	25.236	23.996	24.753	24.650	24.705	24.811	24.973	25.373
Obion	31.761	32.361	32.103	32.128	32.249	32.337	32.484	32.399	32.525	32.601	32.732	33.110
Tipton	37.350	43.865	45.455	46.771	48.314	49.602	51.034	52.493	53.347	54.118	55.677	59.690
Population by Age (0-17)												
LWIA												
LWIA10	47.312	53.982	54.691	55.341	55.869	56.18	56.726	56.626	56.962	57.109	57.514	58.723
LWIA12	50.635	54.05	54.225	54.471	54.765	55.104	55.597	55.449	55.423	55.275	55.337	55.139
LWIA13	234.555	250.655	252.023	253.101	255.288	258.029	260.567	259.318	260.731	261.414	263.285	265.239
LWIA6	47.046	50.828	51.256	51.596	51.741	51.897	52.576	52.742	53.138	53.417	54.054	55.806
LWIA7	44.079	48.471	49.45	50.318	50.807	51.134	51.672	51.724	52.026	52.258	52.77	54.142
LWIA9	169.18	192.752	196.088	198.944	200.768	200.847	199.802	202.067	205.865	209.388	216.744	232.169
County												
Crockett	3.270	3.466	3.479	3.544	3.574	3.563	3.669	3.644	3.602	3.578	3.536	3.447
Dyer	8.918	9.179	9.262	9.317	9.392	9.483	9.601	9.467	9.432	9.400	9.404	9.364
Gibson	11.022	11.487	11.483	11.484	11.440	11.496	11.515	11.463	11.510	11.506	11.507	11.593
Lake	1.565	1.590	1.544	1.502	1.469	1.433	1.404	1.349	1.353	1.355	1.382	1.361
Lauderdale	6.435	6.932	6.858	6.818	6.813	6.784	6.699	6.692	6.690	6.680	6.710	6.706
Obion	7.858	7.797	7.620	7.545	7.490	7.537	7.604	7.555	7.556	7.528	7.575	7.608
Tipton	11.567	13.599	13.979	14.261	14.587	14.808	15.105	15.279	15.28	15.228	15.223	15.06
Population by Age (18-24)												
LWIA												
LWIA10	17.620	17.982	18.030	18.193	18.661	19.043	19.286	20.155	20.892	21.571	22.525	24.187
LWIA12	18.796	18.539	18.449	18.554	19.062	19.303	19.411	20.117	20.408	20.845	21.196	22.258
LWIA13	96.443	92.585	91.261	90.012	90.114	90.422	90.166	90.246	90.800	92.259	94.387	103.896
LWIA6	17.971	18.061	18.122	18.321	18.816	19.190	19.896	20.673	21.002	21.332	21.429	22.270
LWIA7	21.520	20.374	20.157	20.278	20.822	21.412	22.268	22.862	22.928	22.900	22.781	23.469
LWIA9	83.607	86.942	87.229	89.139	91.292	94.568	98.321	95.901	94.239	92.674	88.926	90.812
County												
Crockett	1.159	1.105	1.11	1.118	1.142	1.19	1.189	1.215	1.279	1.343	1.429	1.459
Dyer	3.493	3.266	3.239	3.239	3.267	3.247	3.268	3.306	3.345	3.442	3.525	3.696
Gibson	4.201	3.939	3.881	3.875	3.922	3.869	3.898	4.045	4.082	4.169	4.165	4.385
Lake	0.656	0.674	0.649	0.611	0.599	0.573	0.578	0.563	0.500	0.469	0.434	0.480
Lauderdale	2.156	2.143	2.171	2.224	2.407	2.247	2.361	2.410	2.346	2.282	2.070	1.974
Obion	3.048	2.982	2.909	2.871	2.846	2.768	2.724	2.785	2.806	2.829	2.792	2.811
Tipton	3.523	3.562	3.606	3.703	3.961	4.167	4.307	4.678	4.888	5.151	5.621	6.293

Table 47. Population by Local Workforce Investment Area (in Thousands) (continued)

	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Population by Age (25-64)												
LWIA												
LWIA10	87.116	98.101	100.176	102.360	104.109	105.63	106.716	106.928	108.011	108.784	110.653	114.418
LWIA12	95.855	105.525	107.746	109.594	111.304	112.758	113.907	114.115	115.502	116.312	118.180	122.124
LWIA13	433.606	459.086	465.714	470.085	474.13	480.303	483.376	485.313	491.411	496.396	506.571	526.613
LWIA6	93.656	102.69	105.206	107.483	109.193	110.676	111.822	112.535	114.011	115.14	118.029	124.027
LWIA7	97.302	108.625	111.851	114.918	117.242	118.991	120.181	120.925	122.867	124.443	127.543	133.575
LWIA9	376.311	422.215	434.126	444.148	450.789	457.022	464.883	470.637	480.974	490.228	509.227	544.469
County												
Crockett	6.437	6.873	6.994	7.201	7.339	7.385	7.414	7.399	7.484	7.504	7.597	7.901
Dyer	17.366	18.263	18.700	19.012	19.207	19.386	19.463	19.390	19.668	19.786	20.059	20.664
Gibson	22.648	23.685	23.967	24.169	24.213	24.295	24.193	24.12	24.264	24.387	24.671	24.993
Lake	2.781	3.028	2.988	2.920	2.831	2.734	2.789	2.629	2.642	2.652	2.725	2.841
Lauderdale	10.590	11.918	12.233	12.385	12,693	11.662	12.429	12.293	12.448	12.595	12.952	13.224
Obion	15.922	16.669	16.631	16.772	17.000	17.127	17.221	17.094	17.169	17.175	17.175	17.061
Tipton	18.185	22.098	23.185	23.981	24.861	25.630	26.512	27.167	27.659	28.041	28.829	31.268
Population by Age (65 and Over)												
LWIA												
LWIA10	26.737	28.288	28.726	28.961	29.114	29.309	29.551	29.995	30.267	30.732	31.613	35.182
LWIA12	29.794	30.085	30.100	30.220	30.120	30.057	30.204	30.465	30.597	30.904	31.348	33.823
LWIA13	89.391	95.061	95.054	94.500	93.940	93.120	93.413	93.185	93.006	93.002	93.334	99.134
LWIA6	26.849	28.888	29.232	29.712	30.106	30.503	30.933	31.526	31.945	32.393	33.323	36.374
LWIA7	27.138	28.661	29.021	29.504	29.946	30.320	30.865	31.541	31.958	32.426	33.462	37.077
LWIA9	76.844	84.062	85.131	85.877	86.252	86.641	86.810	87.327	87.763	88.724	90.709	100.602
County												
Crockett	2.526	2.393	2.354	2.292	2.309	2.298	2.292	2.313	2.310	2.328	2.338	2.461
Dyer	5.168	5.182	5.123	5.083	5.015	4.988	5.007	5.019	5.026	5.074	5.167	5.620
Gibson	8.531	8.572	8.621	8.696	8.611	8.521	8.538	8.481	8.474	8.399	8.339	8.482
Lake	1.058	1.050	1.044	1.043	1.045	1.046	1.059	1.064	1.053	1.077	1.064	1.087
Lauderdale	3.504	3.38	3.331	3.341	3.323	3.303	3.264	3.255	3.221	3.260	3.247	3.475
Obion	4.933	4.913	4.943	4.940	4.913	4.905	4.935	4.965	4.994	5.069	5.190	5.630
Tipton	4.074	4.595	4.684	4.825	4.904	4.996	5.109	5.368	5.519	5.697	6.003	7.068
Population by Race (White)												
LWIA												
LWIA10	167.642	186.336	189.820	193.195	195.894	198.198	199.818	201.007	202.765	204.898	209.193	220.057
LWIA12	156.928	164.858	166.678	168.25	169.748	171.236	172.474	172.617	173.263	173.989	175.338	178.683
LWIA13	465.964	461.235	458.141	453.295	448.557	445.524	436.726	432.543	431.515	428.618	422.836	407.781
LWIA6	173.051	184.162	187.295	189.993	191.972	194.023	195.481	197.161	198.629	200.269	203.576	212.030
LWIA7	181.279	194.221	198.914	203.17	206.604	209.961	212.300	214.406	215.525	217.449	221.278	231.033
LWIA9	553.733	597.932	606.821	614.578	618.362	621.707	620.547	622.967	630.385	635.483	645.682	670.647
County												
Crockett	11.076	11.210	11.308	11.453	11.579	11.605	11.639	11.584	11.584	11.572	11.574	11.548
Dyer	30.537	30.965	31.330	31.512	31.634	31.780	31.802	31.549	31.621	31.732	31.954	32.432
Gibson	37.127	37.760	37.957	38.093	37.954	37.932	37.863	37.700	37.729	37.766	37.774	37.879
Lake	5.008	4.992	4.922	4.796	4.672	4.571	4.460	4.281	4.214	4.212	4.214	4.263
Lauderdale	15.630	16.327	16.395	16.460	16.645	16.200	16.332	16.172	16.066	16.036	15.946	15.628
Obion	28.274	28.509	28.298	28.299	28.369	28.443	28.486	28.326	28.297	28.313	28.321	28.361
Tipton	28.291	33.571	34.912	36.027	37.282	38.416	39.923	40.979	41.642	42.245	43.442	46.459

Table 47. Population by Local Workforce Investment Area (in Thousands) (continued)

	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Population by Race (Black)												
LWIA												
LWIA10	15.776	18.356	18.556	18.776	18.993	18.972	18.872	19.211	19.496	19.656	19.996	20.832
LWIA12	36.486	39.868	40.416	40.884	41.514	41.951	41.937	42.658	43.114	43.563	44.572	47.606
LWIA13	371.59	408.923	416.033	422.297	430.22	439.102	449.106	452.478	460.475	467.683	482.193	519.233
LWIA6	10.403	11.007	10.944	11.037	11.183	11.140	11.120	11.293	11.450	11.491	11.663	12.143
LWIA7	2.363	2.842	2.629	2.692	2.668	2.521	2.760	2.828	3.173	3.196	3.207	3.294
LWIA9	135.523	156.105	160.436	164.946	168.457	171.692	174.771	176.34	179.138	181.916	187.488	201.658
County												
Crockett	2.253	2.206	2.167	2.160	2.165	2.132	2.101	2.130	2.159	2.189	2.237	2.390
Dyer	4.147	4.436	4.517	4.629	4.71	4.793	4.887	4.972	5.054	5.144	5.323	5.917
Gibson	8.991	9.358	9.451	9.545	9.593	9.628	9.565	9.671	9.747	9.811	9.965	10.496
Lake	1.020	1.210	1.180	1.150	1.120	1.060	1.220	1.170	1.110	1.100	1.140	1.220
Lauderdale	6.730	7.600	7.770	7.850	8.110	7.350	7.890	7.930	7.980	8.090	8.340	9.020
Obion	3.254	3.316	3.270	3.252	3.266	3.261	3.262	3.307	3.342	3.371	3.428	3.635
Tipton	8.590	9.440	9.690	9.850	10.090	10.240	10.010	10.390	10.510	10.630	10.920	11.710
Population by Race (Native American)												
LWIA												
LWIA10	0.296	0.647	0.672	0.681	0.724	0.638	0.685	0.693	0.939	0.930	0.923	0.889
LWIA12	0.402	0.688	0.639	0.654	0.672	0.586	0.657	0.677	0.830	0.877	0.844	0.766
LWIA13	1.474	1.708	1.731	1.768	1.767	1.774	1.861	1.885	1.474	1.475	1.473	1.488
LWIA6	0.295	0.658	0.648	0.656	0.69	0.614	0.626	0.634	0.876	0.877	0.866	0.849
LWIA7	0.277	0.660	0.630	0.642	0.686	0.568	0.571	0.576	0.878	0.866	0.846	0.791
LWIA9	1.524	2.098	2.102	2.184	2.241	2.300	2.585	2.608	2.238	2.232	2.206	2.158
County												
Crockett	0.009	0.026	0.023	0.028	0.029	0.022	0.022	0.022	0.043	0.051	0.046	0.036
Dyer	0.063	0.099	0.085	0.082	0.087	0.072	0.08	0.082	0.119	0.125	0.120	0.112
Gibson	0.038	0.097	0.093	0.095	0.111	0.096	0.098	0.099	0.144	0.147	0.146	0.143
Lake	0.004	0.029	0.028	0.028	0.034	0.031	0.031	0.041	0.05	0.058	0.054	0.048
Lauderdale	0.127	0.171	0.155	0.16	0.158	0.142	0.171	0.173	0.194	0.204	0.193	0.172
Obion	0.047	0.069	0.061	0.062	0.054	0.037	0.039	0.041	0.068	0.072	0.069	0.058
Tipton	0.114	0.197	0.194	0.199	0.199	0.186	0.216	0.219	0.212	0.220	0.216	0.197
Population by Race (Asian)												
LWIA												
LWIA10	0.376	0.685	0.682	0.702	0.704	0.612	0.687	0.699	0.963	0.985	1.051	1.383
LWIA12	0.296	0.648	0.622	0.626	0.641	0.574	0.62	0.641	0.863	0.875	0.903	1.025
LWIA13	7.649	11.819	12.739	13.397	14.193	14.873	15.985	16.474	16.383	17.119	18.724	23.31
LWIA6	0.663	1.122	1.062	1.053	1.053	0.965	1.092	1.110	1.339	1.371	1.473	1.832
LWIA7	0.573	0.982	0.971	0.988	0.998	0.898	0.928	0.954	1.194	1.226	1.322	1.613
LWIA9	8.977	14.323	15.498	16.412	17.39	18.136	19.261	19.946	20.512	21.714	24.284	31.616
County												
Crockett	0.005	0.017	0.016	0.015	0.014	0.009	0.009	0.009	0.016	0.016	0.016	0.018
Dyer	0.059	0.124	0.120	0.125	0.125	0.119	0.136	0.138	0.190	0.191	0.200	0.225
Gibson	0.062	0.111	0.092	0.089	0.094	0.076	0.078	0.081	0.123	0.125	0.130	0.148
Lake	0.002	0.014	0.014	0.013	0.015	0.012	0.012	0.017	0.022	0.022	0.022	0.022
Lauderdale	0.020	0.054	0.052	0.055	0.060	0.047	0.045	0.051	0.082	0.082	0.077	0.077
Obion	0.048	0.105	0.098	0.095	0.094	0.079	0.078	0.079	0.127	0.128	0.134	0.154
Tipton	0.100	0.223	0.230	0.234	0.239	0.232	0.262	0.266	0.303	0.311	0.324	0.381

Table 47. Population by Local Workforce Investment Area (in Thousands) (continued)

	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Population by Race (Hispanic)												
LWIA												
LWIA10	0.876	2.568	2.766	3.047	3.389	3.68	4.282	4.444	4.913	5.185	5.821	7.379
LWIA12	0.968	2.137	2.165	2.425	2.676	2.875	3.431	3.553	3.860	4.032	4.404	5.264
LWIA13	7.318	13.702	15.408	16.941	18.735	20.601	23.844	24.682	26.101	28.176	32.351	43.07
LWIA6	1.110	3.518	3.867	4.373	4.958	5.524	6.908	7.278	7.802	8.274	9.257	11.623
LWIA7	0.755	2.434	2.572	2.849	3.189	3.420	3.958	4.105	4.724	4.982	5.534	6.950
LWIA9	6.185	15.513	17.717	19.988	22.651	25.243	32.652	34.071	36.568	39.669	45.946	61.973
County												
Crockett	0.049	0.378	0.423	0.499	0.577	0.668	0.793	0.826	0.873	0.925	1.027	1.276
Dyer	0.139	0.266	0.272	0.303	0.325	0.340	0.434	0.441	0.487	0.510	0.558	0.658
Gibson	0.184	0.357	0.359	0.402	0.434	0.449	0.54	0.558	0.587	0.612	0.667	0.787
Lake	0.027	0.097	0.085	0.092	0.108	0.108	0.109	0.116	0.155	0.161	0.175	0.218
Lauderdale	0.178	0.246	0.221	0.243	0.259	0.261	0.314	0.327	0.388	0.396	0.422	0.477
Obion	0.138	0.362	0.376	0.420	0.466	0.517	0.619	0.646	0.691	0.717	0.780	0.902
Tipton	0.253	0.431	0.429	0.466	0.507	0.532	0.622	0.639	0.679	0.711	0.775	0.946

Table 48. Income (in Millions of 1996 Dollars) by Local Workforce Investment Areas and Counties

	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Total Personal Income														
LWIA														
LWIA10	2,302	2,637	3,041	4,387	3,982	4,052	4,209	4,306	4,427	4,579	4,687	4,796	5,021	5,607
LWIA12	2,440	2,866	3,268	3,837	3,906	3,980	4,075	4,126	4,252	4,377	4,462	4,547	4,718	5,160
LWIA13	14,035	16,059	19,074	22,567	23,268	23,796	25,702	26,048	26,558	27,132	27,705	28,274	29,475	32,747
LWIA6	2,349	2,713	3,145	3,659	3,735	3,917	4,093	4,157	4,307	4,375	4,473	4,570	4,768	5,287
LWIA7	2,079	2,445	2,871	3,473	3,540	3,686	3,882	3,962	4,150	4,273	4,363	4,453	4,640	5,137
LWIA9	10,825	13,668	16,217	20,808	21,253	21,900	23,455	23,903	24,795	25,334	25,911	26,501	27,751	31,141
County														
Crockett	158	178	220	260	269	274	281	285	295	304	308	313	323	350
Dyer	455	529	631	722	737	749	757	762	783	804	820	836	867	951
Gibson	623	740	784	942	946	961	984	977	1,010	1,044	1,063	1,082	1,118	1,208
Lake	80	81	88	98	100	96	92	96	97	99	101	102	105	114
Lauderdale	261	308	327	370	387	410	412	415	412	415	421	426	438	471
Obion	431	534	597	679	681	682	703	712	738	756	768	779	801	857
Tipton	433	494	621	767	785	808	847	880	917	954	982	1,010	1,066	1,208
Per Capita Income														
LWIA														
LWIA10	12,436	14,091	15,504	18,914	17,753	17,862	18,173	18,367	18,735	19,131	19,307	19,525	19,956	21,054
LWIA12	11,975	13,916	16,118	17,570	17,804	17,917	18,069	18,211	18,591	19,081	19,288	19,523	20,008	21,218
LWIA13	14,412	16,463	18,713	22,593	23,156	23,797	24,966	25,086	25,511	26,088	26,369	26,671	27,308	28,984
LWIA6	13,080	14,510	16,465	17,753	17,773	18,316	18,875	18,977	19,385	19,429	19,620	19,843	20,294	21,408
LWIA7	10,916	12,617	14,626	16,356	16,203	16,565	17,150	17,210	17,863	18,169	18,330	18,524	18,932	19,975
LWIA9	15,620	17,797	19,446	22,116	21,875	22,437	23,379	23,549	24,241	24,391	24,573	24,790	25,274	26,597
County														
Crockett	10,654	12,715	16,455	18,771	19,314	19,367	19,561	19,741	20,272	20,848	21,006	21,210	21,662	22,901
Dyer	13,109	15,544	18,055	20,119	20,299	20,426	20,530	20,536	20,977	21,636	21,883	22,163	22,730	24,183
Gibson	12,601	15,391	16,893	19,758	19,734	19,934	20,420	20,272	20,976	21,707	22,000	22,319	22,956	24,429
Lake	10,569	9,969	14,500	15,392	16,010	15,761	15,474	16,561	16,637	17,588	18,119	18,395	18,815	19,821
Lauderdale	10,651	13,029	14,419	15,172	15,731	16,561	16,320	17,297	16,628	16,828	17,022	17,184	17,557	18,568
Obion	13,130	16,221	18,808	20,978	21,219	21,220	21,797	22,003	22,725	23,342	23,601	23,885	24,464	25,889
Tipton	13,114	14,542	16,624	17,477	17,272	17,281	17,521	17,742	17,961	18,174	18,410	18,660	19,418	20,704

Table 49. Employment by Occupation and Local Workforce Investment Areas

Occupational Title	LWIA 6	LWIA 7	LWIA 9	LWIA 10	LWIA 12	LWIA 13
Projected Employment (2010)						
Total, All Occupations	93,650	88,610	766,600	100,100	97,050	693,730
Management	7,270	7,240	61,000	7,150	6,840	52,580
Business and Financial Operations	1,620	1,290	29,580	1,800	1,840	26,840
Computer and Mathematical	1,210	460	14,410	1,540	310	15,740
Architecture and Engineering	2,570	680	10,510	1,140	870	9,490
Life, Physical, and Social Science	270	360	2,610	290	300	3,340
Community and Social Services	1,070	2,240	17,890	1,550	1,190	12,190
Legal	140	250	5,270	300	120	4,990
Education, Training, and Library	5,770	6,120	26,800	4,850	4,650	23,770
Arts, Design, Entertainment, Sports, and Media	910	430	14,550	330	260	8,780
Healthcare Practitioners and Technical	3,010	6,010	53,750	4,140	3,210	29,380
Healthcare Support	2,240	2,530	19,200	2,620	2,740	14,880
Protective Service	960	1,710	19,080	3,310	2,340	24,710
Food Preparation and Serving Related	5,190	5,490	58,620	5,130	2,850	44,200
Building and Grounds Cleaning and Maintenance	2,760	2,270	22,810	1,990	2,730	26,630
Personal Care and Service	1,230	1,000	16,260	1,000	990	14,260
Sales and Related	7,690	7,530	87,360	6,630	6,980	75,110
Office and Administrative Support	10,450	11,150	111,860	13,160	12,740	117,580
Farming, Fishing, and Forestry	1,280	1,470	680	1,590	1,040	1,000
Construction and Extraction	4,220	3,780	33,540	4,460	3,380	33,420
Installation, Maintenance, and Repair	3,820	3,960	28,740	4,540	4,190	27,220
Production	22,480	15,530	66,640	24,700	26,220	37,660
Transportation and Material Moving	7,520	7,130	65,440	7,880	11,270	89,970
Employment (2000)						
Total, All Occupations	80,520	78,740	628,600	86,910	85,350	567,140
Management	7,090	7,170	49,130	6,920	6,530	43,290
Business and Financial Operations	1,270	1,110	23,090	1,450	1,580	20,450
Computer and Mathematical	690	310	9,070	950	230	9,370
Architecture and Engineering	1,870	600	8,130	960	720	7,140
Life, Physical, and Social Science	230	340	2,290	280	280	2,750
Community and Social Services	800	1,740	13,840	1,270	950	9,440
Legal	100	190	4,170	230	100	3,880
Education, Training, and Library	5,290	5,510	24,020	4,440	4,290	21,240
Arts, Design, Entertainment, Sports, and Media	700	360	10,990	280	220	7,310
Healthcare Practitioners and Technical	2,440	4,770	42,340	3,130	2,410	23,630
Healthcare Support	1,600	1,850	13,890	1,830	1,810	11,420
Protective Service	740	1,370	13,810	2,360	1,900	17,760
Food Preparation and Serving Related	4,160	4,550	48,050	4,280	2,320	36,400
Building and Grounds Cleaning and Maintenance	2,350	1,910	19,910	1,710	2,320	22,560
Personal Care and Service	980	770	14,060	880	830	11,400
Sales and Related	6,600	6,340	72,770	5,540	5,880	62,880
Office and Administrative Support	9,210	10,130	97,690	11,840	11,380	102,010
Farming, Fishing, and Forestry	1,630	1,830	810	1,860	1,250	1,130
Construction and Extraction	3,280	3,100	26,980	3,610	2,760	26,790
Installation, Maintenance, and Repair	3,200	3,500	24,410	3,980	3,650	22,580
Production	19,770	15,060	55,380	22,320	23,910	32,950
Transportation and Material Moving	6,540	6,260	53,780	6,780	10,040	70,770

Table 50. Civilian Labor Force, Unemployment Rate, and Employment

	1988	1990	1994	1995	1996	1997	1998	1999	2000	2001	2002	2005	2010
Unemployment rate (%)													
LWIA 6	6.8	5.7	5.4	6	7.1	6.8	5.4	4.5	4.4	5.1	5.4	4.6	5.8
LWIA 7	7.1	7.3	6.5	6.7	6.7	8.3	6.8	5.5	5.3	5.9	6.2	5.6	6.6
LWIA 9	4.2	3.9	3.1	3.4	3.3	3.6	2.8	2.8	2.9	3.2	4	2.9	4.2
LWIA 10	8.1	6.8	5.3	7.2	7.6	7.7	5.7	6.2	6.2	6.5	7	6.6	7.5
LWIA 12	6.8	6.3	5.8	6	7.6	7	6	5.5	5.3	6.7	7.2	5.6	7.8
LWIA 13	5	4.5	4.7	4.9	4.4	4.7	3.8	3.8	3.9	4.3	5.3	4.1	5.6
Total Employment (Persons)													
LWIA 6	74,180	83,580	94,760	94,900	94,390	92,990	87,040	96,300	96,920	98,180	100,500	102,147	108,893
LWIA 7	83,110	83,520	96,050	95,300	97,170	92,940	93,040	96,480	96,520	95,840	97,510	101,628	105,375
LWIA 9	370,080	362,830	402,310	409,510	418,280	415,620	437,790	440,640	450,920	452,420	460,190	480,523	512,738
LWIA 10	75,060	84,820	103,980	102,740	103,920	101,030	97,140	103,520	102,330	101,990	101,900	108,095	111,448
LWIA 12	83,750	83,550	90,690	90,790	91,130	89,000	91,060	92,570	93,450	92,800	92,280	96,411	97,026
LWIA 13	375,750	388,620	408,030	415,790	424,560	421,930	434,430	442,600	442,900	443,790	447,670	457,252	475,859
Civilian Labor Force													
LWIA													
LWIA 6	79,620	88,650	100,180	100,950	101,610	99,820	91,970	100,850	101,350	103,410	106,280	106,816	115,156
LWIA 7	89,490	90,100	102,700	102,170	104,170	101,370	99,880	102,130	101,920	101,820	103,940	107,314	112,323
LWIA 9	386,140	377,380	414,990	424,010	432,640	430,980	450,350	453,460	464,220	467,460	479,600	494,696	534,364
LWIA 10	81,710	91,030	109,750	110,690	112,440	109,480	102,980	110,310	109,040	109,070	109,590	115,184	119,858
LWIA 12	89,870	89,130	96,240	96,580	98,620	95,700	96,370	97,910	98,710	99,480	99,480	101,837	104,596
LWIA 13	395,440	406,970	428,070	437,390	444,010	442,710	451,450	459,920	461,070	463,470	472,880	476,010	502,656
Total Employment (Persons)													
County													
Crockett	6,620	6,130	7,090	7,040	6,910	6,530	6,680	6,960	6,800	6,780	6,750	6,957	7,023
Dyer	14,850	15,780	18,380	17,790	17,930	17,430	17,370	17,650	17,310	16,850	16,660	17,688	17,493
Gibson	20,330	20,070	21,880	21,870	20,870	20,140	20,300	19,960	19,900	18,940	18,610	20,122	19,042
Lake	2,110	2,430	2,790	2,650	2,570	2,400	2,260	2,400	2,280	2,360	2,480	2,273	2,563
Lauderdale	10,490	9,110	8,650	8,700	9,120	8,930	9,070	9,210	9,400	9,010	8,590	9,534	8,790
Obion	14,180	14,110	13,980	13,950	14,030	13,540	14,250	14,540	15,020	15,430	15,560	15,135	15,840
Tipton	15,170	15,920	17,920	18,790	19,700	20,030	21,130	21,850	22,740	23,430	23,630	24,787	26,411
Unemployment Rate (%)													
County													
Crockett	6.2	5.1	5.7	6.6	6.9	7.6	6.3	5.4	5	5.6	7.8	5.3	8.4
Dyer	6.4	5.2	5	5.1	7.1	5.9	4.2	4.8	6	7.2	7.5	6.4	8.1
Gibson	8.3	7.7	5.3	6.1	9.4	7.7	5.9	6.4	6.8	9.5	9.4	7.3	10.3
Lake	7	6.2	7	6	9.2	9.1	9.6	6.3	5.8	5.6	6.1	6.1	6.5
Lauderdale	6.8	7.8	9.9	8.8	8.2	8.9	8.2	8.5	6.4	10	10.2	6.8	11.4
Obion	5.9	6.2	5.5	5.6	8.8	7.8	5.3	6.1	4.4	4.3	4.7	4.6	4.9
Tipton	6.2	5.1	5.1	5.4	4.9	5.3	4.4	3.3	3.7	4.7	5.8	3.8	6.1
Civilian Labor Force													
County													
Crockett	7,060	6,460	7,520	7,540	7,420	7,070	7,130	7,360	7,160	7,180	7,320	7,325	7,616
Dyer	15,860	16,650	19,340	18,750	19,290	18,530	18,140	18,530	18,420	18,150	18,010	18,823	18,910
Gibson	22,170	21,740	23,100	23,290	23,040	21,810	21,570	21,320	21,350	20,920	20,530	21,589	21,007
Lake	2,270	2,590	3,000	2,820	2,830	2,640	2,500	2,560	2,420	2,500	2,640	2,412	2,728
Lauderdale	11,260	9,880	9,600	9,540	9,940	9,800	9,880	10,060	10,040	10,010	9,570	10,184	9,793
Obion	15,070	15,040	14,790	14,780	15,380	14,690	15,040	15,480	15,710	16,130	16,330	15,830	16,624
Tipton	16,180	16,770	18,890	19,860	20,720	21,160	22,110	22,600	23,610	24,590	25,080	25,735	28,032

Table 51. Annual and Average Weekly Wages by Private Industry (SIC) and County

Industry	Wages	Year	Crockett	Dyer	Gibson	Lake	Lauderdale	Obion	Tipton
Agriculture	Average Weekly	1997	$368	$289	$350	$291	$410	$303	n.a.
		1998	$357	$269	$355	$290	$400	$323	$312
		1999	$363	$268	$358	$298	$425	$329	$326
		2000	$395	$266	$347	$318	$407	$328	$324
	Total Annual	1997	$2,984,802	$1,429,006	$2,784,175	$1,485,172	$3,280,602	$2,237,880	n.a.
		1998	$2,935,122	$1,328,550	$3,006,000	$1,343,005	$3,308,774	$2,217,908	$1,411,800
		1999	$3,002,738	$1,194,746	$2,757,427	$1,290,659	$3,446,924	$1,622,815	$1,602,078
		2000	$3,074,778	$1,271,940	$2,692,892	$1,122,631	$3,582,469	$1,805,749	$1,882,326
Construction	Average Weekly	1997	$490	$461	$430	$259	$364	$556	$427
		1998	$533	$522	$466	n.a.	$391	$555	$429
		1999	$505	$561	$535	$378	$422	$695	$505
		2000	$510	$602	$484	$344	$401	$715	$541
	Total Annual	1997	$6,376,262	$21,612,306	$18,768,618	$161,875	$4,408,751	$19,240,122	$16,000,999
		1998	$6,795,307	$22,487,444	$20,310,488	n.a.	$4,854,447	$18,301,937	$18,459,927
		1999	$6,398,983	$23,124,578	$22,318,084	$315,824	$5,348,112	$22,429,708	$21,357,785
		2000	$5,322,577	$22,852,232	$17,561,072	$94,020	$5,435,451	$24,052,121	$21,876,094
Finance, Insurance, and Real Estate	Average Weekly	1997	$403	$544	$476	$335	$487	$461	$473
		1998	$435	$586	$495	$323	$509	$511	$500
		1999	$430	$593	$484	$359	$485	$530	$575
		2000	$422	$588	$502	$379	$492	$506	$538
	Total Annual	1997	$2,993,900	$14,743,731	$12,702,768	$660,986	$5,466,282	$8,228,295	$9,178,279
		1998	$3,303,529	$16,735,501	$13,527,753	$705,739	$5,714,769	$9,597,273	$9,104,305
		1999	$3,392,100	$18,318,479	$13,790,820	$842,262	$6,767,110	$10,967,552	$9,333,760
		2000	$3,502,218	$18,232,091	$14,369,919	$875,308	$7,293,149	$10,242,235	$7,940,548
Manufacturing	Average Weekly	1997	$465	$600	$537	$429	$523	$744	$543
		1998	$487	$572	$559	$606	$541	$776	$541
		1999	$495	$599	$574	$635	$550	$830	$552
		2000	$521	$605	$599	$755	$511	$852	$625
	Total Annual	1997	$39,778,058	$182,347,723	$231,356,499	$5,377,786	$102,931,636	$223,361,272	$93,824,994
		1998	$43,295,241	$191,472,673	$221,282,902	$3,625,205	$110,125,323	$235,884,453	$101,265,391
		1999	$44,405,618	$188,094,196	$225,745,110	$4,039,475	$116,120,972	$249,670,198	$104,261,800
		2000	$45,045,652	$192,153,960	$230,670,226	$3,555,253	$93,829,605	$262,915,502	$113,506,298
Retail Trade	Average Weekly	1997	$194	$255	$281	$231	$234	$271	$262
		1998	$203	$267	$291	$232	$245	$289	$306
		1999	$231	$264	$255	$239	$262	$306	$264
		2000	$246	$275	$256	$252	$261	$311	$274
	Total Annual	1997	$3,192,319	$33,672,589	$42,747,664	$3,371,862	$11,879,738	$34,924,926	$20,188,055
		1998	$3,432,139	$35,511,915	$43,695,782	$3,347,399	$12,597,510	$37,452,787	$26,604,319
		1999	$3,817,394	$36,115,701	$35,006,682	$3,524,804	$13,695,410	$37,035,677	$22,072,084
		2000	$4,126,834	$40,490,733	$35,086,073	$3,598,426	$14,920,722	$38,480,007	$23,049,529
Services	Average Weekly	1997	$364	$343	$331	$284	$301	$416	$360
		1998	$353	$356	$357	$298	$270	$418	$371
		1999	$361	$370	$404	$293	$324	$426	$387
		2000	$390	$403	$373	$305	$361	$426	$413
	Total Annual	1997	$8,219,851	$59,204,183	$39,019,345	$3,515,247	$13,169,601	$38,230,893	$31,285,771
		1998	$8,299,511	$65,449,138	$44,794,864	$3,697,358	$18,678,643	$40,998,592	$33,517,049
		1999	$8,870,925	$77,496,922	$49,201,287	$3,895,980	$15,928,980	$43,805,599	$35,475,913
		2000	$9,590,993	$79,361,031	$46,282,699	$3,487,828	$14,111,373	$46,244,265	$35,571,487
Transportation and Public Utilities	Average Weekly	1997	$342	$556	$588	$348	$538	$529	$539
		1998	$332	$553	$599	$306	$552	$510	$561
		1999	$358	$545	$610	n.a.	$560	$528	$569
		2000	$502	$595	$651	$405	$534	$539	$604
	Total Annual	1997	$2,630,750	$15,764,589	$14,501,663	$199,124	$4,530,760	$9,570,718	$4,709,751
		1998	$3,039,143	$17,963,192	$15,922,093	$127,152	$5,136,318	$8,856,845	$5,714,185
		1999	$4,076,801	$17,906,116	$16,043,597	n.a.	$5,535,215	$10,670,744	$5,497,875
		2000	$2,212,776	$17,842,477	$16,591,092	$885,571	$5,251,760	$11,187,793	$5,541,631
Wholesale Trade	Average Weekly	1997	$442	$454	$573	$645	$478	$457	$575
		1998	$460	$469	$612	$433	$471	$471	$548
		1999	$474	$513	$608	$509	$462	$487	$429
		2000	$508	$634	$596	$634	$497	$489	$523
	Total Annual	1997	$3,305,892	$23,260,992	$14,210,242	$1,508,670	$10,261,578	$14,633,005	$10,197,773
		1998	$3,298,757	$19,593,565	$12,795,047	$743,747	$8,653,433	$15,430,033	$10,426,943
		1999	$4,315,721	$19,064,791	$11,266,881	$712,250	$6,968,710	$15,411,337	$13,383,416
		2000	$4,737,379	$17,125,719	$12,469,833	$813,021	$7,624,101	$14,886,652	$15,189,073

Table 52. Annual and Average Weekly Wages by Private Industry (NAICS) and County

Industry	Wages	Year	Crockett	Dyer	Gibson	Lake	Lauderdale	Obion	Tipton
Accommodation and Food Services	Average Weekly	2001	n.a.	$167	$158	n.a.	n.a.	$155	$174
		2002	n.a.	$166	$162	$193	n.a.	$159	$178
	Total Annual	2001	n.a.	$7,587,735	$6,765,000	n.a.	n.a.	$5,151,101	$4,301,710
		2002	n.a.	$7,704,738	$6,725,971	$1,652,448	n.a.	$4,803,591	$4,686,003
Admin. & Support, Waste Management, Remediation Services	Average Weekly	2001	$255	$277	n.a.	n.a.	$803	$311	$550
		2002	$301	$249	n.a.	n.a.	$171	$391	$440
	Total Annual	2001	$1,168,876	$17,826,208	n.a.	n.a.	$10,043,044	$11,473,990	$6,794,854
		2002	$1,814,311	$16,137,630	n.a.	n.a.	$516,216	$13,191,405	$9,841,964
Agriculture, Forestry, Fishing, and Hunting	Average Weekly	2001	$438	$173	$400	$341	$433	$311	n.a.
		2002	$357	$246	$390	$346	$438	$335	n.a.
	Total Annual	2001	$2,931,781	$297,725	$1,303,396	$1,146,734	$3,655,791	$1,850,252	n.a.
		2002	$4,656,731	$1,652,636	$1,303,031	$999,623	$3,425,916	$1,821,918	n.a.
Arts, Entertainment and Recreation	Average Weekly	2001	n.a.	$204	$212	n.a.	n.a.	$166	$274
		2002	n.a.	$203	$209	n.a.	n.a.	$218	$261
	Total Annual	2001	n.a.	$748,017	$706,771	n.a.	n.a.	$316,890	$709,156
		2002	n.a.	$603,801	$675,128	n.a.	n.a.	$380,084	$707,927
Construction	Average Weekly	2001	$557	$652	$551	$265	$385	$738	$565
		2002	$607	$635	$512	$207	$379	$683	$539
	Total Annual	2001	$5,004,246	$22,607,008	$18,002,450	$129,848	$4,526,747	$29,041,910	$20,391,164
		2002	$5,797,856	$21,433,909	$16,220,572	$62,924	$4,287,928	$24,124,264	$19,117,674
Educational Services	Average Weekly	2001	n.a.	$316	n.a.	n.a.	n.a.	n.a.	n.a.
		2002	n.a.	$369	n.a.	n.a.	n.a.	n.a.	n.a.
	Total Annual	2001	n.a.	$377,826	n.a.	n.a.	n.a.	n.a.	n.a.
		2002	n.a.	$460,015	n.a.	n.a.	n.a.	n.a.	n.a.
Finance and Insurance	Average Weekly	2001	$428	$604	$514	$494	$573	$550	$617
		2002	$449	$650	$540	$518	$596	$616	$757
	Total Annual	2001	$3,389,687	$16,687,436	$14,359,851	$704,316	$6,640,775	$9,983,323	$7,438,688
		2002	$4,020,704	$18,106,763	$15,075,009	$578,738	$6,799,987	$11,413,132	$8,535,210
Health Care and Social Assistance	Average Weekly	2001	n.a.	$595	n.a.	$366	$393	n.a.	n.a.
		2002	n.a.	$592	n.a.	n.a.	$417	n.a.	n.a.
	Total Annual	2001	n.a.	$39,889,049	n.a.	$3,529,754	$8,320,274	n.a.	n.a.
		2002	n.a.	$42,326,603	n.a.	n.a.	$8,946,966	n.a.	n.a.
Information	Average Weekly	2001	$482	$469	$577	n.a.	$458	$424	$421
		2002	n.a.	$488	$609	n.a.	$415	$459	$451
	Total Annual	2001	$516,057	$3,289,084	$8,548,063	n.a.	$831,392	$2,292,723	$1,542,500
		2002	n.a.	$3,109,031	$9,223,818	n.a.	$834,262	$2,518,292	$1,550,579
Manufacturing	Average Weekly	2001	$559	$619	$619	$643	$537	$823	$613
		2002	$603	$641	$637	$684	$562	$852	$618
	Total Annual	2001	$45,388,634	$183,261,953	$187,475,296	$3,512,665	$84,342,422	$251,824,390	$100,021,217
		2002	$43,639,591	$181,496,726	$172,892,359	$3,412,281	$80,124,569	$264,611,125	$93,363,945
Other Services (Except Public Administration)	Average Weekly	2001	$340	$407	$308	$297	$311	$437	$398
		2002	$345	$375	$317	n.a.	$335	$392	$393
	Total Annual	2001	$1,277,136	$7,417,544	$4,812,809	$291,090	$1,795,055	$4,961,321	$5,228,273
		2002	$1,419,142	$6,715,239	$4,704,667	n.a.	$1,592,989	$4,010,519	$5,265,841
Professional, Scientific and Technical Services	Average Weekly	2001	n.a.	n.a.	$374	$186	n.a.	n.a.	$387
		2002	n.a.	n.a.	$373	n.a.	n.a.	$531	$442
	Total Annual	2001	n.a.	n.a.	$3,551,395	$86,389	n.a.	n.a.	$2,403,519
		2002	n.a.	n.a.	$3,758,368	n.a.	n.a.	$5,045,870	$2,770,135
Real Estate and Rental and Leasing	Average Weekly	2001	$670	$503	$293	$130	$272	$328	$314
		2002	$769	$592	$295	$121	$269	$293	$328
	Total Annual	2001	$139,427	$3,068,856	$1,102,085	$94,985	$1,149,654	$2,196,635	$926,357
		2002	$133,304	$3,672,531	$1,183,473	$96,194	$1,011,219	$1,943,706	$920,336
Retail Trade	Average Weekly	2001	$262	$330	$314	$343	$307	$371	$322
		2002	$276	$336	$328	$355	$328	$382	$332
	Total Annual	2001	$3,888,938	$35,810,614	$30,105,369	$2,451,671	$12,565,672	$35,282,234	$20,261,193
		2002	$3,855,660	$35,829,799	$31,488,287	$2,707,153	$12,973,081	$35,926,600	$21,868,093
Transportation and Warehousing	Average Weekly	2001	n.a.	$612	$461	n.a.	n.a.	n.a.	n.a.
		2002	n.a.	$630	$502	n.a.	n.a.	n.a.	n.a.
	Total Annual	2001	n.a.	$10,712,104	$17,710,446	n.a.	n.a.	n.a.	n.a.
		2002	n.a.	$9,295,574	$19,112,413	n.a.	n.a.	n.a.	n.a.
Wholesale Trade	Average Weekly	2001	$518	$628	n.a.	n.a.	$511	$470	$581
		2002	$545	$620	n.a.	n.a.	$575	$479	$571
	Total Annual	2001	$4,621,396	$13,311,436	n.a.	n.a.	$6,455,635	$14,266,313	$15,726,442
		2002	$4,892,824	$13,703,986	n.a.	n.a.	$4,826,110	$14,427,778	$18,739,479

Table 53. Payroll Employment by Industry (in Thousands of Jobs)

	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Total														
LWIA														
LWIA10	78.596	81.377	95.740	114.194	115.312	117.661	117.608	120.000	118.735	120.627	122.414	124.160	127.711	136.331
LWIA12	84.875	82.690	94.546	103.685	103.187	104.510	104.718	105.180	104.541	105.705	106.710	107.644	109.416	113.659
LWIA13	450.456	469.051	547.795	589.775	597.089	612.425	630.306	640.357	650.267	660.049	668.431	676.455	694.192	742.056
LWIA6	79.250	82.935	94.988	106.241	106.594	109.765	112.244	112.694	114.059	115.672	117.152	118.574	121.428	128.357
LWIA7	76.120	82.135	98.129	108.775	108.950	109.872	112.491	114.209	114.920	116.380	117.721	119.037	121.782	128.685
LWIA9	388.470	455.341	515.497	602.734	616.790	636.561	661.215	672.841	684.479	694.516	703.896	713.584	734.644	789.933
County														
Crockett	4.880	4.533	5.986	6.448	6.277	6.272	6.749	6.892	6.698	6.722	6.747	6.778	6.853	7.073
Dyer	16.344	16.150	20.570	23.632	23.712	23.764	24.187	24.404	24.316	24.575	24.832	25.087	25.592	26.899
Gibson	22.373	21.818	23.739	25.913	25.066	25.798	25.173	24.879	24.719	25.028	25.283	25.505	25.884	26.693
Lake	2.879	2.215	2.623	2.571	2.463	2.401	2.286	2.343	2.282	2.296	2.308	2.322	2.350	2.417
Lauderdale	10.088	10.482	11.269	11.075	11.349	11.804	11.714	11.699	11.360	11.379	11.401	11.425	11.482	11.651
Obion	18.273	18.149	18.888	19.276	19.196	18.615	18.838	18.833	19.272	19.445	19.557	19.644	19.801	20.139
Tipton	10.038	9.343	11.471	14.770	15.124	15.856	15.771	16.130	15.894	16.260	16.582	16.883	17.454	18.787
Farm														
LWIA														
LWIA10	10.399	10.233	9.668	10.171	9.951	10.25	10.256	10.235	10.103	10.105	10.113	10.121	10.129	10.138
LWIA12	10.295	7.597	6.620	6.300	6.090	6.478	6.298	6.328	6.225	6.134	6.052	5.970	5.806	5.460
LWIA13	3.564	2.581	2.322	2.274	2.223	2.421	2.338	2.352	2.313	2.286	2.261	2.235	2.184	2.078
LWIA6	11.224	10.367	10.203	10.632	10.353	10.951	10.708	10.743	10.578	10.594	10.611	10.624	10.633	10.638
LWIA7	12.981	12.743	12.152	12.310	11.828	11.979	11.983	11.960	11.801	11.776	11.762	11.747	11.71	11.620
LWIA9	6.220	6.014	5.328	5.379	5.239	5.377	5.372	5.362	5.292	5.263	5.242	5.225	5.195	5.133
County														
Crockett	1.088	0.858	0.822	0.766	0.727	0.776	0.744	0.750	0.736	0.724	0.714	0.704	0.684	0.643
Dyer	1.558	1.105	0.930	0.962	0.954	1.039	1.013	1.017	1.001	0.983	0.969	0.955	0.927	0.873
Gibson	2.163	1.708	1.480	1.400	1.346	1.404	1.378	1.381	1.360	1.345	1.330	1.315	1.282	1.207
Lake	0.656	0.347	0.306	0.234	0.216	0.245	0.223	0.228	0.222	0.218	0.215	0.211	0.205	0.193
Lauderdale	1.470	1.090	0.961	0.928	0.902	0.969	0.939	0.944	0.929	0.911	0.896	0.882	0.857	0.805
Obion	1.757	1.356	1.155	1.122	1.091	1.159	1.130	1.135	1.117	1.095	1.077	1.061	1.030	0.967
Tipton	1.603	1.133	0.966	0.888	0.854	0.886	0.871	0.873	0.860	0.858	0.851	0.842	0.821	0.772
Agricultural Services														
LWIA														
LWIA10	0.442	0.477	0.649	0.929	1.050	1.122	1.063	1.090	1.230	1.267	1.300	1.326	1.375	1.481
LWIA12	1.161	1.049	1.054	1.408	1.435	1.387	1.267	1.288	1.346	1.383	1.407	1.428	1.452	1.506
LWIA13	1.710	2.242	3.670	4.377	4.621	4.836	4.754	5.166	5.527	5.684	5.804	5.900	6.063	6.487
LWIA6	0.645	1.110	1.602	1.826	1.949	2.135	1.951	2.074	2.078	2.114	2.150	2.184	2.246	2.387
LWIA7	0.633	0.729	0.894	1.051	1.063	1.174	1.164	1.162	1.305	1.343	1.380	1.411	1.466	1.582
LWIA9	1.593	2.150	2.930	4.251	4.427	4.561	4.500	4.495	4.545	4.640	4.722	4.797	4.928	5.224
County														
Crockett	0.175	0.194	0.169	0.202	0.193	0.215	0.212	0.207	0.210	0.214	0.216	0.217	0.219	0.225
Dyer	0.093	0.105	0.117	0.204	0.214	0.220	0.201	0.201	0.205	0.213	0.219	0.225	0.232	0.244
Gibson	0.168	0.163	0.270	0.321	0.333	0.334	0.332	0.322	0.325	0.331	0.334	0.336	0.339	0.349
Lake	0.034	0.037	0.048	0.061	0.063	0.055	0.041	0.072	0.071	0.072	0.073	0.074	0.075	0.078
Lauderdale	0.193	0.115	0.130	0.214	0.198	0.185	0.139	0.128	0.159	0.162	0.163	0.165	0.166	0.171
Obion	0.403	0.309	0.183	0.188	0.200	0.193	0.168	0.182	0.192	0.195	0.197	0.199	0.200	0.206
Tipton	0.095	0.126	0.137	0.218	0.234	0.185	0.174	0.176	0.184	0.196	0.205	0.212	0.221	0.233

Table 53. Payroll Employment by Industry (in Thousands of Jobs) (continued)

	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Mining														
LWIA														
LWIA10	0.526	0.310	0.250	0.122	0.111	0.102	0.103	0.126	0.110	0.107	0.105	0.105	0.106	0.109
LWIA12	0.125	0.083	0.077	0.106	0.099	0.107	0.103	0.110	0.105	0.103	0.102	0.102	0.102	0.105
LWIA13	0.546	0.834	0.914	0.459	0.401	0.449	0.450	0.442	0.449	0.441	0.437	0.435	0.435	0.448
LWIA6	0.229	0.308	0.196	0.143	0.153	0.158	0.187	0.183	0.155	0.151	0.151	0.151	0.153	0.159
LWIA7	0.830	0.698	0.541	0.543	0.468	0.517	0.491	0.478	0.498	0.488	0.483	0.483	0.488	0.505
LWIA9	0.619	1.091	1.088	0.935	0.892	0.876	0.810	0.792	0.690	0.671	0.665	0.666	0.675	0.708
County														
Crockett	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dyer	0.013	0.013	0.028	0.032	0.028	0.032	0.031	0.032	0.031	0.030	0.030	0.030	0.030	0.031
Gibson	0.015	0.048	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Lake	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Lauderdale	0.004	0.005	0.004	0.004	0.004	0.004	0.004	0.007	0.005	0.005	0.005	0.005	0.005	0.005
Obion	0.028	0.003	0.004	0.029	0.025	0.029	0.027	0.029	0.028	0.028	0.027	0.027	0.027	0.028
Tipton	0.063	0.010	0.036	0.037	0.038	0.038	0.037	0.038	0.037	0.036	0.036	0.036	0.036	0.037
Construction														
LWIA														
LWIA10	3.260	3.355	5.334	5.556	5.893	6.350	6.618	6.731	6.718	6.859	6.971	7.072	7.259	7.661
LWIA12	4.527	4.021	5.111	6.530	6.409	6.620	6.783	6.767	6.563	6.729	6.858	6.970	7.173	7.574
LWIA13	19.949	22.957	25.924	27.416	28.814	30.154	31.253	31.81	31.841	32.47	32.842	33.128	33.751	35.302
LWIA6	3.839	4.303	5.339	5.977	6.047	6.421	6.693	6.745	6.755	6.890	6.989	7.074	7.233	7.570
LWIA7	3.463	3.702	4.806	6.431	6.647	7.283	8.165	8.365	8.523	8.618	8.700	8.782	8.969	9.469
LWIA9	20.923	26.979	26.895	32.099	33.911	36.032	36.707	37.293	38.303	38.451	38.591	38.781	39.327	41.023
County														
Crockett	0.211	0.244	0.351	0.494	0.507	0.460	0.553	0.557	0.515	0.527	0.534	0.54	0.552	0.577
Dyer	1.138	1.059	1.265	1.428	1.389	1.479	1.502	1.475	1.416	1.427	1.434	1.439	1.447	1.460
Gibson	1.326	0.979	1.194	1.609	1.598	1.529	1.615	1.602	1.501	1.540	1.573	1.603	1.655	1.752
Lake	0.066	0.051	0.048	0.057	0.056	0.058	0.040	0.043	0.039	0.039	0.039	0.039	0.040	0.040
Lauderdale	0.299	0.242	0.356	0.525	0.512	0.579	0.470	0.489	0.487	0.499	0.508	0.514	0.524	0.541
Obion	0.817	0.777	0.844	0.961	0.986	1.064	1.037	1.031	1.066	1.098	1.125	1.149	1.190	1.264
Tipton	0.670	0.669	1.053	1.456	1.361	1.451	1.566	1.570	1.539	1.599	1.645	1.686	1.765	1.940
Manufacturing														
LWIA														
LWIA10	26.818	27.102	30.505	36.926	35.476	34.402	33.771	32.973	32.313	32.573	32.809	33.048	33.540	34.747
LWIA12	26.508	26.981	31.43	31.919	29.846	30.167	30.155	29.527	28.920	29.028	29.102	29.179	29.362	29.776
LWIA13	63.027	53.531	54.072	52.15	50.113	51.183	51.276	51.292	49.588	49.254	48.853	48.495	47.928	46.760
LWIA6	21.735	21.443	24.514	23.982	22.907	23.245	24.334	24.580	25.257	25.447	25.607	25.754	26.030	26.645
LWIA7	20.450	23.676	29.314	27.513	26.029	24.775	24.542	23.829	23.079	23.129	23.148	23.163	23.205	23.337
LWIA9	64.235	70.431	67.323	76.204	71.342	70.256	69.810	70.286	70.276	70.432	70.552	70.684	70.998	71.923
County														
Crockett	1.036	0.824	1.863	2.022	1.811	1.727	1.786	1.796	1.733	1.737	1.738	1.740	1.746	1.761
Dyer	5.033	4.383	6.795	6.754	6.189	6.289	6.591	6.172	6.247	6.270	6.291	6.313	6.361	6.482
Gibson	7.714	7.999	8.317	9.317	8.247	8.384	7.697	7.644	7.462	7.490	7.504	7.512	7.521	7.510
Lake	0.651	0.390	0.636	0.381	0.316	0.260	0.148	0.139	0.107	0.107	0.106	0.106	0.105	0.103
Lauderdale	3.464	4.376	4.306	3.478	3.680	3.872	4.005	4.041	3.621	3.592	3.566	3.544	3.514	3.472
Obion	7.192	7.304	6.940	6.605	6.107	5.972	6.041	5.962	6.117	6.125	6.123	6.123	6.137	6.166
Tipton	1.418	1.705	2.573	3.362	3.496	3.663	3.887	3.773	3.633	3.707	3.774	3.841	3.978	4.282

Table 53. Payroll Employment by Industry (in Thousands of Jobs) (continued)

	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Transportation, Telecommunications, and Public Utilities														
LWIA														
LWIA10	2.203	2.367	2.666	3.479	3.585	3.713	3.916	4.088	4.002	4.070	4.130	4.190	4.334	4.704
LWIA12	1.819	2.422	2.533	2.953	3.011	3.066	3.394	3.460	3.430	3.511	3.579	3.645	3.787	4.181
LWIA13	28.802	34.700	49.437	59.591	62.812	65.685	70.462	71.707	74.261	76.521	78.277	80.013	84.023	94.951
LWIA6	2.027	2.016	2.389	2.853	2.952	2.925	3.268	3.241	3.409	3.422	3.433	3.448	3.498	3.643
LWIA7	2.326	2.940	3.547	4.094	4.204	4.360	4.551	4.974	5.075	5.205	5.300	5.388	5.581	6.078
LWIA9	22.493	25.463	28.038	31.209	31.374	30.98	32.785	34.656	37.401	37.914	38.181	38.451	39.284	41.701
County														
Crockett	0.147	0.149	0.133	0.183	0.226	0.269	0.317	0.366	0.239	0.231	0.226	0.224	0.226	0.245
Dyer	0.356	0.491	0.557	0.722	0.754	0.784	0.872	0.827	0.885	0.920	0.951	0.979	1.031	1.164
Gibson	0.582	0.747	0.885	0.782	0.765	0.747	0.825	0.832	0.833	0.852	0.864	0.876	0.901	0.968
Lake	0.031	0.026	0.023	0.036	0.034	0.032	0.022	0.046	0.044	0.045	0.046	0.047	0.049	0.054
Lauderdale	0.236	0.368	0.296	0.334	0.327	0.328	0.376	0.393	0.402	0.411	0.418	0.424	0.441	0.490
Obion	0.318	0.407	0.406	0.544	0.553	0.519	0.529	0.544	0.572	0.589	0.603	0.615	0.639	0.700
Tipton	0.149	0.234	0.233	0.352	0.352	0.387	0.453	0.452	0.455	0.463	0.471	0.480	0.500	0.560
Wholesale Trade														
LWIA														
LWIA10	2.162	2.027	2.347	3.093	3.136	3.225	3.434	3.49	3.586	3.703	3.811	3.913	4.098	4.514
LWIA12	3.586	3.172	3.240	3.919	3.916	3.721	3.480	3.515	3.303	3.389	3.460	3.526	3.643	3.921
LWIA13	35.507	37.299	40.017	41.002	41.832	42.442	43.167	43.891	45.39	46.170	46.785	47.294	48.155	50.462
LWIA6	1.887	2.193	2.256	2.810	2.773	3.161	3.227	3.208	3.106	3.172	3.232	3.287	3.383	3.610
LWIA7	2.680	1.931	2.671	3.487	3.445	3.540	3.812	3.741	3.618	3.664	3.709	3.755	3.842	4.051
LWIA9	27.173	28.958	33.797	38.752	37.501	38.653	40.134	39.07	37.707	38.053	38.362	38.642	39.153	40.487
County														
Crockett	0.229	0.206	0.237	0.262	0.239	0.189	0.204	0.232	0.240	0.248	0.254	0.260	0.270	0.290
Dyer	0.677	0.699	0.749	1.187	1.190	1.164	0.979	0.869	0.644	0.655	0.663	0.670	0.680	0.707
Gibson	0.917	0.879	0.539	0.619	0.629	0.619	0.557	0.503	0.561	0.577	0.591	0.603	0.624	0.658
Lake	0.103	0.066	0.057	0.038	0.053	0.052	0.040	0.032	0.030	0.029	0.027	0.027	0.025	0.023
Lauderdale	0.344	0.373	0.602	0.617	0.560	0.511	0.440	0.370	0.377	0.379	0.380	0.381	0.381	0.379
Obion	0.842	0.679	0.762	0.812	0.856	0.748	0.782	0.756	0.739	0.749	0.756	0.761	0.770	0.792
Tipton	0.474	0.270	0.294	0.384	0.389	0.438	0.478	0.753	0.712	0.752	0.789	0.824	0.893	1.072
Retail Trade														
LWIA														
LWIA10	9.054	10.105	13.049	15.527	16.258	16.450	15.249	15.854	16.032	16.208	16.396	16.586	17.063	18.227
LWIA12	11.167	11.314	13.635	14.777	15.491	15.757	15.116	14.784	15.186	15.393	15.533	15.626	15.77	16.035
LWIA13	74.135	79.045	94.161	102.071	103.064	104.746	104.095	103.259	106.246	106.642	106.886	107.006	108.122	111.828
LWIA6	8.838	9.943	13.229	15.471	16.525	16.994	16.647	16.929	16.954	17.267	17.574	17.870	18.513	20.062
LWIA7	9.022	9.621	12.064	15.182	15.83	16.191	15.986	16.495	16.807	17.081	17.358	17.633	18.253	19.790
LWIA9	58.814	79.47	84.555	99.918	103.259	106.963	111.77	114.938	118.344	119.982	121.765	123.593	127.827	138.709
County														
Crockett	0.650	0.590	0.593	0.609	0.587	0.620	0.651	0.639	0.648	0.648	0.649	0.649	0.649	0.647
Dyer	2.041	2.581	3.143	3.314	3.511	3.540	3.409	3.483	3.694	3.717	3.743	3.77	3.828	3.978
Gibson	2.691	2.730	3.737	3.917	4.007	4.199	3.934	3.628	3.632	3.707	3.753	3.778	3.805	3.828
Lake	0.398	0.349	0.352	0.382	0.387	0.403	0.409	0.410	0.402	0.401	0.399	0.398	0.397	0.392
Lauderdale	1.367	1.059	1.149	1.387	1.427	1.479	1.525	1.538	1.641	1.665	1.686	1.704	1.733	1.780
Obion	2.447	2.651	3.114	3.128	3.412	3.290	3.176	2.998	3.060	3.135	3.174	3.191	3.207	3.223
Tipton	1.573	1.354	1.547	2.040	2.160	2.226	2.012	2.088	2.109	2.120	2.129	2.136	2.151	2.187

Table 53. Payroll Employment by Industry (in Thousands of Jobs) (continued)

	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2010
Finance, Insurance, and Real Estate														
LWIA														
LWIA10	3.941	3.955	4.007	4.770	4.910	5.363	5.578	5.552	5.726	5.831	5.912	5.984	6.133	6.464
LWIA12	3.880	3.408	4.023	4.532	4.560	4.541	4.746	5.068	5.262	5.330	5.376	5.415	5.501	5.722
LWIA13	37.123	35.744	36.359	38.762	40.614	43.175	45.008	46.964	48.969	49.183	49.253	49.423	50.116	52.207
LWIA6	3.477	3.285	3.416	3.847	4.151	4.345	4.956	5.094	5.245	5.293	5.312	5.330	5.391	5.566
LWIA7	2.919	2.795	3.365	3.994	4.163	4.745	5.221	5.611	5.826	5.905	5.948	5.985	6.082	6.330
LWIA9	35.773	39.529	45.495	45.534	47.368	49.411	54.017	55.666	54.42	54.705	54.498	54.459	54.928	56.366
County														
Crockett	0.262	0.253	0.325	0.298	0.302	0.291	0.328	0.348	0.371	0.378	0.382	0.385	0.391	0.409
Dyer	0.931	0.923	1.039	1.106	1.089	1.093	1.268	1.370	1.425	1.433	1.439	1.446	1.465	1.524
Gibson	1.172	0.894	0.871	0.923	1.014	1.163	1.240	1.316	1.375	1.392	1.405	1.417	1.442	1.507
Lake	0.063	0.065	0.100	0.151	0.097	0.076	0.086	0.094	0.096	0.099	0.102	0.104	0.108	0.116
Lauderdale	0.323	0.283	0.408	0.408	0.387	0.402	0.367	0.433	0.466	0.473	0.478	0.482	0.491	0.513
Obion	0.519	0.447	0.709	0.900	0.917	0.681	0.764	0.831	0.856	0.854	0.849	0.846	0.847	0.855
Tipton	0.610	0.543	0.571	0.746	0.754	0.835	0.693	0.676	0.673	0.701	0.721	0.735	0.757	0.798
Services														
LWIA														
LWIA10	10.051	11.716	15.997	21.039	21.885	23.363	23.813	23.490	23.932	24.640	25.308	25.969	27.275	30.494
LWIA12	10.356	13.062	15.952	19.066	20.014	20.237	20.802	21.424	21.126	21.545	21.959	22.377	23.185	25.160
LWIA13	101.856	117.499	147.89	175.663	179.715	189.906	199.822	204.367	205.206	210.239	214.788	219.299	228.417	252.010
LWIA6	14.823	17.438	20.049	25.916	25.844	26.206	26.853	26.122	26.533	27.161	27.735	28.305	29.440	32.296
LWIA7	10.154	12.231	15.616	19.589	20.276	21.016	22.098	22.912	23.199	23.837	24.440	25.043	26.249	29.266
LWIA9	94.124	123.416	161.123	206.298	218.156	228.562	239.675	244.163	250.64	257.131	263.354	269.671	282.507	315.848
County														
Crockett	0.454	0.643	0.882	0.949	1.010	1.030	1.241	1.277	1.281	1.296	1.317	1.342	1.397	1.545
Dyer	1.931	2.814	3.747	5.499	5.886	5.590	5.721	6.294	6.059	6.180	6.304	6.430	6.681	7.324
Gibson	3.143	3.358	3.823	4.347	4.371	4.684	4.900	4.856	4.811	4.918	5.024	5.130	5.332	5.814
Lake	0.484	0.397	0.437	0.536	0.557	0.534	0.560	0.575	0.571	0.578	0.585	0.593	0.607	0.642
Lauderdale	0.817	1.156	1.343	1.379	1.542	1.638	1.589	1.469	1.428	1.439	1.450	1.461	1.483	1.539
Obion	1.837	2.731	3.252	3.142	3.228	3.313	3.452	3.573	3.704	3.755	3.799	3.843	3.925	4.109
Tipton	1.690	1.963	2.468	3.214	3.420	3.448	3.339	3.380	3.272	3.379	3.480	3.578	3.760	4.187
Government (Local, State, and Federal)														
LWIA														
LWIA10	9.740	9.730	11.268	12.582	13.057	13.321	13.807	14.447	14.983	15.264	15.559	15.846	16.399	17.792
LWIA12	11.451	9.581	10.871	12.175	12.316	12.429	12.574	12.909	13.075	13.16	13.282	13.406	13.635	14.219
LWIA13	84.237	82.619	93.029	86.010	82.890	77.428	77.681	79.107	80.477	81.159	82.245	83.227	84.998	89.523
LWIA6	10.526	10.529	11.795	12.784	12.940	13.224	13.420	13.775	13.989	14.161	14.358	14.547	14.908	15.781
LWIA7	10.662	11.069	13.159	14.581	14.997	14.292	14.478	14.682	15.189	15.334	15.493	15.647	15.937	16.657
LWIA9	56.503	51.840	58.925	62.155	63.321	64.890	65.635	66.120	66.861	67.274	67.964	68.615	69.822	72.811
County														
Crockett	0.627	0.571	0.611	0.663	0.675	0.695	0.713	0.720	0.725	0.719	0.717	0.717	0.719	0.731
Dyer	2.573	1.977	2.200	2.424	2.508	2.534	2.600	2.664	2.709	2.747	2.789	2.830	2.910	3.112
Gibson	2.482	2.313	2.618	2.674	2.752	2.731	2.691	2.791	2.855	2.872	2.901	2.931	2.979	3.096
Lake	0.392	0.484	0.616	0.695	0.684	0.686	0.717	0.704	0.700	0.708	0.716	0.723	0.739	0.776
Lauderdale	1.571	1.415	1.714	1.801	1.810	1.837	1.860	1.887	1.845	1.843	1.851	1.863	1.887	1.956
Obion	2.113	1.485	1.519	1.845	1.821	1.647	1.732	1.792	1.821	1.822	1.827	1.829	1.829	1.829
Tipton	1.693	1.336	1.593	2.073	2.066	2.299	2.261	2.351	2.42	2.449	2.481	2.513	2.572	2.719

Skill-Mismatch Index

The skill-mismatch index (SMI) compares county skill supply, as reflected by educational attainment level of workforce, and a given national industry's (i.e., manufacturing) skill demand, as reflected by industry's demand for workforce with certain educational attainment level. If the index score is more than 400, which is the worst match, this indicates on average a 10 percent gap between county workforce skill and national industry workforce skill demand as reflected by educational attainment category.

Here is how the SMI is calculated. Two national industries A and B have plans for relocation. These industries' workforce skill demand is given below.

Industries A and B usually employ workforce with the following skill combination:

	Industry A	Industry B
Bachelor's degree or higher (High Skill)	5 percent	20 percent
Some college or associate degree (Semi-Skilled)	23 percent	40 percent
High school or equivalency (Low Skill)	40 percent	30 percent
Less than high school (No Skill)	32 percent	10 percent

County X's workforce educational attainment includes:

Bachelor's degree or higher (High Skill)	10 percent
Some college or associate degree (Semi-Skilled)	25 percent
High school or equivalency (Low Skill)	35 percent
Less than high school (No Skill)	30 percent

The skill-mismatch index is calculated by taking sum of the squared difference between Industry A's and Industry B's skill demand by educational attainment and County X's workforce educational attainment.

Industry A-County X Skill Comparison	GAP	Squared Difference
Bachelor's or Higher (High Skill)	-5 percent	25
Some college or associate degree (Semi-Skilled)	-2 percent	4
High school or equivalency (Low Skill)	5 percent	25
Less than high school (No Skill)	2 percent	4
Skill Mismatch Index (SMI)		58

Industry B-County X Skill Comparison	GAP	Squared Difference
Bachelor's or higher (High Skill)	10 percent	100
Some college or associate degree (Semi-Skilled)	15 percent	225
High school or equivalency (Low Skill)	-5 percent	25
Less than high school (No Skill)	-20 percent	400
Skill Mismatch Index (SMI)		750

The SMI scores indicate that county X is a good location for industry A but a worst-match location for Industry B.