

State of the Workforce Report X: Region 6

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Center for Business and Economic Research
Culverhouse College of Commerce

University of Alabama Center for Economic Development

Institute for Social Science Research

THE UNIVERSITY OF ALABAMA

State of the Workforce Report X: Region 6



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by

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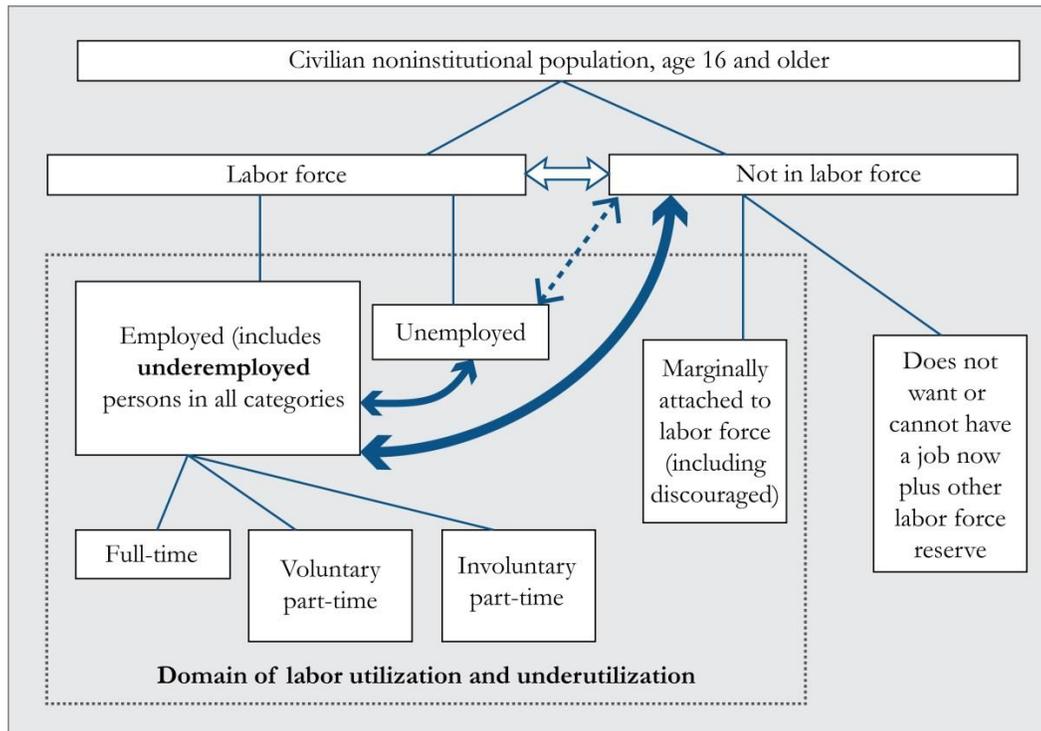
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Summary

- This report analyzes workforce supply and demand issues using available metrics of workforce characteristics for Workforce Development Region 6 and presents some implications and recommendations.
- Region 6 had a 9.1 percent unemployment rate in March 2016, with 3,118 unemployed. An underemployment rate of 20.8 percent for 2015 implies that the region had a 9,620-strong available labor pool that includes 6,502 underemployed workers who are looking for better jobs and are willing to commute farther and longer for such jobs.
- Net out-commuting rose from about 2,400 in 2005 to 5,400 in 2014. Commute time dropped while distance rose in 2015 from the previous year. This implies that congestion is easing but it could worsen as the economy recovers from the last recession. Continuous maintenance and development of transportation infrastructure and systems is important to ensure a smooth flow of goods and workers in the region.
- By sector the top five employers in the region are manufacturing, health care and social assistance, educational services, retail trade, and public administration. In the first quarter of 2015, these five industries provided 18,627 jobs, about 70.4 percent of the regional total. Two of the leading employers—manufacturing and educational services—paid more than the region’s average monthly wage of \$2,759. Economic development should aim to diversify and strengthen the region’s economy by retaining, expanding, and attracting more high-wage providing industries; workforce development should prepare workers for these industries.
- On average 1,397 jobs were created per quarter from second quarter 2001 to first quarter 2015 and quarterly net job flows averaged negative seven jobs. Job creation is the number of new jobs that are created either by new businesses or through expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.
- The top five high-demand occupations are Childcare Workers; Laborers and Freight, Stock, and Material Movers, Hand; Nursing Assistants; Elementary School Teachers, Except Special Education; and Registered Nurses.
- The top five fast-growing occupations are Social and Human Service Assistants; Optometrists; Opticians, Dispensing; Healthcare Practitioners and Technical Workers, All Other; and Pourers and Casters, Metal.
- The top 50 high-earning occupations are mainly in management, health, finance, and business fields and have a minimum mean salary of \$48,314. Seven of the top 10 occupations are in management and two are in health.
- Of the top 40 high-demand, the top 17 fast-growing, and 50 high-earning occupations, only two are both high-demand and fast-growing. Nine occupations are both high-demand and high-earning. None of the occupations belongs to all three categories.

- Of the region's 387 occupations, 28 are expected to decline over the 2012 to 2022 period. Seventeen occupations are expected to sharply decline by at least five percent, with each losing a minimum of 10 jobs. Education and training for these 17 occupations should slow accordingly.
- Skill and education requirements for jobs keep rising. Educational and training requirements of high-demand, fast-growing, and high-earning occupations demonstrate the importance of education in developing the future workforce. In the future, more jobs will require postsecondary education and training at a minimum.
- The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs indicates a strong need for training in these skills. For Region 6 the pace of training needs to increase for technical, resource management, social, and basic skills while the scale of training should be raised for social and basic skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skills. Employers should be an integral part of planning for training as they can help identify future skill needs and any existing gaps.
- The region is likely to continue to experience slow growth in economic output, labor force, and population as well as low educational attainment. In addition, the working age population will decline very quickly. Consequently, from a 2012 base, worker shortfalls of about 4,200 for 2022 and 8,000 for 2030 are expected. Strategies to address these shortfalls and worker skills needs should aim at increasing labor force participation, encouraging in-migration, reducing out-migration, and raising worker productivity. Such strategies might include: (1) improvements in education and its funding; (2) continuation and enhancement of programs to assess, retrain, and place dislocated workers; (3) focus on hard-to-serve populations (e.g. out-of-school youth); (4) lowering the high school dropout rate; (5) use of economic opportunities to attract new residents; (6) encouragement of older worker participation in the labor force; and (7) facilitation of in-commuting.
- Improving education is important because (i) a highly educated and productive workforce is a critical economic development asset, (ii) productivity rises with education, (iii) educated people are more likely to work, and (iv) it yields high private and social rates of return on investment. Workforce development must view all of education and other programs (e.g. adult education, career technical training, worker retraining, career readiness, etc.) as one system. Funding to support workforce development may require tax reform at state and local levels and should provide for flexibility as workforce needs change over time and demand different priorities. Publicizing both private and public returns to education can encourage individuals to raise their own educational attainment levels, while also promoting public and legislative support for education.
- Higher incomes that come with improved educational attainment and work skills will help to increase personal income for the region as well as raise additional local (county and city) tax revenues. This is especially important for a region with a declining population and labor force.
- Together, workforce development and economic development can build a strong, well-diversified Region 6 economy. Indeed, one cannot achieve success without the other.

Labor Utilization and Supply Flows



Source: Addy et al¹ and Canon et al²

The chart above presents labor utilization and supply flows that explain labor market dynamics in view of recent study findings. The civilian noninstitutional population age 16 and above is comprised of participants in the labor force and nonparticipants. The labor force is made of employed and unemployed persons; the unemployed do not have a job but are actively searching for work. Employed persons include fully employed and underemployed persons in all categories of work (full-time, voluntary part-time, and involuntary part-time). Nonparticipants in the labor force include retirees (voluntary and involuntary), people who do not want to or cannot work for various reasons (e.g., disability, caring for family members, in school or training, etc.), discouraged workers, and other labor force reserves. It has been suggested that a subgroup of nonparticipants referred to as the “waiting group” is more likely than the rest of the nonparticipants to take a job if wages and conditions are satisfactory, but they do not actively search for work. New evidence has shown that between January 2003 and August 2013, the flow of nonparticipants into employment was 1.6 times that of unemployed persons transitioning into employment, which may be due to the presence of the waiting group^{1,2}. Nonparticipant flows to employment are larger in services, management, and professional occupations while unemployed flows to employment are higher in physically intensive occupations such as construction workers and miners. Industry effects should vary by the type and number of occupations they contain. This finding enhances the common understanding of labor market dynamics and influences workforce availability and skills gap analyses.

¹ Addy, S.N., Bonnal, M., and Lira, C. (2012). Towards a More Comprehensive Measure of Labor Underutilization: The Alabama Case, *Business Economics*, vol. 47(3).

² Canon, M.E., Kudlyak, M., and Reed, M. (2014). Not Everyone Who Joins the Ranks of the Employed was “Unemployed”, *The Regional Economist*, January.

Workforce Supply

Labor Force Activity

The labor force includes all persons in the civilian noninstitutional population who are age 16 and over and who have a job or are actively looking for one. Typically, those who have no job and are not looking for one are not included (e.g. students, retirees, discouraged workers, and the disabled). Table 6.1 shows labor force information for Region 6 and its five counties for 2015 and March 2016. Alabama labor force information is available from the Labor Market Information (LMI) Division of the Alabama Department of Labor. LMI compiles data in cooperation with the U.S. Bureau of Labor Statistics.

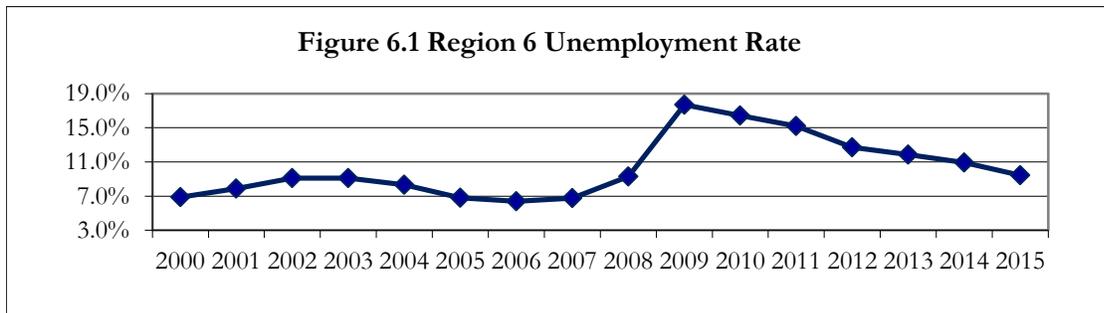
Table 6.1 Region 6 Labor Force Information

	2015 Annual Average			
	Labor Force	Employed	Unemployed	Rate (%)
Dallas	15,566	14,064	1,502	9.6
Marengo	7,357	6,787	570	7.7
Perry	3,501	3,152	349	10.0
Sumter	5,109	4,702	407	8.0
Wilcox	2,812	2,400	412	14.7
Region 6	34,345	31,105	3,240	9.4
Alabama	2,146,157	2,015,189	130,968	6.1
United States	157,130,000	148,833,000	8,296,000	5.3
	March 2016			
	Labor Force	Employed	Unemployed	Rate (%)
Dallas	15,552	14,143	1,409	9.1
Marengo	7,454	6,879	575	7.7
Perry	3,521	3,176	345	9.8
Sumter	5,016	4,621	395	7.9
Wilcox	2,833	2,439	394	13.9
Region 6	34,376	31,258	3,118	9.1
Alabama	2,156,616	2,023,744	132,872	6.2
United States	158,854,000	150,738,000	8,116,000	5.1

Source: Alabama Department of Labor and U.S. Bureau of Labor Statistics.

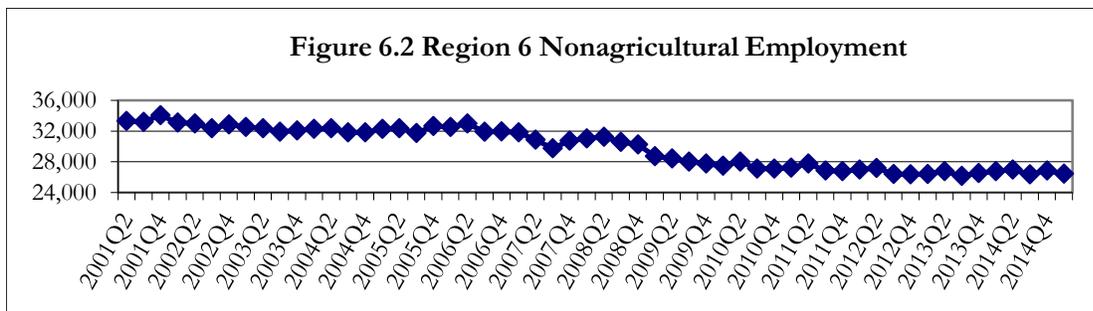
The recession that began in 2007 increased the number of unemployed and sharply raised county unemployment rates. As the economy recovers from the recession, county unemployment rates have declined from a range of 7.7 percent to 14.7 percent in 2015 (9.4 percent for the region) to between 7.7 percent and 13.9 percent in March 2016 (9.1 percent for the region). Marengo County had the lowest unemployment rate, followed by Sumter. Wilcox County had the highest rate. The region and its counties all had unemployment rates above the state's 6.2 percent. Annual unemployment rates for 2000 to 2015 are shown in Figure 6.1. The region's unemployment rate was below 7.0 percent before the 2001 and the most recent recession. After reaching a rate of 9.1 percent in 2002 and 2003, successful state and regional economic development efforts lowered unemployment to 6.4 percent in 2006. The recent recession raised the regional unemployment rate to a record high of 17.7 percent in 2009 before declining to 9.4 percent in 2015. Year-to-date

monthly labor force data point to a lower but still high regional unemployment rate for 2016 than seen in 2015. The recession and structural changes in the economy are expected to keep unemployment high for several years.



Source: Alabama Department of Labor.

Nonagricultural employment of the region's residents averaged 29,838 quarterly from the second quarter of 2001 to the first quarter of 2015 (Figure 6.2). The number of jobs trended downwards from the third quarter of 2008 through third quarter 2013 but improved slightly in the second and fourth quarter of 2014 before dropping in first quarter 2015.



Source: Alabama Department of Labor and U.S. Census Bureau.

Table 6.2 Workers by Age Group (First Quarter 2015)

Age Group	Nonagricultural Employment	
	Number	Percent
14-18	330	1.2
19-24	2,175	8.2
25-34	5,016	19.0
35-44	5,793	21.9
45-54	6,370	24.1
55-64	5,212	19.7
65+	1,549	5.9
55 and over total	6,761	25.6
Total all ages	26,445	100.0

Note: Rounding errors may be present. Nonagricultural employment is by place of work, not residence.

Source: U.S. Census Bureau, Local Employment Dynamics Program.

Table 6.2 shows worker distribution by age in Region 6 for the first quarter of 2015. Older workers, age 55 and over, are 25.6 percent of the region’s nonagricultural employment, much higher than Alabama’s 21.0 percent. The region also has more workers who are age 65 and over, 5.9 percent versus 4.9 percent for the state. To meet long term occupational projections, labor force participation of younger residents must increase otherwise older workers may have to work longer.

Commuting Patterns

In 2005 the number of residents who commuted out of the region for work exceeded nonresidents who commuted in by 2,422 (Table 6.3). By 2014, more people were commuting out of the region for work and net commuter outflow rose to 5,449. Table 6.3 also shows that the one-way average commute time for workers dropped while distance rose in 2015 from 2014. This implies that congestion eased but it could worsen as the region recovers from the last recession. This suggests that transportation infrastructure and systems must be properly maintained and developed to ensure that the flow of goods and the movement of workers are not interrupted. Congestion, which impedes the mobility of workers and goods, can delay or slow economic development.

Table 6.3 Commuting Patterns

Year	Region 6 Inflow		Region 6 Outflow			
	2005	8,419		10,841		
2006	8,732		12,189			
2007	9,464		13,565			
2008	9,727		13,196			
2009	9,171		13,604			
2010	8,976		13,466			
2011	9,871		14,523			
2012	9,995		14,998			
2013	9,743		15,519			
2014	9,701		15,150			
Region 6 Counties						
	<u>Inflow, 2014</u>		<u>Outflow, 2014</u>			
	Number	Percent	Number	Percent		
Dallas	5,383	42.5	5,608	32.4		
Marengo	3,340	26.4	4,485	25.9		
Perry	1,199	9.5	3,306	19.1		
Sumter	1,541	12.2	2,213	12.8		
Wilcox	1,195	9.4	1,696	9.8		
Average commute time (one-way)						
	2010	2011	2012	2013	2014	2015
Less than 20 minutes	59.5	62.4	50.2	58.0	56.2	56.4
20 to 40 minutes	25.2	21.2	29.5	24.7	26.2	26.2
40 minutes to an hour	8.8	12.2	11.8	10.7	7.6	7.6
More than an hour	3.3	2.8	4.4	3.3	4.3	3.6
Average commute distance (one-way)						
	2010	2011	2012	2013	2014	2015
Less than 10 miles	47.6	50.6	40.9	45.8	50.0	46.0
10 to 25 miles	30.9	25.1	32.6	30.1	29.3	30.3
25 to 45 miles	13.2	14.3	15.9	15.3	10.1	15.2
More than 45 miles	7.9	8.8	9.1	7.2	10.1	6.6

Note: Rounding errors may be present.

Source: U.S. Census Bureau; Alabama Department of Labor; and Center for Business and Economic Research, The University of Alabama.

Population

The Region 6 population census of 100,871 for 2010 is 7.2 percent less than was recorded for 2000 (Table 6.4). Population decreased in all the five counties. The largest percentage population decline was in Wilcox County followed by Perry and the smallest was in Dallas. The 2015 population estimates show a continuation of this trend for the region with population declining by 5.8 percent since 2010. Perry and Dallas counties have the highest population decline.

Table 6.4 Region 6 Population

	1990 Census	2000 Census	2010 Census	2015 Estimate	Change 2000-2010	% change 2000-2010	Change 2010-2015	% change 2010-2015
Dallas	48,130	46,365	43,820	41,131	-2,545	-5.5	-2,689	-6.1
Marengo	23,084	22,539	21,027	20,028	-1,512	-6.7	-999	-4.8
Perry	12,759	11,861	10,591	9,652	-1,270	-10.7	-939	-8.9
Sumter	16,174	14,798	13,763	13,103	-1,035	-7.0	-660	-4.8
Wilcox	13,568	13,183	11,670	11,059	-1,513	-11.5	-611	-5.2
Region 6	113,715	108,746	100,871	94,973	-7,875	-7.2	-5,898	-5.8
Alabama	4,040,587	4,447,100	4,779,736	4,858,979	332,636	7.5	79,243	1.7
United States	248,709,873	281,421,906	308,745,538	321,418,820	27,323,632	9.7	12,673,282	4.1

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.

Table 6.5 shows population counts, estimates, and projections by age group. The population aged 65 and over is expected to grow as the baby boom generation turns 65. At the same time, the prime working age group (20-64) and youth (0-19) populations are expected to decline at a faster rate than the general population. This poses a significant challenge for workforce development for Region 6. If labor force growth continues to decline faster than employment growth as is expected in the region, the community may need to consider investments in amenities and infrastructure to attract new residents while retaining current residents.

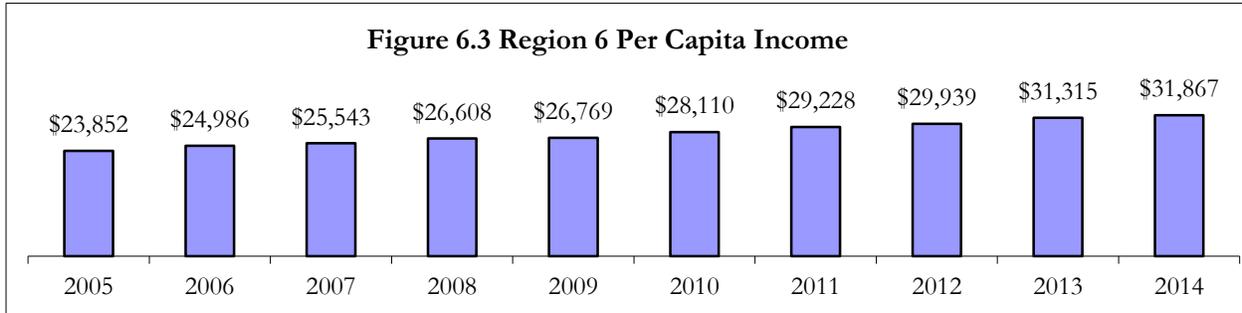
Table 6.5 Population by Age Group and Projections

Age Group	2000	2010	2012	2022	2030
0-19	35,162	29,049	27,475	25,398	24,328
20-24	6,903	6,705	7,027	6,498	6,211
25-29	6,412	5,572	5,350	4,927	4,900
30-34	6,201	5,331	5,384	4,398	4,751
35-39	7,387	5,689	5,180	4,570	4,545
40-44	7,920	5,855	5,568	4,868	4,089
45-49	7,187	6,948	6,208	5,134	4,745
50-54	6,345	7,680	7,173	5,427	4,819
55-59	5,086	6,884	7,291	6,129	5,239
60-64	4,800	5,985	5,992	6,859	5,326
65+	15,343	15,173	15,656	19,077	21,675
20-64 Total	58,241	56,649	55,173	48,810	44,625
Total Population	108,746	100,871	98,304	93,285	90,628
Change from 2012					
0-19				-7.6%	-11.5%
20-64				-11.5%	-19.1%
Total Population				-5.1%	-7.8%

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.

Per Capita Income

Per capita income (PCI) in Region 6 was \$31,867 in 2014 (Figure 6.3), up 34.0 percent from 2005, but \$5,645 (15.0 percent) below the state average of \$37,512. Marengo County had the highest PCI with \$37,235 and Wilcox had the lowest with \$27,815.



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research, The University of Alabama.

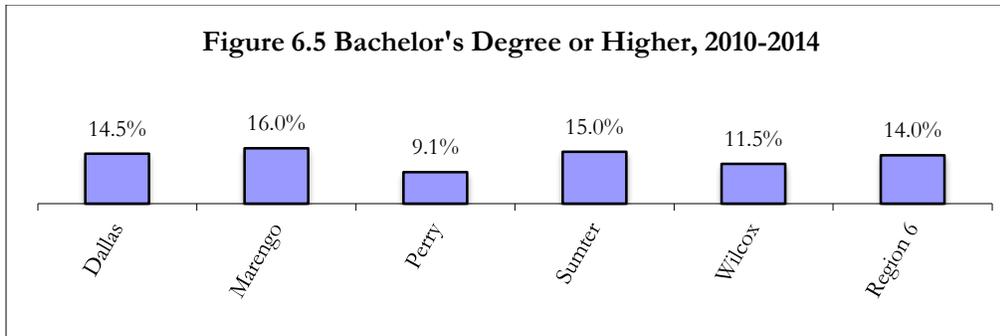
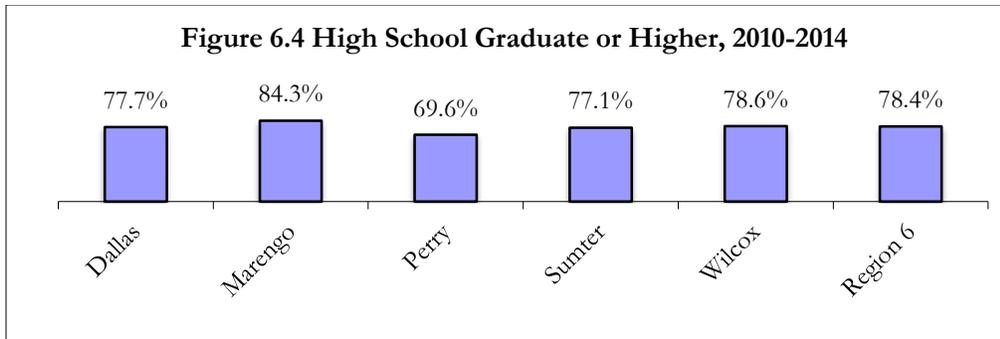
Educational Attainment

Educational attainment in 2010 to 2014 of Region 6 residents who were 25 years old and over is shown in Table 6.6 and Figures 6.4 and 6.5. Over 78.0 percent graduated from high school and 14.0 percent held a bachelor's or higher degree. Marengo County had the highest educational attainment rates while Perry had the lowest. Educational attainment is important as skills rise with education and high-wage jobs for the 21st century demand more skills.

Table 6.6 Educational Attainment of Population 25 Years and Over, 2010-2014

	Dallas	Marengo	Perry	Sumter	Wilcox	Region 6
Total	27,699	13,943	6,252	8,268	7,466	63,628
No schooling completed	619	124	162	61	232	1,198
Nursery to 4th grade	84	97	94	184	102	561
5th and 6th grade	350	170	153	207	212	1,092
7th and 8th grade	735	262	208	314	191	1,710
9th grade	610	337	390	124	143	1,604
10th grade	1,623	404	399	356	173	2,955
11th grade	1,445	519	448	373	273	3,058
12th grade, no diploma	717	272	47	276	270	1,582
High school graduate/equivalent	9,811	5,798	2,421	3,321	3,146	24,497
Some college, less than 1 year	1,715	700	128	254	459	3,256
Some college, 1+ years, no degree	3,981	2,108	804	1,101	969	8,963
Associate degree	2,003	927	430	455	436	4,251
Bachelor's degree	2,353	1,469	315	719	581	5,437
Master's degree	1,297	591	203	438	198	2,727
Professional school degree	255	106	15	27	52	455
Doctorate degree	101	59	35	58	29	282

Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.



Source: Center for Business and Economic Research, The University of Alabama and U.S. Census Bureau.

Underemployment and Available Labor

Labor force data are often limited to information on the employed and the unemployed that is available from government sources. However, this information is not complete from the perspective of employers. New or expanding employers are also interested in underemployment because current workers are potential employees. In fact, the experience requirements in job ads are evidence that many prospective employers look beyond the unemployed for workers.

Workers in occupations that underutilize their experience, training, and skills are underemployed. These workers might look for other work because their current wages are below what they believe they can earn or because they wish to not be underemployed. Underemployment occurs for various reasons including (i) productivity growth, (ii) spousal employment and income, and (iii) family constraints or personal preferences. Underemployment is unique to areas because of the various contributing factors combined with each area's economic, social, and geographic characteristics.

The existence of underemployment identifies economic potential that is not being realized. It is extremely difficult to measure this economic potential because of uncertainties regarding additional income that the underemployed can bring to an area. It is clear, however, that underemployment provides opportunities for selective job creation and economic growth. A business that needs skills prevalent among the underemployed could locate in places that have such workers regardless of those areas' unemployment rates. A low unemployment rate, which may falsely suggest limited labor availability, is therefore not a hindrance to the business.

The underemployed present a significant labor pool because they tend to respond to job opportunities that they believe are better for reasons that include (i) higher income, (ii) more benefits, (iii) superior terms and conditions of employment, and (iv) a better match with skills, training, and experience. The underemployed also create opportunities for entry-level workers as they leave lower-paying jobs for better-paying ones. Even if their previously held positions are lost or not filled (perhaps due to low unemployment or adverse economic conditions), there is economic growth in gaining higher-paying jobs. Such income growth boosts consumption, savings, and tax collections. Quantifying the size of the underemployed is a necessary first step in considering this group for economic development, workforce training, planning, and other purposes. It is important to note that the underemployed can take on more responsibilities and earn more income, but they cannot be counted on to address possible future worker shortages as they are already employed.

Region 6 had an underemployment rate of 20.8 percent in 2015. Applying this rate to March 2016 labor force data means that 6,502 employed residents were underemployed (Table 6.7). Adding the unemployed gives a total available labor pool of 9,620 for the region. This is 3.1 times the number of unemployed and is a more realistic measure of the available labor pool in the region. Prospective employers must be able to offer the underemployed higher wages, better benefits or terms of employment, or some other incentives to induce them to change jobs. Underemployment rates ranged from 11.3 for Marengo County to 28.6 percent for Wilcox. Dallas County had the largest available labor pool and Wilcox had the smallest. The underemployed are more willing to commute longer and farther for better jobs. For the one-way commute, 57.1 percent are prepared to travel for 20 or more minutes longer and 52.4 percent will go 20 or more extra miles.

Table 6.7 Underemployed and Available Labor by County

	Region 6	Dallas	Marengo	Perry	Sumter	Wilcox
Labor Force	34,376	15,552	7,454	3,521	5,016	2,833
Employed	31,258	14,143	6,879	3,176	4,621	2,439
Underemployment rate	20.8%	21.7%	11.3%	27.9%	16.7%	28.6%
Underemployed workers	6,502	3,075	779	886	770	697
Unemployed	3,118	1,409	575	345	395	394
Available labor pool	9,620	4,484	1,354	1,231	1,165	1,091

Note: Rounding errors may be present. Based on March 2016 labor force data and 2015 underemployment rates.

Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Labor.

Underemployment rates for counties, Workforce Development Regions (WDRs), and the state were determined from an extensive survey on the state's workforce. A total of 413 complete responses were obtained from Region 6 in 2015. About 54.0 percent (225 respondents) were employed, of whom 47 respondents stated that they were underemployed. A lack of job opportunities in their area, low wages at available jobs, living too far from jobs, owning a house in their area, retirement, other family or personal obligations, and other undisclosed reasons are the primary reasons given for being underemployed. Ongoing economic development efforts can help in this regard.

Nonworkers cite retirement, disability or other health concerns, a lack of job opportunities in their area, living too far from jobs and low wages at the available jobs as the main reasons for their status, but some also cite social security limitations, and owning a house in the area as additional major reasons. Many of these workers may become part of the labor force if their problems can be

addressed. Indeed a recent study found that the flow of labor force nonparticipants to employment status was 60.0 percent more than that of unemployed workers who gain employment.³ This implies that the region's available labor pool could be larger than estimated in this report.

A comparison of underemployed workers to the overall workforce in Region 6 shows that:

- Fewer work full-time and more of the part-timers prefer full-time work.
- More commute longer distance to work and slightly shorter time.
- More work in education, training, and library; arts, design, entertainment, sports, and media; healthcare practitioners and technicians; protective service; food preparation and serving; building and grounds cleaning and maintenance; sales; office administrative support; transportation and material moving occupations.
- More are in wholesale trade; transportation and warehousing; information; real estate and rental and leasing; professional, scientific, and technical services; educational services; arts, entertainment, and recreation; accommodation and food services; and public administration industries.
- They earn less and have shorter job tenure.
- Fewer believe their jobs fit well with their education and training, skills, and experience.
- More believe they are qualified for a better job.
- More would leave their current jobs for a higher income even for less than five percent.
- More are willing to commute longer times and distances for a better job.
- Fewer are satisfied with their current jobs.
- More have sought better jobs in the preceding quarter.
- More are willing to train for a better job even if they have to pay the full cost.
- They are slightly younger and generally have lower education; they are less likely to have a 4-year college degree or more but more likely to have an associate degree.
- More are women and are married.
- More are Hispanic and African-American, or other nonwhite ethnic groups.

Table 6.8 shows the detailed survey results on job satisfaction and willingness to train. Responses for overall job satisfaction as well as various aspects of the job were obtained. In general, most of the region's workers (77.3 percent) are satisfied or completely satisfied with their jobs. Workers are most satisfied with the work that they do and least satisfied with the earnings they receive. Clearly, fewer underemployed workers are satisfied with their jobs (42.6 percent). The underemployed are also much more dissatisfied with their earnings and most satisfied with the work they do.

Workers are generally willing to train for a new or better job, with the underemployed being much more willing (76.2 percent vs. 59.1 percent). However, the willingness to train is strongly influenced by who pays for the cost of training. Workers typically do not wish to pay for the training and so their willingness is highest when the cost is fully borne by government and lowest when the trainee must pay the full costs. In every cost burden scenario considered, the underemployed are more willing to train for the new or better job. The results strongly show that workers expect the

³ Canon, M.E., Kudlyak, M., and Reed, M. (2014). Not Everyone Who Joins the Ranks of the Employed was "Unemployed", *The Regional Economist*, January.

government to bear at least some of the training cost. This expectation may result from worker awareness of government workforce programs that provide such assistance.

Table 6.8 Job Satisfaction and Willingness to Train (Percent)

		Job Satisfaction				
		Completely Dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
Employed						
Overall		1.8	4.4	16.4	21.8	55.6
	Earnings	9.8	9.3	24.0	24.4	32.0
	Retention	4.0	4.4	10.7	16.4	63.1
	Work	1.3	0.4	7.6	20.4	70.2
	Hours	4.4	3.1	4.9	19.1	68.4
	Shift	2.7	6.2	4.4	14.2	72.4
	Conditions	1.8	8.4	9.8	27.6	51.1
	Commuting Distance	3.6	2.7	8.0	11.1	74.7
Underemployed						
Overall		2.1	14.9	40.4	25.5	17.0
	Earnings	19.2	21.3	36.2	12.8	8.5
	Retention	4.3	10.6	23.4	23.4	36.2
	Work	2.1	0.0	17.0	31.9	48.9
	Hours	10.6	10.6	8.5	25.5	44.7
	Shift	8.5	17.0	4.3	19.2	51.1
	Conditions	6.4	14.9	21.3	25.5	31.9
	Commuting Distance	8.5	2.1	6.4	14.9	68.1
		Willingness to Train				
		Completely Unwilling	Unwilling	Neutral	Willing	Completely Willing
Employed						
For a new or better job		23.2	5.0	12.2	15.5	43.7
	If paid by trainee	51.1	15.8	16.6	5.8	8.6
	If paid by trainee and government	12.2	15.1	31.7	20.9	18.0
	If paid by government	3.6	1.4	8.6	13.0	72.7
Underemployed						
For a new or better job		11.9	4.8	7.1	19.1	57.1
	If paid by trainee	37.8	13.5	24.3	10.8	13.5
	If paid by trainee and government	13.5	2.7	27.0	27.0	29.7
	If paid by government	5.4	0.0	2.7	8.1	83.8

Note: Rounding errors may be present.

Source: Center for Business and Economic Research, The University of Alabama.

Workforce Demand

Industry Mix

The manufacturing sector was the region’s leading employer with 5,729 jobs in the first quarter of 2015 (Table 6.9), followed by health care and social assistance, educational services, retail trade, and public administration. These five industries provided 18,627 jobs, 70.4 percent of the region’s total. The region’s average monthly wage across all industries was \$2,759; two of the leading employers—manufacturing and educational services—paid more. New hire monthly earnings averaged \$1,731, about 63.0 percent of the average monthly wage. The highest average monthly wages were for utilities at \$5,742; wholesale trade \$4,023; management of companies and enterprises \$3,775; finance and insurance \$3,741; manufacturing \$3,711; and professional, scientific, and technical services \$3,703. Accommodation and food services paid the least at \$1,012. Wholesale trade had the highest average monthly new hire wages with \$3,634 followed by professional, scientific, and technical services at \$3,346 and management of companies and enterprises with \$3,233. Accommodation and food services paid newly hired workers the least, \$809.

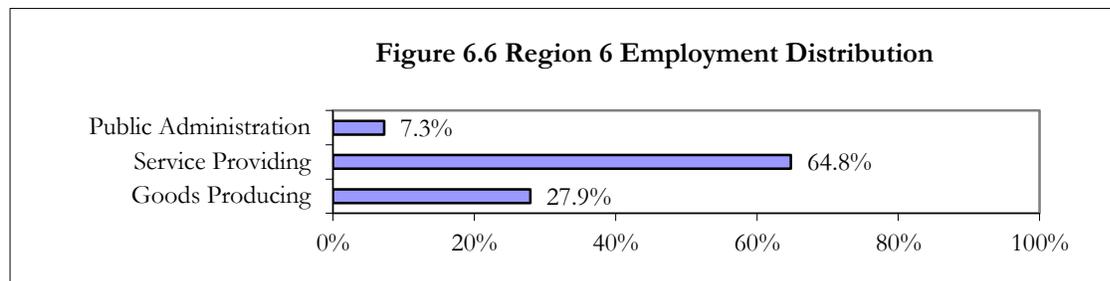
Table 6.9 Industry Mix (First Quarter 2015)

Industry by 2-digit NAICS Code	Total Employment	Share	Rank	Average Monthly Wage	Average Monthly New Hire Earnings
11 Agriculture, Forestry, Fishing and Hunting	917	3.47%	7	\$2,671	\$2,203
21 Mining	NA	NA		\$2,158	NA
22 Utilities	303	1.15%	15	\$5,742	\$2,143
23 Construction	732	2.77%	9	\$2,983	\$2,207
31-33 Manufacturing	5,729	21.69%	1	\$3,711	\$2,512
42 Wholesale Trade	531	2.01%	13	\$4,023	\$3,634
44-45 Retail Trade	3,151	11.93%	4	\$1,905	\$1,079
48-49 Transportation and Warehousing	545	2.06%	12	\$3,031	\$2,767
51 Information	183	0.69%	17	\$3,213	\$2,506
52 Finance and Insurance	589	2.23%	10	\$3,741	\$1,948
53 Real Estate and Rental and Leasing	257	0.97%	16	\$2,645	\$1,647
54 Professional, Scientific, and Technical Services	394	1.49%	14	\$3,703	\$3,346
55 Management of Companies and Enterprises	146	0.55%	18	\$3,775	\$3,233
56 Administrative and Support and Waste Management and Remediation Services	877	3.32%	8	\$1,985	\$1,627
61 Educational Services	3,863	14.62%	3	\$2,919	\$1,194
62 Health Care and Social Assistance	3,964	15.01%	2	\$2,409	\$1,948
71 Arts, Entertainment, and Recreation	85	0.32%	19	\$1,882	\$921
72 Accommodation and Food Services	1,640	6.21%	6	\$1,012	\$809
81 Other Services (Except Public Administration)	589	2.23%	10	\$1,693	\$962
92 Public Administration	1,920	7.27%	5	\$2,277	\$1,627
ALL INDUSTRIES	26,444	100.00%		\$2,759	\$1,731

N/A – Not available because of U.S. Census publication standards.

Source: Alabama Department of Labor and U.S. Census Bureau.

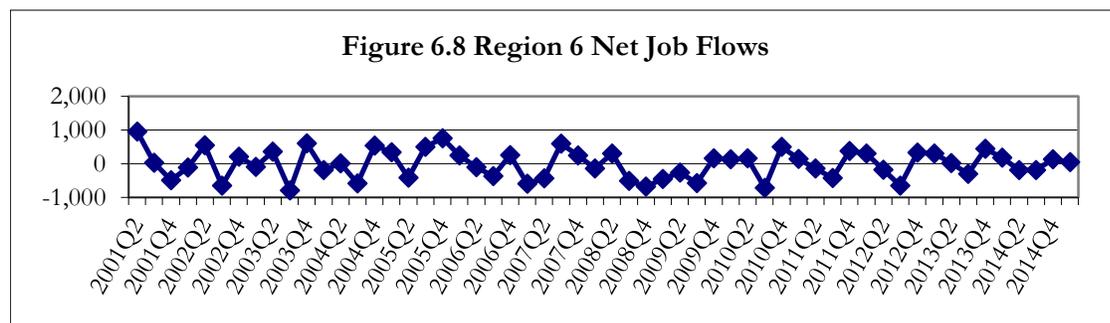
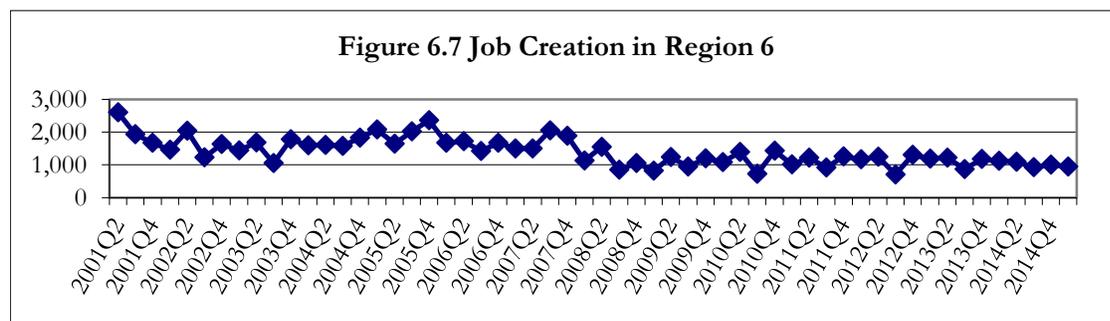
By broad industry classification, service providing industries generated 64.8 percent of jobs in first quarter 2015 (Figure 6.6). Goods producing industries were next with 27.9 percent and public administration accounted for 7.3 percent. The distribution is for all nonagricultural jobs in the region, but there is significant variation by county.



Source: Alabama Department of Labor and U.S. Census Bureau.

Job Creation and Net Job Flows

On average, 1,397 jobs were created per quarter from second quarter 2001 to first quarter 2015 (Figure 6.7); quarterly net job flows averaged negative seven jobs (Figure 6.8). Job creation has been flat at about 1,000 jobs since the fourth quarter of 2013. After dropping to negative numbers in the second and third quarter of 2014, net job flows rose to positive number of jobs in the following quarters. Net job flows have fluctuated greatly and have ranged from a gain of 952 to a loss of 791. Job creation refers to the number of new jobs that are created either by new area businesses or through the expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.



Source: Alabama Department of Labor and U.S. Census Bureau.

High-Demand, Fast-Growing, High-Earning, and Sharp-Declining Occupations

Workforce Development Region 6 has 387 single occupations. Table 6.10 shows the 40 occupations that are expected to be in high-demand, ranked by projected average annual job openings over the 2012 to 2022 period. Many of these occupations are common to three of the five largest employment sectors identified earlier (Table 6.9): educational services; health care and social assistance; and manufacturing. Thus, these sectors will continue to dominate employment in the region.

The top five high-demand occupations are Childcare Workers; Laborers and Freight, Stock, and Material Movers, Hand; Nursing Assistants; Elementary School Teachers, Except Special Education; and Registered Nurses. Only two of the high-demand occupations—Childcare Workers and Educational, Guidance, School, and Vocational Counselors—are also fast-growing. This means that these two occupations have a minimum annual growth rate of 1.55 percent, faster than the regional and statewide occupational growth rate of 0.35 percent and 0.99 percent.

The 17 fastest growing occupations ranked by projected growth of employment are listed in Table 6.11. The top five fast-growing occupations are Social and Human Service Assistants; Optometrists; Opticians, Dispensing; Healthcare Practitioners and Technical Workers, All Other; and Pourers and Casters, Metal.

Table 6.12 shows the 50 selected highest earning occupations in the region. Many of these occupations are in management, health, business, and finance fields. Seven of the top 10 listed are management occupations. Any discussion of earnings must consider that wages vary with experience. Occupations with the highest entry level wages may not necessarily have the highest average or experienced wages.

The selected high-earning occupations are generally not fast-growing or in high-demand. Only two of the occupations—Nurse Practitioners and Physicians and Surgeons, All Other—are both fast-growing and high-earning (Table 6.12) and nine are high-earning and high demand. None of the occupations is in all the three selected categories.

Of the region's 387 occupations, 28 are expected to decline over the 2012 to 2022 period. Employment in the 17 sharpest-declining occupations will fall by at least five percent, with each losing a minimum of 10 jobs over the period (Table 6.13). No efforts should be made to sustain these occupations because they are declining as a result of structural changes in the economy of the region.

Table 6.10 Selected High-Demand Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Average Annual Job Openings		
	Total	Due to Growth	Due to Separations
Childcare Workers*	25	10	15
Laborers and Freight, Stock, and Material Movers, Hand	25	5	20
Nursing Assistants	20	5	10
Elementary School Teachers, Except Special Education	15	5	10
Registered Nurses	15	5	10
Licensed Practical and Licensed Vocational Nurses	15	5	10
Industrial Machinery Mechanics	15	5	10
General and Operations Managers	10	5	5
Middle School Teachers, Except Special and Career/Technical Education	10	5	10
Secondary School Teachers, Except Special and Career/Technical Education	10	0	10
Police and Sheriff's Patrol Officers	10	0	5
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	10	0	10
Landscaping and Groundskeeping Workers	10	5	10
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	10	5	5
Heavy and Tractor-Trailer Truck Drivers	10	0	10
Education Administrators, Elementary and Secondary School Managers, All Other	5	0	5
Accountants and Auditors	5	0	5
Educational, Guidance, School, and Vocational Counselors*	5	5	0
Home Health Aides	5	0	0
Medical Assistants	5	0	0
Firefighters	5	0	5
Correctional Officers and Jailers	5	0	5
First-Line Supervisors of Personal Service Workers	5	0	0
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	5	0	5
First-Line Supervisors of Office and Administrative Support Workers	5	0	5
Receptionists and Information Clerks	5	0	5
Shipping, Receiving, and Traffic Clerks	5	0	0
Medical Secretaries	5	0	0
Logging Equipment Operators	5	0	5
Carpenters	5	0	0
Construction Laborers	5	0	5
Plumbers, Pipefitters, and Steamfitters	5	0	0
Highway Maintenance Workers	5	0	0
First-Line Supervisors of Mechanics, Installers, and Repairers	5	0	5
Bus and Truck Mechanics and Diesel Engine Specialists	5	0	5
Electrical Power-Line Installers and Repairers	5	0	0
Maintenance and Repair Workers, General	5	0	5
First-Line Supervisors of Production and Operating Workers	5	0	5
Sawing Machine Setters, Operators, and Tenders, Wood	5	0	0

Note: Occupations are growth- and wages-weighted and data are rounded to the nearest 5. Occupations in bold are also high-earning.

* - Qualify as both high-demand and fast-growing occupations.

Source: Alabama Department of Labor and Center for Business and Economic Research, The University of Alabama.

Table 6.11 Selected Fast-Growing Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Employment		Percent Change	Annual Growth (Percent)	Average Annual Job Openings
	2012	2022			
Social and Human Service Assistants	10	20	36	7.18	0
Optometrists	NA	NA	29	7.18	0
Opticians, Dispensing	NA	NA	31	7.18	0
Healthcare Practitioners and Technical Workers, All Other	NA	NA	42	7.18	0
Pourers and Casters, Metal	10	20	100	7.18	0
Ophthalmic Medical Technicians	NA	NA	30	4.14	0
Emergency Medical Technicians and Paramedics	NA	NA	39	3.42	5
Management Analysts	30	40	28	2.92	0
Nurse Practitioners	30	40	40	2.92	0
Maintenance Workers, Machinery	30	40	25	2.92	0
Healthcare Support Workers, All Other	NA	NA	24	2.54	5
Food Servers, Nonrestaurant	NA	NA	29	2.54	5
Personal Care Aides	NA	NA	21	2.54	0
Educational, Guidance, School, and Vocational Counselors*	120	150	27	2.26	5
Painters, Construction and Maintenance	40	50	24	2.26	0
Childcare Workers*	470	580	25	2.13	25
Physicians and Surgeons, All Other	60	70	21	1.55	0

Note: Employment data are rounded to the nearest 10 and job openings are rounded to the nearest 5. Occupations in bold are also high-earning.

* - Qualify as both high-demand and fast-growing occupations. NA – Not available.

Source: Alabama Department of Labor and Center for Business and Economic Research, The University of Alabama.

Table 6.12 Selected High-Earning Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Employment		Annual Growth (Percent)	Average Annual Job Openings	Mean Annual Salary (\$)
	2012	2022			
Chief Executives	30	30	0.00	0	182,339
Physicians and Surgeons, All Other	60	70	1.55	0	160,284
Pharmacists	70	70	0.00	0	122,684
Architectural and Engineering Managers	30	30	0.00	0	118,984
Industrial Production Managers	150	150	0.00	5	104,433
Medical and Health Services Managers	30	40	2.92	0	95,636
Financial Managers	50	50	0.00	0	93,722
General and Operations Managers*	350	380	0.83	10	92,418
Industrial Engineers	90	90	0.00	0	82,831
Computer and Information Systems Managers	20	20	0.00	0	81,234
Education Administrators, Postsecondary	30	40	2.92	0	77,099
Loan Officers	70	70	0.00	0	75,853
Human Resources Managers	10	10	0.00	0	74,903
Occupational Health and Safety Specialists	10	10	0.00	0	71,745
Managers, All Other*	80	90	1.18	5	71,462
Education Administrators, Elementary and Secondary School*	110	110	0.00	5	71,279
Lawyers	70	80	1.34	0	68,891
Nurse Practitioners	30	40	2.92	0	67,601
First-Line Supervisors of Police and Detectives	40	40	0.00	0	65,519
Electrical Power-Line Installers and Repairers*	70	80	1.34	5	64,576
Logisticians	20	20	0.00	0	63,889
First-Line Supervisors of Mechanics, Installers, and Repairers*	120	120	0.00	5	63,133
Accountants and Auditors*	170	180	0.57	5	63,094
Food Service Managers	50	50	0.00	0	63,070
Postmasters and Mail Superintendents	30	30	0.00	0	62,390
Social and Community Service Managers	20	20	0.00	0	62,132
Judges, Magistrate Judges, and Magistrates	20	20	0.00	0	61,056
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	20	20	0.00	0	60,832
Construction Managers	60	70	1.55	0	60,801
Business Operations Specialists, All Other	30	30	0.00	0	60,103
Civil Engineers	40	40	0.00	0	58,708
First-Line Supervisors of Non-Retail Sales Workers	60	60	0.00	0	58,655
Purchasing Agents, Except Wholesale, Retail, and Farm Products	60	60	0.00	0	57,140
Career/Technical Education Teachers, Secondary School	40	40	0.00	0	55,045
Registered Nurses*	590	650	0.97	15	54,580
Sales Representatives, Services, All Other	20	20	0.00	0	53,912
First-Line Supervisors of Correctional Officers	20	20	0.00	0	53,652
Executive Secretaries and Executive Administrative Assistants	40	30	-2.84	0	53,631
Office and Administrative Support Workers, All Other	10	10	0.00	0	52,881
Network and Computer Systems Administrators	40	40	0.00	0	52,801
Dietitians and Nutritionists	10	10	0.00	0	52,676
First-Line Supervisors of Production and Operating Workers*	210	210	0.00	5	51,953
First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	20	20	0.00	0	51,784
Database Administrators	NA	NA	0.00	0	51,276
Appraisers and Assessors of Real Estate	20	20	0.00	0	50,821
Human Resources Specialists	40	40	0.00	0	50,642
Chemical Equipment Operators and Tenders	50	50	0.00	0	49,774
Medical and Clinical Laboratory Technologists	20	30	4.14	0	48,920
First-Line Supervisors of Office and Administrative Support Workers*	230	240	0.43	5	48,398
First-Line Supervisors of Fire Fighting and Prevention Workers	20	20	0.00	0	48,314

Note: Employment data are rounded to the nearest 10; openings to the nearest 5. The salary data provided are based on the May 2014 release of the Occupational Employment Statistics (OES) combined employment and wage file. Estimates for specific occupations may include imputed data. Occupations in bold are also fast-growing. NA – Not available

* - Qualify as both high-earning and high-demand occupations. .

Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Labor.

Table 6.13 Selected Sharp-Declining Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Employment		Net Change	Percent Change
	2012	2022		
Sewing Machine Operators	NA	NA	-120	-41
Farmers, Ranchers, and Other Agricultural Managers	760	690	-70	-9
Waiters and Waitresses	NA	NA	-30	-10
Industrial Truck and Tractor Operators	150	130	-20	-10
Cooks, Fast Food	140	120	-20	-16
Postal Service Mail Carriers	100	80	-20	-21
Cutters and Trimmers, Hand	NA	NA	-20	-38
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	280	270	-10	-5
Cutting and Slicing Machine Setters, Operators, and Tenders	110	100	-10	-5
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	100	90	-10	-6
Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	NA	NA	-10	-7
Labor Relations Specialists	40	30	-10	-6
Executive Secretaries and Executive Administrative Assistants	40	30	-10	-8
Millwrights	NA	NA	-10	-24
Coaches and Scouts	20	10	-10	-7
Foresters	20	10	-10	-7
Couriers and Messengers	20	10	-10	-13

Note: Employment data are rounded to the nearest 10. NA - Not available.

Source: Alabama Department of Labor and Center for Business and Economic Research, The University of Alabama.

Skills and Skills Gap Analyses

Jobs require skill sets and it is necessary that jobholders have the relevant skills. Table 6.14 shows skill types and definitions as provided by O*NET Online, which offers skill sets for all occupations ranked by the degree of importance. High-earning occupations typically require skills that are obtained in the pursuit of the high educational attainment levels that such jobs require. Lower earning occupations require more basic skill sets. Some occupations have no minimum skill set requirements (e.g. dishwashers and maids).

Table 6.15 shows the percentage of selected occupations in the region that list a particular skill as primary. We define primary skills as the 10 most important skills in the required skill set for an occupation. It is important to note that a particular skill may be more important and more extensively used in one occupation than another. Table 6.15 does not address such cross-occupational skill importance comparisons. In general, basic skills are most frequently listed as primary, which means that they are important for practically all jobs.

Table 6.14 Skill Types and Definitions

<p>Basic Skills: Developed capacities that facilitate learning or the more rapid acquisition of knowledge.</p> <p>Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.</p> <p>Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.</p> <p>Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.</p> <p>Learning Strategies — Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.</p> <p>Mathematics — Using mathematics to solve problems.</p> <p>Monitoring — Monitoring / Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.</p> <p>Reading Comprehension — Understanding written sentences and paragraphs in work-related documents.</p> <p>Science — Using scientific rules and methods to solve problems.</p> <p>Speaking — Talking to others to convey information effectively.</p> <p>Writing — Communicating effectively in writing as appropriate for the needs of the audience.</p> <p>Complex Problem Solving Skills: Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.</p> <p>Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.</p> <p>Resource Management Skills: Developed capacities used to allocate resources efficiently.</p> <p>Management of Financial Resources — Determining how money will be spent to get the work done and accounting for these expenditures.</p> <p>Management of Material Resources — Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.</p> <p>Management of Personnel Resources — Motivating, developing, and directing people as they work, identifying the best people for the job.</p> <p>Time Management — Managing one's own time and the time of others.</p> <p>Social Skills: Developed capacities used to work with people to achieve goals.</p> <p>Coordination — Adjusting actions in relation to others' actions.</p> <p>Instructing — Teaching others how to do something.</p> <p>Negotiation — Bringing others together and trying to reconcile differences.</p> <p>Persuasion — Persuading others to change their minds or behavior.</p> <p>Service Orientation — Actively looking for ways to help people.</p> <p>Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.</p> <p>Systems Skills: Developed capacities used to understand, monitor, and improve socio-technical systems.</p> <p>Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.</p> <p>Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.</p> <p>Systems Evaluation — Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.</p> <p>Technical Skills: Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems.</p> <p>Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.</p> <p>Equipment Selection — Determining the kind of tools and equipment needed to do a job.</p> <p>Installation — Installing equipment, machines, wiring, or programs to meet specifications.</p> <p>Operation and Control — Controlling operations of equipment or systems.</p> <p>Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.</p> <p>Operations Analysis — Analyzing needs and product requirements to create a design.</p> <p>Programming — Writing computer programs for various purposes.</p> <p>Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.</p> <p>Repairing — Repairing machines or systems using the needed tools.</p> <p>Technology Design — Generating or adapting equipment and technology to serve user needs.</p> <p>Troubleshooting — Determining causes of operating errors and deciding what to do about it.</p>
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Source: O*NET Online (<http://online.onetcenter.org/skills/>).

Table 6.15 Percentage of Selected Occupations for Which Skill Is Primary

	Selected High-Demand Occupations	Selected Fast-Growing Occupations	Selected High-Earning Occupations
Basic Skills			
Active Learning	23	35	34
Active Listening	68	82	82
Critical Thinking	73	76	78
Learning Strategies	10	6	6
Mathematics	0	0	4
Monitoring	50	41	68
Reading Comprehension	60	53	74
Science	0	12	8
Speaking	65	65	78
Writing	20	35	32
Complex Problem Solving Skills			
Complex Problem Solving	20	29	48
Resource Management Skills			
Management of Financial Resources	0	0	4
Management of Material Resources	0	0	0
Management of Personnel Resources	8	0	28
Time Management	28	18	32
Social Skills			
Coordination	53	35	56
Instructing	13	6	12
Negotiation	8	0	10
Persuasion	10	12	4
Service Orientation	30	47	14
Social Perceptiveness	50	65	42
Systems Skills			
Judgment and Decision Making	40	53	60
Systems Analysis	0	6	6
Systems Evaluation	0	0	4
Technical Skills			
Equipment Maintenance	13	6	2
Equipment Selection	8	0	0
Installation	0	0	0
Operation and Control	23	12	4
Operation Monitoring	23	12	10
Operations Analysis	0	0	4
Programming	0	0	2
Quality Control Analysis	18	6	8
Repairing	10	6	2
Technology Design	0	0	0
Troubleshooting	18	6	4

Note: Rounding errors may be present.

Source: O*NET Online and Center for Business and Economic Research, The University of Alabama.

High-earning occupations require more critical thinking, mathematics, monitoring, reading comprehension, speaking, complex problem solving, resource management, coordination, negotiation, judgment and decision making, and system evaluation skills than both high-demand and fast-growing jobs. These skills require long training periods and postsecondary education. High-demand occupations require more social, resource management, and technical skills than fast-growing occupations but less complex problem solving skills.

Table 6.16 shows skill gap indexes for all the 35 skills presented in Table 6.14 based on a previous projection period (2008 to 2018). Skills gap indexes range up to 100 and are standardized measures of the gap between current supply and projected demand. The index does not provide any information about current or base year skill supply. Its focus is on the projection period and identifies critical skill needs. The index essentially ranks expected training needs. The higher the index the more critical is the skill over the specified projection period.

For policy and planning purposes, skill gap indexes have to be considered together with replacement indexes, which are the expected shares of job openings due to replacement. Replacement is necessary because of turnover and people leaving the labor force. The smaller the replacement index, the larger the share of job openings due to growth, which in turn implies a need to increase the pace of skill training. Skill gap indexes point to the need to ramp up the scale of skill training while replacement indexes address the pace of training.

By skill type, the skill gap indexes show that basic and social skills are most critical in Region 6 followed by resource management, complex problem solving, technical, and systems skills. The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs indicates a strong need for training in these skills. The pace of training needs to increase for technical, resource management, social, and basic skills. The scale of training should be raised for social and basic skills as well.

Education and Training Issues

Educational attainment in Region 6 is low compared to the state as a whole. About 78.0 percent of residents age 25 and over have graduated from high school, compared to about 84 percent for Alabama. Just over 14.0 percent have a bachelor's or higher degree versus 23.0 percent for the state. Skill and education requirements for jobs keep rising. This highlights a strong need to raise educational attainment in the region.

Table 6.17 shows the number of selected occupations in the region for which a particular education/training category is most common. In general, high-earning occupations require high educational attainment levels; 20 high-earning occupations do not require a bachelor's or higher degree. Eight (20.0 percent) of the 40 high-demand occupations require at least an associate degree and seven (18.0 percent) require a bachelor's or higher degree. However, 21 (53.0 percent) of high demand jobs require a high school diploma plus on-the-job training or work experience. Six (35.0 percent) of the 17 fast-growing occupations require a bachelor's or higher degree at the minimum.

The region has lower education and training requirements for high-demand, fast-growing, and high-earning jobs because of low socioeconomic status of the region and the small size of the economy. Many of the occupations in the high-earning category in this region do not pay high enough to

qualify in other regions. Any higher-wage jobs brought by economic development efforts to the region will require postsecondary education and training at a minimum. Of the region's 387 occupations, 28 are expected to decline over the period and education and training for these should slow accordingly.

Table 6.16 Skills Gap Indexes (Base Year 2008 and Projected Year 2018)

Skill	Total Openings (Projected Demand)	Replacement Index	Skills Gap Index
Reading Comprehension	138	78	100
Active Listening	142	81	97
Critical Thinking	126	79	94
Instructing	119	77	91
Speaking	122	78	89
Coordination	118	80	86
Writing	113	78	83
Active Learning	111	79	80
Monitoring	105	77	77
Social Perceptiveness	129	81	74
Time Management	95	78	71
Service Orientation	116	83	69
Learning Strategies	103	83	66
Persuasion	84	80	63
Complex Problem Identification	71	79	60
Mathematics	48	73	57
Judgment and Decision Making	67	82	54
Negotiation	54	78	51
Equipment Selection	24	88	49
Management of Personnel Resources	19	79	46
Management of Financial Resources	16	75	43
Management of Material Resources	8	63	40
Science	5	80	37
Operation and Control	9	100	34
Operation Monitoring	10	100	31
Installation	9	100	29
Troubleshooting	7	100	26
Equipment Maintenance	13	100	23
Repairing	7	100	20
Systems Evaluation	6	83	17
Technology Design	3	100	14
Quality Control	1	100	11
Programming	0	0	9
Operations Analysis	5	100	6
Systems Analysis	1	100	3

Source: Alabama Department of Labor.

Note: The skills gap indexes are from 2008 to 2018 projection period and not 2012 to 2022.

Table 6.17 Number of Selected Occupations by Education/Training Requirement

Most Common Education/Training Requirements Categories	Selected High-Demand Occupations	Selected Fast-Growing Occupations	Selected High-Earning Occupations
Doctoral Degree or First Professional Degree	0	2	4
Master's Degree	2	2	3
Bachelor's or Higher Degree Plus Work Experience	4	1	14
Bachelor's Degree	1	1	8
Associate Degree	1	0	1
Postsecondary Non-Degree Plus On-the-job Training	3	0	3
Postsecondary Non-Degree	3	2	0
Some College, no Degree Plus On-the-job Training	0	0	0
Some College, no Degree	0	0	0
High School Diploma Plus On-the-job Training	21	5	16
High School Diploma	0	1	1
Less than High School Plus On-the-job Training	5	3	0
Less than High School	0	0	0

Note: The on-the-job training refers to the typical on-the-job training needed to attain competency in the occupation in addition to the typical education needed for entry to the occupation. This could be long-term, moderate-term, or short-term on-the-job training. **Long-term** requires more than 12 months on-the-job training. **Moderate-term** requires one to 12 months of on-the-job training. **Short-term** requires up to one month of on-the-job training. These types of training are more common in occupations that require postsecondary non-degree or less educational attainment. Other types of on-the-job training requirements that may be needed but are not shown on the table are apprenticeship and internship/residency that are typical in certain professions many of which require higher educational attainment.

Source: O*NET Online; Center for Business and Economic Research, The University of Alabama; and Alabama Department of Labor.

Implications and Recommendations

The region will continue to experience a slow economic output growth, declining labor force and population growth, low labor force participation, and educational attainment. The working age population will also decline while there will be job growth. Consequently, from a 2012 base, worker shortfalls of 4,186 for 2022 and 7,970 for 2030 are expected (Table 6.18). This outcome is driven largely by declining population especially for the age group 20-64 in particular. A focus on both worker skills and shortfalls are necessary through 2030.

Table 6.18 Expected Worker Shortfall

	2012-2022	2012-2030
Total population growth (percent)	-5.1	-7.8
Age 20-64 population growth (percent)	-11.5	-19.1
Job growth (percent)	2.9	8.3
Worker shortfall (percent)	14.4	27.4
Worker shortfall (number)	4,186	7,970

Source: Center for Business and Economic Research, The University of Alabama.

Employment is critical to economic development and so strategies to address the potential shortfalls and skill needs must be adopted and implemented. Such strategies must aim at increasing labor force participation, encouraging in-migration, and raising worker productivity. Specific efforts could include: (1) improvements in education and its funding; (2) continuation and enhancement of programs to assess, retrain, and place dislocated workers; (3) focus on hard-to-serve populations (e.g. out-of-school youth); (4) lowering the high school dropout rate; (5) use of economic opportunities to attract new and young residents; (6) facilitation of in-commuting; and (7) encouragement of older worker participation in the labor force.

Improving education is vital because a highly educated and productive workforce is a critical economic development asset. The educational and training requirements of high-demand, fast-growing, and high-earning occupations show the significance of education in developing the future workforce. The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs demonstrates a strong need for training in these skills. In Region 6, the pace of training needs to increase for technical, resource management, social, and basic skills. The scale of training must be raised for social and basic skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skills while enhancing these basic skills. Employers should be an integral part of planning for training as they can help identify future skill needs and any existing gaps. Education and training for the 17 sharp-declining occupations in Table 6.13 should slow accordingly.

Another very important reason to improve education is that people that are more educated are more likely to work. Data on worker participation and educational attainment show that labor force participation increases with worker education. Productivity also rises with education, which yields high private and social returns. Workforce development must view all of the education and other programs (e.g. adult education, career technical training, worker retraining, career readiness, etc.) as one system. Funding to support workforce development may require tax reform at state and local

levels and must provide for flexibility as workforce needs change over time and demand different priorities.

Programs to assess, retrain, and place dislocated workers—especially those affected by outsourcing and structural changes in the economy—should be continued and enhanced because they can improve the labor force participation rate. Hard-to-serve populations include persons in poverty, those receiving welfare, residents of sparsely populated areas, out-of-school youth, and people on active parole. These populations are often outside of the mainstream economy and are poor. They usually have difficulty finding work because they have low levels of educational attainment, lack occupational skills, or face geographic or other barriers. They are a potential human resource and investment in training, transportation, child care, infrastructure, etc. may be needed to tap this resource.

In-migration is one way of growing the labor force as it helps population growth. The region's population growth rate is declining, which may hinder its ability to meet the expected job demand barring future economic slowdowns. Higher employment demand could be alleviated somewhat with in-commuting. However, new residents can be attracted using higher-paying job opportunities from the region's economic development successes. Investment in amenities and infrastructure may be needed to support such growth. In-migration is generally more beneficial than in-commuting since it grows the economy faster and adds to the tax base.

Policies that facilitate and encourage older worker participation are needed as older workers can help meet the region's workforce challenge. Such policies can be related to income taxation, job flexibility, and retirement programs. As the share of older people in the population is projected to increase (see Table 6.5), it becomes even more important that they be active in the workforce. Older worker participation has been rising nationally since the early 1990s. This has been attributed to reasons including:

- Older workers can work longer because they are healthier
- The number of physically demanding jobs is falling
- Defined contribution plans are replacing pensions
- There are fewer employer-paid retiree health insurance programs
- Social security reforms affecting those born after 1938 that (i) gradually raise the normal retirement age from 65 to 67, (ii) increase the rate at which monthly payments rise with delayed benefits, and (iii) eliminate the reduction in benefits for those working beyond the full retirement age.

Diversifying the region's economy will strengthen it. This demands that economic development also focus on retaining, expanding, and attracting businesses that provide more high-earning jobs. Current workers—including the underemployed—would welcome higher-earning opportunities. An economic development focus on diversification would require that workforce development pay attention to postsecondary and higher educational systems to ensure a ready and available workforce for new and expanding businesses. The higher incomes earned by graduates of these institutions would help raise personal income for the region and provide additional local (county and city) tax revenue. Raising personal income by improving educational attainment and technological skills for a region that has low population and labor force growth rates is an effective economic development strategy. Together, workforce development and economic development can build a strong, well-diversified Region 6 economy. Indeed, one cannot achieve success without the other.