STATE OF WORKFORCE REPORT XI:

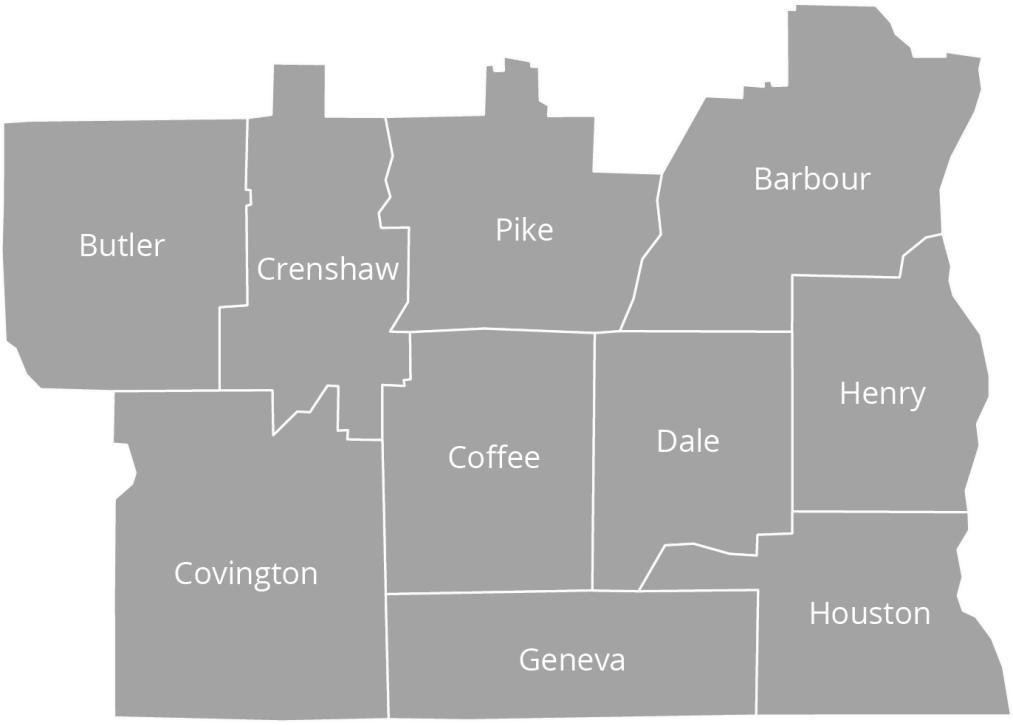
Southeast AlabamaWorks

MAY 2017

Center for Business and Economic Research
Culverhouse College of Commerce

University of Alabama Center for Economic Development

Institute for Social Science Research



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SUMMARY

- This report analyzes workforce supply and demand issues using available metrics of workforce characteristics for Southeast AlabamaWorks region and presents implications and recommendations.

- Southeast AlabamaWorks had a 5.6 percent unemployment rate in March 2017, with 8,868 unemployed. An underemployment rate of 23.6 percent for 2016 means that the region has an available labor pool of 43,971 that includes 35,103 underemployed workers who are looking for better jobs and are willing to commute longer and farther for such jobs.

- The region's commute distance and time were up in 2016 from 2015, implying that congestion worsened. Net out-commuters rose from 1,812 in 2005 to 11,115 in 2013 before dropping slightly to 9,278 in 2014. Over the same period, the total number of in- and out-commuters jumped from 44,072 to 61,282. The significant within-region commuting indicates that continuous maintenance and development of regional transportation infrastructure and systems is important to ensure that congestion doesn't slow economic development.

- By sector, the top five employers in the region are manufacturing, health care and social assistance, retail trade, accommodation and food services, and educational services. These five industries 81,329 jobs, (64.3 percent of the regional total) in the first quarter of 2016. Three of these leading employers paid higher wages than the region's $3,197 monthly average. Economic development should continue to diversify and strengthen the region's economy by retaining, expanding, and attracting more high-wage providing industries. Workforce development should also focus on preparing workers for these industries.

- On average 5,879 jobs were created per quarter from second quarter 2001 to first quarter 2016; quarterly net job flows averaged 407. 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 Retail Salespersons; Combined Food Preparation and Serving Workers, Including Fast Food; Registered Nurses; Aircraft Mechanics and Service Technicians; and Heavy and Tractor-Trailer Truck Drivers.

- The top five fast-growing occupations are Web Developers; Athletic Trainers; Tire Builders; Painters, Transportation Equipment; and Nurse Practitioners.

- The top 50 high-earning occupations are mainly in management, health, and engineering fields and have a minimum salary $79,370. Six of the top 10 are health occupations and the other four are in management.

- Of the top 40 high-demand, the top 20 fast-growing, and 50 high-earning occupations, five belong to all three categories. Seven occupations are in high-demand and high-earning, and 11 are both high-demand and fast-growing.

- Of the region's 704 single occupations, 58 are expected to decline over the 2014 to 2024 period, with 20 occupations expected to sharply decline by at least five percent and lose a minimum of 10 jobs each. Education and training for these 20 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 Southeast AlabamaWorks the pace of training needs to increase for technical skills while the scale of training is raised for basic and social skills. Ideally, high school graduates should possess basic skills so that postsecondary and higher education can focus on 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.

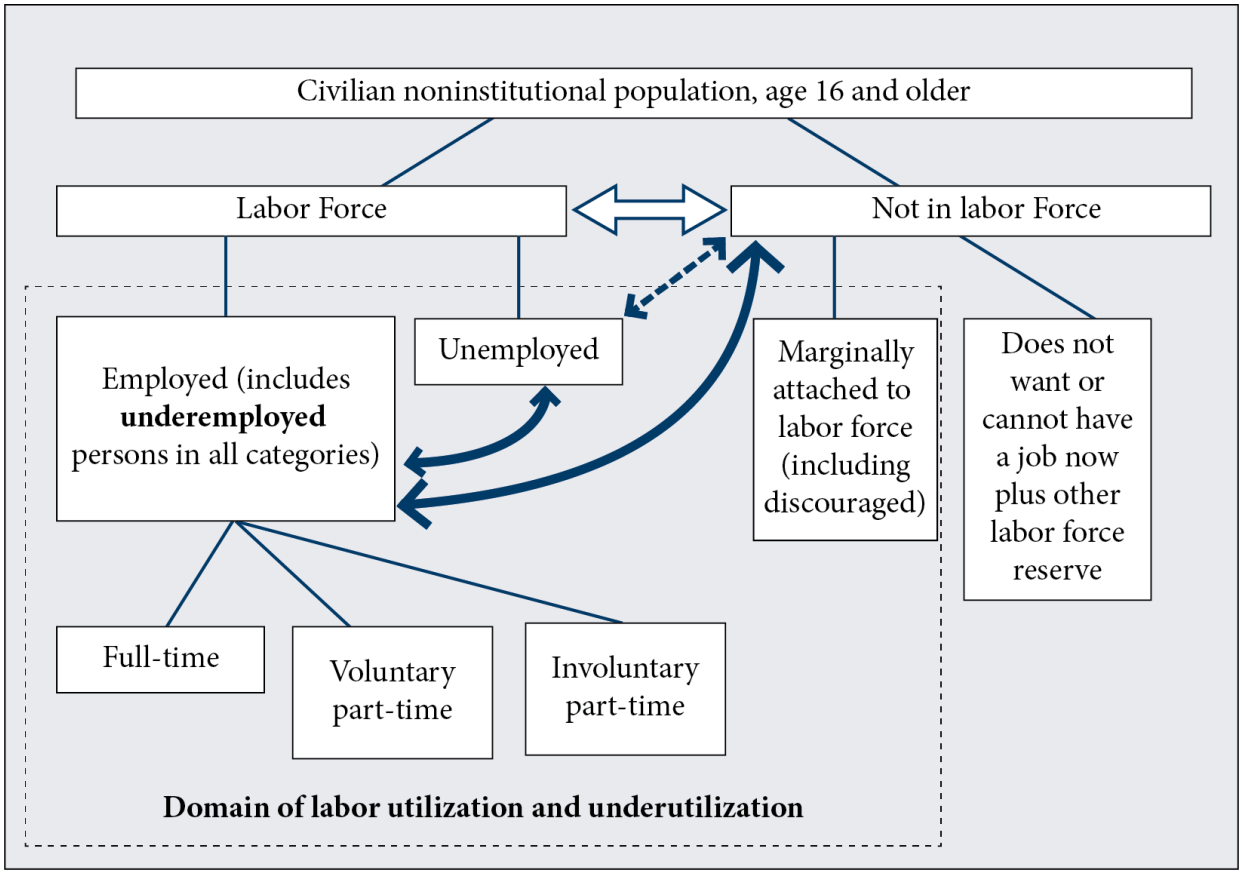
- From a 2014 base, worker shortfalls of about 16,400 and 21,100 are expected for 2024 for 2030, respectively. The worker shortfall will reach 22,500 by 2040. Worker skills and the projected shortfalls must be of high priority through 2040. Worker shortfalls for critical occupations will also need to be addressed continuously. Strategies to address skill needs and worker shortfalls might include: (1) improving education and its funding; (2) introducing economic opportunities that attract new and younger residents; (3) lowering the high school dropout rate; (4) focusing on hard-to-serve populations (e.g. out-of-school youth); (5) continuing and enhancing programs to assess, retrain, and place dislocated workers; (6) encouraging older worker participation in the labor force; and (7) facilitating 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 and priorities change over time. 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.

- The 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 important, especially for a region that has low per capita income and population and a declining labor force.

- Together, workforce development and economic development can build a strong, well-diversified Southeast AlabamaWorks economy. Indeed, one cannot achieve success in one without the other.

Labor Utilization and Supply Flows



Source: Addy et al[1] and Canon et al[2]

The chart above presents labor utilization and supply flows that explain labor market dynamics in view of recent study findings. The civilian non-institutional 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, the disabled, and discouraged workers). Table 6.1 shows labor force information on Southeast AlabamaWorks region and its 10 counties for 2016 and March 2017. 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 Southeast AlabamaWorks Labor Force Information

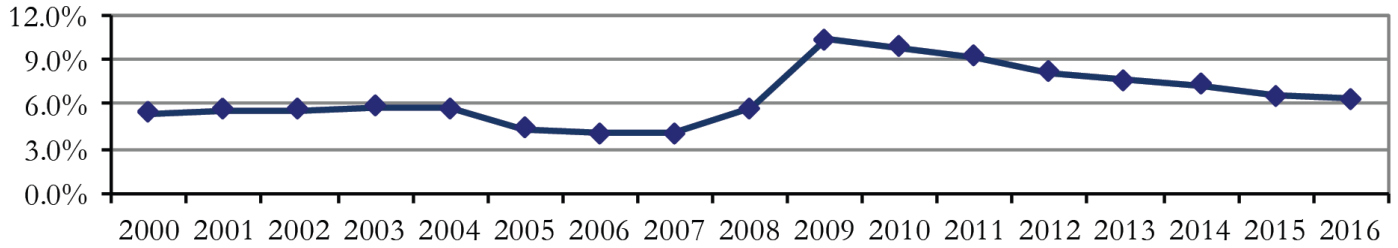
	2016 Annual Average			
	Labor Force	Employed	Unemployed	Rate (%)
Barbour	8,302	7,584	718	8.6
Butler	9,132	8,481	651	7.1
Coffee	20,402	19,167	1,235	6.1
Covington	15,392	14,315	1,077	7.0
Crenshaw	6,451	6,063	388	6.0
Dale	20,078	18,890	1,188	5.9
Geneva	10,905	10,263	642	5.9
Henry	6,762	6,316	446	6.6
Houston	44,718	42,089	2,629	5.9
Pike	15,157	14,188	969	6.4
Southeast	157,299	147,356	9,943	6.3
Alabama	2,168,608	2,038,775	129,833	6.0
United States	159,187,000	151,436,000	7,751,000	4.9
	March 2017			
	Labor Force	Employed	Unemployed	Rate (%)
Barbour	8,071	7,475	596	7.4
Butler	9,208	8,624	584	6.3
Coffee	20,649	19,518	1,131	5.5
Covington	15,204	14,217	987	6.5
Crenshaw	6,512	6,174	338	5.2
Dale	20,085	18,990	1,095	5.5
Geneva	10,937	10,371	566	5.2
Henry	6,791	6,396	395	5.8
Houston	45,000	42,673	2,327	5.2
Pike	15,469	14,620	849	5.5
Southeast	157,926	149,058	8,868	5.6
Alabama	2,186,599	2,069,412	117,187	5.4
United States	159,912,000	152,628,000	7,284,000	4.6

Note: Not seasonally adjusted.
Source: Alabama Department of Labor and U.S. Bureau of Labor Statistics.

The recession that began in 2007 increased the number of unemployed and drastically raised county unemployment rates. Regional and state economic recovery efforts lowered county unemployment rates to a range of 5.9 percent to 8.6 percent for 2016 (6.3 percent for the region). By March 2017 county unemployment rates ranged from 5.2 percent to 7.4 percent and regional unemployment was at 5.6 percent. Unemployment was lowest in Crenshaw, Geneva, and Houston counties, where the unemployment rates were lower than Alabama's 5.4 percent. The other 7 counties in the region had unemployment rates above the state's, the highest being in Barbour. The county unemployment rates are still high compared to the pre-recession period but are expected to decline at a slow pace.

Annual unemployment rates for 2000 to 2016 are shown in Figure 6.1. The 2001 national economic recession kept the region's unemployment rate at about 5.7 percent through 2004, but successful state and local economic development efforts brought the rate to record lows of 4.1 in 2006 and 2007. However, the last recession raised regional unemployment to its highest rate for the decade. Unemployment was at 10.3 percent in 2009 before gradually declining to 6.5 and 6.3 percent in 2015 and 2016, respectively. Year-to-date monthly labor force data suggest similar regional unemployment rates in 2017 as in 2016, although they are expected to be slightly lower in 2017. Regional unemployment is expected to decline slowly in the next several years as the economy recovers from the recent recession.

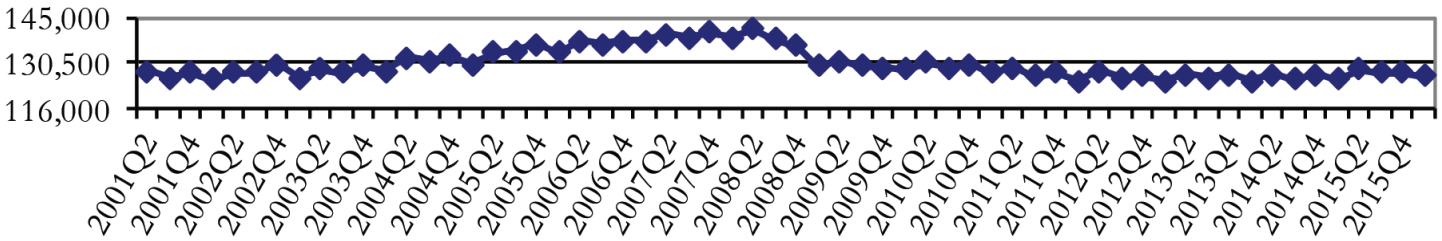
Figure 6.1 Southeast AlabamaWorks Unemployment Rate



Source: Alabama Department of Labor.

Quarterly nonagricultural employment in Southeast AlabamaWorks averaged 130,355 from the second quarter of 2001 to the first quarter of 2016 (Figure 6.2). The number of jobs sharply declined from about 141,000 in the third quarter of 2008 to about 130,000 in the first quarter of 2009 due to the last recession. The region continued to lose jobs, falling to about 128,000 in the first quarter of 2011 and is yet to show any significant improvement. By the first quarter of 2016, total nonagricultural employment was still about 127,000 jobs.

Figure 6.2 Southeast AlabamaWorks Employment



Source: Alabama Department of Labor.

Table 6.2 shows worker distribution by age in Southeast AlabamaWorks for the first quarter of 2016. The region's workforce is older than the state's: workers age 55 and over are 22.7 percent of the region's nonagricultural employment compared to 21.3 percent for Alabama. Those who are age 65 and over constitute 5.7 percent of nonagricultural employment compared to 5.1 percent for the state. Labor force participation of younger residents must increase to meet long term occupational projections for growth and replacement or older workers may have to work longer.

Table 6.2 Workers by Age Group (First Quarter 2016)

	Nonagricultural Employment	
Age Group	Number	Percent
14-19	2,135	1.7
19-24	13,121	10.4
25-34	26,396	20.9
35-44	27,696	21.9
45-54	28,412	22.5
55-64	21,583	17.1
65+	7,196	5.7
55 and over total	28,779	22.7
Total all ages	126,539	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.

Commuting Patterns

In 2005 there were 44,072 in- and out-commuters for Southeast AlabamaWorks, with a net of 1,812 out-commuters (Table 6.3). The total number of in- and out-commuters gradually increased over the years. By 2014 there were 61,282 in- and out-commuters, with 9,278 net out-commuters. There is also significant commuting inside the region, and Houston County has the largest number of in- and out-commuters. Table 6.3 also shows that the region's commute distance and time rose in 2016 from 2015, suggesting that congestion may have worsened in the region. Congestion could be an issue as the regional economy recovers from the last recession. It is essential that the region's transportation infrastructure and systems be continuously maintained and developed to encourage uninterrupted mobility of workers and goods.

Population

The regional population count in 2010 was 378,812, a 6.7 percent increase from 2000 Census (Table 6.4). This population growth was slower than Alabama's 7.5 percent for the decade. The population shrank in two counties—Barbour and Butler—and grew in the other eight. Coffee County growth's rate was the fastest, followed by Houston and Pike. However, the 2016 population estimates show that the regional population growth has stagnated since 2010, with six counties losing population. Regional population growth was 0.0 percent, compared to Alabama's 1.7 percent growth.

Table 6.5 shows the region's population counts, estimates, and projections by age group up to 2040. The population aged 65 and over is expected to grow rapidly, as the first of the baby boom generation turned 65 in 2011. Consequently, growth of the prime working age group (20-64) will decline through 2040. The growth of the youth (0-19) population will lag that of the total population from 2030 through 2040. This poses a challenge for workforce development. If employment growth outpaces labor force growth as is expected in the long term, communities that experience rapid job gains may need to consider investments in amenities and infrastructure to attract new residents.

Table 6.3 Southeast AlabamaWorks Commuting Patterns

Year	Southeast Inflow	Southeast Outflow
2005	21,130	22,942
2006	20,933	24,457
2007	24,941	29,306
2008	27,182	29,563
2009	25,116	31,348
2010	26,263	32,656
2011	27,158	35,004
2012	25,820	35,120
2013	25,129	36,244
2014	26,002	35,280

	Inflow, 2014		Outflow, 2014	
Southeast Counties	Number	Percent	Number	Percent
Barbour	3,858	6.4	4,928	7.1
Butler	3,186	5.3	4,667	6.7
Coffee	7,919	13.1	9,659	13.9
Covington	4,730	7.8	5,260	7.5
Crenshaw	1,828	3.0	3,966	5.7
Dale	8,255	13.7	9,992	14.3
Geneva	1,997	3.3	6,758	9.7
Henry	1,621	2.7	5,541	7.9
Houston	19,992	33.1	12,715	18.2
Pike	7,050	11.7	6,228	8.9

	Percent of Workers	
Average commute time (one-way)	**2015**	**2016**
Less than 20 minutes	54.9	54.8
20 to 40 minutes	24.8	22.5
40 minutes to an hour	9.0	9.9
More than an hour	3.1	4.1
Average commute distance (one-way)	**2015**	**2016**
Less than 10 miles	48.6	44.7
10 to 25 miles	29.0	29.8
25 to 45 miles	14.7	14.7
More than 45 miles	5.8	7.7

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.

Table 6.4 Southeast AlabamaWorks Population

	1990 Census	2000 Census	2010 Census	2016 Estimate	Change 2000-2010	% change 2000-2010	Change 2010-2016	% change 2010-2016
Barbour	25,417	29,038	27,457	25,965	-1,581	-5.4	-1,492	-5.4
Butler	21,892	21,399	20,947	19,998	-452	-2.1	-949	-4.5
Coffee	40,240	43,615	49,948	51,226	6,333	14.5	1,278	2.6
Covington	36,478	37,631	37,765	37,458	134	0.4	-307	-0.8
Crenshaw	13,635	13,665	13,906	13,913	241	1.8	7	0.1
Dale	49,633	49,129	50,251	49,226	1,122	2.3	-1,025	-2.0
Geneva	23,647	25,764	26,790	26,614	1,026	4.0	-176	-0.7
Henry	15,374	16,310	17,302	17,164	992	6.1	-138	-0.8
Houston	81,331	88,787	101,547	104,056	12,760	14.4	2,509	2.5
Pike	27,595	29,605	32,899	33,286	3,294	11.1	387	1.2
Southeast	335,242	354,943	378,812	378,906	23,869	6.7	94	0.0
Alabama	4,040,587	4,447,100	4,779,736	4,863,300	332,636	7.5	83,564	1.7
United States	248,709,873	281,421,906	308,745,538	323,127,513	27,323,632	9.7	14,381,975	4.7

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

Table 6.5 Population by Age Group and 2040 Projections

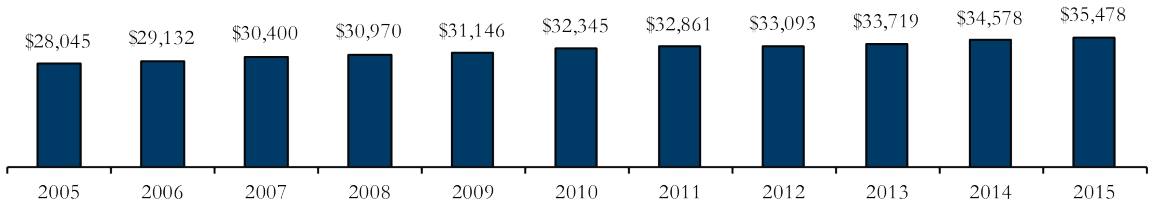
Age Group	2000	2010	2014	2024	2030	2035	2040
0-19	99,539	99,724	95,707	98,050	97,798	97827	99,001
20-24	22,517	25,330	27,340	25,069	25,389	26362	26,491
25-29	23,073	24,775	24,006	22,848	23,451	23897	24,994
30-34	22,950	22,889	23,965	22,922	23,435	24143	24,689
35-39	26,195	23,690	22,371	22,956	23,022	23638	24,473
40-44	26,627	23,641	24,050	23,935	22,683	23195	23,936
45-49	24,599	26,680	23,639	22,277	24,443	22829	23,449
50-54	23,261	27,014	26,368	22,742	21,945	24382	22,862
55-59	18,818	24,750	26,072	22,969	22,518	21842	24,335
60-64	16,169	23,199	23,438	25,093	22,146	22385	21,793
65+	51,195	57,120	63,995	77,120	84,710	86,538	87,542
20-64 Total	**204,209**	**221,968**	**221,249**	**210,811**	**209,032**	**212,673**	**217,022**
Total Population	**354,943**	**378,812**	**380,951**	**385,981**	**391,540**	**397,038**	**403,565**
Change from 2014							
0-19				2.4%	2.2%	2.2%	3.4%
20-64				-4.7%	-5.5%	-3.9%	-1.9%
Total Population				1.3%	2.8%	4.2%	5.9%

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

Per Capita Income

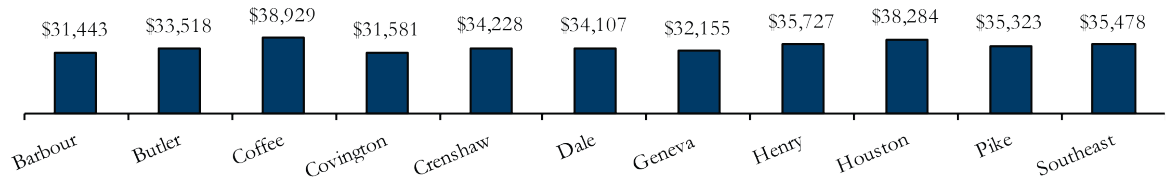
Per capita income (PCI) in Southeast AlabamaWorks was at $35,478 in 2015 (Figure 6.3), up 26.5 percent from 2005, but $2,552 or 6.7 percent below the state average of $38,030. Per capita income by county is shown in Figure 6.4. Coffee County had the highest PCI with $38,929, followed by Houston with $38,284, while Barbour had the lowest with $31,443.

Figure 6.3 Southeast AlabamaWorks Per Capita Income



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

Figure 6.4 County Per Capita Income, 2015

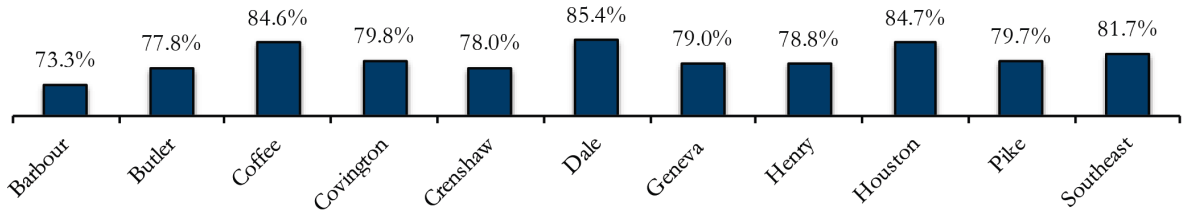


Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research, The University of Alabama.

Educational Attainment

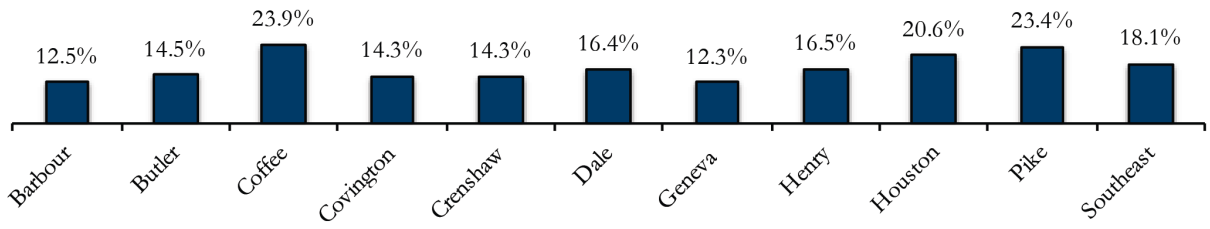
Educational attainment in 2011 to 2015 of Southeast AlabamaWorks residents who were 25 years old and over is shown in Table 6.6 and Figures 6.5 and 6.6. Of this population, about 82 percent graduated from high school and 18 percent held a bachelor's or higher degree. This is below the state's educational attainment. Dale County had highest percentages of high school graduates, followed by Houston and Coffee, while Coffee and Pike had the highest percentages of bachelor's or higher degree holders. Barbour County had the lowest percentage of high school graduates, and Geneva had the lowest for percentage with bachelor's degree or higher. Educational attainment is important as skills rise with education, and high-wage jobs demand more skill sets.

Figure 6.5 High School Graduate or Higher, 2011-2015



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

Figure 6.6 Bachelor's Degree or Higher, 2011-2015



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

Table 6.6 Educational Attainment of Population 25 Years and Over, 2011-2015

	Barbour	Butler	Coffee	Covington	Crenshaw	Dale	Geneva	Henry	Houston	Pike	Southeast
Total	18,808	13,996	34,464	26,470	9,548	33,245	18,762	12,213	70,274	19,506	257,286
No schooling completed	356	249	527	317	222	430	259	212	1,064	229	3,865
Nursery to 4th grade	219	81	104	114	75	63	274	122	337	100	1,489
5th and 6th grade	297	218	356	433	197	355	281	216	579	134	3,066
7th and 8th grade	860	516	914	1,110	398	765	765	319	1,491	501	7,639
9th grade	681	443	911	896	248	560	624	401	1,517	751	7,032
10th grade	1,071	481	1,016	1,021	389	912	885	566	2,043	903	9,287
11th grade	1,104	704	793	1,030	342	1,203	599	571	2,322	862	9,530
12th grade, no diploma	433	410	670	422	234	570	244	178	1,429	471	5,061
High school graduate/ equivalent	6,490	5,274	10,151	8,890	3,629	10,704	6,960	4,338	23,248	6,604	86,288
Some college, less than 1 year	1,111	620	2,419	1,920	541	2,349	1,519	703	4,717	924	16,823
Some college, 1+ years, no degree	2,482	1,811	5,123	3,981	1,204	6,329	2,640	1,644	11,065	2,405	38,684
Associate degree	1,350	1,157	3,257	2,544	705	3,568	1,395	925	5,993	1,060	21,954
Bachelor's degree	1,412	1,173	5,250	2,550	955	3,599	1,747	1,151	9,343	2,785	29,965
Master's degree	745	631	2,279	890	352	1,481	498	707	3,620	1,312	12,515
Professional school degree	131	131	467	293	29	251	65	130	980	147	2,624
Doctorate degree	66	97	227	59	28	106	7	30	526	318	1,464

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, 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 in different 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 areas with such workers regardless of the local 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.

Southeast AlabamaWorks had an underemployment rate of 23.6 percent in 2016. Applying this rate to March 2017 labor force data means that 35,103 employed residents were underemployed (Table 6.7). Adding the unemployed gives a total available labor pool of 43,971 for the region. This larger labor pool is almost five 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. County underemployment rates ranged from 10.6 percent for Coffee County to 35.6 percent for Butler. Geneva County had the smallest available labor pool while Houston had the largest. The underemployed workers are mostly willing to extend their commute for a better job. For the one-way commute, 48.5 percent are prepared to travel for 20 or more minutes longer and 35.0 percent will go 20 or more extra miles.

Table 6.7 Underemployed and Available Labor by County

	Southeast	Barbour	Butler	Coffee	Covington	Crenshaw
Labor Force	157,926	8,071	9,208	20,649	15,204	20,402
Employed	149,058	7,475	8,624	19,518	14,217	6,174
Underemployment rate	23.6%	24.5%	35.6%	10.6%	28.6%	25.0%
Underemployed workers	35,103	1,831	3,067	2,077	4,062	1,544
Unemployed	8,868	596	584	1,131	987	338
Available labor pool	**43,971**	**2,427**	**3,651**	**3,208**	**5,049**	**1,882**

	Dale	Geneva	Henry	Houston	Pike
Labor Force	20,085	10,937	6,791	45,000	15,469
Employed	18,990	10,371	6,396	42,673	14,620
Underemployment rate	17.2%	12.5%	27.3%	20.9%	28.0%
Underemployed workers	3,274	1,296	1,744	8,931	4,094
Unemployed	1,095	566	395	2,327	849
Available labor pool	**4,369**	**1,862**	**2,139**	**11,258**	**4,943**

Note: Rounding errors may be present. Based on March 2017 labor force data and 2016 underemployment rates.
Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Labor.

The underemployment rates for counties, AlabamaWorks regions, and the state were determined from an extensive survey of the state's workforce. A total of 1,370 complete responses were obtained from North AlabamaWorks. About 58.5 percent (802 respondents) were employed, of whom 188 stated that they were underemployed. The primary reasons given for being underemployed are low wages at the available jobs; a lack of job opportunities in their area; living too far from jobs; other family or personal obligations; owning a house in their area; child care responsibilities; and a spouse having a really good job. Ongoing economic development efforts can help in this regard. Nonworkers cite retirement and disability or other health concerns as the main reasons for their status, but some also cite a lack of job opportunities in their area and social security limitations as additional key factors. Such 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 gained employment.[3] This implies that the region's available labor pool could be larger than estimated in this report.

[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.

A comparison of underemployed workers to the overall workforce in Southeast AlabamaWorks shows that:

- Fewer work full-time and more of the part-timers would like to work full-time.
- More hold multiple jobs.
- They have longer commute times but similar distances with all workers.
- More work in life, physical, and social science; community and social services; legal; healthcare practitioners and technicians; healthcare support; protective service; arts, design, entertainment, sports, and media food preparation and serving related; office and administration support; farming, fishing, and forestry; construction and extraction; and production occupations.
- They have shorter job tenure and earn less.
- More are in agriculture, forestry, fishing, and hunting; construction; manufacturing; wholesale trade; finance and insurance; professional, scientific, and technical services; administrative and support and waste management and remediation; health care and social assistance; public administration; and other services industries.
- 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, except when the additional pay is less than 5 percent.
- More are willing to extend their commute time for a better job but not distance.
- 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 all the cost.
- Fewer are married and more are male.
- Their median age is a year higher than the median for all workers.
- More are African-Americans or other nonwhite racial groups.
- They are less likely to have high school diplomas and bachelor's degrees.

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 (78.9 percent) are satisfied or completely satisfied with their jobs. Workers are most satisfied with the work they do and least satisfied with their earnings. Fewer (53.5 percent) underemployed workers are satisfied with their jobs. The underemployed are most satisfied with their work shift but most dissatisfied with their earnings.

Workers are generally willing to train for a new or better job, with the underemployed being more willing (64.1 percent vs. 55.0 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. Underemployed workers are more willing to train for a new or better job, even if they have to pay the full cost of the training. The results show that workers expect the government to bear at least part 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	3.9	3.1	13.6	25.2	53.7
Earnings	8.9	8.7	21.7	24.2	35.7
Retention	3.1	3.1	11.0	16.7	65.1
Work	1.7	1.2	7.0	20.9	69.2
Hours	4.3	4.8	11.6	17.8	61.6
Shift	3.3	3.1	7.4	19.2	66.5
Conditions	3.1	3.7	13.4	24.6	55.0
Commuting Distance	4.3	5.0	9.5	14.3	66.5
Underemployed					
Overall	11.4	7.0	27.2	21.9	31.6
Earnings	24.6	10.5	29.0	24.6	11.4
Retention	4.4	7.0	17.5	17.5	48.3
Work	2.6	3.5	12.3	23.7	57.9
Hours	7.9	9.7	15.8	14.9	51.8
Shift	5.3	6.1	6.1	21.1	61.4
Conditions	7.0	11.4	18.4	22.8	39.5
Commuting Distance	7.0	8.8	7.9	18.4	57.9

Willingness to Train	Completely Unwilling	Unwilling	Neutral	Willing	Completely Willing
Employed					
For a new or better job	26.7	3.1	13.2	14.8	40.2
If paid by trainee	42.7	18.8	22.2	4.9	9.0
If paid by trainee and government	12.2	8.7	35.1	24.0	17.4
If paid by government	2.1	2.8	9.4	20.8	64.2
Underemployed					
For a new or better job	21.4	1.0	10.7	13.6	50.5
If paid by trainee	42.0	23.5	17.3	4.9	11.1
If paid by trainee and government	11.1	7.4	28.4	27.2	22.2
If paid by government	3.7	1.2	3.7	19.8	71.6

Note: Rounding errors may be present.
Source: Center for Business and Economic Research, The University of Alabama.

Workforce Demand

Industry Mix

Since industry data for the new AlabamaWorks regions are not yet available, county employment numbers were aggregated to obtain regional industry employment. Average wages were derived using total wage aggregates. The manufacturing sector was the largest Southeast AlabamaWorks employer with 22,091 jobs in the first quarter of 2016 (Table 6.9). Rounding out the top five industries by employment are health care and social assistance, retail trade, accommodation and food services, and educational services. These five industries provided 81,329 jobs, 64.3 percent of the regional total. The average monthly wage across all industries in the region was $3,197; three leading employers—manufacturing, educational services, and health care and social assistance—paid more than the average. The highest average monthly wages were for utilities at $7,721; finance and insurance at $4,102; mining at $3,995; wholesale trade at $3,969; manufacturing at $3,942; and professional, scientific, and technical services at $3,776. Accommodation and food services paid the least at $1,251.

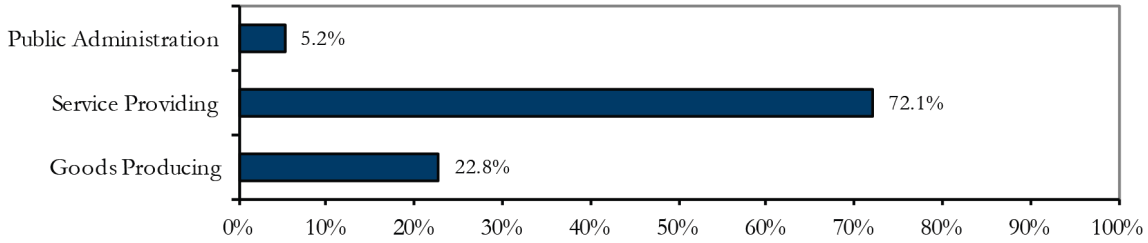
Table 6.9 Industry Mix (First Quarter 2016)

Industry by 2-digit NAICS Code	Total Employment	Share	Rank	Average Monthly Wage
11 Agriculture, Forestry, Fishing and Hunting	1,903	1.50%	15	$3,148
21 Mining	254	0.20%	20	$3,995
22 Utilities	2,401	1.90%	14	$7,721
23 Construction	4,543	3.59%	10	$3,352
31-33 Manufacturing	22,091	17.46%	1	$3,942
42 Wholesale Trade	5,169	4.09%	9	$3,969
44-45 Retail Trade	17,123	13.53%	3	$2,344
48-49 Transportation and Warehousing	6,208	4.91%	7	$3,557
51 Information	1,265	1.00%	16	$3,497
52 Finance and Insurance	3,143	2.48%	11	$4,102
53 Real Estate and Rental and Leasing	1,222	0.97%	17	$2,982
54 Professional, Scientific, and Technical Services	3,011	2.38%	12	$3,776
55 Management of Companies and Enterprises	701	0.55%	18	$2,874
56 Administrative and Support and Waste Management and Remediation Services	5,576	4.41%	8	$2,055
61 Educational Services	11,256	8.90%	5	$3,390
62 Health Care and Social Assistance	19,489	15.40%	2	$3,326
71 Arts, Entertainment, and Recreation	668	0.53%	19	$1,343
72 Accommodation and Food Services	11,370	8.99%	4	$1,251
81 Other Services (Except Public Administration)	2,619	2.07%	13	$2,527
92 Public Administration	6,522	5.15%	6	$2,632
ALL INDUSTRIES	**126,543**	**100.00%**		**$3,197**

Source: Alabama Department of Labor, U.S. Census Bureau, and Center for Business and Economic Research, The University of Alabama.
Note: Due to disclosure limitations in multiple sectors across several counties, accurate regional new hire monthly wages could not be determined.

By broad industry classification, service producing industries provided 72.1 percent of jobs in first quarter 2016 (Figure 6.7). Goods producing industries were next with 22.8 percent, and public administration accounted for 5.2 percent. The distribution is for all nonagricultural jobs in the region, but there is significant variation by county.

Figure 6.7 Southeast AlabamaWorks Employment Distribution



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

Job Creation and Net Job Flows

On average, 5,879 jobs were created per quarter from second quarter 2001 to first quarter 2016 (Figure 6.8); quarterly net job flows averaged 407 (Figure 6.9). 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. Quarterly net job flows generally reflect trends in job creation over the period, and both have been fluctuating without any significant improvement since the third quarter of 2010. Regional job creation and job flows were down in the third quarter of 2015 but increased slightly in the fourth quarter of 2015 and first quarter of 2016. Quarterly net job flows have fluctuated considerably throughout the period, ranging from a loss of 2,414 to a gain of 2,774.

Figure 6.8 Job Creation in Southeast AlabamaWorks

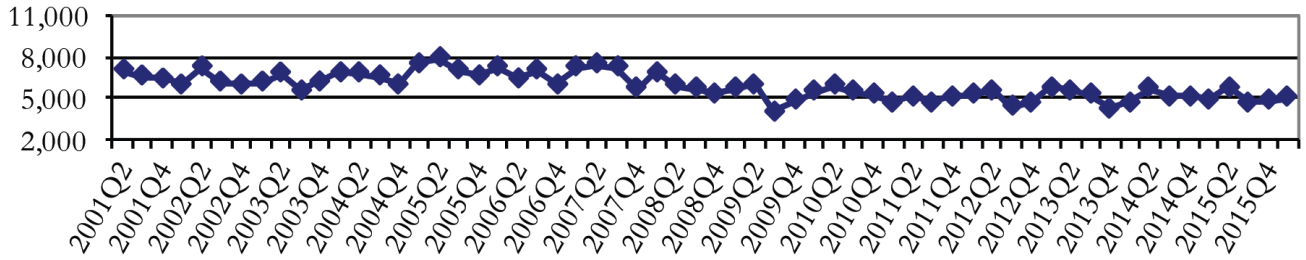
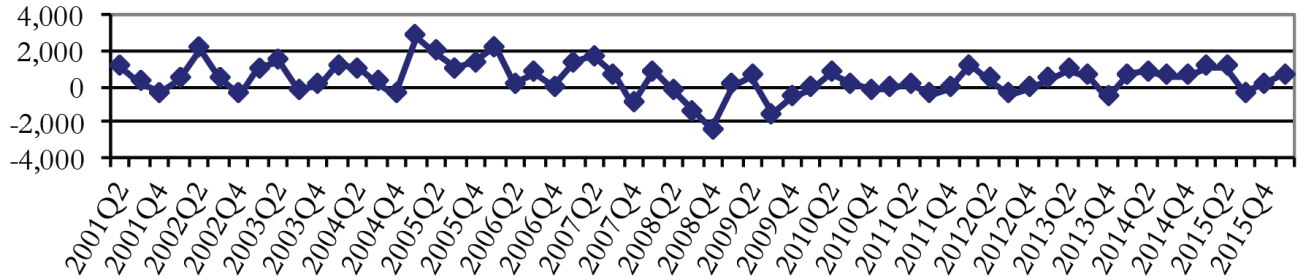


Figure 6.9 Southwest AlabamaWorks Net Job Flows



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

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

Southeast AlabamaWorks has 704 single occupations based on 2014 to 2024 occupational projections. Table 6.10 shows the 40 occupations that are expected to be in high-demand, ranked by projected average annual job openings over the 2014 to 2024 period. Many of these occupations are related to health care and social assistance, one of the five largest employment sectors identified earlier (Table 6.9). Thus, this sector will continue to be a major employer in the region.

The top five high-demand occupations are Retail Salespersons; Combined Food Preparation and Serving Workers, Including Fast Food; Registered Nurses; Aircraft Mechanics and Service Technicians; and Heavy and Tractor-Trailer Truck Drivers. Eleven of the top 40 high-demand occupation are also in the top 20 fast-growing category. This means that these 11 occupations have a minimum annual growth rate of 2.03 percent, much faster than the regional and state occupational growth rates of 0.69 percent and 0.74 percent, respectively.

The 20 fastest growing occupations ranked by projected growth of employment are listed in Table 6.11. Many of these occupations are related to the health care and social assistance industry. The top five fast-growing occupations are Web Developers; Athletic Trainers; Tire Builders; Painters, Transportation Equipment; and Nurse Practitioners.

Table 6.12 shows the 50 selected highest earning occupations in the region. The top 50 high-earning occupations paid a minimum average salary of $79,370 per year and maximum of $276,670. These occupations are mainly in management, health, and engineering fields. Six of the top 10 listed are health occupations and four are in management. Any discussion of earnings must consider that wages vary with experience. Occupations with the highest entry 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. Seven occupations are both high-earning and in high-demand (Table 6.10), and of those seven, five are also fast-growing.
Of the region's 704 single occupations, 58 are expected to decline over the 2014 to 2024 period. Employment in the 20 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 2014 and Projected Year 2024)

Occupation	Average Annual Job Openings		
	Total	Due to Growth	Due to Separations
Retail Salespersons	190	35	155
Combined Food Preparation and Serving Workers, Including Fast Food	140	40	100
Registered Nurses	120	45	75
Aircraft Mechanics and Service Technicians	95	45	50
Heavy and Tractor-Trailer Truck Drivers	90	20	65
Nursing Assistants	75	30	50
Stock Clerks and Order Fillers	65	15	50
Cooks, Restaurant	60	20	35
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	60	20	40
Licensed Practical and Licensed Vocational Nurses	55	15	40
Personal Care Aides*	40	35	10
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	40	15	25
Maintenance and Repair Workers, General	40	10	30
Accountants and Auditors	35	10	25
Industrial Machinery Mechanics	30	15	20
Automotive Service Technicians and Mechanics	30	5	25
Emergency Medical Technicians and Paramedics*	25	15	10
Welders, Cutters, Solderers, and Brazers	25	5	15
Medical Assistants	20	10	10
Construction Laborers	20	5	10
Commercial Pilots	**20**	**5**	**15**
Medical Secretaries	15	10	5
Operating Engineers and Other Construction Equipment Operators	15	5	5
Bus and Truck Mechanics and Diesel Engine Specialists	15	5	10
Transportation Inspectors	15	5	5
Management Analysts*	**10**	**10**	**5**
Purchasing Agents, Except Wholesale, Retail, and Farm Products	10	5	10
Computer User Support Specialists*	10	5	5
Industrial Engineers	**10**	**5**	**5**
Mechanical Engineers*	**10**	**5**	**5**
Physical Therapists*	**10**	**5**	**5**
Home Health Aides*	10	5	5
Physical Therapist Assistants*	10	5	5
Insurance Sales Agents	10	5	10
Avionics Technicians*	10	5	5
Software Developers, Applications*	**5**	**5**	**0**
Healthcare Social Workers	5	5	5
Nurse Practitioners*	**5**	**5**	**5**
Computer Systems Analysts	5	0	0
Speech-Language Pathologists	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 2014 and Projected Year 2024)

Occupation	Employment		Percent Change	Annual Growth (Percent)	Average Annual Job Openings
	2014	2024			
Web Developers	50	80	30	4.81	5
Athletic Trainers	60	90	30	4.14	5
Tire Builders	NA	NA	120	3.42	20
Painters, Transportation Equipment	NA	NA	70	3.34	10
Nurse Practitioners*	**140**	**190**	**50**	**3.10**	**5**
Personal Care Aides*	1,040	1,390	350	2.94	40
Physical Therapist Assistants*	150	200	50	2.92	10
Phlebotomists	120	160	40	2.92	5
Computer-Controlled Machine Tool Operators, Metal and Plastic	60	80	20	2.92	5
Mechanical Engineers*	**130**	**170**	**40**	**2.72**	**10**
Home Health Aides*	230	300	70	2.69	10
Software Developers, Applications*	**100**	**130**	**30**	**2.66**	**5**
Computer User Support Specialists*	270	350	80	2.63	10
Physical Therapists*	**170**	**220**	**50**	**2.61**	**10**
Computer and Information Systems Managers	**140**	**180**	**40**	**2.54**	**5**
Management Analysts*	**280**	**360**	**80**	**2.54**	**10**
Software Developers, Systems Software	**110**	**140**	**30**	**2.44**	**5**
Emergency Medical Technicians and Paramedics*	570	710	140	2.22	25
Computer, Automated Teller, and Office Machine Repairers	130	160	30	2.10	5
Avionics Technicians*	270	330	60	2.03	10

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 2014 and Projected Year 2024)

Occupation	Employment		Annual Growth (Percent)	Average Annual Job Openings	Mean Annual Salary ($)
	2014	2024			
Internists, General	NA	NA	0.00	5	276,670
Dentists, General	50	60	1.84	0	257,873
Physicians and Surgeons, All Other	240	280	1.55	10	247,824
Pediatricians, General	20	20	0.00	0	193,079
Chief Executives	160	160	0.00	5	173,071
Nurse Anesthetists	30	30	0.00	0	157,975
Architectural and Engineering Managers	110	130	1.68	5	140,607
Marketing Managers	NA	NA	0.00	0	134,482
Pharmacists	440	440	0.00	10	132,656
Financial Managers	210	220	0.47	5	124,992
General and Operations Managers	1,710	1,900	1.06	60	115,004

Table 6.12 (continued)

Optometrists	NA	NA	2.26	5	114,446
Sales Managers	160	170	0.61	5	113,754
Personal Financial Advisors	60	70	1.55	5	111,374
Psychologists, All Other	20	20	0.00	0	104,628
Purchasing Managers	40	50	2.26	0	104,435
Industrial Production Managers	180	200	1.06	5	102,136
Computer and Information Systems Managers	**140**	**180**	**2.54**	**5**	**101,466**
Aerospace Engineers	80	90	1.18	5	101,323
Software Developers, Systems Software	**110**	**140**	**2.44**	**5**	**99,056**
Physician Assistants	40	50	2.26	0	99,014
Lawyers	230	240	0.43	5	98,176
Air Traffic Controllers	110	110	0.00	5	98,043
Transportation, Storage, and Distribution Managers	70	80	1.34	5	97,898
Physical Therapists*	**170**	**220**	**2.61**	**10**	**97,834**
Operations Research Analysts	NA	NA	4.14	0	97,819
Administrative Services Managers	30	40	2.92	0	97,171
Computer Network Architects	30	40	2.92	0	95,410
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	NA	NA	0.00	0	94,631
Commercial Pilots*	620	680	0.93	20	94,296
Managers, All Other	310	330	0.63	10	91,546
Nurse Practitioners*	**140**	**190**	**3.10**	**5**	**90,453**
Occupational Therapists	70	90	2.54	0	89,300
Medical and Health Services Managers	220	240	0.87	5	89,251
Mechanical Engineers*	**130**	**170**	**2.72**	**10**	**88,947**
Power Distributors and Dispatchers	60	70	1.55	5	87,799
Human Resources Managers	80	90	1.18	5	87,790
Industrial Engineers*	180	220	2.03	10	87,569
Management Analysts*	**280**	**360**	**2.54**	**10**	**87,059**
Veterinarians	70	90	2.54	0	86,388
Chiropractors	30	40	2.92	0	85,773
Electrical Engineers	270	290	0.72	10	84,321
Engineers, All Other	40	40	0.00	0	83,028
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	20	30	4.14	0	82,381
Software Developers, Applications*	**100**	**130**	**2.66**	**5**	**80,651**
Construction Managers	180	200	1.06	5	80,548
Computer Occupations, All Other	90	90	0.00	0	80,530
Education Administrators, Elementary and Secondary School	370	390	0.53	15	80,357
Logisticians	100	110	0.96	0	80,227
Securities, Commodities, and Financial Services Sales Agents	70	70	0.00	0	79,370

Note: Employment and salaries data are rounded to the nearest 10; job openings to the nearest 5. The salary data provided are based on the May 2016 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.
* Qualify as both high-earning and high-demand occupations. NA – Not available.
Source: Center for Business and Economic Research, The University of Alabama and Alabama Deptartment of Labor

Table 6.13 Selected Sharp-Declining Occupations (Base Year 2014 and Projected Year 2024)

Occupation	Employment		Net Change	Percent Change
	2014	2024		
Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	NA	NA	-180	-26
Bookkeeping, Accounting, and Auditing Clerks	1,600	1,470	-130	-8
Postal Service Mail Carriers	440	320	-120	-27
Textile Knitting and Weaving Machine Setters, Operators, and Tenders	NA	NA	-60	-32
Cooks, Fast Food	410	350	-60	-15
Switchboard Operators, Including Answering Service	120	80	-40	-33
Tellers	800	760	-40	-5
Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	210	180	-30	-14
Airline Pilots, Copilots, and Flight Engineers	NA	NA	-30	-12
Cooks, Short Order	NA	NA	-30	-10
Logging Equipment Operators	570	540	-30	-5
Mail Clerks and Mail Machine Operators, Except Postal Service	NA	NA	-20	-33
Computer Operators	90	70	-20	-22
Radio and Television Announcers	90	70	-20	-22
Postal Service Clerks	100	80	-20	-20
Dishwashers	330	310	-20	-6
Bill and Account Collectors	370	350	-20	-5
Coin, Vending, and Amusement Machine Servicers and Repairers	70	60	-10	-14
Medical Transcriptionists	80	70	-10	-13
Meter Readers, Utilities	80	70	-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 pursuit of high education 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.

High-earning occupations require more active learning, mathematics, reading comprehension, science, writing, complex problem solving, personnel resources management, persuasion, negotiation, judgment and decision making, and system analysis skills than both high-demand and fast-growing jobs. Some of these skills require long training periods and postsecondary education. Fast-growing occupations require more basic, complex problem solving, systems, and resource management skills than high-demand occupations.

Table 6.14 Skill Types and Definitions

Basic Skills: Developed capacities that facilitate learning or the more rapid acquisition of knowledge.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

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.

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

Learning Strategies — Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.

Mathematics — Using mathematics to solve problems.

Monitoring — Monitoring / Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Reading Comprehension — Understanding written sentences and paragraphs in work-related documents.

Science — Using scientific rules and methods to solve problems.

Speaking — Talking to others to convey information effectively.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Complex Problem Solving Skills: Developed capacities used to solve novel, ill-defined problems in complex, real-world settings.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Resource Management Skills: Developed capacities used to allocate resources efficiently.

Management of Financial Resources — Determining how money will be spent to get the work done and accounting for these expenditures.

Management of Material Resources — Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.

Management of Personnel Resources — Motivating, developing, and directing people as they work, identifying the best people for the job.

Time Management — Managing one's own time and the time of others.

Social Skills: Developed capacities used to work with people to achieve goals.

Coordination — Adjusting actions in relation to others' actions.

Instructing — Teaching others how to do something.

Negotiation — Bringing others together and trying to reconcile differences.

Persuasion — Persuading others to change their minds or behavior.

Service Orientation — Actively looking for ways to help people.

Social Perceptiveness — Being aware of others' reactions and understanding why they react as they do.

Systems Skills: Developed capacities used to understand, monitor, and improve socio-technical systems.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

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.

Technical Skills: Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems.

Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.

Equipment Selection — Determining the kind of tools and equipment needed to do a job.

Installation — Installing equipment, machines, wiring, or programs to meet specifications.

Operation and Control — Controlling operations of equipment or systems.

Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

Operations Analysis — Analyzing needs and product requirements to create a design.

Programming — Writing computer programs for various purposes.

Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

Repairing — Repairing machines or systems using the needed tools.

Technology Design — Generating or adapting equipment and technology to serve user needs.

Troubleshooting — Determining causes of operating errors and deciding what to do about it.

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	30	35	50
Active Listening	75	95	82
Critical Thinking	75	100	80
Learning Strategies	5	5	2
Mathematics	3	10	12
Monitoring	53	70	48
Reading Comprehension	65	70	78
Science	5	10	16
Speaking	70	80	78
Writing	30	30	36
Complex Problem Solving Skills			
Complex Problem Solving	40	60	62
Resource Management Skills			
Management of Financial Resources	3	0	2
Management of Material Resources	0	0	0
Management of Personnel Resources	0	5	14
Time Management	20	35	18
Social Skills			
Coordination	40	35	36
Instructing	13	30	2
Negotiation	8	0	14
Persuasion	10	5	12
Service Orientation	38	35	22
Social Perceptiveness	45	50	46
Systems Skills			
Judgment and Decision Making	45	65	72
Systems Analysis	5	5	6
Systems Evaluation	10	15	10
Technical Skills			
Equipment Maintenance	15	10	0
Equipment Selection	8	5	0
Installation	0	0	0
Operation and Control	18	15	4
Operation Monitoring	23	20	4
Operations Analysis	5	15	12
Programming	5	10	2
Quality Control Analysis	10	20	0
Repairing	13	10	0
Technology Design	0	0	0
Troubleshooting	18	10	0

Note: Rounding errors may be present.
Source: O*NET Online and Center for Business and Economic Research, The University of Alabama

Table 6.16 shows skill gap indexes for all 35 skills in Table 6.14 based on occupational projections for 2014 to 2024. 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. The index focus is on the projection period, which for Table 6.16 is 2014 to 2024, and it 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, skills 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.

The skill gap indexes show that for Southeast AlabamaWorks basic skills are most critical followed by social, complex problem solving, system, resource management, and technical skills. The importance of basic skills generally and for fast-growing, high-demand, and high-earning jobs indicates a strong need for training in these skills. The pace of training needs to increase for technical skills, and the scale of training should be raised for basic and social skills.

Education and Training Issues

Educational attainment in Southeast AlabamaWorks is below that of the state as a whole. About 82 percent of residents age 25 and over graduated from high school in 2011 to 2015, compared to about 84 percent for Alabama. Of the age 25 and over population, about 18 percent had a bachelor's or higher degree versus 24 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; only four high-earning occupations do not require a bachelor's or higher degree. Fourteen (35.0 percent) of the top 40 high-demand occupations require at least an associate degree and 12 (30.0 percent) require a bachelor's or higher degree. Eleven (55.0 percent) of the top 20 fast-growing occupations require an associate degree at the minimum and eight (40.0 percent) require a bachelor's or higher degree.

Future jobs will require postsecondary education and training at a minimum. Job ads are increasingly asking for at least a high school diploma or GED. Of the region's 704 occupations, 58 are expected to decline over the projection period. The 20 sharpest-declining occupations will decline by at least five percent with each losing 10 jobs at the minimum. Education and training for these should slow accordingly.

Table 6.16 Skills Gap Indexes (Base Year 2014 and Projected Year 2024)

Skill	Skill Type	Total Openings (Projected Demand)	Skills Gap Index	Replacement Index
Active Listening	Basic	3,505	76	73
Speaking	Basic	3,430	75	73
Monitoring	Basic	3,095	67	69
Critical Thinking	Basic	2,835	62	70
Coordination	Social	2,775	60	69
Social Perceptiveness	Social	2,760	60	73
Service Orientation	Social	2,680	58	74
Reading Comprehension	Basic	2,550	56	71
Time Management	Resource	2,325	51	69
Judgment and Decision Making	Systems	2,040	44	68
Complex Problem Solving	Complex	1,620	35	67
Writing	Basic	1,545	34	67
Active Learning	Basic	1,530	33	70
Persuasion	Social	1,430	31	66
Instructing	Social	1,355	30	72
Negotiation	Social	965	21	75
Learning Strategies	Basic	925	20	67
Mathematics	Technical	925	20	66
Systems Analysis	Technical	810	18	67
Operation Monitoring	Systems	785	17	65
Management of Personnel Resources	Basic	770	17	77
Systems Evaluation	Systems	720	16	63
Quality Control Analysis	Technical	695	15	66
Operation and Control	Resource	680	15	74
Troubleshooting	Technical	540	12	64
Equipment Maintenance	Technical	420	9	65
Operations Analysis	Technical	350	8	63
Repairing	Technical	250	5	58
Science	Technical	190	4	53
Management of Financial Resources	Basic	150	3	50
Equipment Selection	Resource	145	3	72
Management of Material Resources	Resource	145	3	76
Installation	Technical	60	1	58
Programming	Technical	30	1	50
Technology Design	Technical	25	1	20

Note: These are annualized skills indexes for 2014 to 2024.
Source: Center for Business and Economic Research, The University of Alabama; Alabama Department of Labor; and O*Net Online.

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	1	1	10
Master's Degree	3	1	6
Bachelor's Degree Plus On-the-job Training or Work Experience	2	2	19
Bachelor's Degree	6	4	11
Associate Degree Plus On-the-job Training or Work Experience	0	0	1
Associate Degree	2	3	0
Postsecondary Non-Degree Plus On-the-job Training or Work Experience	2	0	0
Postsecondary Non-Degree	5	2	0
Some College, no Degree Plus On-the-job Training or Work Experience	0	1	0
Some College, no Degree	1	1	0
High School Diploma Plus On-the-job Training or Work Experience	10	3	3
High School Diploma	0	0	0
No Formal Education Credential Plus On-the-job Training or Work Experience	8	2	0
No Formal Educational Credential	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. 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

Employment growth is expected to be faster than that of prime working age group (20-64) and the youth. From a 2014 base, worker shortfalls of 16,358 and 21,133 are estimated for 2024 and 2030, respectively (Table 6.18). The expected worker shortfall will grow to 22,546 by 2040. A focus on worker skills and the projected shortfalls must be the priorities through 2040. Worker shortfalls for critical occupations will also need to be continuously addressed through the entire period.

Table 6.18 Expected Worker Shortfall

	2014-2024	2014-2030	2014-2035	2014-2040
Total population growth (percent)	1.3	2.8	5.7	5.9
Age 20-64 population growth (percent)	-4.7	-5.5	-4.0	-1.9
Job growth (percent)	7.3	10.0	12.1	14.6
Worker shortfall (percent)	12.0	15.3	16.1	16.5
Worker shortfall (number)	16,358	21,133	21,016	22,546

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

Since employment is critical to economic development, strategies to address skill needs and worker shortfalls must be adopted and implemented. Such strategies should aim at increasing labor force participation, encouraging in-migration, and raising worker productivity. Efforts to address the need for higher labor force participation, higher productivity, and faster labor force growth to meet workforce demand must include: (1) improving education and its funding; (2) introducing economic opportunities that attract new and younger residents; (3) lowering the high school dropout rate; (4) focusing on hard-to-serve populations (e.g. out-of-school youth); (5) continuing and enhancing programs to assess, retrain, and place dislocated workers; (6) encouraging older worker participation in the labor force; and (7) facilitating in-commuting.

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 in particular demonstrates a strong need for training in these skills. The pace and scale of training needs to increase for basic and social 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 20 sharp-declining occupations in Table 6.13 should slow accordingly.

Another very important reason to improve education is that more educated people 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 out-of-school youth, persons in poverty, those receiving welfare, residents of sparsely populated areas, and those on active parole. These populations are often outside of the mainstream economy and are poor. They

usually have difficulty finding work because of low levels of educational attainment, geographic or other barriers, or a lack of occupational skills. They are a potential human resource, but 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 is growing much more slowly than the state's, and the prime working age population is expected to decline. This is likely to hinder the Southeast AlabamaWorks region's ability to meet long term expected job demands. Higher employment demand could be partially served by 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 preferred to 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 (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 economy. Indeed, one cannot achieve success in one without the other.