

State of the Workforce Report XVII: Southwest AlabamaWorks



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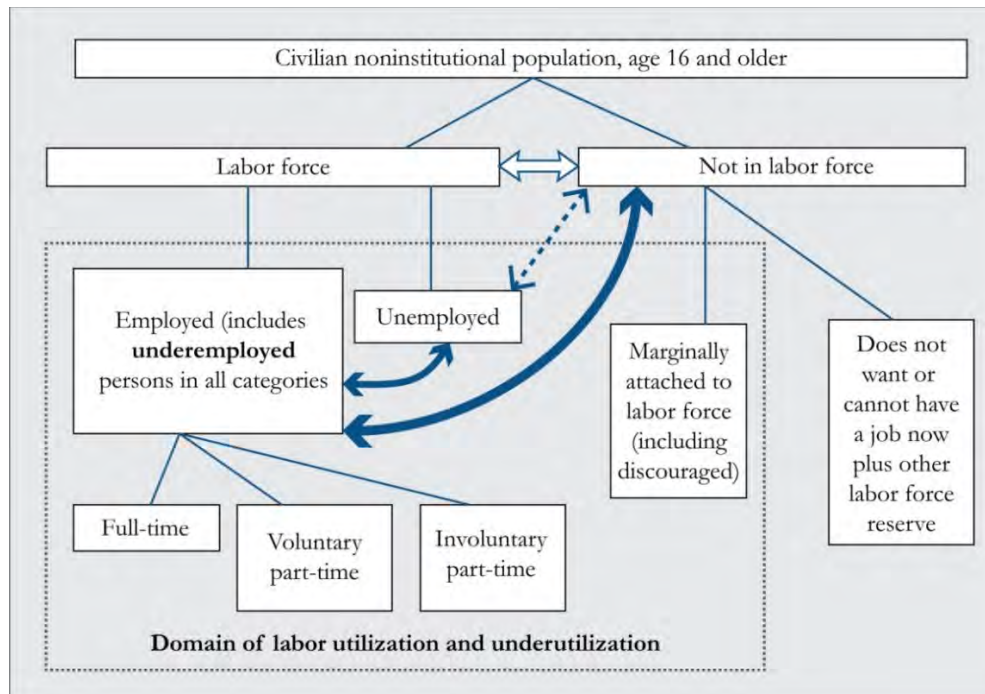
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Summary

- This report analyzes workforce supply and demand issues using available metrics of workforce characteristics for Southwest AlabamaWorks workforce region and presents implications and recommendations.
- Southwest AlabamaWorks had a 2.3 percent unemployment rate in March 2023, with 7,926 unemployed workers. An underemployment rate of 22.8 percent for 2022 implies that the region has an available labor pool of 84,283 that includes 76,357 underemployed workers who are looking for better jobs and are willing to commute farther and longer for such jobs.
- In 2022 commute time and distance rose from 2021, implying that congestion worsened as the region recovered from the pandemic and recession. Congestion could pose challenges as the economy continues to recover. This means continuous maintenance and development of transportation infrastructure and systems is necessary to avoid slowing economic development.
- By sector, the top five employers in the region are health care and social assistance, retail trade, accommodation and food services, manufacturing, and educational services. In the first quarter of 2022, these five industries provided 162,820 jobs, 56.2 percent of the regional total. Two of these leading employers paid more than the region's \$4,419 monthly average wage. 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, 13,080 jobs were created per quarter from second quarter 2001 to first quarter 2022, and quarterly net job flows averaged 323. 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 Customer Service Representatives; Heavy and Tractor-Trailer Truck Drivers; Laborers and Freight, Stock, and Material Movers, Hand; Registered Nurses; and General and Operations Managers.
- The top five fast-growing occupations are Computer Numerically Controlled Tool Programmers; Transportation Inspectors; Nurse Practitioners; Cooks, Restaurant; and Occupational Therapy Assistants.
- The top 50 high-earning occupations are mainly in health care, management, and engineering fields and pay a minimum mean salary of \$90,693 and maximum of \$254,949 per year. Eight of the top 10 occupations are health jobs and two are in management and law.
- Of the top 40 high-demand, 20 fast-growing, and 50 high-earning occupations, two—Nurse Practitioners and Medical and Health Services Managers—belong in all three categories. Nine occupations are both high-demand and high-earning, four are both high-earning and fast-growing, and two are in high-demand and fast-growing.

- Of the region's 675 occupations, 111 are expected to decline over the 2020 to 2030 period, with the 20 sharpest declining occupations dropping by at least three percent and those with disclosed net change data losing a minimum of 30 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. The pace of training needs to increase for technical and basic skills, while the scale of training should be raised 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. Employers should be an integral part of planning for training, as they can help identify future skill needs and any existing gaps.
- From a 2020 base, worker shortfalls of over 25,500 for 2030 and 28,300 for 2035 are expected. By 2045, worker shortfall will drop to 15,500. This demands a focus on worker skills and shortfalls. Worker shortfalls for critical occupations will also need to be continuously addressed. 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 types of education and related 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 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 labor force growth rates and below average per capita income.
- Together, workforce development and economic development can build a strong, well-diversified Southwest AlabamaWorks economy.

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. The civilian noninstitutional population, age 16 and above, includes 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 people in this group do not actively search for work. 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 generally 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 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. Skill and spatial mismatches present additional complications to labor market dynamics. For example, unemployment can coexist with significant job availability.

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 age 16 and over, 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 7.1 shows labor force information for Southwest AlabamaWorks and its nine counties for 2022 and March 2023. 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 7.1 Southwest AlabamaWorks Labor Force Information

2022 Annual Average				
Region	Labor Force	Employed	Unemployed	Rate (%)
Baldwin	102,849	100,432	2,417	2.4
Choctaw	4,298	4,133	165	3.8
Clarke	7,694	7,309	385	5.0
Conecuh	4,242	4,092	150	3.5
Escambia	14,231	13,789	442	3.1
Mobile	192,312	186,073	6,239	3.2
Monroe	7,300	7,001	299	4.1
Washington	6,565	6,326	239	3.6
Wilcox	2,528	2,331	197	7.8
Southwest	342,019	331,486	10,533	3.1
Alabama	2,286,028	2,226,670	59,358	2.6
United States	164,287,000	158,291,000	5,996,000	3.6

March 2023				
Region	Labor Force	Employed	Unemployed	Rate (%)
Baldwin	103,386	101,549	1,837	1.8
Choctaw	4,225	4,099	126	3.0
Clarke	7,622	7,309	313	4.1
Conecuh	4,134	4,026	108	2.6
Escambia	14,337	13,980	357	2.5
Mobile	193,351	188,741	4,610	2.4
Monroe	6,977	6,738	239	3.4
Washington	6,378	6,209	169	2.6
Wilcox	2,414	2,247	167	6.9
Southwest	342,824	334,898	7,926	2.3
Alabama	2,291,233	2,246,853	44,380	1.9
United States	166,783,000	160,741,000	6,043,000	3.6

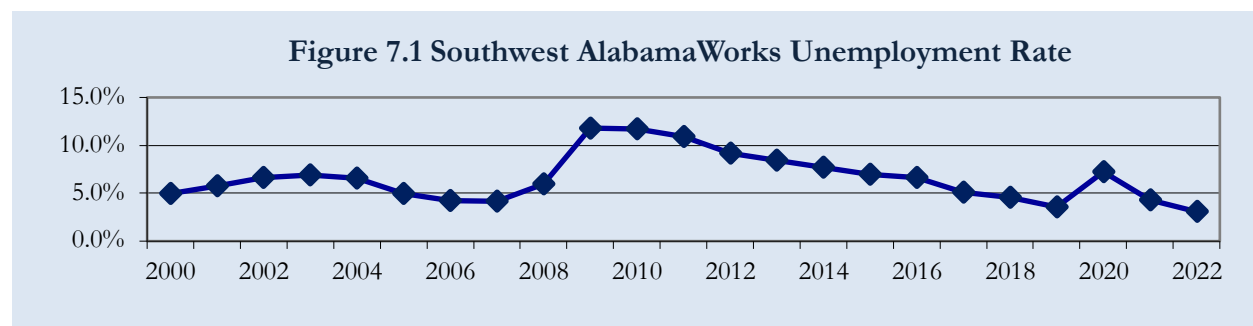
Note: Not seasonally adjusted.

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

Regional and county unemployment sharply rose in 2020 due to the COVID-19 pandemic and the associated economic recession, but a fast recovery followed as personal protection equipment, testing, and vaccines became available and Congress quickly provided fiscal relief through the CARES Act, Consolidated Appropriation Act, and American Rescue Act. As supply chain disruptions persisted, Congress provided more fiscal assistance through the Infrastructure Investment and Jobs Act to rebuild infrastructure, followed by the Inflation Reduction Act of 2022

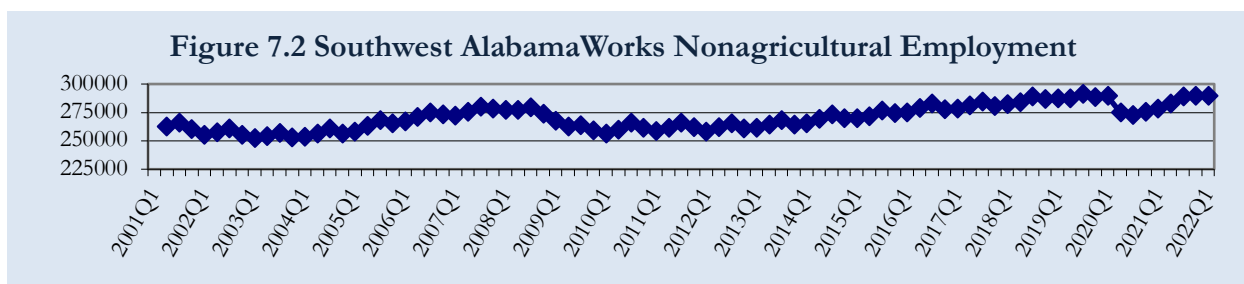
to ease inflationary pressures on the economy. In 2022, annual county unemployment declined and ranged from 2.4 percent in Baldwin County to 7.8 percent in Wilcox (3.1 percent for the region). The regional unemployment rate was above the state's 2.6 percent rate and Baldwin County was the only county with a lower unemployment rate than Alabama. Unemployment remained high relative to Alabama because the region's economy is dependent on tourism and food services, which were adversely affected by the pandemic, labor shortages, and inflation. By March 2023, county unemployment rates had further declined ranging from 1.8 percent in Baldwin County to 6.9 percent in Wilcox, with 2.3 percent for the region. The regional unemployment rate was above the state's rate of 1.9 percent. All the counties in the Southwest region had higher unemployment rates than Alabama, except for Baldwin County.

Annual unemployment rates from 2000 to 2022 are shown in Figure 7.1. The 2007 economic recession led to massive job losses and raised the regional unemployment rate to double digits in 2009 through 2011. A slow but long economic recovery resulted in a very low unemployment level of 3.6 percent in 2019. However, the 2020 pandemic and recession raised unemployment rate to 7.2 percent in 2020. A mix of pandemic mitigation measures, COVID-19 vaccines, and fiscal interventions by Congress helped counter job losses lowering unemployment rate to 4.3 percent in 2021. In 2022, the unemployment rate dropped to a historically low level of 3.1 percent despite a persistent COVID-19, supply chain backlogs, high inflation, and rising interest rates. The historically low unemployment levels can be attributed to a combination of several factors including labor shortages as more older workers retire, sustained pent up demand from consumer pandemic lockdowns and bailout savings, and pandemic related shifts in demand from services to goods then back to services. Year-to-date monthly labor force data indicate low regional unemployment for 2023 similar to the rates seen in 2022. By July 2023, the region's unemployment rate stood at 2.6 percent, which is among the lowest on record for the region.



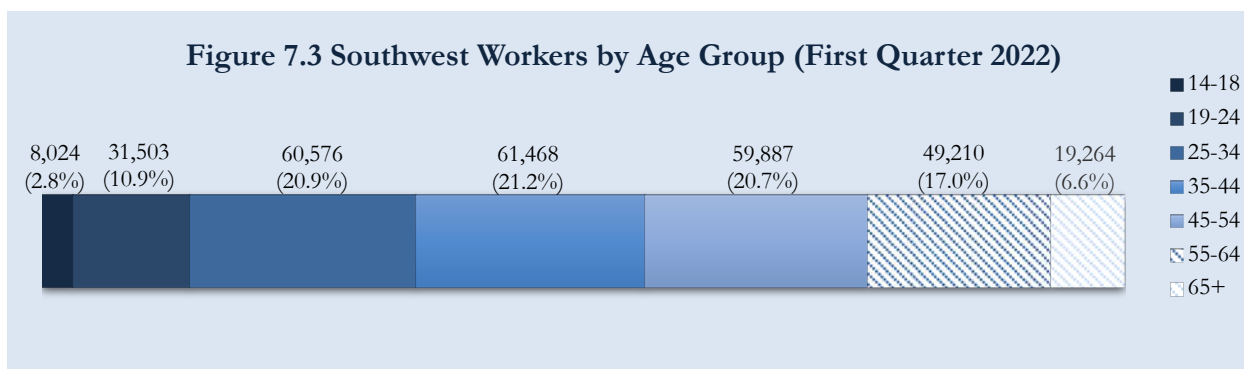
Source: Alabama Department of Labor

Quarterly nonagricultural employment of the region's residents averaged 270,479 from the second quarter of 2001 to the first quarter of 2022 (Figure 7.2). The region's employment is highly seasonal due to the nature of tourism-related activities, which form a major sector along the Gulf Coast. The number of jobs declined steadily from the third quarter of 2008 to first quarter of 2010 due to the 2007 financial recession, but gradually increased surpassing the pre-recession levels in the third quarter of 2016. In the third quarter of 2019, total employment reached 291,436, the highest on record, before declining to 272,594 in the third quarter of 2020 due to the COVID-19 pandemic and economic recession. The nonagricultural employment recovered steadily and reached 289,053 in the third quarter of 2021 as the regional economy and tourism recovered but is yet to pass pre-COVID levels. By the first quarter of 2022, total employment stood at 289,932.



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

Figure 7.3 shows worker distribution by age in Southwest AlabamaWorks for the first quarter of 2022. The region's workforce is older than that of Alabama. Older workers, age 55 and over, are 23.6 percent (68,474) of the region's nonagricultural employment versus the state's 22.9 percent. Those who are age 65 and over constitute 6.6 percent of the region's workforce, which is above Alabama's 6.3 percent. 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.



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

Commuting Patterns

The number of workers who commute out of Southwest AlabamaWorks exceeds the number commuting into the region (Table 7.2). In 2005, net out-commuting was 10,243 but rose to 19,478 in 2013 before dropping to 15,462 in 2018. In 2019, there was a significant drop in out-commuting and net out-commuting dropped to 5,896. In- and out-commuters declined in 2020 due to the effects of COVID-19 pandemic and recession, but net out-outflows rose to 6,187 as the drop in commuter inflows exceeded that of out-flows. There is also significant commuting within the region, especially in Mobile and Baldwin Counties. Most of the out-commuting residents work in other workforce regions within the state as opposed to out-of-state and the region attracts more out-of-state workers than the number of residents out-commuting out-of-state. Over 16,100 (6.9 percent) of Southwest AlabamaWorks workers commute from out-of-state, with 6,905 travelling from Florida and 6,516 from Mississippi. Over 15,200 residents of the region commute out-of-state for work, of which 9,362 travel to Florida. By workforce region, about 38,000 workers (14.3 percent) in-commute from other regions with 6,002 coming from Central AlabamaWorks and 5,228 from Central AlabamaWorks. In contrast, over 44,100 (16.2 percent) residents of the region out-commute to other regions with 9,133 going to Central Six and 7,599 to Central AlabamaWorks. Table 7.2 also shows that regional average commute times and distances rose in 2022 from the previous year. This

implies that congestion worsened as the region recovered from COVID-19 pandemic and recession and as tourism and economic activities picked up. Congestion is likely to remain a challenge, particularly in the Mobile and Daphne-Fairhope-Foley metropolitan areas. Thus, regional transportation infrastructure and systems must be maintained and developed to ensure that the flow of goods and movement of workers are not interrupted. Slowing the movement of goods and workers can slow economic development.

Table 7.2 Southwest AlabamaWorks Commuting Patterns

Year	Inflow			Outflow			
2005	24,139			34,382			
2006	24,415			38,388			
2007	29,181			43,257			
2008	33,237			44,236			
2009	32,346			47,649			
2010	33,351			50,926			
2011	33,614			51,545			
2012	32,588			50,934			
2013	34,061			53,539			
2014	36,042			54,648			
2015	34,599			49,137			
2016	36,496			50,527			
2017	38,860			53,171			
2018	39,499			54,961			
2019	39,315			45,211			
2020	37,953			44,140			
Southeast AlabamaWorks Counties	Inflow, 2020			Inflow, 2020			
	Number	Percent		Number	Percent		
Baldwin	23,185	26.6		36,098	38.7		
Choctaw	1,766	2.0		1,879	2.0		
Clarke	3,431	3.9		5,143	5.5		
Conecuh	1,644	1.9		2,849	3.1		
Escambia	5,364	6.2		6,315	6.8		
Mobile	45,752	52.6		31,089	33.3		
Monroe	2,887	3.3		4,108	4.4		
Washington	1,703	2.0		3,712	4.0		
Wilcox	1,317	1.5		2,043	2.2		
Percent of Workers							
Average commute time (one-way)	2016	2017	2018	2019	2020	2021	2022
Less than 20 minutes	48.6	48.7	50.5	49.5	46.2	43.2	41.4
20 to 40 minutes	29.8	27.1	28.5	25.1	25.4	25.4	26.1
40 minutes to an hour	8.0	9.8	8.1	9.9	11.2	12.1	12.9
More than an hour	4.8	5.6	2.7	4.2	4.8	5.3	5.8
Average commute distance (one-way)	2016	2017	2018	2019	2020	2021	2022
Less than 10 miles	42.0	38.7	43.4	44.7	41.7	40.0	37.0
10 to 25 miles	35.9	31.6	32.3	31.3	30.2	30.2	29.7
25 to 45 miles	13.0	16.6	13.9	13.2	14.7	14.7	15.9
More than 45 miles	6.7	9.5	7.8	8.9	10.1	11.4	13.3

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

From 2010 to 2020, the population in Southwest AlabamaWorks grew from 738,815 to 776,442, a 5.1 percent increase, same as the state's growth (Table 7.3). However, nearly all of the population growth happened in Baldwin County (27.2 percent), as the only other county (Mobile) that gained population had a paltry 0.4 percent growth and all the other counties lost population. The fastest population decline occurred in Monroe County, followed by Conecuh and Clarke. The 2022 population estimates show a similar trend, with the region's population growing 1.1 percent, just above the state's 1.0 percent growth. All the population growth occurred in Baldwin County, as the other counties lost population. The fastest population decline occurred in Wilcox County, followed by Washington and Conecuh.

Table 7.3 Southwest AlabamaWorks Population

Region	2000	2010	2020	2022	Change, 2010-2020		Change, 2020-2022	
	Census	Census	Census	Estimate	Number	Percent	Number	Percent
Baldwin	140,415	182,265	231,767	246,435	49,502	27.2	14,668	6.3
Choctaw	15,922	13,859	12,665	12,439	-1,194	-8.6	-226	-1.8
Clarke	27,867	25,833	23,087	22,515	-2,746	-10.6	-572	-2.5
Conecuh	14,089	13,228	11,597	11,206	-1,631	-12.3	-391	-3.4
Escambia	38,440	38,319	36,757	36,666	-1,562	-4.1	-91	-0.2
Mobile	399,843	412,992	414,809	411,411	1,817	0.4	-3,398	-0.8
Monroe	24,324	23,068	19,772	19,404	-3,296	-14.3	-368	-1.9
Washington	18,097	17,581	15,388	15,122	-516	-2.9	-777	-4.4
Wilcox	13,183	11,670	10,600	10,059	-1,070	-9.2	-541	-5.1
Southwest	692,180	738,815	776,442	785,257	37,627	5.1	8,815	1.1
Alabama	4,447,100	4,779,736	5,024,279	5,074,296	244,543	5.1	50,017	1.0
United States	281,421,906	308,745,538	331,449,281	333,287,557	22,703,743	7.4	1,838,276	0.6

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

Table 7.4 Southwest AlabamaWorks Population by Age Group and 2030-2045 Projections

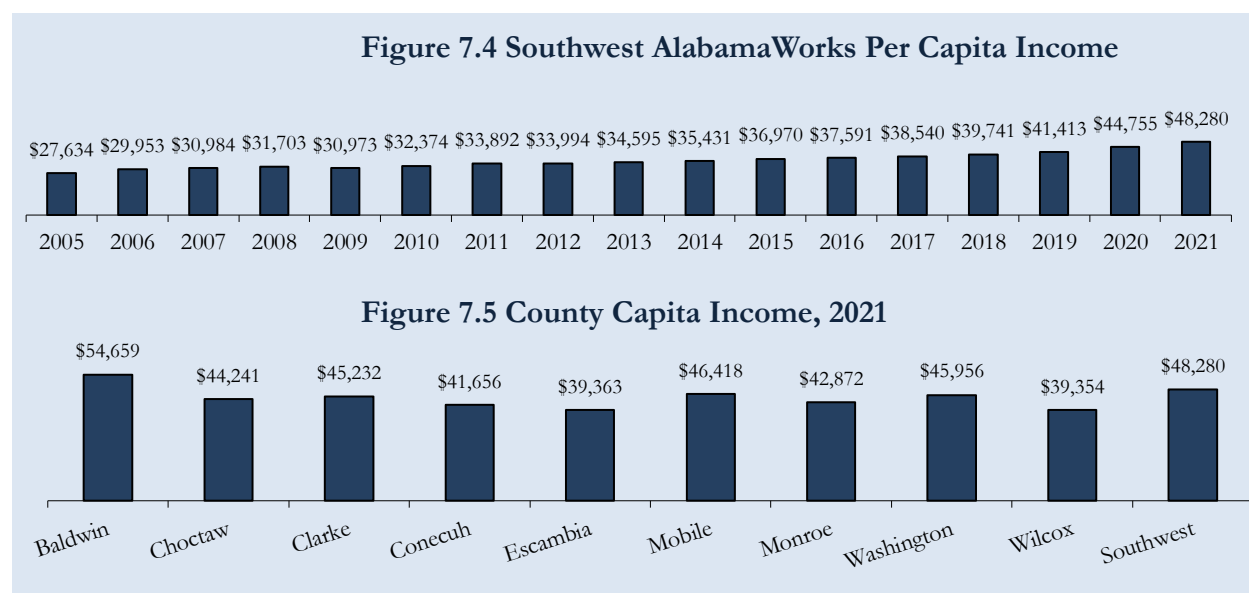
Age Group	2000	2010	2020	2030	2035	2040	2045
0-19	205,052	200,699	192,032	201,798	202,879	207,705	215,616
20-24	43,968	46,087	46,103	48,726	48,961	51,904	53,421
25-29	44,562	45,828	51,866	47,540	47,847	49,233	52,658
30-34	44,902	44,949	46,485	48,493	48,652	50,242	52,082
35-39	51,690	46,127	46,733	47,935	49,749	50,881	53,018
40-44	53,795	47,046	44,522	47,392	46,808	52,038	53,693
45-49	48,368	53,397	47,997	48,789	49,699	48,635	54,498
50-54	43,767	54,779	49,435	48,385	48,485	51,419	50,570
55-59	35,576	49,174	54,005	48,887	49,151	50,051	53,479
60-64	29,904	44,013	51,884	51,088	49,153	50,495	51,817
65+	90,596	106,716	137,857	179,475	187,638	199,367	209,181
20-64 Total	396,532	431,400	439,029	437,233	438,507	454,899	475,236
Total Population	692,180	738,815	768,917	818,507	829,024	861,971	900,033
<i>Change from 2020</i>							
0-19				5.1%	5.6%	8.2%	12.3%
20-64				-0.4%	-0.1%	3.6%	8.2%
Total Population				6.4%	7.8%	12.1%	17.1%

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

Table 7.4 shows Southwest AlabamaWorks' population decennial counts, estimates, and projections by age group. The population aged 65 and over has been growing rapidly since 2010 when the first of the baby boom generation turned 65. Consequently, growth of the main working age group (20-64) and youth (0-19) will soon lag that of the total population. Indeed, from a 2020 base, the main working population will decline through 2035, which poses a challenge for workforce development. If employment growth outpaces labor force growth in the long term, communities that experience rapid job gains may need to consider investments in amenities and infrastructure to attract new residents.

Per Capita Income

Per capita income (PCI) in Southwest AlabamaWorks was \$48,280 in 2021 (Figure 7.4), up 74.7 percent from 2005. Even with this increase, the PCI was \$1,489, or 3.0 percent, below the state average of \$49,769. County PCIs are shown in Figure 7.5. Baldwin County had the highest PCI with \$54,659, followed by Mobile at \$46,418 and Washington with \$45,956. Wilcox County had the lowest PCI with \$39,354, followed by Escambia at \$39,363. Of the nine counties in Southwest AlabamaWorks, only Baldwin County had a PCI above the state average.



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

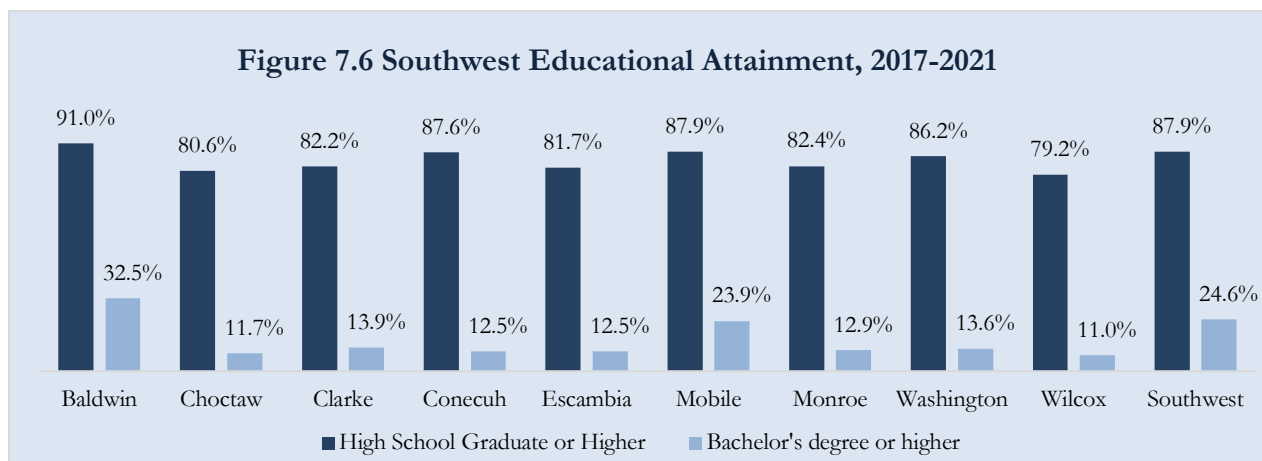
Educational Attainment

Educational attainment in 2017 to 2021 of Southwest AlabamaWorks residents who were 25 years old and over is shown in Table 7.5 and Figure 7.6. Of these residents, 87.9 percent graduated from high school, which is higher than 87.4 percent for Alabama. Educational attainment of bachelor's or higher degrees was 24.6 percent, lower than the state's 26.7 percent. Baldwin County had higher educational attainment than the other eight counties and even the state, followed by Mobile. Wilcox County had the lowest educational attainment, followed by Choctaw. Educational attainment is important since skills rise with education and high-wage jobs for the 21st century demand more skill sets.

Table 7.5 Southwest Educational Attainment of Population 25 Years and Over, 2017-2021

	Baldwin	Choctaw	Clarke	Conecuh	Escambia
Total	161,977	9,281	16,269	8,665	25,716
No schooling completed	1,309	188	427	69	202
Nursery to 4th grade	319	51	83	64	76
5th and 6th grade	733	78	53	22	99
7th and 8th grade	1,039	298	320	121	815
9th grade	1,812	382	554	40	875
10th grade	3,253	195	626	237	1,144
11th grade	2,516	439	550	331	1,094
12th grade, no diploma	3,574	171	279	193	392
High school graduate/equivalent	44,342	3,477	6,740	4,200	11,249
Some college, less than 1 year	11,246	705	909	601	1,212
Some college, 1+ years, no degree	23,928	1,261	2,182	935	3,284
Associate degree	15,344	949	1,287	773	2,047
Bachelor's degree	33,379	750	1,379	585	2,180
Master's degree	13,884	286	726	320	866
Professional school degree	3,059	20	96	33	98
Doctorate degree	2,240	31	58	141	83
	Mobile	Monroe	Washington	Wilcox	Southwest
Total	280,280	13,867	10,831	7,154	534,040
No schooling completed	3,015	211	52	154	5,627
Nursery to 4th grade	619	19	189	34	1,454
5th and 6th grade	1,060	17	87	50	2,199
7th and 8th grade	3,359	270	124	154	6,500
9th grade	5,579	250	148	163	9,803
10th grade	6,043	638	401	340	12,877
11th grade	8,804	682	393	342	15,151
12th grade, no diploma	5,548	353	104	248	10,862
High school graduate/equivalent	95,988	6,205	4,606	2,806	179,613
Some college, less than 1 year	15,173	410	799	527	31,582
Some college, 1+ years, no degree	43,884	1,875	1,512	1,084	79,945
Associate degree	24,155	1,150	947	467	47,119
Bachelor's degree	43,183	1,126	643	522	83,747
Master's degree	17,503	509	532	229	34,855
Professional school degree	4,080	126	100	34	7,646
Doctorate degree	2,287	26	194	0	5,060

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



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

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.

Southwest AlabamaWorks had an underemployment rate of 22.8 percent in 2022. Applying this rate to March 2023 labor force data means that 76,357 employed residents were underemployed (Table 7.6). Adding the underemployed workers to the unemployed persons gives a total available labor pool of 84,283 for the region, which is 10.6 times the number of unemployed persons 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 entice them to change jobs. County underemployment rates ranged from 18.1 percent for Baldwin County to 24.8 percent for Mobile. Mobile County had the largest available labor pool, followed by Baldwin, while Wilcox County had the smallest. More underemployed workers in Southwest AlabamaWorks are willing to commute farther and longer for a better job. For one-way commute, 47.0 percent of the underemployed workers are prepared to add 20 or more minutes to their one-way commute and 36.3 percent are willing to go 20 or more extra miles for such a job. In contrast, 43.3 percent of all workers are willing to travel for 20 or more minutes, and 31.4 percent will go 20 or more extra miles.

Table 7.6 Southwest AlabamaWorks Underemployed and Available Labor by County

	Southwest	Baldwin	Choctaw	Clarke	Conecuh
Labor force	342,824	103,386	4,225	7,622	4,134
Employed	334,898	101,549	4,099	7,309	4,026
Underemployment rate	22.8%	18.1%	20.6%	20.6%	20.9%
Underemployed workers	76,357	18,380	846	1,507	841
Unemployed	7,926	1,837	126	313	108
Available labor pool	84,283	20,217	972	1,820	949
	Escambia	Mobile	Monroe	Washington	Wilcox
Labor force	14,337	193,351	6,977	6,378	2,414
Employed	13,980	188,741	6,738	6,209	2,247
Underemployment rate	21.3%	24.8%	24.3%	24.5%	24.5%
Underemployed workers	2,979	46,808	1,639	1,519	550
Unemployed	357	4,610	239	169	167
Available labor pool	3,336	51,418	1,878	1,688	717

Note: Rounding errors may be present. Based on March 2023 labor force data and 2022 underemployment rates.

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

Underemployment rates for counties, AlabamaWorks regions, and the state were determined from an extensive survey of the state's workforce. A total of 1,992 complete responses were obtained from Southwest AlabamaWorks in 2022. Over 55 percent (1,101 respondents) were employed, of whom 251 respondents stated that they were underemployed. The primary reasons for being underemployed in order of popularity 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, childcare responsibilities, and other undisclosed reasons. Ongoing economic development efforts can help in this regard. Nonworkers list retirement and disability or other health concerns as the main reasons for their status, but some also cite social security limitations, low wages at the available jobs, a lack of job opportunities in their area, and other undisclosed reasons as additional key factors. Such workers may become part of the labor force if these issues can be addressed.

A 2014 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 available labor pool in Southwest AlabamaWorks could be larger than estimated in this report.

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

- Fewer work full-time and more of the part-timers would like to work full-time.
- More hold multiple jobs.
- They commute shorter distances but for less time.
- By occupation, more work in management; computer and mathematical; healthcare support; food preparation and serving related; building and grounds cleaning and maintenance; farming, fishing, and forestry; installation, maintenance, and repair; transportation and material moving; and other.
- More are in agriculture, forestry, fishing, and hunting; retail trade; management of companies and enterprises; administrative and support and waste management and remediation; health care and social assistance; and accommodation and food services occupations.
- They have shorter job tenure and earn less.
- More were laid-off from their jobs in the preceding quarter, and fewer were recalled.
- Fewer believe their jobs fit well with their education and training, skills, and experience.
- More believe they are qualified for a better job based on their education and training and work experience.
- More would leave their current job for higher income if the new offer pays 5 percent more, 15 to 30 percent, or more than 50 percent more than the current job.
- For a better job, more are willing to commute farther and longer.
- 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.
- Fewer are married and more are female.
- They have high educational attainment; more have some college education, junior college, and 4-year college degrees.
- More are African-American or other nonwhite racial groups.

Table 7.7 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 (75.4 percent) are satisfied or completely satisfied with their jobs. Workers are most satisfied with the work they do and least satisfied with the earnings they receive. Fewer of the underemployed workers are satisfied with their jobs (59.4 percent). The underemployed are most satisfied with their work shift and very dissatisfied with their earnings.

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.

Workers are generally willing to train for a new or better job, with the underemployed being much more willing (70.9 percent versus. 59.4 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 the 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 bear the full cost of training. The results show that workers expect the government to bear at least a part of the training cost. This expectation may result from worker awareness of government workforce programs that provide such assistance.

Table 7.7 Job Satisfaction and Willingness to Train (Percent)

Job Satisfaction						
		Completely Dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
Employed						
Overall		3.0	3.8	17.0	26.3	49.1
	Earnings	7.1	10.1	22.3	25.3	35.0
	Retention	2.7	3.7	8.7	17.7	66.2
	Work	0.9	1.8	9.9	26.2	61.1
	Hours	3.5	4.4	11.7	22.0	58.2
	Shift	2.9	3.5	9.4	18.5	65.3
	Conditions	2.6	5.0	14.4	23.1	54.6
	Commuting Distance	4.8	4.5	13.0	15.5	61.9
Underemployed						
Overall		8.0	7.6	25.1	23.1	36.3
	Earnings	16.7	17.1	26.3	19.5	20.3
	Retention	5.6	6.0	22.3	22.3	50.6
	Work	1.6	4.8	14.4	24.8	54.4
	Hours	8.0	4.8	15.6	20.4	51.2
	Shift	6.4	3.6	10.0	19.5	59.8
	Conditions	4.8	8.4	19.9	22.7	44.2
	Commuting Distance	8.0	4.4	14.7	14.7	58.2
Willingness to Train						
		Completely Unwilling	Unwilling	Neutral	Willing	Completely Willing
Employed						
For a new or better job		16.9	5.8	16.3	14.8	44.6
	If paid by trainee	45.1	18.1	21.2	5.7	6.9
	If paid by trainee and government	14.3	12.9	34.8	17.4	17.8
	If paid by government	4.4	2.7	8.3	17.8	65.1
Underemployed						
For a new or better job		9.4	4.3	14.1	14.1	56.8
	If paid by trainee	41.5	17.5	24.1	4.3	10.4
	If paid by trainee and government	10.9	10.4	30.2	19.8	27.8
	If paid by government	3.8	1.4	6.6	14.6	72.6

Note: Rounding errors may be present.

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

Workforce Demand

Industry Mix

The health care and social assistance sector was the leading employer in Southwest AlabamaWorks with 40,430 jobs in the first quarter of 2022 (Table 7.8). Rounding out the top five industries by employment are retail trade, accommodation and food services, manufacturing, and educational services. These five industries provided 162,820 jobs or 56.2 percent of the regional total. The average monthly wage across all industries in the region was \$4,419. Of the five leading employers, only manufacturing and health care and social assistance paid more than this average wage. The highest average monthly wages were for mining at \$7,676, utilities at \$7,017, finance and insurance at \$6,978, wholesale trade at \$6,609, and manufacturing with \$6,404. At \$2,049, accommodation and food services paid the least average monthly wage even though it was the third largest employer. New hire monthly earnings averaged \$2,817, which is 63.7 percent of the region's average monthly wage. Information had the highest average monthly new hire wages with \$5,505, followed by mining at \$5,397, finance and insurance at \$4,898, manufacturing at \$4,342, and wholesale trade with \$4,280. Accommodation and food services paid newly hired workers the least, at \$1,441.

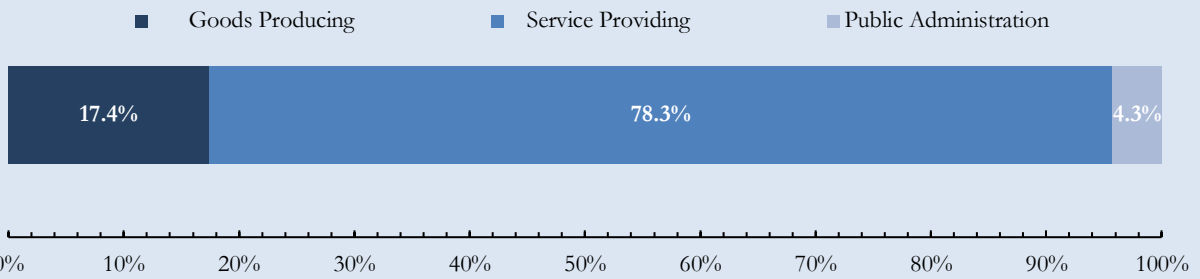
Table 7.8 Southwest AlabamaWorks Industry Mix (First Quarter 2022)

Industry by 2-digit NAICS Code	Total Employment	Share	Rank	Average Monthly Wage	Average Monthly New Hire Earnings
11 Agriculture, Forestry, Fishing and Hunting	2,664	0.92%	17	\$4,143	\$3,137
21 Mining	628	0.22%	20	\$7,676	\$5,397
22 Utilities	2,606	0.90%	18	\$7,017	\$3,639
23 Construction	18,392	6.34%	6	\$4,914	\$3,877
31-33 Manufacturing	28,713	9.90%	4	\$6,404	\$4,342
42 Wholesale Trade	11,868	4.09%	11	\$6,609	\$4,280
44-45 Retail Trade	40,205	13.87%	2	\$3,156	\$1,802
48-49 Transportation and Warehousing	16,556	5.71%	8	\$4,540	\$3,064
51 Information	3,160	1.09%	16	\$5,869	\$5,505
52 Finance and Insurance	9,093	3.14%	12	\$6,978	\$4,898
53 Real Estate and Rental and Leasing	5,340	1.84%	14	\$4,016	\$3,324
54 Professional, Scientific, and Technical Services	11,879	4.10%	10	\$5,877	\$3,896
55 Management of Companies and Enterprises	2,323	0.80%	19	\$5,540	\$3,537
56 Administrative and Support and Waste Management and Remediation Services	17,958	6.19%	7	\$3,280	\$2,749
61 Educational Services	23,661	8.16%	5	\$3,736	\$1,857
62 Health Care and Social Assistance	40,430	13.94%	1	\$4,648	\$3,377
71 Arts, Entertainment, and Recreation	3,932	1.36%	15	\$2,994	\$1,485
72 Accommodation and Food Services	29,811	10.28%	3	\$2,049	\$1,441
81 Other Services (Except Public Administration)	8,225	2.84%	13	\$3,616	\$2,687
92 Public Administration	12,487	4.31%	9	\$3,898	\$2,856
ALL INDUSTRIES	289,932	100.00%		\$4,419	\$2,817

Note: Rounding errors may be present.

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

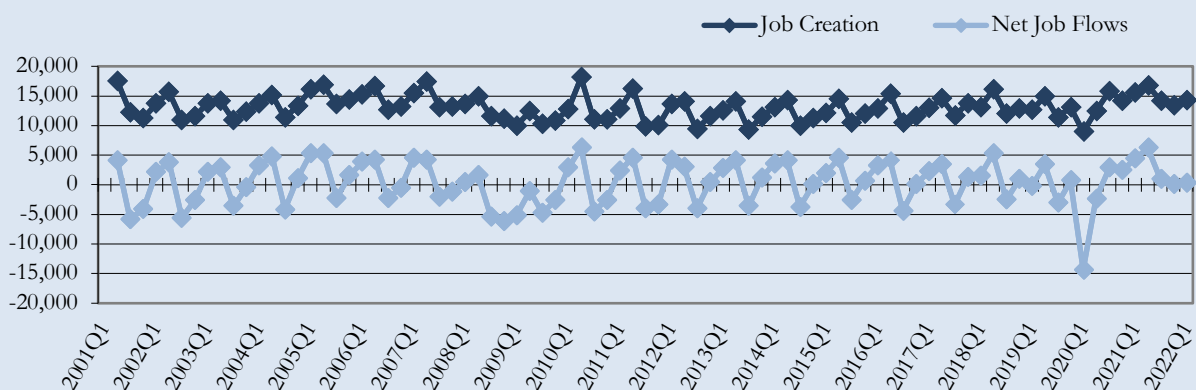
By broad industry classification, service providing industries generated 78.3 percent of jobs in the first quarter of 2022 (Figure 7.7). Goods producing industries were next with 17.4 percent, and public administration accounted for 4.3 percent. The distribution is for all nonagricultural jobs in the region, but there is significant variation by county.

Figure 7.7 Southwest Employment Distribution (First Quarter 2022)

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

Job Creation and Net Job Flows

On average, 13,080 jobs were created per quarter from second quarter 2001 to first quarter 2022, while quarterly net job flows averaged 323 (Figure 7.8). The seasonal nature of the region's employment due to tourism is shown by the strong fluctuation in both quarterly job creation and net job flows. Job creation and net job flows spike and peak during the second quarters when tourism at the Gulf Coast region is at its peak then significantly drop in the third quarter. Both job creation and net job flows dropped to record levels in the fourth quarter of 2020 due to the COVID-19 pandemic and recession, but rose in the second and third quarter of the same year. After peaking in the second quarters of 2021, both measures of employment change declined through the third and fourth quarter of 2021 before slightly rising in the first quarter of 2022. Quarterly net job flows fluctuate considerably and have ranged from a gain of 6,331 in the second quarter of 2010 to a loss of 14,372 jobs in the first quarter of 2020. 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.

Figure 7.8 Southwest AlabamaWorks Job Creation and Net Job Flows

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

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

Southwest AlabamaWorks has 675 single occupations based on 2020 to 2030 occupational projections. Table 7.9 shows the top 40 occupations that are expected to be in high-demand, ranked by projected average annual job openings over the projection period. Many of these occupations are in health care and social assistance, construction, finance and insurance, management of companies, and retail trade. Two of these industries (retail trade and health care and social assistance) are among the five largest employment sectors, identified earlier (Table 7.8). These sectors will continue to dominate employment in the region.

The top five high-demand occupations are Customer Service Representatives; Heavy and Tractor-Trailer Truck Drivers; Laborers and Freight, Stock, and Material Movers, Hand; Registered Nurses; and General and Operations Managers. Two of the high-demand occupations are also fast-growing. This means that these two occupations have a minimum annual growth rate of 2.49 percent, which is much faster than the regional and state occupational growth rates of 0.70 percent and 0.62 percent, respectively.

The top 20 fastest growing occupations ranked by projected annual percentage growth of employment are listed in Table 7.10. The majority of these occupations are related to the health care and social assistance and manufacturing sectors. The top five fast-growing occupations are Computer Numerically Controlled Tool Programmers; Transportation Inspectors; Nurse Practitioners; Cooks, Restaurant; and Occupational Therapy Assistants.

Table 7.11 shows the top 50 highest earning occupations in the region. These occupations are mainly in health, management, and engineering fields and pay a minimum average salary of \$90,693 for Occupational Therapists and maximum of \$254,949 for Anesthesiologists per year. Eight of the top 10 listed are healthcare occupations and two are in management and law. Any discussion of earnings must consider that wages vary with experience. Occupations with the highest average wages may not necessarily have the highest entry wages.

The top high-earning occupations are generally not fast-growing or in high-demand. Nine of the region's top high-earning occupations are also in high-demand (Table 7.9 and Table 7.11) and four are fast-growing (Table 7.10 and Table 7.11) occupations. Two occupations—Nurse Practitioners and Medical and Health Services Managers—are in all the three top categories (Table 7.9, Table 7.10, and Table 7.11). Interestingly, one high-earning occupation—Computer Programmers—is among the region's 20 most declining occupations (Table 7.12).

Of the region's 675 occupations, 111 are expected to decline over the 2020 to 2030 period. Employment in the 20 sharpest-declining occupations will fall by at least three percent, with each losing at least 30 jobs (for those with disclosed net job openings) over the period (Table 7.12). 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 7.9 Top 40 High-Demand Occupations (Base Year 2020 and Projected Year 2030)

Occupation	Average Annual Job Openings		
	Total	Due to Growth	Due to Separations
Customer Service Representatives	760	25	735
Heavy and Tractor-Trailer Truck Drivers	735	35	700
Laborers and Freight, Stock, and Material Movers, Hand	705	30	675
Registered Nurses	480	70	410
General and Operations Managers	475	45	430
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	365	20	345
Construction Laborers	355	40	315
Maintenance and Repair Workers, General	345	25	320
Electricians	300	30	265
Elementary School Teachers, Except Special Education	265	20	245
Industrial Machinery Mechanics	240	40	195
Accountants and Auditors	235	15	215
Welders, Cutters, Solderers, and Brazers	215	15	205
Licensed Practical and Licensed Vocational Nurses	190	25	165
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	175	10	160
Plumbers, Pipefitters, and Steamfitters	170	15	155
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	150	15	135
Carpenters	135	5	125
Software Developers and Software Quality Assurance Analysts and Testers	130	25	110
Medical and Health Services Managers*	115	30	85
Insurance Sales Agents	105	10	95
Market Research Analysts and Marketing Specialists	95	15	80
Computer User Support Specialists	95	10	80
Real Estate Sales Agents	90	5	85
Construction Managers	85	15	70
Bus and Truck Mechanics and Diesel Engine Specialists	80	5	75
Food Service Managers	70	10	60
Human Resources Specialists	70	5	65
Educational, Guidance, School, and Vocational Counselors	70	5	60
Nurse Practitioners*	60	30	35
Civil Engineers	60	10	55
Lawyers	60	10	55
Claims Adjusters, Examiners, and Investigators	60	5	55
Clinical Laboratory Technologists and Technicians	60	5	50
Financial Managers	55	10	40
Loan Officers	55	5	50
Management Analysts	40	5	30
Mechanical Engineers	40	10	30
Sales Managers	35	5	35
Industrial Production Managers	35	5	30

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 7.10 Top 20 Fast-Growing Occupations (Base Year 2020 and Projected Year 2030)

Occupation	Employment		Percent Change	Annual Growth (Percent)	Annual Total Openings
	2020	2030			
Computer Numerically Controlled Tool Programmers	30	50	56	4.56	5
Transportation Inspectors	NA	NA	56	4.56	60
Nurse Practitioners*	510	790	56	4.54	60
Cooks, Restaurant	2,730	4,160	53	4.31	640
Occupational Therapy Assistants	NA	NA	50	4.14	5
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	NA	NA	46	3.89	20
Computer Numerically Controlled Tool Operators	NA	NA	46	3.88	60
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	240	340	43	3.63	40
Tool and Die Makers	20	30	40	3.42	5
Physician Assistants	120	170	39	3.32	15
Logisticians	240	330	38	3.31	35
Physical Therapist Assistants	220	300	37	3.21	40
Animal Trainers	20	30	35	3.03	5
Engine and Other Machine Assemblers	50	60	35	3.03	10
Molders, Shapers, and Casters, Except Metal and Plastic	100	140	35	3.02	15
Medical and Health Services Managers*	970	1,270	31	2.75	115
Mechanical Door Repairers	NA	NA	30	2.67	10
Dining Room and Cafeteria Attendants and Bartender Helpers	730	940	30	2.67	165
Financial Examiners	40	50	29	2.60	5
Nonfarm Animal Caretakers	610	780	28	2.49	120

Note: Employment data are rounded to the nearest 10 and job openings are rounded to the nearest 5.

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

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

Table 7.11 Top 50 High-Earning Occupations (Base Year 2020 and Projected Year 2030)

Occupation	Employment		Annual Growth (Percent)	Annual Job Openings	Mean Annual Salary (\$)
	2020	2030			
Anesthesiologists	50	50	0.19	0	\$254,949
Surgeons, Except Ophthalmologists	80	80	-0.12	0	\$253,788
Family Medicine Physicians	160	170	0.99	5	\$248,378
Physicians, All Other; and Ophthalmologists, Except Pediatric	640	710	0.94	25	\$241,467
Psychiatrists	20	20	0.00	0	\$215,727
Nurse Anesthetists	340	400	1.66	25	\$166,816
Dentists, General	220	250	1.03	10	\$160,577
Chief Executives	400	380	-0.59	25	\$158,908
Podiatrists	20	20	0.00	0	\$156,150
Lawyers*	1,080	1,170	0.77	60	\$150,528
Architectural and Engineering Managers	260	300	1.33	25	\$143,431

Table 7.11 Continued

Occupation	Employment		Annual Growth (Percent)	Annual Job Openings	Mean Annual Salary (\$)
	2020	2030			
Petroleum Engineers	20	20	0.91	0	\$132,129
Pharmacists	880	880	-0.05	35	\$131,365
Industrial Production Managers*	420	470	1.20	35	\$122,487
Optometrists	100	110	1.14	5	\$122,390
Computer Hardware Engineers	100	80	-1.94	5	\$117,434
Computer and Information Systems Managers	360	390	0.61	30	\$117,347
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	70	80	1.09	5	\$114,145
Chemical Engineers	250	300	1.75	20	\$113,685
Electronics Engineers, Except Computer	110	120	0.84	10	\$113,129
Human Resources Managers	170	180	0.76	15	\$113,115
Education Administrators, Postsecondary	390	420	0.67	30	\$112,445
Purchasing Managers	110	120	1.49	10	\$112,188
General and Operations Managers*	4,990	5,460	0.91	475	\$111,995
Natural Sciences Managers	40	40	0.00	5	\$111,736
Marketing Managers	140	160	1.17	15	\$109,604
Computer Programmers	380	310	-2.06	15	\$108,401
Financial Managers*	560	660	1.61	55	\$108,376
Aerospace Engineers	90	110	1.22	5	\$106,318
Sales Managers*	410	430	0.65	35	\$104,189
Industrial Engineers	760	940	2.18	70	\$103,876
Business Teachers, Postsecondary	90	100	0.53	10	\$103,528
Electrical Engineers	330	390	1.46	30	\$103,513
Computer Network Architects	170	170	-0.17	10	\$102,902
Transportation, Storage, and Distribution Managers	230	240	0.64	20	\$102,522
Veterinarians	150	180	1.55	5	\$99,661
Mechanical Engineers*	490	580	1.57	40	\$99,534
Personal Financial Advisors	390	420	0.72	30	\$98,827
Construction Managers*	900	1,040	1.45	85	\$96,884
Atmospheric and Space Scientists	20	20	0.00	0	\$96,276
Nurse Practitioners*	510	790	4.54	60	\$95,756
Environmental Engineers	120	120	0.25	10	\$94,765
Transportation Inspectors	NA	NA	4.56	60	\$94,596
Physician Assistants	120	170	3.32	15	\$93,137
Administrative Services and Facilities Managers	200	220	0.85	20	\$92,976
Power Distributors and Dispatchers	30	30	-0.36	5	\$92,692
Advertising and Promotions Managers	10	10	0.74	0	\$92,255
Training and Development Managers	NA	NA	0.80	0	\$91,322
Medical and Health Services Managers*	970	1,270	2.75	115	\$91,110
Occupational Therapists	140	170	2.44	10	\$90,693

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 2021 release of the Occupational Employment Statistics (OES) combined employment and wage file. Estimates for specific occupations may include imputed data. * Qualify as both high-earning and high-demand occupations.

NA – Not available due to disclosure restrictions.

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

Table 7.12 Selected Sharp-Declining Occupations (Base Year 2020 and Projected Year 2030)

Occupation	Employment		Net Change	Percent Change
	2020	2030		
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	8,500	7,810	-690	-8
Cashiers	8,010	7,780	-230	-3
Tellers	1,260	1,120	-140	-11
Office Clerks, General	4,200	4,060	-140	-3
First-Line Supervisors of Retail Sales Workers	4,350	4,210	-140	-3
Paper Goods Machine Setters, Operators, and Tenders	1,400	1,280	-120	-8
Legal Secretaries	550	440	-110	-19
Postal Service Mail Carriers	740	650	-90	-11
Executive Secretaries and Executive Administrative Assistants	440	370	-70	-18
Computer Programmers	380	310	-70	-19
Inspectors, Testers, Sorters, Samplers, and Weighers	820	750	-70	-8
Power Plant Operators	220	190	-30	-16
Payroll and Timekeeping Clerks	230	200	-30	-14
Data Entry Keyers	NA	NA	NA	-19
Structural Metal Fabricators and Fitters	NA	NA	NA	-10
Switchboard Operators, Including Answering Service	NA	NA	NA	-23
Telemarketers	NA	NA	NA	-17
Word Processors and Typists	NA	NA	NA	-33
Medical Transcriptionists	NA	NA	NA	-23
Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	NA	NA	NA	-18

Note: Employment data are rounded to the nearest 10.

NA – Not Available due to disclosure restrictions.

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 7.13 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 the higher education that such jobs typically require. Lower earning occupations require more basic skill sets. Some occupations have no minimum skill set requirements (e.g., dishwashers and maids).

Table 7.14 shows the percentage of top 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 7.14 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 7.13 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 7.14 Percentage of Top Occupations for Which Skill Is Primary

	Top 40 High-Demand Occupations	Top 20 Fast-Growing Occupations	Top 50 High-Earning Occupations
Basic Skills			
Active Learning	45	50	54
Active Listening	80	90	92
Critical Thinking	85	85	92
Learning Strategies	5	5	6
Mathematics	13	5	14
Monitoring	50	80	56
Reading Comprehension	73	75	92
Science	5	0	18
Speaking	78	65	88
Writing	38	25	68
Complex Problem Solving Skills			
Complex Problem Solving	58	60	80
Resource Management Skills			
Management of Financial Resources	0	0	2
Management of Material Resources	0	0	0
Management of Personnel Resources	13	5	18
Time Management	28	35	20
Social Skills			
Coordination	38	40	32
Instructing	5	15	8
Negotiation	18	0	10
Persuasion	15	0	10
Service Orientation	23	25	16
Social Perceptiveness	40	30	34
Systems Skills			
Judgment and Decision Making	50	60	82
Systems Analysis	5	5	18
Systems Evaluation	3	0	10
Technical Skills			
Equipment Maintenance	8	5	0
Equipment Selection	3	5	0
Installation	5	5	0
Operation and Control	13	15	2
Operation Monitoring	0	0	0
Operations Analysis	5	0	10
Programming	0	5	2
Quality Control Analysis	18	30	4
Repairing	15	0	0
Technology Design	0	0	0
Troubleshooting	18	0	0

Note: Rounding errors may be present.

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

High-earning occupations in Southwest AlabamaWorks require more active learning, active listening, critical thinking, learning strategies, mathematics, reading comprehension, science, speaking, writing, complex problem solving, management of financial and personnel resources, persuasion, judgment and decision making, system analysis, system evaluation, and operations analysis skills than are required for most of the high-demand or fast-growing occupations. Many of these skills require long training periods and postsecondary education. However, high-earning occupations require significantly fewer technical skills. High-demand occupations require more social and systems skills than fast-growing occupations. Fast-growing and high-demand occupations in general require more technical skills.

Table 7.15 shows skill gap indexes for all 35 skills in Table 7.13 based on the projection period (2020 to 2030). By definition, skill gap indexes range from 0 to 100 and are standardized measures of the difference between current supply and projected demand. The index does not provide any information about current or base year skill supply. It focuses on the projection period and identifies critical skill needs. The index essentially ranks expected training needs and indicates the need to increase the scale of training. The higher the index, the more critical the skill over the specified projection period and a higher skill gap index indicates the need to increase the scale of training.

For policy and planning purposes, skill gap indexes have to be considered together with replacement indexes, which illustrate the expected share 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 demonstrate 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 skills are most critical, followed by social, complex problem solving, systems, resource management, and technical 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 and basic skills. The scale of training should be raised for basic and social skills as well.

Education and Training Issues

Educational attainment in Southwest AlabamaWorks is above that of the state for graduates with a high school diploma or higher but is lower for those with a bachelor's degree or higher. Of the region's residents aged 25 and over, 87.9 percent graduated from high school from 2017 to 2021, compared to 87.4 percent for the state. About 25 percent of the population had a bachelor's or higher degree, versus 27 percent for Alabama. Skill and education requirements for jobs keep rising. This highlights a strong need to raise educational attainment in the region as only Baldwin County has higher educational attainment than the state.

Table 7.16 shows the number of top occupations in the region for which a particular education/training category is most common. In general, high-earning occupations require high educational attainment levels; just three high-earning occupations do not require a bachelor's or higher degree. Twenty (50.0 percent) of the top 40 high-demand occupations have a bachelor's or higher degree. Seven (35.0 percent) of the top 20 fast-growing occupations require an associate's degree at the minimum, with five (25.0 percent) requiring a bachelor's or higher degree.

The 2020 to 2030 occupational projections indicate that future jobs will require postsecondary education and training at a minimum. Currently, job ads increasingly require at least a high school diploma or GED. Of the region's 675 occupations and occupational categories, 111 are expected to decline over the period. Education and training for the fastest declining occupations should slow accordingly.

Table 7.15 Skills Gap Indexes (Base Year 2020 and Projected Year 2030)

Skill Requirement	Skill Type	Total Openings (Projected Demand)	Skills Gap Index	Replacement Index
Active Listening	Basic	31,355	81	82
Speaking	Basic	28,315	73	87
Monitoring	Basic	24,750	64	86
Coordination	Social	24,545	64	77
Critical Thinking	Basic	23,980	62	86
Social Perceptiveness	Social	23,055	60	78
Service Orientation	Social	22,685	59	77
Time Management	Resource	22,210	58	85
Reading Comprehension	Basic	22,055	57	86
Writing	Basic	16,610	43	83
Judgment and Decision Making	Systems	15,410	40	92
Active Learning	Basic	15,285	40	80
Complex Problem Solving	Complex	15,110	39	91
Persuasion	Social	11,135	29	76
Negotiation	Social	10,170	27	76
Instructing	Social	8,945	24	90
Operation Monitoring	Technical	8,225	22	92
Learning Strategies	Basic	7,805	21	90
Systems Analysis	Systems	7,540	20	90
Operation and Control	Technical	6,865	18	94
Systems Evaluation	Systems	6,300	17	90
Quality Control Analysis	Technical	5,835	16	92
Management of Personnel Resources	Resource	5,445	15	91
Mathematics	Basic	5,375	14	93
Troubleshooting	Technical	4,620	12	92
Equipment Maintenance	Technical	3,115	9	91
Repairing	Technical	2,695	7	91
Equipment Selection	Technical	1,800	5	90
Management of Financial Resources	Resource	1,790	5	87
Management of Material Resources	Resource	1,105	3	88
Installation	Technical	1,010	3	92
Operations Analysis	Technical	880	3	84
Science	Basic	605	2	73
Technology Design	Technical	90	1	83
Programming	Technical	85	1	94

Note: These are annualized skills indexes based on 2020 to 2030 occupation projections.

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

Table 7.16 Number of Top Occupations by Education/Training Requirement

Most Common Education/Training Requirements Categories	Top 40 High-Demand Occupations	Top 20 Fast-Growing Occupations	Top 50 High-Earning Occupations
Doctoral Degree or First Professional Degree	1	0	12
Master's Degree	2	2	5
Bachelor's Degree	17	3	30
Associate Degree	0	2	0
Postsecondary Non-Degree	3	2	0
Some College, no Degree	1	0	0
High School Diploma or Equivalent	14	9	3
No Formal Educational Credential	2	2	0

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

Implications and Recommendations

Employment in Southwest AlabamaWorks is expected to grow through 2045, while labor force is expected to decline through 2035 then grow at a lower rate than job growth leading to worker shortfalls. From a 2020 base, worker shortfalls of about 25,500 and 28,300 for 2030 and 2035, respectively, are expected (Table 7.17). By 2045, the worker shortfall is expected to decline to about 15,500 workers. Worker skills and shortfalls must be a priority for the region through 2045. Worker shortfalls for critical occupations will need to be continuously addressed.

Table 7.17 Southwest AlabamaWorks Expected Worker Shortfall

	2020-2030	2020-2035	2020-2040	2020-2045
Total population growth (%)	6.4	7.8	12.1	17.1
Age 20-64 growth (%)	-0.4	-0.1	3.6	8.2
Nonagricultural job growth (%)	8.2	9.4	11.1	13.5
Worker shortfall (%)	8.6	9.5	7.5	5.2
Worker shortfall (number)	25,549	28,331	22,413	15,511

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

Since employment is critical to economic development, strategies to address potential shortfalls must be adopted and implemented. Such strategies should aim at increasing labor force participation, encouraging in-migration for faster labor force growth and raising worker productivity to meet workforce demand with efforts 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 of training needs to increase for technical and basic skills, while the scale of training should be raised 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 7.12 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 types of education and related 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 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, and those on active parole. These populations are often outside of the mainstream economy and are in poverty. 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, but investment in training, transportation, childcare, eldercare, 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 currently higher than the state, but the working age group is expected to decline through 2030. This might hinder the region's ability to meet the expected job demand, barring future economic slowdowns. 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 generally more beneficial to a region 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, 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 policies 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 labor force growth rates is an effective economic development strategy. Together, workforce development and economic development can build a strong, well-diversified economy. Indeed, we cannot achieve success in one without the other.

